STRATEGIES FOR PUBLIC HEALTH

A Compendium of Ideas, Experience, and Research From Minnesota's Public Health Professionals

Volume 2

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TABLE OF CONTENTS

TABLE OF CONTENTS

http://www.health.state.mn.us/strategies/

PUBLIC HEALTH EMERGENCY PREPAREDNESS
- But is Minnesota Prepared?

SOCIAL AND ECONOMIC DETERMINANTS OF HEALTH
- Effective Strategies
- Address Issues of Unequal Access to Affordable, Nutritious Food
- Improve Community Environments that Promote Physical Activity, Mental Well-being and Quality of Life
- Provide Quality, Affordable Housing
- Develop and Promote Education, Literacy, and Employment Policies that Contribute to Employment Status
- Health Impact Assessment
- How HIA Works
- Where HIA Can Be Used

CATEGORIES OF PUBLIC HEALTH

ALCOHOL, TOBACCO AND OTHER DRUGS
http://www.health.state.mn.us/strategies/atod.pdf
- Introduction
- Alcohol and Other Drug Use
- Tobacco
- Appendix
  - The Community 6 A's: Recommended Practices for Talking with Youth About Alcohol Use
  - The Community 6 A's: Recommended Practices for Talking with Youth About Tobacco Use

CHILD AND ADOLESCENT GROWTH AND DEVELOPMENT
http://www.health.state.mn.us/strategies/child.pdf
- Introduction
- Adolescent Health
  - Parenting and Youth Development
- Children's Health
  - Childhood Asthma
  - Childhood Lead Poisoning
  - Early Identification of Children with Special Health Needs
  - Iron Deficiency Anemia

CHRONIC/NONINFECTIOUS DISEASE
http://www.health.state.mn.us/strategies/chronic.pdf
- Introduction
- Arthritis
- Diabetes
- Early Detection of Cancer
- Heart Disease, Heart Attack and Stroke
- Nutrition
- Oral Health

Osteoporosis
Physical Activity/Inactivity
Weight Management

DISABILITY-DECREASED INDEPENDENCE
http://www.health.state.mn.us/strategies/disability.pdf
Introduction
Promote Healthful Aging and Support the Well-Being of the Elderly

ENVIRONMENTAL CONDITIONS
http://www.health.state.mn.us/strategies/environment.pdf
Introduction
Asbestos
Clean Indoor Air/Radon/Carbon Monoxide Poisoning
Food Safety/Protection
Safe Water

INFECTIOUS DISEASE
http://www.health.state.mn.us/strategies/infectious.pdf
Introduction
Sexually Transmitted Diseases (STD), Human Immunodeficiency Virus (HIV), and Acquired Immunodeficiency Syndrome (AIDS)
Tuberculosis
Vaccine-Preventable Diseases
Appendix
Communicable Disease Prevention and Control Common Activities Framework

MENTAL HEALTH
http://www.health.state.mn.us/strategies/mental.pdf
Introduction
Infant Mental Health
Maternal Depression
Mental Health

PREGNANCY AND BIRTH
http://www.health.state.mn.us/strategies/pregnancy.pdf
Introduction
Birth Outcomes and Prenatal Care
Breastfeeding
Infant Mortality
Women's Health

SERVICE DELIVERY SYSTEM
http://www.health.state.mn.us/strategies/service.pdf
Introduction
Eliminate Barriers and Improve Access to Health Care

INTRODUCTION

INTRODUCTION

THE PREAMBLE

This document is Volume 2 of *Strategies for Public Health: A Compendium of Ideas, Experience and Research from Minnesota's Public Health Professionals*. The previous version was published in 3 parts between November 1998 and March 1999. It was intended to complement *Healthy Minnesotans: Public Health Improvement Goals for 2004.* This new, updated version of *Strategies for Public Health, Volume 2,* is also intended to compliment *Healthy Minnesotans: Public Health Improvement Goals for 2004,* and the work being done at the state and local levels to achieve Minnesota's public health goals and objectives.

What is *Strategies for Pubic Health, Volume 2?* *Strategies for Public Health, Volume 2* is a compilation of strategies based on the ideas, experiences and research from Minnesota's public health professionals. It includes descriptions of key strategies available to address important public health issues.

This document also shares current evidence on the effectiveness of the strategies, and to the extent possible, identifies key partners that can play a collaborative role in implementing them. As such, it can support collaborative, community-wide efforts; can help evaluate whether efforts are making a difference; and can inform the planning, program design, implementation and evaluation of actions taken by state and local public health agencies, health plans, hospitals and clinics, the educational system, community-based organizations, and businesses.

Strategies for Public Health, Volume 2 is a step in a strategic process to build on the experience of Minnesota's public health professionals and to support the movement of public health practice in Minnesota toward the use of population-based public health interventions that are based on the best available evidence.

What is the Purpose of *Strategies for Public Health?* The purpose of this collection of strategies is to offer guidance for organizations in answering two questions:

- What are some effective strategies that can be implemented to address the health issues identified in *Healthy Minnesotans: Public Health Improvement Goals for 2004?*
- Does my organization have a potential role to play in working on this public health problem?

The wide array of strategies that might be considered by public health practitioners and their community partners to achieve public health goals can be overwhelming. Most organizations face finite resources that limit how much they can do in any given time period. They are equally interested in "what works." It is important that choices for actions are made using the most current and up-to-date information on the available resources in the community and on the potential effectiveness of the actions taken.

What is Included in This Document? Within each broad category of public health, several health problems have been identified, effective strategies to prevent or reduce the problem are described, the

evidence for each strategy is presented, and indicators of progress are offered.

This information can be useful in a variety of settings. For example, local public health agencies have found this document helpful during the development of their Community Health Services (CHS) Plans and in writing grants. They use the list of strategies as a "menu" from which to choose actions to include in their plans and grants. Health Plans have used the document during the collaboration planning process to consider and develop priorities for actions in collaboration with local public health agencies. Collaborative groups that are focusing on a specific public health problem or issue have used the menus of strategies as discussion guides to clarify their roles and to consider which effective strategies they might choose to implement.

Who is the Audience for This Document? This document is for public health practitioners and their partners who are working together, either those that are currently engaged in or those who are considering getting involved in, public health interventions. In particular, this document will provide support for groups comprised of various community sectors working in collaboration to achieve public health goals. This includes but is not limited to community coalitions, advisory committees, local Boards of Health, healthy community teams, family services collaboratives, faith communities and other aggregate or collaborative groups. It is likely that many diverse organizations will find this document useful as they convene groups in their communities to address important public health issues.

Where Can I Find This Document? For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Strategies". Many of the materials (e.g., articles, journals, manuals, books, videos, pamphlets) mentioned in this document are also available in the Minnesota Department of Health Library. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Library". Local public health, MDH department, and school health staff may borrow them by e-mail at: library@health.state.mn.us, or calling (612) 676-5090, or by FAX (612) 676-5385. Other interested individuals may borrow them through their corporate or public libraries.

The main MDH library in Room 370, 717 Delaware St. SE, Minneapolis is open from 8:00 a.m. to 4:30 p.m., Monday through Friday. The MDH Library Branch in St. Paul is on the 4th floor of the Golden Rule building, and is open 8:00 a.m. to 12:00 p.m. and 12:45 p.m. to 4:00 p.m. Monday-Thursday and on Fridays from 1:00 to 4:00. The public is welcome to use material on site at either location. Both areas are secure and visitors must check in at the desk in the 717 lobby or the reception area in St. Paul.

Who Worked on *Strategies for Public Health?* The document was originally developed in 1998-1999 by a strategies review workgroup comprised of members of the Minnesota Health Improvement Partnership (MHIP) and the State and Community Health Services Advisory Committee (SCHSAC). The MHIP is a group that represents more than 30 statewide organizations and advises the Commissioner

of Health on public health issues that cross the boundaries of the public, private and non-profit sectors. The SCHSAC is an advisory committee to the commissioner of health that is comprised of representatives of the 50 (as of January, 2003, there will be 51) Community Health Boards that make up the local public health system in Minnesota. The MHIP/SCHSAC Strategies Review Working Group reviewed the work of nearly 100 MDH staff and others who identified, compiled and described the strategies. It also developed a framework and reviewed examples of broad-based roles and responsibilities for the strategies. See Appendix A for the membership of the MHIP/SCHSAC Strategies Review Work Group.

Though some of the writers of the original strategies have moved on to other positions and organizations, most of them were able to update their work for Volume 2 of the document. See *Acknowledgements* in front of the Table of Contents of this document for a listing of those who contributed to the original version as well as Volume 2 of *Strategies for Public Health*.

What are the Limitations of the Strategies Document? This collection of strategies is intended to be used as a guide for local activity. **The document is NOT to be interpreted as a set of standards.** Similarly, it does not represent all the strategies available to address every public health problem. Rather, it represents the efforts of MDH staff to compile a collection or menu of the best strategies for addressing important public health problems and for which MDH staff have expertise.

Admittedly, there are gaps in the strategies offered. The gaps **DO NOT** indicate needs that have already been met. Moreover, offering these strategies does not guarantee that resources are available from the MDH to support them. *Strategies for Public Health, Volume 2* does not attempt to prioritize the strategies. Within each category of public health and on the strategy grids, the strategies are listed in no particular order. They are simply offered for users to pursue and consider.

Evidence-based Strategies. The evidence for each strategy is described using experience, research, literature and expert opinion. As such, *Strategies for Public Health, Volume 2* strengthens the evidence-based approach to population health. These efforts will continue on a systematic and increasingly rigorous basis, building on federal work as it is disseminated. For example, under the auspices of the Centers for Disease Control and Prevention, the Task Force on Community Preventive Services has been working for the past few years to develop the Guide to Community Preventive Services (also known as the Community Guide).

The Task Force on Community Preventive Services is an independent, non-federal Task Force and consists of 15 members, including a chair, appointed by the Director of CDC. The Task Force's membership is multi-disciplinary, and includes representatives of state and local health departments, managed care, academia, behavioral and social sciences, communications sciences, mental health, epidemiology, quantitative policy analysis, decision and cost-effectiveness

analysis, information systems, primary care, and management and policy.

The Community Guide addresses a variety of health topics important to communities, public health agencies and health care systems. It summarizes what is known about the effectiveness and cost-effectiveness of population based interventions designed to promote health, prevent disease, injury, disability and premature death as well as exposure to environmental hazards.

Based on systematic evaluations of the evidence, the Community Guide provides recommendations on population-based interventions for use by communities and healthcare systems to promote health and to prevent disease, injury, disability and premature death. The recommendations are: "strongly recommended", "recommended", or "insufficient evidence". For those interventions where there is insufficient evidence of effectiveness, the Community Guide provides guidance for further prevention research. **It is important to note that a determination that evidence is insufficient should not be confused with evidence of ineffectiveness.** The *Community Guide* is not yet complete. Work on it continues as the evidence on new topics is considered and analyzed. The Community Guide can be accessed at: http://www.thecommunityguide.org.

Future Directions. *Strategies for Public Health* is an evolutionary document. Initially it was published in stages during the fall of 1998 and the winter of 1999. "Volume 2" is being disseminated in the fall and winter of 2002-2003. It should be considered a "work in progress" and will continue to evolve over time. *Strategies for Public Health,* both the original document and Volume 2, represent steps in a strategic process to build on the experience of Minnesota's public health professionals and to integrate research into public health practice in Minnesota.

Public Health is Everybody's Business. In *The Future of Public Health* (Institute of Medicine, 1988), public health is described as "…what we, as a society, do collectively to assure the conditions in which people can be healthy." While protecting the health of the public is a basic responsibility of government, no single business, organization or government agency has the resources to bring about the changes needed to improve the public's health. It is what we do collectively in our communities that will move us as individuals and as a state toward a healthier future. We all share the benefits of and the responsibility for a healthy society. Public health is everybody's business.

In Minnesota, the practice of public health has long depended upon a strong partnership between state and local health departments. Effective public health practice also depends upon teamwork with other governmental units (such as schools) and others in the community (such as businesses and consumers). With recent changes in the health care landscape, successful collaborative efforts are increasingly taking place between the public and private health sectors in Minnesota. More and more health plans, patient care providers, non-profit organizations and others recognize the importance of improving the health of populations. State and local public health agencies are working with these new partners to develop effective ways of improving the public's health. *Strategies for Public Health, Volume 2* is intended to support these collective efforts.

Governmental Public Health in Minnesota. Governmental public health agencies have a responsibility to provide certain services that will promote and protect the health of the population. How these responsibilities are carried out varies from state to state and community to community. In Minnesota these public health activities are carried out through a unique partnership between state and local governments. Minnesota has long been recognized for this partnership, strengthened over the years by joint efforts to achieve public health goals and improve the health of all Minnesotans.

Minnesota's system of local public health - known as Community Health Services (CHS) - includes both the state public health agency and 50 (and as of January 2003, 51) local Community Health Boards and is designed to "…*protect and promote the health of the general population…by emphasizing the prevention of disease, injury, disability, and preventable death through the promotion of effective coordination and use of community resources, and by extending health services into the community"* (MN Statutes 145A.02). Minnesota's Community Health Boards provide direction, planning and coordination for local public health departments.

Community Health Plans. The CHS system exists to carry out the planning, administration and delivery of public health services in Minnesota. To qualify for CHS funds appropriated by the Minnesota Legislature, local Community Health Boards must periodically conduct a comprehensive public health planning process. This

planning culminates in the preparation of a four-year *Community Health Services Plan.* CHS plans include:

- a community-wide assessment of issues, needs, strengths, and resources;
- prioritization of public health problems;
- a plan for addressing and evaluating specific public health problems;
- a list and/or description of ongoing activities.

The development of the CHS plans helps make public health issues more visible to the public. The CHS plans lay the groundwork for the development and periodic updating of Minnesota's public health improvement goals, provide the foundation for collaborative work between local public health agencies and their partners, e.g., health plans, health systems and community based organizations; help each community to set priorities for the health of its citizens, identify the resources (staff time, funding, etc.) needed to address those priorities, and mobilize the community to act on those priorities.

Minnesota's Public Health Improvement Goals. We know we want people in our state to be healthy. But what exactly does "healthy" mean? To answer that question, Minnesota has a set of "public health improvement goals" that identifies what is needed for all citizens to live healthy, productive lives. These goals are regularly reviewed and updated to make sure they address emerging public health problems and changing societal conditions.

The most recent set of public health goals, *Healthy Minnesotans: Public Health Improvement Goals for 2004*, builds upon local and regional assessments, community planning activities, and national goals. The Commissioner of Health formed the Minnesota Health Improvement Partnership (MHIP) in order to engage statewide organizations and systems in the process of setting public health goals and action steps to achieve the goals. The partnership includes leaders from more than 30 statewide organizations that have some responsibility for the health of the public. *Healthy Minnesotans* has three purposes:

- provide a common direction for the many people and organizations that work to improve the public's health;
- stimulate and encourage additional efforts toward healthy communities; and
- present data that indicate the health status of Minnesota residents, and that can be used to determine if we are achieving our public health goals.

There are 18 goals in *Healthy Minnesotans: Public Health Improvement Goals for 2004.* They are:

- Reduce the behavioral risks, which are primary contributors to morbidity and mortality.
- Improve birth outcomes and early childhood development.
- Reduce unintended pregnancies.
- Promote health for all children, adolescents, and their families.
- Promote a violence-free society.
- Reduce the behavioral and environmental health risks which are primary contributors to unintentional injury.
- Improve the outcomes of medical emergencies.
- Reduce infectious disease.
- Promote the well-being of the elderly

and those with disabilities, disease and/or chronic illness.
- Reduce exposure to environmental health hazards.
- Promote early detection and improved management of non-infectious/chronic conditions.
- Promote optimum oral health for all Minnesotans.
- Reduce work-related injury and illness.
- Assure access to and improve the quality of health services.
- Ensure an effective state and local government public health system.
- Eliminate the disparities in health outcomes and the health profile of populations of color.
- Foster the understanding and promotion of the social conditions that support health.

Healthy People 2010, the public health goals for our nation, are designed to achieve two overarching goals or priorities: increase quality and years of healthy life, and eliminate health disparities. Similarly, three themes emerge as critical priorities for assuring a healthy future for all Minnesota residents. As in *Healthy Minnesotans*, this document, *Strategies for Public Health, Volume 2*, is a call to action to address the three priorities for improving the health of Minnesotans. All organizations are urged to consider carefully how they can address the three priority areas when looking at the strategies presented in this document. It is only through concerted attention to these priority areas that we will move ahead in improving the health of Minnesota residents. The three critical priority areas of opportunity for improving the health of all Minnesotans are:

✓ **Assuring a Foundation for Health Protection.** At no time is the need for a responsive and effective foundation for health protection more evident than when residents of Minnesota are dealing with the effects of natural or human-made disasters. A variety of organizations and systems carry out activities to protect health. Minnesota's governmental public health system is an integral part of this foundation for health protection. The state and local government public health system's statutory responsibilities for health protection include an ability to assure that appropriate health protection steps are taken. Thus, the ability to mobilize quickly to protect health rests, in part, on society's ongoing commitment to support and maintain the government's public health system. For more information, see the section within this Introduction on *Public Health Emergency Preparedness*.

✓ **Eliminating Disparities in Health Status.** Minnesota consistently scores near the top of national surveys ranking states on the health of their residents. However, these relatively good overall health outcomes, tend to mask severe disparities among certain groups in Minnesota. These disparities include geographic, economic, age, gender, race and ethnicity. Minnesota is among the states with the greatest gap of health status disparity between whites and African Americans, American Indians, and other groups. American Indians and populations of color in Minnesota are at greater risk of suffering from cancer, heart disease, stroke, chemical

dependency, diabetes, homicides, suicides, unintentional injuries, and HIV/AIDS. If action is not taken immediately, the problem will only worsen. Concerted action on the part of state and local public health agencies, community-based organizations, and the entire health care industry is needed to address existing health disparities. For more information see the section within this Introduction on *Eliminate Health Disparities*.

- ✓ **Increasing Years of Healthy Life.** While increased life expectancy represents one of the major success stories of the last 100 years, we are now poised to add a new dimension to the discussion, that of quality of life. The ultimate goal of Minnesota residents is to have not only a long life, but a long and healthy life. While this concept may seem intuitive, the addition of quality-of-life considerations into discussions of health has major implications for many of the organizations that work to improve health. This will be particularly true as Minnesota's large population of baby-boomers ages.

Healthy Minnesotans: Public Health Improvement Goals for 2004 will continue to be updated using information from the local CHS planning process and advice from representatives of a wide range of perspectives. This comprehensive goal-setting process helps to provide a common direction, a common language, a sense of ownership, and broad support for the efforts needed to improve the health of Minnesota residents. The next version of *Healthy* Minnesotans will be completed in December 2003 and will cover the period of time from the beginning of 2004 to the end of 2010.

Categories of Public Health. Minnesota's CHS agencies collect and organize the information in their CHS plans according to twelve "categories" of public health. These categories reflect the wide scope of issues with which the public health system is concerned. Each of the twelve public health categories correlates to one or more of the goals in *Healthy Minnesotans.* The categories were developed as an organizing framework for the collection, analysis, and reporting of information. The goals and their accompanying objectives, on the other hand, indicate where the state is headed and how to measure progress. See Appendix B for a list of the categories, the public health goals with which they correspond and the public health problem areas within the categories in which strategies are offered. While the categories will remain static over time, the goals are dynamic and can change in response to changes in the health of the people of Minnesota. The twelve categories of public health are:

- alcohol, tobacco and other drugs
- children and adolescents growth and development
- chronic/noninfectious disease
- disability/decreased independence
- environmental conditions
- infectious disease
- mental health
- pregnancy and birth
- service delivery systems
- unintended pregnancy
- unintentional injury
- violence

How to Use This Document. *Strategies for Public Health, Volume 2* is organized according to the previously mentioned categories of public health (see Appendix B, *List of Categories, Goals and Problem Areas*). Each category in this document contains: a title page that lists public health problem areas within the category for which strategies are presented, a general introduction to the category, and for each public health problem, an introduction, a strategy grid and descriptions for each strategy on the grid. The strategy grids in this document are also included in *Healthy Minnesotans: Public Health Improvement Goals for 2004.*

Strategy Grids. The strategy grids provide a visual representation of a "menu" of strategies for a specific public health problem and the community sectors that have a potential *collaborative* role in the implementation of each strategy. See Appendix C for definitions of community sectors on the strategy grids. The grids do NOT indicate mandated roles or activities, but are intended to indicate potential voluntary involvement (e.g., business and work sites). In addressing a particular public health problem, the grids are to be used as a guide in helping to determine what strategies to use, and who could be involved in implementing them. Conversely, if there is not a check-mark on the grid for a sector or an organization that perhaps should be involved in addressing the problem, or that wants to be involved in working on the problem, that's great! Don't let the grid limit creativity and the uniqueness of any particular community. Appendix D contains a blank grid for use by community groups as they determine which sectors might or should become involved.

Each strategy grid lists sectors in the community that have a potential collaborative role to play in implementing the strategies on the grid. The sectors on each grid are: governmental public health agencies, health plans, hospitals and clinics, educational system, community-based organizations, businesses/work sites, and other. Their definitions can be found in Appendix C, *Definitions of Community sectors on the Strategy Grids*.

Determining specific roles in any given community will be dependent on the availability of local resources, expertise and the level of readiness of a community to address the problem. This is a local process that needs to happen within communities. Appendix E contains a series of community prevention planning tools that can be used in making local decisions about roles and responsibilities with regard to any particular strategy, groups of strategies or workplans.

In 2000, the Minnesota Council of Health Plans produced a report called, *Putting Commitments into Practice*. It describes the roles for health plans in implementing activities in communities that support the 10 Essential Services of Public Health. This report can be accessed at: http://www.mnhealthplans.org/collateral/MCHP_Public_Health.pdf. In addition, the Minnesota Council of Health Plans has developed two documents, *Public Health Priorities 2002*, that provide examples of roles for health plans in achieving public health goals. These documents are in Appendix F, *Public Health Priorities 2002 –*

Minnesota's Health Plans in Action, and are also available on the Minnesota Council of Health Plans website at: http://www.mnhealthplans.org/. Hard copies can by attained by contacting the Minnesota Council of Health Plans, at (651) 645-0099, info@mnhealthplans.org. Court International Building, Suite 255 South, 2550 University Avenue West, St. Paul, MN 55114.

The Minnesota Hospital and Healthcare Partnership (MHHP) has information about roles for hospitals and clinics in achieving public health goals. In January 2003, MHHP will change its name to the Minnesota Hospital Association. The Minnesota Hospital Association will begin collecting stories in 2003 that provide current examples of roles of its association members in working on public health goals. For more information, see the Association's website, at www.mhhp.com or call (800) 462-5393.

Strategy Descriptions. Each strategy on a grid has a corresponding description. Within each strategy description are the following components:

- a small table that indicates the "levels of prevention" and the "levels of intervention";
- background and purpose;
- additional resources such as documents, monographs, organizations and journal articles that can be of value to anyone looking for more information about the strategy;
- a brief description of the evidence that supports the strategy;
- whether the strategy has been implemented in Minnesota and if so, where;
- indicators that can be used to mark progress on the strategy; and
- who at the MDH to contact for more information about the strategy.

Levels of Prevention and Intervention. Each strategy description contains a small table that indicates the "levels of prevention" and the "levels of intervention" of the strategy. The term "levels of prevention," refers to the points of the problem development at which the strategy intervenes (e.g., primary, secondary, tertiary). The term, "levels of intervention," refers to the focus of the strategy (e.g., individual-focused, systems-focused, community-focused). Together, the levels of prevention and the levels of intervention help to focus intervention efforts, to document progress toward their completion and to integrate research into practice. Definitions for these terms are found in Appendix G.

Setting the Stage. Health problems are heavily influenced by societal policies and environments that either sustain the behaviors and practices that contribute to the problems, or fail to foster healthier choices that could prevent the problems. The major public health problems of our time will not be solved solely by individual actions and health choices, but by individuals coming together to make our society one in which healthy choices are easy, fun and popular. Communities in which policies and environments focus on the latter approach will be healthier and more satisfying places to live, work and play.

Often policies that affect health are not under the purview of public health. Instead,

they may be in school districts, in parks and recreation departments, economic development or other arenas of local life. This means that health practitioners must engage with the non-health sectors of our society, so those sectors understand how they can contribute to the health of people in their communities.

Addressing these policies, environments and individual changes successfully, requires the implementation of several strategies aimed at multiple levels of the community, e.g., individuals, systems and communities themselves. Depending on the intended goal, these multiple strategies may also span the continuum from primary prevention to tertiary prevention (see Appendix G, *Levels of Prevention and Intervention*) for more information).

Choosing Your Strategies. The strategies presented in this document cover the spectrum from working with individuals to influencing policies in communities and systems; from preventing problems from occurring in the first place to treating them after they've become problematic. Some of these strategies are broad and global, others are very specific to certain situations.

So, how do you know which strategies to choose? How can you tell which strategies will achieve your goals and objectives? Essentially these are questions that must be answered by the communities in which they will be implemented. Involving community members in making decisions and taking action is critical to the success of that action. Effective community engagement results in activities and programs that reflect the strengths, needs and resources of the community, and outcomes that matter, that are understandable to community members and that reflect community expectations. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Community Engagement".

Of all the potential strategies that could be implemented, it is often confusing to know which ones you should implement. Appendix H, *How To Choose Strategies*, contains a series of questions that will help you determine which of several strategies to select.

Activities for All Problem Areas. No matter what strategies are implemented, most public health practitioners engage in activities that span many different problem areas. For example, whether addressing immunization or tobacco use, family planning or clean water, the public health practitioner may need to be skilled in such activities[1] as:

- **Advocacy** - Act on someone's behalf and/or for healthy public policy. Use with clients who lack resources of access to health care; includes a focus on developing a client's capacity to become their own advocate. Also includes

[1] *Many of these descriptions are taken from two sources: (1) a document called, "Public Health Interventions: Examples from Public Health Nursing;" and (2) an article, Keller, L., Strohschein, S., et al. Population-based public health nursing interventions: A model from practice. Public Health Nursing 15(3), 207-215. Both can be obtained by contacting Linda Olson Keller, R. N., M.S., Office of Public Health Practice, Minnesota Department of Health, Community Health Division, Metro Square, Suite 460, P. O. Box 64975, St. Paul, MN 55164-0975.*

actions to develop healthy public policy in other arenas, such as media advocacy (working with the media to tell your story), policy advocacy (working to advance formal and informal policies for the betterment of all), and empowering advocacy (working with individuals and groups to become their own advocates on issues in addition to health care access).

- **Assessment** - The regular and systematic collection, analysis and dissemination of information on the health of the community, including statistics on health status and community health needs and strengths, and epidemiologic and other studies of health problems.
- **Asset Building** - Identification of and building upon strengths of individuals and communities to promote the healthy development of youth, families and communities.
- **Coalition Building** - Promote development of alliances among different organizations or constituencies for a common purpose. Used to solve problems, build linkages and enhance local leadership to addresses health concerns.
- **Collaboration** - Enhance the capacity of another organization for mutual benefit and to achieve common goals. Used to exchange information and share risks, responsibilities, resources and rewards. Involves more complex processes, and financial and time commitments compared to coalitions.
- **Community Engagement** - A systematic process that provides an opportunity for citizens, planners, managers, and elected representatives to share their experience, knowledge, and goals, and combine their energy to create a plan that is technically sound, economically attractive, generally understood and accepted by most of those affected by it, and is thus politically viable.
- **Counseling, Screening, Referral and Follow-up** - Assist individuals/families to develop ability to assume increased responsibility for self-care and to cope with stressful events and situations. Identify at-risk populations and provide appropriate screening techniques and referral for follow-up relevant to findings. Assist individuals, families, groups, or organizations to use necessary resources available to prevent or resolve problems. Used to enhance client's self-care capabilities to access resources.
- **Data Collection, Analysis, Dissemination** - Gather information about specific health problems to determine the nature and relationships and share findings with the public.
- **Disease Surveillance** - Monitor for the occurrence of disease for a given population.
- **Evaluation** - Systematic efforts to collect and appraise information with the intent of improving the quality of the process(es) and/or improving the effect(s) or outcome(s).
- **Outreach** - Reach out to at-risk individuals/families. Used to provide information about services and make services more accessible to vulnerable populations.
- **Policy Development** - Contribute to the development of formal policies, e.g., legislation, regulations, ordinances; and informal policies, e.g., worksite,

community and family norms that support healthy communities. Includes policy implementation, evaluation, and community mobilization and involvement.

- **Program Planning** - A generic set of tasks to guide the development of a community intervention. The tasks are: (1) assess the needs and assets of the target population; (2) identify the problem(s); (3) develop appropriate goals and objectives; (4) create an intervention based on the needs and assets of the target population; (5) implement the intervention; and (6) evaluate the results.
- **Provider Education** - Provide information, resources, and training to individuals, groups, and organizations whose services affect public health-related community problems.
- **Public Information/Public Education/Consumer Education** - Provide communities and consumers with information pertinent to healthy behaviors or specific diseases and risks.
- **Social Marketing** - Adapt commercial marketing techniques to the analysis, planning, implementation, and evaluation of programs that are designed to influence and improve the health behaviors of target groups and populations.
- **Strategic Planning** - Making, doing or arranging something more effectively; creating a set of decisions for future action.

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Why Engage the Community? Community engagement is a cornerstone of effective public health practice. Involving community members in making decisions and taking action is critical. Successful community engagement builds skills and capacity within the community, which are fundamental factors for optimal health.

Community engagement is a process of involving community members and the reliance on a community's own resources and strengths as the foundation for designing, implementing, and evaluating solutions to problematic conditions that affect them. As such, community engagement involves interpersonal trust, communication, and collaboration. Such engagement, or participation, should focus on, and result from, the needs, expectations, and desires of a community's members.

Effective community engagement results in activities and programs that reflect the strengths, needs and resources of the community, and outcomes that are understandable to community members and that reflect community expectations.

Along with more traditional risk reduction activities, building community engagement is increasingly regarded as a priority for health improvement. The Institute of Medicine (IOM) recently noted that the next generation of prevention interventions must focus on building relationships with communities, and derive from the communities' assessments of their needs and priorities.

What is Community Engagement? "Community" is a fluid concept and may be described as people (socioeconomics and demographics, health status and risk profiles, cultural and ethnic characteristics), location (geographic boundaries), connectors (shared values, interests, motivating forces), or power relationships (communication patterns, formal and informal lines of authority and influence, stakeholder relationships, resource flows).

Effective community engagement brings people to the table—both community members and professionals—and nurtures their active participation in all aspects of decision-making processes. The International Association for Public Participation defines "constructive citizen participation" as a systematic process that provides an opportunity for citizens, planners, managers, and elected representatives to share their experience, knowledge, and goals, and combine their energy to create a plan that is technically sound, economically attractive, generally understood and accepted by most of those affected by it, and is thus politically viable. Cultural strengths are identified and valued as the process seeks to meld community "wisdom" with scientific and institutional expertise. Community members are valued as equal partners. Information is gathered to inform action, and new understandings emerge as participants reflect on potential actions.

The Cycle of Engagement. The cycle of engagement typically has three parts to it: First is coming together - starting the conversation and dialogue; building trust and safe spaces for people to think, debate,

reflect and make decisions. Second is moving forward—converting dialogue into activity; reaching out beyond the original planning group; and creating dynamic partnerships to implement programs and provide services. And third is sustaining momentum—building structures; developing and sustaining leadership; assessing and improving programs; measuring change and communicating results. These three steps can bring many sectors of the community together, foster new alliances and relationships, provide community members with a better compass for understanding community problems and assets, and be used to drive community change.

Principles of Community Engagement. The Centers for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) Committee for Community Engagement suggests several underlying principles that can help guide community members in designing, implementing, and evaluating community engagement efforts, and form effective engagement partnerships. Each principle covers a broad practice area of engagement, often addressing multiple issues, and is organized in three sections: items to consider before starting the engagement effort, what is necessary for engagement to occur, and what to consider for the engagement to be successful. The nine principles are discussed below. For more information see the website for strategies at: www.health.state.mn.us/strategies/. Click on "Community Engagement".

Before starting a community engagement effort it is important to:

- Principle 1 -- Be clear about the purposes or goals of the engagement effort, and the populations and/or communities you want to engage.
- Principle 2 -- Become knowledgeable about the community in terms of its economic conditions, political structures, norms and values, demographic trends, history, and experience with engagement efforts.

For effective engagement to occur, it is necessary to:

- Principle 3 -- Go into the community, establish relationships, build trust, work with the formal and informal leadership, and seek commitment from community organizations and leaders to create processes for mobilizing the community.
- Principle 4 -- Remember and accept that community self-determination is the responsibility and right of all people who comprise a community.

For engagement to succeed it is necessary to:

- Principle 5 -- Partner with the community to create change and improve health.
- Principle 6 -- Recognize and respect community diversity.
- Principle 7 -- Identify and mobilize community assets, and develop capacities and resources for community health decisions and action.
- Principle 8 -- Release control of actions or interventions to the community, and be flexible enough to meet the changing needs of the community.
- Principle 9 -- Commit to the activities for the long-term.

New Assumptions. Effectively engaging the public means adopting an entirely different set of assumptions about the public, it means doing things differently. For example:

- Professionals within public institutions must understand that under the right conditions, people can deal with complex issues, and that they are willing to take the time to do it thoughtfully.
- We must recognize that people think about public concerns not in isolated bits, but in inter-related webs of concerns; and that there is a wisdom in communities throughout the state that needs to be tapped in order to truly make sense of data and decide what actions to take.
- People need to learn from one another—have room for ambivalence and time and space to test ideas, explore, and listen—so they can sort out what they believe and learn together.
- People need a sense of possibility to engage in public discussions—a belief that something worthwhile might be produced from their efforts and involvement.
- It is essential for those engaging the community to adhere to the highest ethical standards. Failure to act ethically is not an option. Ethical action is the only hope for developing and maintaining the trust of communities.

Community Engagement and the Local Public Health Act. *"Governmental public health agencies must find ways to improve communication and openness with the public to maintain and increase their trustworthiness."* (IOM, Healthy Communities, 1996).

Community participation was a key ingredient in the original design of the Community Health System in Minnesota. The 1976 CHS Act established a system of local public health agencies across the state and required Citizen Advisory Committees and community involvement in community health assessment and planning. Since that time, local public health agencies have served as catalysts, engaging people in ways that allowed communication and cooperation among community members, organizations, and government entities.

The State's changing demographics and the recent priority focus on the elimination of health disparities is challenging the established ways this work has been done. Success in achieving public health goals will require a new level of communication and cooperation between community members who have not been a part of past decision-making processes and the organizations and governments that serve them. In the words of one public health practitioner, *"This work means making a commitment to change the way we do our work."*

Suggested Strategies. Successful community engagement calls for everyone to take responsibility—to step up to the plate, to be involved and to hold one another accountable. Multiple sectors must be involved in efforts to eliminate health disparities. Suggested strategies include:

- Take the time necessary for authentic participation.
- Initiate or expand dialogue within the broader systems and communities served.
- Periodically and systematically create the time and place needed for internal

discussions, planning, and training on community engagement strategies and tools.
- Recognize and plan for expanded timelines necessitated by identification, recruitment, and orientation of new partners and community members.
- Include adequate time in decision-making processes for representatives of organizations and communities to seek input.
- Communicate with the community every step of the way.
- Encourage and support community engagement training opportunities.
- Assure that community engagement principles are incorporated into contracts for capacity building and technical assistance, social marketing and evaluation, so that contractors include community engagement information and strategies in their activities.

"Go in search of people.
Begin with what they know.
Build on what they have."

Chinese proverb

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ELIMINATE HEALTH DISPARITIES

Minnesota has been noted as one of the healthiest states in the nation; however, racial/ethnic minority populations in Minnesota experience poorer health in several areas. Overall, populations of color and American Indians experience shorter life spans, higher rates of infant mortality, higher incidences of diabetes, heart disease, and cancer, as well as other diseases and conditions. These disparities also affect Minnesota's newly arrived immigrants and refugees. In some cases, the health disparities among these populations are the highest in the nation. Populations of color and American Indians have joined with MDH and its Office of Minority and Multicultural Health for increased attention to these issues.

Data on Health Disparities. Improved data collection now is more accurately uncovering the breadth of these health disparities in Minnesota. Highlights of those data are summarized on fact sheets covering Minnesota's four major racial/ethnic minority groups - African American, American Indian, Asian American and Hispanic/Latino. To locate these fact sheets see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "African American" for *Eliminating Disparities in the Health Status of **African Americans***; on "American Indian" for *Eliminating Disparities in the Health Status of **American Indians***; on "Asian American" for *Eliminating Disparities in the Health Status of **Asian Americans***; and on "Hispanic/Latino" for *Eliminating Disparities in the Health Status of **Hispanics/Latinos***.

Data on "subgroups" within several of these racial/ethnic groups, for example Somalis from Africa and the Asian Hmong community in Minnesota (one of the largest Hmong communities in the United States) are not specifically identified among the data for the respective larger racial/ethnic group. Without this identification of subgroups, accurate analysis and assessment of health status and specific health issues is very difficult, and is a disservice to the population subgroups.

More specifically, some examples of these racial/ethnic and American Indian health disparities include:

- Among the racial/ethnic groups in Minnesota, African American women have a breast cancer mortality rate that is 50 percent higher than that of white or Hispanic/Latina women, despite similar incidence rates. A greater proportion of African American women with breast cancer are diagnosed at a later, less treatable stage.
- African American, American Indian, and Asian American women have cervical cancer incidence rates that are three to four times higher than the rate for white women. Deaths due to cervical cancer also occur at significantly higher rates among Asian Americans and African Americans compared with whites.
- Mortality rates for Minnesotans overall are lower than for the nation as a whole; however, for some segments of the population, including American Indians, Asian Americans, and African American females, mortality rates for heart disease or stroke are higher than these rates for the overall state population. American Indian death rates from 1990 through

1998 were 33 percent higher than the state's population rates and 44 percent higher than the total U.S. American Indian rates. Age-adjusted death rates also indicate considerable disparities in heart disease for African American females living in Minnesota. Asian Americans living in Minnesota are more likely than other population groups to suffer from stroke.

< In Minnesota, glaring racial and ethnic disparities in diabetes exist. These are reflected in the prevalence, complications, death rates, and preventive care received by those who have diabetes. Compared to whites, diabetes, as an underlying cause of death in Minnesota, was between 1.5 and five times more common among African Americans, Hispanics/Latinos, and American Indians. The diabetes death rate among Asian Americans is increasing faster than among any other racial or ethnic group. Among people with diabetes: kidney failure is two to six times greater in populations of color; lower limb amputations are four times greater in American Indians; and eye disease is two times greater in Hispanics/Latinos, and 40-50 percent greater in African Americans.

< In 2000, the number of newly reported cases of HIV among persons of color was greater than among whites for the first time in Minnesota, even though communities of color make up approximately 10 percent of Minnesota's population. African American men have the highest annual rate of newly reported HIV/AIDS infections, 21 times greater than white males in Minnesota. The disparity is even greater for African American women with an HIV/AIDS rate 91 times greater than that among white women.

< Infant mortality is a summary statistic reflecting multiple conditions and causes. Although Minnesota has one of the lowest state infant mortality rates in the nation, the overall state rate masks severe and longstanding disparities in infant mortality experienced by some of Minnesota's populations. American Indian infant deaths have been rising over time. In fact, the National Center for Health Statistics and the Bemidji Indian Health Service have reported that Minnesota's Indian infant death rate is the highest in the U.S. African American infant deaths, although improving over time, remain significantly higher than those of white infants. Asian infant deaths are also rising in the most recent time period measured.

< Minnesota has wide and unacceptable disparities in the rates of teen pregnancy across its population. While Minnesota's teen pregnancy rate among whites is one of the lowest in the nation, the rates among African American and Hispanic/Latina teens are first and second respectively. While teen pregnancy rates among many Minnesota populations are decreasing, there is an alarming increase in pregnancy rates for Asian and Hispanic/Latina teens. Preventing teen pregnancy reduces infant mortality, child poverty, and out-of-wedlock childbearing and is an effective way to improve overall child and family well-being.

Social and Economic Determinants of Health Disparities. According to the report

A Call to Action: Advancing Health for all through Social and Economic Change (July 2001), "health is the product of individual factors (such as genes, beliefs, coping skills, and personal behaviors) combined with the collective conditions (factors in the physical, social, and economic environment)." (For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Social Determinants".)

In addition, factors and barriers to better health status have been identified as: lack of health care insurance and access to affordable health services; language differences and lack of interpreters; negative cultural history with western medicine and systems; lack of transportation to health services; lack of child care available to attend health-related appointments; and lack of health providers from and familiar with the varying cultural groups in Minnesota.

A Call to Action further identifies the key aspects of the social and economic environments that affect health as education, income, and income distribution; social norms; social support and community cohesion; living conditions such as availability of affordable housing, transportation, and nutritious foods; racism and discrimination; employment and working conditions; and culture, religion, and ethnicity. In addition:

- The effect of income inequality on health is not limited to people in poor or low income groups. The health of people in middle (and, in some studies, upper) income groups is worse in communities with a high degree of income inequality (a large income gap) when compared to communities with less income inequality (a smaller income gap).
- Poverty is not the overarching factor for poor health. Regardless of income or health care coverage, people of color receive poorer services. (Institute of Medicine, 2002). *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care.* Washington D.C. Contact: National Academy Press, at (800) 624-6242, http://www.nap.edu/books/030908265X/html/).
- Culture, religion, and ethnicity have an overarching influence on beliefs and practices related to health, illness, and healing. This includes perceptions of health and illness, beliefs about the causes of health and illness, decisions about whether to seek a health care provider, and decisions about type of provider or healer that should be sought.

Underlying social and economic conditions affect health status as much as do individual health behaviors, access to health care, and genetics. Studies conducted to date point to conclusions, such as:

- Discrimination and racism play a crucial role in explaining health status and health disparities, through factors such as restricted socioeconomic opportunities and mobility, limited access to and bias in medical care, residential segregation (which can limit access to social goods and services), environmental hazards and chronic stress.
- People of color and American Indians do not experience poorer health simply because they are more likely to have lower income; at every level of income

the health of people of color and American Indians is poorer than that of their white peers.

< People of low income do not experience worse health simply because of high-risk personal behavior. In one recent study, (detrimental) health behaviors explained less than 20 percent of the difference in death rates across income groups.

It is clear that successfully addressing disparities cannot be done without also addressing the realm of social and economic conditions that influence health status. It is also clear that interventions to improve access to medical care and reduce behavioral risks must be combined with broader efforts to increase socioeconomic status and reduce racial/ethnic discrimination in eliminating health disparities.

While public health in Minnesota has the responsibility to address all populations and identify and address all health disparities, the Office of Minority and Multicultural Health (OMMH) exists within MDH to focus attention on the disparities in health status among Minnesota's American Indians and racial/ethnic populations.

The mission of the Office of Minority and Multicultural Health (OMMH) is *"… to strengthen the health and wellness of racial/ethnic, cultural, and tribal populations of the State of Minnesota by engaging diverse populations in health systems, mutual learning, and actions essential for achieving health parity and optimal wellness". (OMMH Mission Statement, 2002)*

The OMMH provides leadership within MDH to:

< Ensure that all health policies, initiatives, and strategies - throughout all levels of the Minnesota Department of Health - are inclusive of populations of color and American Indians.
< Collaborate on all levels regarding community health activities addressing racial/ethnic and American Indian health.
< Assist communities in assessing public health needs of populations of color and American Indians.
< Assist communities in assessing public health needs of populations of color and American Indians.
< Build state and community capacity to meet the needs of populations of color and American Indians in disease prevention, health promotion, and health care systems, and to close the gap on health disparities.
< Identify resources available to community-based organizations regarding racial/ethnic and American Indian health.
< Work in partnership with communities throughout the state to ensure the health issues of racial/ethnic and American Indian populations are addressed.

In addition, all of MDH is responsible for working with racial/ethnic communities and American Indians in Minnesota, with local public health, and with other organizations and groups to:

< Identify research issues on the health status of racial/ethnic populations and collaborate with internal and external partners to conduct research.

- Identify and develop policies to improve the health status of populations of color and American Indians.
- Promote collaboration and increased communication among local public health departments, state and local government officials, non-government agencies and organizations (such as voluntary agencies, community-based organizations and philanthropic groups), and populations of color and American Indians, in order to identify and address public health issues.
- Work to ensure that valid, available, and reliable health data are available on each population of color and on American Indians in Minnesota.

Implicit in this work is the philosophy that racial/ethnic community members must be able to design strategies and activities relevant to their cultures, traditions, customs, and beliefs.

OMMH's work is based in public health principles* in the following ways:

General Public Health Principles:	**Public Health Principles Specific to Addressing Racial and Ethnic Health Disparities:**
Aggregate: Public Health's focus is population-based, rather than individual-based as in medical practice. The whole population as well as population groups within the whole are identified and addressed as groups.	**Identify and Address Populations of Color:** Racial/ethnic groups are addressed from a population-based, whole group aggregate perspective to determine health status, spotlighting specific groups when indicators of health disparities are noted.
Prevention: Public Health's priority is to promote health and prevent health problems before risks are apparent and problems occur.	**Support Culturally-relevant Health Promotion and Prevention:** Community-determined, culturally-relevant strategies that enhance, promote, and improve the health status of communities and populations of color and American Indians are essential.

Community Organization: Public Health practice means identifying and bringing together community resources to meet needs.	**Support Communities' Coming Together for Strength:** Racial/ethnic and American Indian community groups develop their own cohesiveness, identify their strengths and assets, and develop their own strategies based in cultural beliefs and practices to enhance health and overall well-being of their people.
Greater Good: Public Health's first consideration is interventions that provide the greater good for the greatest number of people.	**Greatest Good:** The health of vulnerable populations affects us all and is all our responsibility. With improved quality of life, people have energy and resources to create stronger families and communities.
Leadership: Public Health does what others cannot or will not do.	**Support Leadership:** Work with, connect, and support local communities and their leaders to identify, take responsibility for, and address racial/ethnic health disparities, and to identify and publicize health disparities among their members, together developing strategies to address the disparities.
Epidemiology: Public Health describes the health status of populations, explains the causes of disease, predicts the occurrence of disease, and controls the distribution of disease. Public health relies on epidemiology as its method of inquiry.	**Epidemiology of Racial/Ethnic Health Disparities:** Reliable data on the health status of Minnesota's populations of color are almost non-existent, and data collection methods are not culturally-sensitive. Actions can be developed to prevent poor health outcomes by: appropriately identifying, collecting, and reporting racial/ethnic group-specific data; identifying where data are lacking and developing appropriate tools to collect those data; and linking poor health status indicators to social conditions and influences, as well as personal behaviors and genetics.

* For more information on public health principles, see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

The Minnesota Eliminating Health Disparities Initiative (EHDI). The populations experiencing these disparities have many strengths and traditions to draw upon for solutions. For example, in the African American and Latino communities, churches provide connections and leadership on community issues. For American Indians, restoring cultural traditions such as native foods, cradleboards, and sacred use of tobacco can improve infant health. Hispanic/Latino and Asian communities have similar traditions around family, nutrition, and healing practices that are strong already and need support from mainstream providers to promote healthy pregnancy, birth, and infancy.

Recognizing these assets, along with the need to provide funding to the communities experiencing disparities, the Minnesota Legislature created in statute (MN. Stat. 145.928) a statewide initiative and funding to close the gap on health disparities in Minnesota. The resulting legislation has two main goals:

- By 2010, decrease by 50 percent the disparities in infant mortality rates and adult and child immunizations rates for American Indians and populations of color in Minnesota as compared with the rates for whites; and
- Close the gap in health disparities of American Indians and populations of color as compared with the rates for whites in the following priority health areas:
  - breast and cervical cancer
  - cardiovascular disease
  - diabetes
  - HIV/AIDS and sexually transmitted infections
  - violence and unintentional injuries

In addition, federal TANF (Temporary Assistance to Needy Families) funds are distributed through this program for infant mortality prevention. These funds focus on preventing out-of-wedlock teen births through programs that support healthy youth development.

The Eliminating Health Disparities Initiative (EHDI) legislation focuses on African Americans/Africans, Latino/Hispanics, Asian/Pacific Islanders, and American Indians living in Minnesota. Eligible Community Grant applicants include, but are not limited to faith-based organizations, social service organizations, community non-profit organizations, community health boards, tribal governments, and community clinics.

The following are the major components of the EHDI:

- A partnership steering committee to address health disparities in a comprehensive way.
- A set of measurable outcomes to track Minnesota's progress in reducing health disparities.
- Improved statewide assessment of risk behaviors among African Americans/Africans, Asian/Pacific Islanders, Latinos/Hispanics, and American Indians in Minnesota.
- Competitive community grants directed at reducing health disparities in immunizations for adults and children and infant mortality; breast and cervical cancer, cardiovascular disease, diabetes, HIV/AIDS and sexually transmitted infections, and violence and unintentional injuries; and teen pregnancy prevention through healthy youth development.

- Formula grants to Community Health Boards for health screening and follow-up services for tuberculosis in foreign-born persons.
- Formula grants to American Indian tribal governments for community interventions to reduce health disparities.
- Evaluation of the initiative.
- A biennial report to the legislature.

All aspects of the EHDI, from creation of the legislation to the Request for Community Grant Proposals to review and evaluation of the proposals received, have been developed with the input from and involvement of members of Minnesota's racial/ethnic and American Indian communities. The use of community engagement principles is encouraged throughout any state and local processes addressing eliminating health disparities, whether funded by this initiative or not. These community engagement principles include:

- Fostering openness and participation in the planning process.
- Ensuring that those representing a specific community truly represent that community's values, norms, and behaviors.
- Using strategies that insure inclusion, representation, and equality in the planning process. For example, ensuring that those representatives who are included in the process participate in a meaningful way and share fully in the decision making process; and offering orientation and skill building opportunities so that everyone will have an equal voice in voting and other decision making activities.
- Developing cultural competence in the organization's staff.
- Communicating with and involving the community in the planning process.

For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Community Engagement".

The 2002-2003 EHDI Community Grants Request for Proposals (RFP) provides information on the initiative, the legislation (Appendix A of the proposal), the grants, social conditions, asset-based community development, community engagement, the eight EHDI priority health areas (Appendix B of the proposal) and strategies shown effective in addressing these eight areas to-date. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "EHDI".

Some specific strategies suggested in Appendix E of the EHDI RFP (*Social Conditions*) and promoted and supported by Office of Minority and Multicultural Health, include:

- Addressing issues of unequal access to affordable, nutritious food.
- Working to improve community environments that promote physical activity and wider mental well-being and quality of life.
- Advocating for good quality, affordable housing.
- Promoting education, literacy, and employment.

The EHDI is unique in that it provides support for communities to determine their assets, as well as needs, and to develop and implement the strategies they create to employ those assets to address the needs.

Evaluation plans include steps to assess overall changes in health systems as well as lessons learned by the community-based strategies. Grantees are encouraged to try practical, common sense approaches; and new, culturally relevant health promotion, prevention, and improvement approaches including those proven effective in the mainstream science-based research. The lessons and specific effective strategies will be shared with other communities so that successful approaches can be promoted and additional new approaches tried. Racial/Ethnic and American Indian Health Committees are being organized in partnership with Minnesota's four statutory Councils, to further identify, support, coordinate, and share lessons learned in the EHDI and related communities.

The MDH Office of Minority and Multicultural Health has on staff Minority Health Coordinators for each of the racial/ethnic and American Indian groups designated in statute. These staff work closely with community grantees to assure members of communities are intricately involved in assessing the strengths, resources, and needs of the community, and in planning for and overseeing activities toward improved health status. Program staff of MDH working with the eight priority health (and related) areas in the statute meet with OMMH staff on a monthly basis to coordinate technical assistance, resources, and training opportunities for the EHDI grantees. For more information contact the Office of Minority and Multicultural Health, at (651) 297-5813. For additional information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Minority Health".

In addition, staff of OMMH address the broader scope of minority and multicultural health and encourage local (geographic) communities to take on this important work. First steps include those identified in the *Service Delivery Systems* category of this strategies document. In addition, local (geographic) communities are encouraged to take the following first steps:

- Recognize that racial/ethnic and American Indian community members may not participate in offered programs and services because the programs do not fit for them.
- Actively involve community members in designing and implementing strategies will likely lead to more effective approaches.
- Build relationships that lead to increased mutual knowledge, comfort, familiarity and trust, before launching into major new efforts.

Prevention is the best investment. It has long been documented that money spent on prevention of sickness, chronic conditions, and injuries is an investment in preventing or reducing more serious and expensive health crises later. This philosophy extends to other arenas as well. For example:

- Healthy pregnancies reduce infant mortality and promote healthier infants.
- Healthy children learn better.
- Youth who are learning healthy attitudes and behaviors remain in school longer and can set better long-term goals for themselves.
- Healthy workers are more productive and take less medical leave.
- Healthy elders live longer and need fewer health resources.

Improved quality of life allows people to have energy and resources to create stronger families, and can become more involved with their communities. With the *Service Delivery System* category of this document there is a segment on *Eliminating Health Disparities.* Within this are the universal systemic strategies that every community in Minnesota should be doing, to assure that the health of all Minnesotans of racial/ethnic heritage is assessed, addressed, and assured.

These are challenging times for public health. Our purpose is to protect and promote the health of the public, yet the events of September 11, 2001 and the October 2001 release of anthrax in Florida, Washington, DC, and New York have raised the need to protect our citizens from threats we hoped would never occur.

As a result of these events, state and local public health agencies receive funding from the Centers for Disease Control and Prevention (CDC) to prepare state and local public health agencies for bioterrorism, infectious diseases, and other threats to public health. This funding of approximately $16 million was received by MDH in June, 2002 and is supplemental to funding the MDH had received in the past. For each of the previous three years, the MDH has received $1.2 million for surveillance and epidemiology, biological lab support, and the Health Alert Network (HAN). Minnesota will use the additional funds for:

- Preparedness Planning and Readiness Assessment – determining how ready Minnesota is to manage a public health threat or emergency and preparing plans to respond to those threats.
- Surveillance and Epidemiology Capacity – making sure systems are in place within state and local health departments to rapidly detect and investigate unusual outbreaks of illness.
- Laboratory Capacity-Biologic Agents – ensuring that we can identify bioterrorist agents at public health laboratories.
- Health Alert Network/ Communications and Information Technology – enabling state and local public health agencies to rapidly exchange information and to make sure that information gets to all agencies, their partners, and the public in a safe and secure manner.
- Communicating Health Risks and Health Information Dissemination – providing timely and accurate information to citizens during a bioterrorism attack, outbreak of infectious disease, or other public health threat.
- Education and Training – ensuring that state and local public health staff, and their many partners, are adequately trained to respond to bioterrorism other public health threats and emergencies.

But is Minnesota Prepared? The need to plan and prepare for a public health threat is not new to public health. Each of Minnesota's 87 counties has been declared a federal disaster area at least once since 1965 and some have been declared a disaster areas seven or more times. This has taught us that successfully addressing a public health threat or disaster is not just the result of having a good plan, but to be continually planning and exercising those plans. A plan on the shelf, no matter how good, is seldom pulled down when a disaster strikes.

But there is still much to do. Not only does Minnesota have a lot of work to do to prepare for a bioterrorism attack or other public health threat, we need to be ready to respond to an event today, should the need arise. Community Health Boards, in coordination with the MDH, are being asked to undertake a number of activities to assure that Minnesota is prepared to respond to bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies. These activities include:

- providing leadership for the coordination and management of public health

planning and response;
- completing an assessment of local public health capacity;
- assuring the development and exercise of a comprehensive public health emergency preparedness and response plans;
- leading or participating in the response to an event;
- promoting provider compliance of infectious disease reporting as outlined in the Disease Prevention & Control (DP & C) Common Activities Framework (see the appendix to the Infectious Disease category in this document);
- maintaining and enhancing a local health alert network;
- developing a plan for communicating information to the media and the public during an event; and
- assuring a basic level of understanding among their staff and community partners.

Throughout 2002 and 2003, strategies, guidelines, and protocols will be developed to assure coordination of activities between state and local public health agencies and among local public health agencies. The strategies will be developed that can address several categories in this document including *Environmental Conditions, Infectious Disease, Mental Health, and Service Delivery Systems.*

Many of the strategies already included in these areas can be used by local agencies to prepare for and respond to an event. For example, strategies outline in the *Service Delivery Systems* category discuss working with local emergency medical services.

These relationships will be vital in the event of an attack of bioterrorism. In addition, the *Infectious Disease* category describes the DP&C Common Activities Framework (see the appendix of this category). This framework serves as the foundation for all surveillance activities, including monitoring for occurrences of bioterrorism.

Public health has always had a role to play in disaster and emergency response. The state and local public health system must now, more than ever, strengthen and clarify that role to assure that Minnesota is safe from bioterrorism, other outbreaks of infectious disease, and other public health threats and emergencies. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Emergency Preparedness".

SOCIAL AND ECONOMIC DETERMINANTS OF HEALTH

Minnesota ranks as one of the healthiest states in the nation, but mounting evidence shows that this great state of health is not shared by all – particularly American Indians, populations of color, foreign-born populations, and people with low incomes.

Health is more than not being sick. Health is a resource for everyday living. It's the ability to realize hopes, satisfy needs, change or cope with life experiences, and participate fully in society. Health has physical, mental, social and spiritual dimensions. Achieving optimal health means attending to the important influences of health. This vision is bigger than our systems of public health and health care. All individuals, systems and institutions in the community share responsibility for – and reap the rewards of – optimal health.

Health is influenced by important factors such as the physical environment, health practices and coping skills, biology, health care service and the social and economic environment (the social conditions, or the social determinants of health) in which people live their daily lives. These influences of health are further described in the table below:

Social and Economic Environment: Interactions with families, friends, co-workers and others that shape everyday experiences in neighborhoods, communities, and institutions (such as schools, the workplace, places of worship, government agencies, etc.). This means that individual and community socioeconomic factors; social norms, social support and community connectedness; employment and working conditions; living conditions; and culture, religion, and ethnicity shape health. The social and economic environment of a community is created by the individual and combined actions of its members and is unique because of social norms and cultural customs.
Physical Environment: The safety, quality and sustainability of the environment, which provides basic necessities such as food, water, air, and sunshine; materials for shelter, clothing and industry; and opportunities for recreation.
Health Practices and Coping Skills: Individual health-promoting and health-compromising attitudes, beliefs and behaviors, and the ways in which people cope with stress.
Biology: Genetic makeup, family history, and physical and mental health problems acquired during life (aging, diet, physical activity, smoking and drug use, stress, injury, and infections affect one's biology over the lifecycle).
Health Care Services: Access to and quality of health services to promote health and prevent and treat disease and other threats to health.

Some examples of the ways that social conditions influence health include:

- People with higher income generally enjoy better health and live longer than people with a lower income.
- In communities where there is a greater gap in income between rich and poor (a higher degree of income inequality), the health of people in the middle and sometimes the upper income groups is worse than in those income groups that live in communities with a smaller income gap or have less income inequality.
- People are healthiest when they feel safe, supported and connected to and can trust others in their families, neighborhoods, workplaces, and communities.
- Workers are healthiest when they believe that their jobs are secure, when they feel that the work they do is important and valued, when the workplace is safe and there are ample opportunities for control over their work life, including decision-making, advancement and personal growth.
- Culture, religion and ethnicity have a broad influence on beliefs and practices related to health, illness and healing. This influence includes definitions of health and illness, beliefs about the causes of health and illness, decisions about whether or not to seek formal health care, and decisions about the type of health care provider to be sought.

Though more research is needed to understand exactly how these factors affect health and health disparities, studies have been conducted that point to such conclusions as:

- Social and economic factors can influence decisions and behaviors that promote or threaten health, can offer a broad array of opportunities to improve health, and can have negative or positive health effects.
- Discrimination and racism play a crucial role in explaining health status and health disparities, through factors such as restricted employment and educational opportunities and mobility, limited access to and bias in medical care, limited access to safe recreation and healthful food, residential segregation, and chronic stress.
- People of color and American Indians do not experience worse health simply because they are more likely to have a low income. At every level of income, their health is worse than that of their white peers.
- High risk personal behaviors such as cigarette smoking, alcohol use, and physical inactivity are not the major cause of health disparities, explaining less than 20% of the difference in death rates across income groups.

Based on research into the social determinants of health, which you can find detailed in the report, *A Call to Action: Advancing Health for All through Social and Economic Change,* the following recommendations were made:

- Identify and advocate for healthy public policies.
- Build and fully utilize a representative and culturally competent workforce.
- Increase civic engagement and social capital.
- Re-orient funding.
- Strengthen assessment, evaluation and research.

- Create opportunities for dialogue and action.
- Focus coordinated commitment on priority strategies.
- Take this work to the next stage.

For more information on this report and its recommendations, see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Social Determinants".

These recommendations are being incorporated into public health work at the state and local levels by effectively engaging community members in developing solutions to issues that affect them (see the section, "Community Engagement" within this Introduction). One example of this is the Eliminating Health Disparities Initiative (EHDI) Community Grants Program (see the section, "Eliminate Disparities" within this Introduction).

Effective Strategies. Examples of effective strategies for addressing social and economic determinants of health include:

Address Issues of Unequal Access to Affordable, Nutritious Food. Unequal access to food is a well-documented issue. Over the years, commercial pressures have led to the closure of supermarkets in many low-income areas. Often the most affordable fresh food is available only at large discount supermarkets located in suburban areas – often not easily accessible by public transportation. The lack of convenient access to affordable urban supermarkets have caused problems for many inner city communities, who are left with corner convenience stores that do not carry a large or varied stock.

People who cannot easily get to distant supermarkets are thus surviving on convenience store food, usually canned or processed, or fast food. Their diet suffers, and consequently their health. The overall effect is to increase the inequalities in health already suffered by disadvantaged communities.[i] Examples of activities to address this issue include:

- Community groups grow fresh fruit or vegetables at public garden space or community centers then sell the produce at neighborhood farmers' markets.
- Specially provided shuttles transport people to shopping centers and supermarkets at convenient times.

Improve Community Environments that Promote Physical Activity, Mental Well-being and Quality of Life. Unsafe, substandard living environments present many barriers for residents attempting to increase their activity levels. Fear of crime keeps many people indoors, as does lack of safe and pleasant parks and green spaces, or poorly maintained sidewalks. Many residents from low-income neighborhoods find it difficult, if not impossible, to afford memberships at fitness centers or to travel to cleaner, safer neighborhoods with good facilities. Some effective initiatives include:

- Increase feelings of community safety by tackling pockets of crime by developing working partnerships with local law enforcement, community planners, and residents.
- Community centers can offer free or low-cost fitness facilities, exercise classes, or outdoor recreation areas. Classes on diabetes management or parenting skills can be offered in conjunction with other health opportunities. Including young people

can help them develop healthy habits that may prevent the later onset of many chronic conditions, such as diabetes, and promote self-esteem.

Provide Quality, Affordable Housing. The impact of housing on health cannot be overemphasized. Enabling people to obtain a safe, secure place to live can have far reaching health implications, from the environmental effects contributing to the control of asthma to mental health and well-being. Some strategies include:

- Offer housing benefit workshops to link people with programs or other initiatives that can help them afford housing, and to help them navigate the application processes. Many processes needed to receive benefits are complex and require a high level of literacy, and are barriers to access.
- Foster relationships between community residents and housing developers to ensure housing meets the needs of the community, as well as future residents of the new housing.

Develop and Promote Education, Literacy, and Employment Policies that Contribute to Employment Status. Many barriers to employment exist, such as illiteracy or lack of education. Removing these barriers can open avenues of access to better housing, improved nutrition, leisure, and health care. Strategies to address these barriers include:

- Connect elderly residents in the community with opportunities to assist younger residents with improving their literacy skills. This has a two-pronged approach of addressing social isolation issues for the elderly, as well as offering the opportunity to learn to read to community members, which in turn can increase the community members' ability to apply and qualify for jobs.
- Develop partnerships with local employers to implement innovative recruitment practices that are culturally sensitive or otherwise modified to be more accessible to marginalized populations. This could also involve strategies to improve working conditions for current employees, such as assisting in the development of workplace safety or stress management, or to alter workplace policies to make jobs more accessible. Policy development could include, for instance, job share opportunities for people with childcare issues, assistance with childcare facilities, or culturally sensitive leave and vacation policies.

These are just a few examples of a broad approach to thinking about how we can address the social determinants of health and tackle health disparities in Minnesota. Recognizing that health extends beyond indicators such as death, disease and disability is essential. Addressing factors such as mental and social well-being, quality of life, racism, isolation, income, employment and working conditions, education and others factors known to influence health can have important, sustainable effects.

Health Impact Assessment. Health Impact Assessment is an emerging approach to policy development and program planning designed to assure that current and future policies, programs, and/or organizational structures contribute to meeting public health improvement goals, or at least do not hamper achievement of those goals.

Since investments outside the health sector (e.g., in the areas of housing, transportation and economic development) have consequences for community health, the potential impact of social and economic policies on the health of Minnesotans should be an integral part of policy-making processes.

HIA is a structured method of assessing and identifying ways to improve the health consequences of policies and programs. It involves working in partnership with a range of agencies and the public to consult and draw together the available evidence on the benefits and drawbacks to health of a given policy or program. HIA is a process that can promote the development of healthy public policy, create dialogue between and among agencies and communities, and stress the role of assessment and evaluation.

How HIA Works. Ideally, HIA should be applied before a policy or program is implemented (prospectively), although it can be applied concurrently or retrospectively. It broadly comprises:

- Screening. Systematically deciding whether or not an HIA is worth doing. (The answer is probably 'no' if informed opinion and the available evidence suggests the health impacts are negligible or already well known).
- Developing a plan. Deciding which potential health effects in relation to a specific population and/or geographical area need investigation, which methods to use, what resources are needed and who needs to be involved.
- Identifying and appraising the evidence using both qualitative and quantitative research.
- Decision making. Recommending changes to a proposal to minimize harmful affects on health and maximize health gain.
- Monitoring and evaluation. Assessing the accuracy of predictions and ascertaining how the process can be improved.

HIA may be 'rapid' (carried out within days using minimal resources); 'intermediate' (more detailed over several weeks); or 'comprehensive' (an intensive investigation over a number of months). Experience of public health and community development and involvement may be needed, along with epidemiological and social science research skills.

Where HIA Can Be Used. So far most HIAs have been carried out on community revitalization or public transportation projects or proposals. However, HIA may be useful for a range of activities including: policy development and analysis, service provision, resource allocation, capital investment and community participation.

For more information please contact Lee Kingsbury, at (651) 296-9162, lee.kingsbury@health.state.mn.us. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on the following search words for the following topics:

- For the information on the social determinants of health and for the report, *A Call to Action: Advancing Health for All Through Social and Economic Change*, click on “Social Determinants”.

- For the tools for community engagement, click on “Community Engagement”.
- For the Eliminating Health Disparities Initiative, click on “EHDI”.
- For Health Impact Assessment information, click on “Health Impact”.

[i] *Source: Linda Sheridan (unpublished), from The Report of HIA on the Greater London Authority draft economic development strategy.*

Category:

CHILD AND ADOLESCENT GROWTH AND DEVELOPMENT

The strategies presented in this category can be used to help achieve the following public health improvement goals from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 2: Improve birth outcomes and early childhood development.

GOAL 4: Promote health for all children, adolescents and their families.

CATEGORY: CHILD AND ADOLESCENT GROWTH AND DEVELOPMENT

Assuring optimal health for all children, adolescents, and their families is a major goal for those interested in maintaining and improving the public's health. According to the 2000 census, approximately 30 percent of Minnesota's population is 19 years of age or younger. This very large segment of the population presents a wide range of challenges to health professionals and policy makers because of the diversity it incorporates. Selected demographic trends, however, demonstrate some common themes: an increase in the number of children living in poverty; an increase in the number of adolescents; and an increase in the number of children of color. These demographic trends will require different approaches in health care and will affect how health care is financed and delivered.

Successful health promotion activities for children and adolescents focus on:

- Healthy growth and development that is encouraged by policies that combat poverty and other social factors such as racism and low educational attainment.
- The importance of involving parents and caregivers in the healthy development of children and adolescents.
- Early identification of health risks.
- Early intervention to address health risks before serious health problems occur.

These activities include a focus on the behavioral and social (in addition to physical) factors that influence health. They are delivered by a broad array of public, private, and voluntary providers, primarily in the health, education, and social service fields. A collaboration of efforts increases the success of health promotion activities.

Steps to achieve this goal are furthered through policies and programs that not only promote the health of Minnesota families, but also foster a system of quality health care services that are coordinated, family-centered, developmentally appropriate, and culturally competent. There are four types of objectives for child, adolescent, and family health promotion in this chapter. These four types of objectives are focused on:

- Fostering resiliency and positive youth development activities.
- Decreasing social risk factors.
- Increasing the number of children and youth who receive developmentally appropriate health promotion services.
- Increasing early intervention for youth diagnosed with health problems.

For related strategies, see the following categories: *Alcohol, Tobacco and Other Drug Use; Chronic/Noninfectious Disease; Infectious Disease; Mental Health; Service Delivery System; Unintended Pregnancy; Unintentional Injury; and Violence.*

CATEGORY: Child and Adolescent Growth and Development

TOPIC: ADOLESCENT HEALTH – PARENTING AND YOUTH DEVELOPMENT

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Develop focus on the role of parents in adolescent health.	✔			✔	✔		
Increase awareness of parents about the importance of parenting in the healthy development of teens.	✔	✔	✔	✔	✔		
Improve the parenting skills of parents of adolescents.	✔	✔		✔	✔		
Develop youth service and youth leadership opportunities.	✔	✔		✔	✔	✔	
Provide youth with career opportunities.				✔	✔	✔	
Develop an increased focus on healthy youth development in health care systems.	✔	✔	✔				
Expand data collection on adolescent health issues.	✔			✔			
Teach youth social skills.		✔	✔	✔	✔	✔	
Provide youth enrichment opportunities.	✔			✔	✔	✔	
Help youth feel comfortable with and connected to schools.	✔			✔	✔		

Adolescence is a time of great physical, emotional, and social change. Many Minnesota adolescents negotiate their way successfully through these years with the support and guidance of caring families, schools, and communities. Yet others are not so successful, becoming involved in risky behaviors that result in harmful outcomes.

Adolescents are primarily physically healthy. The major threats to their health are related to such social and behavioral factors such as poverty, unstable family situations, violence, ATOD (alcohol, tobacco, and other drug) use, unhealthy sexual behaviors, etc. The top three causes of death among adolescents are unintentional injuries (especially motor vehicle accidents), suicide, and homicide. Many of these threats can be prevented or reduced, and health promotional efforts to support healthy behaviors, as well as connections to families, schools, and other caring adults, have been effective in deceasing the risk of unhealthy outcomes among adolescents. In fact, helping young people move through their adolescence in health and safety has been identified as a key activity for many communities throughout Minnesota and for the state as a whole. Health care systems have begun to support health care providers in providing preventive health care and early identification and intervention for health risk behaviors and psychosocial problems, in addition to physical health problems.

As with child health, it is difficult to determine if the health of Minnesota adolescents is improving or worsening, due to the complexity and interrelatedness of health indicators. Generally, two types of health data paint a picture about adolescents: statistics about their major health problems and statistics about factors that protect against health risks. Relevant data include:

- The leading causes of death for adolescents continue to be unintentional injury (especially due to motor vehicle injuries), homicide, and suicide (Minnesota Center for Health Statistics).
- Although the proportion of Minnesota's adolescents smoking cigarettes decreased appreciably between 1998 and 2001, 34.7 percent of twelfth graders report smoking cigarettes within the last 30 days. (2001 - *Minnesota Student Survey*).
- Approximately two in three 12^{th} graders, almost one in two 9^{th} graders and one in seven 6^{th} graders reported using alcohol over the past year. (2001 - *Minnesota Student Survey*).
- 22 percent of Minnesota twelfth grade boys report driving a motor vehicle after using alcohol or drugs within the last 12 months. (2001 - *Minnesota Student Survey*).
- Between 1997 and 1999, almost 25 per 1000 15-17 year old girls became pregnant. However, pregnancy rates vary considerably by race, ethnicity, and poverty status. (Minnesota Department of Health Vital Statistics. See Minnesota's Public Health Goal #3, Unintended Pregnancies topic area as well as the strategies in this document for Unintended Pregnancies in the *Unintended Pregnancy* category).

In response to these major health threats, there has been a move in Minnesota to increase those factors that protect against health risks for adolescents. One significant protective factor is a positive connection with parents and schools. Minnesota teens

appear to have good connections to these two groups. Yet, still more needs to be done to strengthen these connections. The *2001 Minnesota Student Survey* indicates that a significant proportion of teens feel that their parents care very much about them (between 72 and 92 percent). Yet fewer feel that they can talk to their parents about problems (between 42 and 67 percent could talk to their mothers and 20-45 percent could talk to their fathers). Furthermore, 11 percent of 9th grade males and 12 percent of 9th grade females reported running away from home during the last 12 months.

In 1997, an estimated 736 youth aged 11-17 were homeless in Minnesota on a given night. This should be regarded as a conservative estimate (Wilder Research Center, July 1998, *Minnesota Statewide Survey of Persons Without Permanent Shelter: Unaccompanied Youth*).

Health care systems are another important support for adolescents in maintaining and improving their health. A number of national standards have been developed, outlining the need to address preventive health issues with adolescents (e.g., *Bright Futures, Guidelines for Adolescent Preventive Services*, *Adolescent Preventive Health Services: Opportunities for Improvement*; see strategies in this section for specific references). Anecdotally, we know that Minnesota health plans and health care providers have increasingly focused on preventive health for all age groups. Yet, little is known about how much or what types of preventive health services are available to Minnesota adolescents. This area needs further attention.

The strategies presented here build individual and community assets that are protective factors for youth development and healthy families. For related strategies, see the following categories: *Mental Health*; *Service Delivery Systems* (i.e., the section on eliminating barriers and improving access to health care - children and adolescents); *Unintended Pregnancy*; *Violence*; and *Alcohol, Tobacco, and Other Drugs*.

Strategy: Develop a focus on the role of parents in adolescent health.

	Systems	Community	Individual
Primary	✔		
Secondary			
Tertiary			

Background:
Very little attention is given to the important role that parents play in the healthy development of their adolescent children. Their importance in the lives of their teens is strongly supported in research, particularly current research on resiliency. Yet, the primary focus of adolescent health interventions is on the adolescent. It is important to start focusing on ways to strengthen parents' skills and support their roles in promoting healthy development among teenage children. Steps to accomplish this include:

- Start discussion among adolescent-related programs about the important role of parents in healthy adolescent development. This should include programs within the MDH, local public health agencies, the Department of Human Services, the Department of Children, Family and Learning, the

Department of Corrections, etc. Collectively, adolescent-related programs could examine what is currently happening within their programs in terms of supporting and training parents; evaluate the effectiveness of these activities; and identify ways to link and expand these activities.

- Identify programs that focus on parents of adolescents (to determine key players in this discipline).
- Formally include parents and professionals from the parental education and support discipline whenever forming a group around an adolescent health issue. Form links and connections between adolescent health initiatives and parental education and support systems.
- Research and report the effectiveness of parental education and support programs in promoting healthy family development. (What works? How does it work? With whom does it work best?)
- Support more research around the role of parents in the healthy development of adolescents, including identification of effective ways to support and educate parents of adolescents.
- Challenge the existing parental education and support system to increase its focus on the parents of adolescents.

Additional resources:

Bibliographic resources:

- Carnegie Corp. 1995. *Great Transitions: Preparing Adolescents for a New Century.* Carnegie Corp. [This document contains a good section on helping families re-engage with their adolescent children.] Abridged version available on-line: www.carnegie.org
- Dryfoos, J. 1998. *Safe Passage: Making It Through Adolescence in a Risky Society.* Oxford University Press.
- Minnesota Department of Health. 1996, 1998. *Prevention of Violence Against Women and Children.* Public Health Nursing Practice Guidelines. For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us.
- Minnesota Department of Health. 1996. *Promoting Positive Parenting: School-aged Children and Adolescents.* Public Health Nursing Practice Guidelines. For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us.
- Pittman, K. 1991. *A New Vision: Promoting Youth Development.* Center for Youth Development and Policy Research.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools, guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on “Adolescent Health Services”.
- Children, Youth and Family Consortium, Electronic Clearinghouse, University of

Minnesota, St. Paul, MN, (612) 626-1212, http://www.cyfc.umn.edu.

- Minnesota Datanet is an on-line information system consisting of summarized statistical information serving Minnesota's governments, businesses, schools, nonprofit agencies and citizens. The system contains statistics about social, economic and demographic conditions in Minnesota. www.mnplan.state.mn.us/datanetweb.
- Minnesota Department of Children, Families and Learning, Jim Colwell, at (651) 582-8328, http://cfl.state.mn.us/studentsurvey/, Coordinated School Health Programs, Minnesota Student Survey (2001) Data Coordinator.
- Minnesota Extension, 4-H Youth Development, University of Minnesota, at (612) 624-2116 or 800-444-4238, 4hcenter@extension.umn.edu, or http://www.fourh.nes.umn.edu, 270 McNamara Alumni Center. 200 Oak St SE, Minneapolis, MN 55455.
- Search Institute, at (612) 376-8955 or 1-800-888-7828, http://www.search-institute.org, Minneapolis, MN, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138.
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:
Studies have shown that parental support and education is the critical component of effective adolescent health programs (Dryfoos, 1998). In addition, a large-scale national study of adolescent health found a positive association for teens between feeling connected with their families and engaging in healthy behaviors (Resnick et al., 1997).

Has this strategy been implemented in Minnesota?
No.

Indicators for this strategy:

- Number of discussions among adolescent-related programs about the important role of parents in healthy adolescent development.
- Number of programs that focus on parents of adolescents.
- Number of parents who participate in these programs.
- Number and kind of links and connections between adolescent health initiatives and parental education or support systems.
- Number and kind of professionals from the parental support discipline involved in adolescent health issues.

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Increase awareness of parents about the importance of parenting in the healthy development of teens.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
Parents of adolescents are given mixed

messages about the importance and role of parenting in adolescent development. The term "parents" is used as a generic term in this section and refers to parents and other care-giving adults (e.g., grandparents, foster parents, etc.) who may be parenting an adolescent. This strategy focuses on increasing awareness of parents about the importance of their roles in the lives of their adolescent children. Activities to increase this awareness include:

- Talking with parents about the importance of their role. Emphasizing the importance of the parental role in adolescent development can be done in faith settings, schools (including, but not limited to, parent-teacher associations), Family Service Collaboratives, Healthy Youth/Healthy Community initiatives (e.g., through the Search Institute), teen pregnancy prevention collaboratives, teen drug and alcohol prevention collaboratives, youth programs (e.g., recreational programs, Ys, Girl Scouts, Boy Scouts, etc.), and health care systems (e.g., clinics, health plan outreach efforts, newsletters, etc.).
- Train health care providers in skills to provide "anticipatory guidance" to parents of adolescents. The Guidelines for Adolescent Preventive Services (GAPS), a recognized guideline for adolescent health developed by the AMA, recommends that parents receive prospective information and guidance on early, middle, and late adolescence as part of adolescents' annual health exams. During these visits, parents need to hear about:
  - Normal adolescent physical, sexual, emotional, and cognitive development.
  - Signs or symptoms of emotional distress.
  - Ways to promote healthy adolescent development.
  - Ways to prevent potential problems (including community resources).
  - Health care providers should include parental "anticipatory guidance" as part of services to adolescents and their parents. (See above). This is similar to anticipatory guidance that is given to parents of young children (a routine part of pediatric health care).

Additional resources:

Bibliographic resources:

- *Active Parenting of Teens* [Curriculum]. For information on this parental education curriculum, contact: Active Parenting Publishers, at 800-825-0060, 810 Franklin Court, Suite B, Marietta, GA 30067.
- American Medical Association. 1992. *Guidelines for Adolescent Preventive Services (GAPS)* at (312) 464-5000, http://www.ama/pub/category/1947.html Baltimore, MD: Williams and Wilkins. In addition, they have a "Parent Packet" that includes reproducible tip sheets for parents of teens with such topics as growth, development, parenting, physical activity, sexuality, tobacco, alcohol, etc.
- Carnegie Corp. 1995. *Great Transitions: Preparing Adolescents for a New Century.* Carnegie Corp. This document contains a good section on helping families re-engage with their adolescent children. Abridged version available on-line: www.carnegie.org
- Kreipe, R. 1991. Principles of office counseling: The healthy adolescent. *Adolescent Medicine: State of the Art Reviews*, 2(2), 277-290. This document contains good information for health care providers, including information on

supporting parents of teens.

- Minnesota Department of Health. 1996. *Promoting Positive Parenting: School-aged Children and Adolescents.* Public Health Nursing Practice Guidelines. For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us.
- National Clearinghouse on Families and Youth. 1996. *Support Your Adolescent: Tips for Parents.* To get copies, go to the National Clearinghouse Families and Youth World Wide Web Page and click on ANCFY publications@; click on Atitle of this booklet@ and download it. Copies can also be obtained from: NCFY, at (301) 608-8098P.O. Box 13505, Silver Spring, MD 20911-3505.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-32. This is a national study that used a cohort of MN adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools, guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Services".
- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, MN, at (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Datanet is an on-line information system consisting of summarized statistical information serving Minnesota's governments, businesses, schools, nonprofit agencies and citizens. The system contains statistics about social, economic and demographic conditions in Minnesota. www.mnplan.state.mn.us/datanetweb.
- Minnesota Extension, 4-H Youth Development, University of Minnesota, 270 McNamara Alumni Center, at (612) 624-2116 or 800-444-4238, 4hcenter@extension.umn.edu, or http://www.fourh.nes.umn.edu, 200 Oak St SE, Minneapolis, MN 55455.
- Search Institute, at (612) 376-8955 or 800-888-7828, http://www.search-institute.org, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138.
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health. Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:

While extensive research demonstrates the positive association between caring, supportive parents and teens who develop in healthy ways, there are few programs to support and train parents of teens and even less research on the effectiveness of these programs. However, extensive experience and research indicates that supporting parents of young children is effective in reducing childhood problems.

Has this strategy been implemented in Minnesota?

Yes, the Minnesota Extension Service and other local community programs have

implemented efforts to support parents of teens.

Indicators for this strategy:

- Percentage of parents of teens who are knowledgeable about normal adolescent growth and development.
- Percentage of parents of teens who report comfort in communicating openly with their adolescent children.
- Percentage of parents of teens who can identify parental support resources in their community.
- Percentage of teens who can talk with a parent about problems or who report their family cares about them.
- Number and kind of parent-of-teen support resources that are available in the community.

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Improve the parenting skills of parents of adolescents.

	Systems	Community	Individual
Primary			✔
Secondary			
Tertiary			

Background:
More attention is needed to support adults in their roles as parents of adolescents. While parents of young children are provided with an array of support services (Early Childhood Family Education, etc.), little attention or support is given to parents of adolescents. Parents of adolescents need support and education around successful parenting. "Parents" is used as a generic term in this section to refer to parents and other caregiver adults, e.g., grandparents, foster parents, etc., who may be parenting an adolescent. Activities to support this strategy include:

- Implement "Parents of Adolescents" parental education programs and outreach. This could be done through schools, community education, parent-teacher associations (PTAs), public health agencies, health care agencies, hospitals, youth agencies, religious organizations, informal parent-mentorship programs, etc.
- Implement parental support groups. This may be done informally, for example, through individual mentor-type support (a supporting agency trains mentor parents, who then become mentors to other parents of adolescents) or neighborhood support groups.
- Develop and distribute a reading list and collection of web sites on parenting of adolescents.
- Develop a "Parents of Adolescents" support phone line. (This could be similar to the Parent Warmline service that Children's' Health Care Minneapolis used to provide for parents of young children.)

Additional resources:
Bibliographic resources:

- *Active Parenting of Teens* [Curriculum]. Active Parenting Publishers. For copies, contact: 810 Franklin Court, Suite B, Marietta, GA 30067, at 800-825-0060.
- American Medical Association. 1992. *Guidelines for Adolescent Preventive Services (GAPS)*, at (312) 464-5000, http://www.ama/pub/category/1947.html

Baltimore, MD: Williams and Wilkins. In addition, they have a "Parent Packet" that includes reproducible tip sheets for parents of teens with such topics as growth, development, parenting, physical activity, sexuality, tobacco, alcohol, etc.

- Carnegie Council on Adolescent Development. 1995. *Great Transitions: Preparing Adolescents for a New Century*. Carnegie Council on Adolescent Development. To order a copy for $10, contact: (202) 429-7979. Abridged version on-line: www.carnegie.org.
- Dryfoos, J. 1998. *Safe Passage: Making It Through Adolescence in a Risky Society*. Oxford University Press.
- Kreipe, R. 1991. Principles of office counseling: The healthy adolescent. *Adolescent Medicine: State of the Art Reviews, 2*(2), 277-290. This article contains good information for health care providers, including information on supporting parents of teens.
- Minnesota Department of Health. 1996. *Promoting Positive Parenting: School-aged Children and Adolescents.* Public Health Nursing Practice Guidelines. For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us.
- National Clearinghouse on Families and Youth. 1996. *Support Your Adolescent: Tips for Parents.* To get copies, go to the National Clearinghouse on Families and Youth World Wide Web Page and click on "NCFY publications"; then click on "title of this booklet" and download it. Copies can also be obtained by contacting: NCFY, P.O. Box 13505, Silver Spring, MD 20911-3505, (301) 608-8098.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA, 278*(10), 823-832. This national study used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools, guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Services".
- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, MN, (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Extension, 4-H Youth Development, University of Minnesota, 270 McNamara Alumni Center, at (612) 624-2116 or 800-444-4238. 4hcenter@extension.umn.edu, or http://www.fourh.nes.umn.edu, 200 Oak St SE, Minneapolis, MN 55455.
- Search Institute, at (612) 376-8955 or 800-888-8955, http://www.search-institute.org, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138,
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:
While extensive research demonstrates the positive association between caring, supportive parents and teens who develop in healthy ways, there are few programs to support and train parents of teens and even less research on the effectiveness of these programs. Yet, extensive experience and research indicates that supporting parents of young children effectively reduces childhood problems.

Has this strategy been implemented in Minnesota?
Yes, some community agencies have parental education and support groups for parents of adolescents (for example, Children and Family Services in Hennepin County).

Indicators for this strategy:
- Percentage of parents of teens who are knowledgeable about normal adolescent growth and development.
- Percentage of parents of teens who report comfort in communicating openly with their adolescent children.
- Percentage of parents of teens who can identify parental support resources in their community.
- Percentage of teens who can talk with a parent about problems or who report their family cares about them.
- Number and kind of parent-of-teen support resources available in the community.

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Develop youth service and youth leadership opportunities.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
According to Karen Johnson Pittman (1991) of the Center for Youth Development and Policy Research, "For years, Americans have accepted the notion that services for youth exist to address youth problems. We have assumed that positive youth development occurs naturally in the absence of youth problems. Preventing high-risk behaviors, however, is not the same as preparation for the future. Problem-free does not mean fully prepared. There must be an equal commitment to helping young people understand life's challenges and responsibilities and to developing the necessary skills to succeed as adults. What is needed is massive conceptual shift from thinking that youth problems are merely the principal barrier to youth development to thinking that youth development serves as the most effective strategy for the prevention of youth problems" (*Promoting a New Vision: Promoting Youth Development*).

One of the problems many adolescents face is a perception that they do not have a place in society. Young people need to know that they have important roles to play in their families and communities. Youth service and leadership activities provide youth with hands-on opportunities in their neighborhoods, teaching them skills for successful participation as leaders and

supporting them in their roles as youth advocates.

As youth advocates, teens should be given opportunities to become involved in activities important to them and given full rights and responsibilities within the groups to which they belong. As youth active in community service, teens should be offered opportunities to participate in activities that benefit others in their community. These opportunities must include strong adult leadership and guidance. Activities to accomplish this strategy include:

- Incorporate youth input as in integral component of any adolescent-related policy that is developed.
- Include adolescents as youth advocates when developing adolescent-related policies and programs. This could be done by involving teens as representatives on school boards, on ATOD prevention coalitions, teen pregnancy coalitions, CHS planning activities, health plan strategic planning, etc. This could also include the development of a youth advisory council within a community that allows teens to choose the issues they feel are important to work on.
- Involve teens in community service activities. This can be done in many areas of a community (e.g., schools, youth-based community programs, faith settings, etc.).
- Sponsor a youth health conference. This type of activity is developed and planned by youth (with adult guidance) and then put on for community youth by its teen planners. The goal of this type of conference is to gather adolescents' perspectives about adolescent health issues (e.g., what do they think about teen pregnancy; is it really a problem; how can it be addressed, etc.). This type of activity could be used in areas such as CHS planning activities and development of community goals.
- Develop a youth center. This center should include a broad array of services and programs that are designed for youth, using input from youth. Suggested programs could include recreational, community service, employment, mental health, and physical health services.

Additional resources:

Bibliographic resources:

- Blum, RW., and Rinehart, PM. 1997. *Reducing the Risk: Connections That Make a Difference in the Lives of Youth.* Minneapolis, MN: University of Minnesota Division of General Pediatrics and Adolescent Health.
- Carnegie Council on Adolescent Development. 1995. *Great Transitions: Preparing Adolescents for a New Century.* Carnegie Council on Adolescent Development. To order a copy for $10, contact: (202) 429-7979, www.carnegie.org.
- Pittman, K. 1991. *A New Vision: Promoting Youth Development.* Center for Youth Development and Policy Research.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA, 278*(10), 823-832. This national study used a cohort of Minnesota adolescents. It provides an excellent overview of the "connections" between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, MN, at (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Alliance with Youth, at (651) 296-4738 or 800-234-6687, http://www.mnyouth.org, 117 University Avenue, St. Paul, MN 55155-2200.
- Minnesota Extension, 4-H Youth Development, University of Minnesota, 270 McNamara Alumni Center, at (612) 624-2116 or 800-444-4238, 4hcenter@extension.umn.edu, or http://www.fourh.nes.umn.edu, 200 Oak St SE, Minneapolis, MN 55455.
- National Youth Leadership Council, Jim Kielsmeier, Executive Director, (651) 631-3672, http://www.nylc.org, 1910 West County Road B, St. Paul, MN 55113. Their goals are to engage young people in their communities and schools through innovation in learning, service, leadership, and public policy.
- Search Institute, at (612) 376-8955 or 800-888-7828, http://www.search-institute.org, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138.
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:
Extensive research demonstrates the positive association between youth involvement in community service and healthy youth development (Dryfoos, 1998). In addition, numerous organizations coordinate opportunities for youth service. These organizations include the Minnesota Alliance with Youth, SEARCH Institute, National Youth Leadership Council, 4-H Youth Development, etc.

Has this strategy been implemented in Minnesota?
Yes, there are a number of communities that include youth as advocates in their planning for youth-related services (most often in tobacco and drug prevention coalitions). Dakota County has a youth advocacy council that holds a youth health conference. This workshop is more informational for the youth that attend, rather than about gathering youth input on adolescent health issues. Many schools have community-service-type activities associated with their programming. Numerous organizations support and encourage communities and youth to become involved in youth leadership and youth service opportunities, including the Minnesota Alliance with Youth, 4-H, National Youth Leadership Council, SEARCH Institute, etc.

Indicators for this strategy:

- Number of hours per week that teens spend in volunteer or community service.
- Number of adolescents involved in youth leadership activities.
- Number of youth programs that actively engage adolescents in program planning and evaluation.
- Number of youth who participate in setting policies in their community.
- Percentage of adolescents who feel they are leaders in their community.
- Percentage of adolescents who feel they play a role in their community.
- Percentage of adolescents who feel they are valued by their community.

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Provide youth with career opportunities.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
According to Karen Johnson Pittman (1991) of the Center for Youth Development and Policy Research, "For years, Americans have accepted the notion that services for youth exist to address youth problems. We have assumed that positive youth development occurs naturally in the absence of youth problems. Preventing high-risk behaviors, however, is not the same as preparation for the future. Problem-free does not mean fully prepared. There must be an equal commitment to helping young people understand life's challenges and responsibilities and to developing the necessary skills to succeed as adults. What is needed is massive conceptual shift - from thinking that youth problems are merely the principal barrier to youth development to thinking that youth development serves as the most effective strategy for the prevention of youth problems" (*Promoting a New Vision: Promoting Youth Development*).

Career exploration and work opportunities involve young people in the real world of work through mentorships, internships, work-study, vocational student organizations, community-based career programs, etc. These experiences help link youth with the adult world and adult role models. These connections help develop a set of skills, expectations, and values that support healthy development. Activities in this strategy include:

- Work collaboratively within systems to ensure youth access to job training and career development opportunities.
- Develop a youth center. A center could include a broad array of services and programs designed for youth (including recreational, community service, employment, mental health, physical health services, and others as appropriate to the youth in the community).
- Provide youth with access to job training and internships.

Additional resources:

- Blum, RW., and Rinehart, PM. 1997. *Reducing the Risk: Connections That Make a Difference in the Lives of Youth.* Minneapolis, MN: University of Minnesota Division of General Pediatrics and Adolescent Health.
- Carnegie Council on Adolescent Development. 1995. *Great Transitions: Preparing Adolescents for a New Century.* Carnegie Council on Adolescent Development. To order a copy for $10, contact: (202) 429-7979. Abridged version on-line at www.carnegie.org.
- Dryfoos, J. 1998. *Safe Passage: Making It Through Adolescence in a Risky Society.* Oxford University Press.
- Pittman, K. 1991. *A New Vision: Promoting Youth Development.* Center for Youth Development and Policy Research.
- Resnick, MD., et al. 1997. Protecting

adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA, 278*(10), 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the "connections" between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, MN, at (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Alliance with Youth, at (651) 296-4738 or 800-234-6687, http://www.mnyouth.org, 117 University Ave., St. Paul, MN 55155-2200.
- Minnesota Department of Children, Families and Learning, School to Work Service Learning, at (651) 582-8330, www.educ.state.mn.us/stw, 1500 Highway 36 West, Roseville, MN 55113.
- Minnesota Extension, 4-H Youth Development, University of Minnesota, 270 McNamara Alumni Center, at (612) 624-2116 or 800-444-4238, 4hcenter@extension.umn.edu, or http://www.fourh.nes.umn.edu, 200 Oak St SE, Minneapolis, MN 55455.
- National Youth Leadership Council, Jim Kielsmeier, Executive Director, 1910 West County Road B, St. Paul, MN 55113, (651) 631-3672, http://www.nylc.org. Their goals are to engage young people in their communities and schools through innovation in learning, service, leadership, and public policy.
- Search Institute, at (612) 376-8955 or 800-888-7828, http://www.search-institute.org, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138.
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:
Evaluation research of youth prevention programs indicates that programs that link youth to the world of work are effective (Dryfoos, 1998).

Has this strategy been implemented in Minnesota?
Unknown, these are broad recommendations that occur in many places around Minnesota (e.g., jobs training, youth centers, etc.), but their implementation has not been systematically documented.

Indicators for this strategy:

- Number and kinds of ways that youth have access to job-training and career-development opportunities.
- Number of businesses that offer youth opportunities to work and develop job skills.
- Number of businesses and organizations that offer mentorships for youth.
- Number and kind of programs that link youth to the world of work (e.g., training, internships, mentoring, work-study, etc.).

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Develop an increased focus on healthy youth development in health care systems.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
As Karen Johnson Pittman (1991) of the Center for Youth Development and Policy research notes, "For years, Americans have accepted the notion that services for youth exist to address youth problems. We have assumed that positive youth development occurs naturally in the absence of youth problems. Preventing high-risk behaviors, however, is not the same as preparation for the future. Problem-free does not mean fully prepared. There must be an equal commitment to helping young people understand life's challenges and responsibilities and to developing the necessary skills to succeed as adults. What is needed is massive conceptual shift - from thinking that youth problems are merely the principal barrier to youth development to thinking that youth development serves as the most effective strategy for the prevention of youth problems."

Our current health care system has traditionally focused on health problems (primarily their diagnoses and treatment and, to a certain extent, their prevention). The piece that is missing in youth health is a focus on the promotion of healthy development, in addition to the prevention of risk behaviors and health problems. This shift in focus requires a cultural change in our health care system and involves the education of those who work in these areas about healthy youth development, as well as a discussion of ways in which this perspective can be infused into the current system. Activities to support this strategy include:

- Incorporate a healthy youth development focus in all adolescent health programs and policies. This involves educating those who work on these issues about healthy youth development and discussing ways in which this perspective can be infused into the current system.
- Incorporate healthy youth development into the curriculum of organizations that train health professionals. This includes universities, colleges, vocational technical programs, and professional organizations such as medical and nursing associations.
- Work with programs that finance health care (e.g., insurance companies, government agencies, etc.) to improve financing for health promotion activities within the health care setting.

Additional resources:
Bibliographic resources:

- Green, M. 2000. *Guidelines for Health Supervision of Infants, Children and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health. Available on-line at www.brightfutures.org.
- Minnesota Health Improvement Partnership 2001. *Adolescent Preventive Health Services: Opportunities for Improvement.* MDH, Community Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".

- National Adolescent Health Information Center. 1998. *Assuring the Health of Adolescents in Managed Care: A Quality Checklist for Planning and Evaluating Components of Adolescent Health Care.* San Francisco, CA: University of California San Francisco. For a copy, contact: (415) 502-4856.
- Pittman, K. 1991. *A New Vision: Promoting Youth Development.* Center for Youth Development and Policy Research.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-832. This is a national study that used a cohort of MN adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resource:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools, guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/ Click on "Adolescent Health Services".
- Minnesota Adolescent Health Care Coalition, an informal collaboration of more than 40 members representing health care providers, health plans, health associations, government, public health, hospitals, foundations, nonprofit agencies, and education. The mission of the Coalition is to improve the health status of adolescents by influencing the health care system in order better to meet the unique needs of adolescents and their families. For more information, contact: Sarah Stoddard Nafstad, at (651) 281-9956, or at sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Evidence for strategy:
Extensive research demonstrates that adolescents who are supported by an array of protective factors (such as connection to caring adults, positive connection to school, opportunities and recognition for meaningful activities in the community, etc.) are less likely to engage in risky behavior and experience poor health outcomes. Although there has not been enough rigorous program evaluation on the outcome of youth health programs based on a healthy youth development framework, anecdotal evidence has shown a positive impact. It is presumed, therefore, that use of a healthy youth development framework in policy, professional training, and funding will make a difference in the health outcomes of adolescents.

Has this strategy been implemented in Minnesota?
Yes, the Minnesota Adolescent Health Care Coalition is actively working to implement this strategy. The Coalition is involved in reaching out to health care providers, funders, and consumers with a health promotion/healthy youth development model of health care. They are also promoting the adoption of an Adolescent Health Position Statement among a wide variety of organizations involved in the health care system.

Indicators for this strategy:

- Number of state-level adolescent health programs based on a healthy youth development model.
- Number of state-level adolescent health policies based on a healthy youth development model.
- Number of adolescent health training programs for health professionals that use a healthy youth development model within their curriculum.
- Number of adolescent health funders who incorporate a healthy youth development/health promotional model into funding decisions.

For more information contact:
Sarah Stoddard Nafstad, at (651)-281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Expand data collection on adolescent health issues.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
In Minnesota, little data exist on healthy youth development; however, the *Minnesota Student Survey* (2001) offers questions about self-esteem, personal worth, life satisfaction, and personal goals of sixth, ninth, and twelfth graders. There has been little analysis of this data in comparison to analysis of questions on alcohol, tobacco, and drug use. Greater analysis and assessment of data specific to questions of self-esteem, personal worth, life satisfaction, and personal goals would provide a useful benchmark for public health and community agencies to gauge the effectiveness of their youth development strategies for school-aged youth, particularly in relation to students' social, emotional, and mental health needs.

Additional resources:
Bibliographic resources:

- Minnesota Planning. 1998. *Minnesota Milestones.* Contact: Mark Larson, at (651) 297-4026, http://www.mnplan.state.mn.us/press/mm98final.html.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10): 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Minnesota Datanet is an on-line information system consisting of summarized statistical information serving Minnesota's governments, businesses, schools, nonprofit agencies and citizens. The system contains statistics about social, economic and demographic conditions in Minnesota. www.mnplan.state.mn.us/datanetweb
- Minnesota Department of Children, Families and Learning, Jim Colwell, at (651) 582-8328, http://cfl.state.mn.us/studentsurvey/, Coordinated School Health Programs, Minnesota Student Survey Data Coordinator.

- Search Institute, at (612) 376-8955 or 800-888-7828, http://www.search-institute.org, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138.
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:
Some questions on the survey have been field tested by many school districts in Minnesota. In addition, some school districts are beginning to do their own analysis of mental health data, much of which is similar to the data needed for healthy youth development.

Has this strategy been implemented in Minnesota?
Yes, to some extent. Both the *Minnesota Student Survey* and the Search Institute's 1996 *Survey of Assets* have been used as benchmarks for school districts and communities developing strategies related to chemical health and tobacco usage for youth. Analysis of the *Minnesota Student Survey* data provides an additional resource for communities along with the Search Institute findings.

Indicators for this strategy:
- Local analysis of questions 39, 41, 42, 45, 47, 49, and 51 of the 1998 *Minnesota Student Survey*.
- Assessment and dissemination of this data by the MDH Center for Health Statistics.
- Utilization of these analyses in local planning and program development.

For more information contact:
- Ann Kinney, at (651) 297-1281, ann.kinney@health.state.mn.us, MDH Center for Health Statistics.
- Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Teach youth social skills.

	Systems	Community	Individual
Primary	✔		
Secondary			
Tertiary			

Background:
Teaching adolescents social skills will help them make a successful transition into adulthood. These include communication skills, decision-making skills, problem-solving skills, planning skills, etc. This approach has been used as part of health education programs (such as teen pregnancy prevention and teen drug or alcohol prevention) and in juvenile corrections settings. This approach could be successfully implemented more extensively in the health care setting. Health professionals who work with teens (e.g., doctors, nurse practitioners, nurses, social workers, nutritionists, etc.) should be trained in ways to teach social skills when working with adolescent clients. This professional education could be done through professional organizations that typically do continuing education, through vocational technical programs that offer community education for health professionals through public health agencies, etc.

Additional resources:
Bibliographic resources:
- American Academy of Pediatricians. 1993. Life skills training for adolescent health promotion. *Adolescent Health Update, 5*(2).
- Dryfoos, J. 1998. *Safe Passage: Making It Through Adolescence in a Risky Society.* Oxford University Press.

Organizational resource:
- Minnesota Department of Children, Families and Learning, Jim Colwell, at (651) 582-8328, http://cfl.state.mn.us/studentsurvey/, Coordinated School Health Programs, Minnesota Student Survey Data Coordinator.

Evidence for strategy:
This approach is based on a variety of studies in the fields of social learning theory and health education strategies, and has been used as part of health education programs (such as teen pregnancy prevention and teen drug/alcohol prevention) and in juvenile corrections settings.

Has this strategy been implemented in Minnesota?
Yes, social skill training is included in a wide variety of prevention-based health education programs in Minnesota (both school and community). In a 1996 survey of health educators in Minnesota schools, the vast majority had taught social skills as part of required health education courses for sixth through twelfth graders. In particular, 99 percent reported teaching decision-making skills, 98 percent reported teaching skills to resist social pressure for unhealthy behaviors, 91 percent taught communication skills, and 90 percent taught goal setting.

Indicators for this strategy:
- Percentage of prevention-based health education programs for adolescents that include social skill training as a component.
- Percentage of adolescents who report comfort with their level of personal mastery of social skills such as communication, decision-making, and problem solving.

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Provide youth enrichment opportunities.

	Systems	Community	Individual
Primary		✔	✔
Secondary			
Tertiary			

Background:
According to Karen Johnson Pittman (1991) of the Center for Youth Development and Policy Research, "For years, Americans have accepted the notion that services for youth exist to address youth problems. We have assumed that positive youth development occurs naturally in the absence of youth problems. Preventing high-risk behaviors, however, is not the same as preparation for the future. Problem-free does not mean fully prepared. There must be an equal commitment to helping young people understand life's challenges and responsibilities and to developing the necessary skills to succeed as adults. What is needed is massive conceptual shift - from

thinking that youth problems are merely the principal barrier to youth development to thinking that youth development serves as the most effective strategy for the prevention of youth problems" (*Promoting a New Vision: Promoting Youth Development*).

Young people need to develop their own personal creative and physical capabilities in their process of healthy development. Through involvement with others around areas of common interest, young people can develop their individual talents, skills, knowledge, and character. This involvement can give them opportunities to develop healthy relationships with peers and adults. Last, young people can receive positive recognition for their efforts. Activities might include:

- Develop strong after school programs (in addition to sports opportunities) with a variety of activities of interest to adolescents.
- Develop a youth activity information and referral service. This type of service provides youth and adults with information about youth activities available in the community. It is encouraged that youth participate in planning, developing, and implementing this service.
- Develop a youth center. A center can include a broad array of services and programs that are designed by and for youth. Such services and programs include recreational, community service, employment, mental health, physical health services, and others, as appropriate to the youth in the community.
- Provide opportunities for youth and adults to develop positive relationships through activities in the community, religious settings, mentor programs, etc.

Additional resources:

Bibliographic resources:

- Blum, RW., and Rinehart, PM. 1997. *Reducing the Risk: Connections That Make a Difference in the Lives of Youth.* Minneapolis, MN: University of Minnesota Division of General Pediatrics and Adolescent Health.
- Carnegie Council on Adolescent Development. 1995. *Great Transitions: Preparing Adolescents for a New Century*. Carnegie Council on Adolescent Development. To order a copy for $10, contact: (202) 429-7979, www.carnegie.org.
- Dryfoos, J. 1998. *Safe Passage: Making It Through Adolescence in a Risky Society.* Oxford University Press.
- Pittman, K. 1991. *A New Vision: Promoting Youth Development.* Center for Youth Development and Policy Research.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:

- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, MN, at (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Alliance with Youth, at (651) 296-4738 or 800-234-6687, http://www.mnyouth.org, 117 University

Ave., St. Paul, MN 55155-2200.
- Minnesota Department of Children, Families and Learning, School to Work Service Learning. Contact: Charles Coskram, at (651) 582-8330, www.educ.state.mn.us/stw, 1500 Highway 36 West, Roseville, MN 55113.
- Minnesota Extension, 4-H Youth Development, University of Minnesota, 270 McNamara Alumni Center, at (612) 624-2116 or 800-444-4238, 4hcenter@extension.umn.edu, or http://www.fourh.nes.umn.edu, 200 Oak St SE, Minneapolis, MN 55455.
- Minneapolis Youth Coordinating Board, at (612) 673-2060, http://www.ycb.org or http://www.whatsup.org, 350 South Fifth Street, Minneapolis, MN 55415.
- National Youth Leadership Council, Jim Kielsmeier, Executive Director, at (651) 631-3672, http://www.nylc.org, 1910 West County Road B, St. Paul, MN 55113. Their goals are to engage young people in their communities and schools through innovation in learning, service, leadership, and public policy.
- Search Institute, at (612) 376-8955 or 800-888-7828, http://www.search-institute.org, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137, www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:
Community-based youth enrichment approaches have been implemented in Minnesota and throughout the U.S. For example, the Minneapolis Youth Coordinating Board programs and strategies have been identified as using promising approaches to improving the health and well being of adolescents (Dryfoos, 1998).

Has this strategy been implemented in Minnesota?
Yes, the Minneapolis Youth Coordinating Board has developed a youth activity information and referral service called, "What's Up?" It is developed and staffed by youth.

Indicators for this strategy:
- Number of after school programs that provide youth enrichment opportunities.
- Existence of a youth activity information and referral service.
- Number of youth who participate in planning, developing, and implementing the youth activity service.
- Existence of a youth center.
- Number of youth who participate in the planning and development of the center, as well as its operations.
- Number and type of opportunities for youth and adults to develop positive relationships through activities in the community.

For more information contact:
Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Help youth feel comfortable with and connected to schools.

	Systems	Community	Individual
Primary		✔	✔
Secondary			
Tertiary			

Background:
According to Karen Johnson Pittman (1991) of the Center for Youth Development and Policy Research, "For years, Americans have accepted the notion that services for youth exist to address youth problems. We have assumed that positive youth development occurs naturally in the absence of youth problems. Preventing high-risk behaviors, however, is not the same as preparation for the future. Problem-free does not mean fully prepared. There must be an equal commitment to helping young people understand life's challenges and responsibilities and to developing the necessary skills to succeed as adults. What is needed is massive conceptual shift - from thinking that youth problems are merely the principal barrier to youth development to thinking that youth development serves as the most effective strategy for the prevention of youth problems" (*Promoting a New Vision: Promoting Youth Development*).

Connectedness to school is considered an asset or a protective factor in preventing risky behavior and promoting healthy development for adolescents. Efforts to help youth feel comfortable in their school settings and connected to their schools can help in fostering positive youth development. For related strategies, see the section on children's mental health in the *Mental Health* category. Activities to support this strategy include:

- Develop mechanisms within individual schools that allow youth and their families to actively participate in the running of the school (e.g., school councils, planning groups, etc.). These groups could include activities that gather information from students about their level of comfort and connectedness to the school and suggestions for ways to build these connections.
- Identify children with school or learning difficulties or both early and provide support services to these children and their families. These efforts help young people feel successful and connected to their school.
- Use school buildings for a variety of youth-related community activities during non-school hours. This provides youth with a sense that schools are concerned about them.

Additional resources:
Bibliographic resources:

- Blum, RW., and Rinehart, PM. 1997. *Reducing the Risk: Connections That Make a Difference in the Lives of Youth.* Minneapolis, MN: University of Minnesota Division of General Pediatrics and Adolescent Health.
- Council on Adolescent Development. 1995. *Great Transitions: Preparing Adolescents for a New Century.* Carnegie Council, www.carnegie.org. To order a copy for $10, contact: (202) 429-7979.
- Dryfoos, J. 1998. *Safe Passage: Making It Through Adolescence in a Risky Society.* Oxford University Press.
- Pittman, K. 1991. *A New Vision: Promoting Youth Development.* Center for Youth Development and Policy Research.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-832. This is a national study that used a cohort of MN adolescents. It provides an excellent overview of the connections between family, child, school, and

community that protect youth from risk behaviors.

Organizational resources:

- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, MN, at (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Alliance with Youth, 117 University Avenue, St. Paul, MN 55155-2200, (651) 296-4738 or 1-800-234-6687, http://www.mnyouth.org.
- National Youth Leadership Council, Jim Kielsmeier, Executive Director, at (651) 631-3672, http://www.nylc.org, 1910 West County Road B, St. Paul, MN 55113. Their goals are to engage young people in their communities and schools through innovation in learning, service, leadership, and public policy.
- Search Institute, at (612) 376-8955 or 800-888-7828, http://www.search-institute.org, Minneapolis, MN, 700 South Third Street, Suite 210, Minneapolis, MN 55415-1138.
- University of Minnesota Konopka Institute for Best Practices in Adolescent Health, Judith Kahn, Director, at (612) 625-7137. www.allaboutkids.umn.edu/cfahad.

Evidence for strategy:

A large-scale study, the National Longitudinal Study of Adolescent Health, has found a positive association between adolescent connectedness to school and health. Youth who felt connected to school reported lower levels of emotional distress and violent behavior; less use of tobacco, alcohol, and marijuana; and a delay in first sexual intercourse. They were also less likely to think about or attempt suicide (Resnick et al., 1997).

Has this strategy been implemented in Minnesota?

Yes, the Minneapolis Public Schools have implemented a program called ACheck and Connect@ that identifies students at risk for school failure and connects them with a student advocate or case manager who helps keep the student connected and active in school. This is a truancy prevention program, which has applications for healthy youth development.

Indicators for this strategy:

- Percentage of schools with after school programs for adolescents that include both sports and non-sport activities.
- Adolescent participation rates in after school activities in both sports and non-sport activities.
- Number of youth activity information and referral services (e.g., web-based, hotline, etc.).
- Utilization rates of the activity information and referral services by adolescents and by adults.
- Number of communities with a youth center with a variety of programs and services for adolescents.
- Percentage of programs and services for adolescents in which teens are actively involved in program planning, development, implementation, and evaluation.
- Percentage of youth who report that school people care about them.
- Percentage of youth who drop out of school.

For more information contact:

Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

CATEGORY: Child and Adolescent Growth and Development

TOPIC: CHILDREN'S HEALTH – CHILDHOOD ASTHMA

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Incorporate asthma education in elementary school curricula.	✔	✔	✔	✔	✔		Asthma Coalition
Promote the use among Minnesota health care providers of the National Institute of Health (NIH) asthma guidelines for children.	✔	✔	✔	✔	✔		Asthma Coalition
Promote coordination among all organizations and systems that work with children with asthma.	✔	✔	✔	✔	✔	✔	Asthma Coalition
Increase public awareness about the identification and reduction of asthma triggers for children.	✔	✔	✔	✔	✔	✔	Asthma Coalition

Asthma is one of the most common childhood diseases. Children with asthma may experience limitations of their ability to engage in such usual childhood activities as playing with other children or attending school regularly. Asthma is the leading cause of school absences, as well as the cause of frequent medical interventions, including hospitalizations. Teaching children and their families about asthma, increasing public awareness of environmental triggers for asthma, supporting children and their families with asthma to manage their condition, encouraging physicians and other health care providers to utilize the National Institutes of Health guidelines for children with asthma, and bringing together and coordinating organizations and systems that work with children with asthma are critical steps in addressing asthma in children.

Strategy: Incorporate asthma education in elementary school curricula.

	Systems	Community	Individual
Primary			
Secondary		U	
Tertiary			

Background:
Teaching children about self-care, beginning in early elementary grades, enhances their potential to understand and manage their asthma. Schoolchildren are both the target audience and a captive one.

The manual, *Asthma Education: An Integrated Approach*, consists of a series of lesson plans for elementary schoolchildren. These lesson plans are designed to be incorporated into existing curricula. Some are based on the daily use of a peak flow meter, a small handheld tool that measures the lungs' ability to exhale air. In these lessons, students use the peak flow meter daily for a period of 10 days and are taught basic information about asthma and the use of a peak flow meter. When used on a regular basis, these meter readings can give children early warnings of an asthma episode. Some of the lesson plans do not incorporate the peak flow meter. However, like those that do, these lessons are aimed at educating children about the anatomy and physiology of asthma, self-care skills, and the self-esteem issues surrounding this chronic condition.

Some examples of the ways in which information about asthma management is integrated into broader topic areas via these lesson plans are:

- *Math lessons*. By using data collected from the peak flow meter readings, students learn math skills about fractions, averages, means, and modes. They also learn basic research methodology, the development of hypotheses, and ways to illustrate their data with bar graphs, pie charts, etc.
- *Science lessons*. By expanding asthma education, students learn about lung anatomy and physiology and the impact of environmental contaminants and smoking on lung tissue.
- *Language arts*. By reading books about children with asthma and developing skits based on scenarios involving asthma episodes among school-aged children, students learn to communicate about asthma, to ask for help, and to utilize it appropriately.

The lesson plans are written in a teacher-friendly manner, with worksheets to

enhance the learning process. The children become better able to manage asthma through learning its vocabulary and anatomy, as well as through use of a peak flow meter.

Additional resources:

Bibliographic resources:

< Lurie, N. et al. 1998. Incorporating asthma education into a traditional school curriculum. *American Journal of Public Health* 88(5):822-823.

< Mendoza, GR., and Sander, N. *User's Guide to Peak Flow Monitoring.* Allergy and Asthma Network/Mothers of Asthmatics, Inc., at (703) 385-4403. 3554 Chain Bridge Road, Suite 200, Fairfax, VA 22030.

< Minnesota Department of Health. *Frequently asked questions*, a fact sheet about indoor air quality for K-12 school health and safety personnel and school custodians (compliments US EPA Indoor Air Quality: Tools for Schools), at http://www.dehs.umn.edu/iaq/school/.

< Weitzman, M. et al. 1992. Recent trends in the prevalence and severity of childhood asthma. *Journal of the American Medical Association (JAMA)* 268(19):2673-2677.

< Yawn, B. et al. 2000. An in-school CD-ROM asthma education program. *Journal of School Health 2000 70 (4):153-159.*

Organizational resources:

< Minnesota Department of Health Minnesota Children with Special Health Needs (MCSHN*). Asthma Education: An Integrated Approach*. MCSHN, at (651) 215-8956 or (800) 728-5420, Box 64882, St. Paul, MN 55164. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Asthma".

< National Asthma Education and Prevention Program. *Asthma Awareness: Curriculum for the Elementary Classroom*. National Heart, Lung, and Blood Institute Health Information Center, at (301) 592-8573, P.O. Box 30105, Bethesda, MD 20824-0105, www.nhlbi.nih.gov/health/prof/lung/asthma/school/index.htm.

< National Asthma Education and Prevention Program. *How Asthma Friendly Is Your School?* http://www.nhlbi.nih.gov/health/public/lung/asthma/friendhi.htm.

< National Jewish Center for Immunology and Respiratory Medicine. *Understanding Asthma.* National Jewish Center for Immunology and Respiratory Medicine, at (303) 388-4461, http://nationaljewish.org/understanding/understandingasthma.html 1400 Jackson Street, Denver, CO 80206,

Evidence for strategy:

The concept of incorporating asthma education into an elementary curriculum is new and has not been adequately studied. The approach of conducting programs, either during or after school hours, has been studied and found to have limitations. These programs have generally been shown to have positive effects on knowledge and behavior, but they often require students to be pulled from regularly scheduled classes; they may require students to spend time after school; they may require special consents from parents; and they require asthmatic children to be identified as a special group with possible risk of social stigma. This strategy teaches about respiratory health and asthma to all students as they learn math, science, and language arts.

Has this strategy been implemented in Minnesota?
Yes, all lesson plans were pilot tested at three Minneapolis Public Elementary Schools (Hans Christian Andersen School of Many Voices - both Elementary and Open, and Windom Open School).

Indicators for this strategy:
- < Increased school attendance for children with asthma in the schools incorporating the lesson plans.
- < Increased participation in school and community activities by children with asthma from the schools incorporating the lesson plans.
- < Increased ability to self-manage asthma in children from the schools incorporating the lesson plans.
- < Reduced asthma hospitalizations of children from the schools incorporating the lesson plans.

For more information contact:
Barbara Lundeen, at (651) 281-9967 or (800) 728-5420, barbara.lundeen@health.state.mn.us, MDH Minnesota Children with Special Health Needs.

Strategy: Promote the use among Minnesota health care providers of the National Institute of Health (NIH) asthma guidelines for children.

	Systems	Community	Individual
Primary			
Secondary		U	
Tertiary			

Background:
In the early l990's the National Institutes of Health (NIH) National Heart, Lung and Blood Institute called together a panel of experts on asthma to develop guidelines for its diagnosis and management. Their motivation was the wide diversity of medical practices across the nation used to deal with this chronic illness. The expert panel was charged with developing a user-friendly tool for physicians and other care providers that would incorporate all the current research findings and best practice measures available in treating asthma in both children and adults. This publication, known as the *Guidelines for the Diagnosis and Management of Asthma,* was published in August of l991 and broadly disseminated.

With the advent of further research and the development of new medications, the NIH called together a new expert panel in l997 to update the first report. This report is known as the *Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma.*

After these revisions in 1991 and 1997, the NIH released an update of selected topics in the Guidelines for the Diagnosis and Management of Asthma in June 2002. The guidelines now recommend inhaled corticosteroids as safe, effective and preferred first-line therapy for children as

well as adults with persistent asthma. The update continues to recommend a "step-wise" approach to asthma management – in which treatment is adjusted depending on disease severity – but it modifies specific treatment recommendations at each step to reflect research over the last five years. The hope with this latest effort of updates is to continue to increase standardization of asthma care across medical practices.
The NIH expert panel believes that all asthma is both under-diagnosed and under-treated. They feel the personal, social, and economic burdens of asthma can be minimized with appropriate medical care and medication management. Statewide dissemination of the NIH recommendations to physicians and nurses who work with children and their families with asthma could inform health care providers of the latest tools for diagnosis and management of pediatric asthma.

This strategy encourages communities to actively promote the implementation of the NIH Guidelines by their local health care providers. It involves physicians, nurses, pharmacists, respiratory therapists, other health care providers, health educators, parents, and community organizations concerned with the environment and respiratory health (i.e., the American Lung Association of Minnesota/Minnesota Asthma Coalition) working together. It also involves assessing the current knowledge base of health care providers and planning educational events to update all concerned with the latest recommendations. The promise of standardization of care across providers and across health plans, based upon the NIH Expert Panel update of selected topics guarantees consistent advice to families.

Downloadable versions of several important resources are available at the following internet websites:

- The Executive Summary of the NIH Expert Panel Report: *Guidelines for the diagnosis and management of asthma - Update on selected topics 2002*, at http://www.nhlbi.nih.gov/guidelines/asthma/index.htm.
- *Asthma management model system*, at http://www.nhlbisupport.com/asthma/index.html.
- National Asthma Education and Prevention Program, at http://www.nhlbi.nih.gov/about/naepp/index.htm.

Additional resources:
Bibliographic resources:

- Evans, D. 1993. To help patients control asthma, the clinician must be a good listener and teacher. *Thorax* 48:685-687.
- Goodman, DC. et al. 1994. Why are children hospitalized? The role of non-clinical factors in pediatric hospitalizations. *Pediatrics* 93(6): 896-902.
- König. P. 1981. Hidden asthma in childhood. *American Journal of Diseases of Children* 135:1053-1055.
- Lana, M. et al. 2002. Improving childhood asthma outcomes in the United States: A blueprint for policy action. *Pediatrics* 109 (5): 919-930.
- Lurie, N. et al. 1998. Incorporating asthma education into a traditional school curriculum. *American Journal of Public Health* 88(5): 822-823.
- White, M. *What Everyone Needs to Know About Asthma*. Allergy and Asthma Network/Mothers of Asthmatics, Inc., at (703) 385-4403, 3554 Chain Bridge Road, Suite 200, Fairfax, VA 22030.

Organizational resources:

< Minneapolis Public Schools (MPS) Related Services. The *Healthy Learners Asthma Initiative* is a community-wide collaboration between MPS, health care delivery and public health systems, and community organizations. This project aims to decrease student absent days, emergency department visits and inpatient admissions related to asthma by 50 percent. This program will be expanded in the fall of 2002 to include all Minneapolis before and after student school programs. For more information contact Stephanie Bisson-Belseth, at (612) 668-0852, Coordinator of Healthy Learners Asthma Initiative, Minneapolis Public Schools Health Related Services, 2225 East Lake Street, Minneapolis, MN 55407.

< *Minnesota Asthma Coalition (MAC).* MDH has been collaborating with the American Lung Association of Minnesota since 1999 in establishing and maintaining the MAC. The creation of the MAC serves as a unique opportunity for health and medical professionals, individuals and other groups to come together and work on asthma in a collaborative and coordinated approach. The MAC is comprised of a statewide steering committee and seven regional asthma coalitions. Contact Lyann Yates, at (651) 227-8014 or (800) 642-LUNG or www.mnasthma.org, Manager of the Minnesota Asthma Coalition, American Lung Association of Minnesota, 490 Concordia Avenue, Saint Paul, MN 55103-2441.

< Minnesota Department of Health, Minnesota Children with Special Health Needs (MCSHN*). Guidelines of Care for Children with Special Health Care Needs: Asthma*. Minnesota Children with Special Health Needs (MCSHN), (651) 215-8956 or (800) 728-5420 MDH, Box 64882, St. Paul, MN 55164.

< Minnesota Department of Health, *Strategic Plan for Addressing Asthma in Minnesota.* The Commissioner's Asthma Advisory Workgroup was formed in October 2001 to provide guidance and direction in developing a statewide strategic plan to address the increasing health and economic burden of asthma in Minnesota. The strategic plan will be available through the Minnesota Department of Health's Asthma Program early in 2003. Contact Dianne Ploetz, at (612) 676-5460, dianne.ploetz@health.state.mn.us, Asthma Program Coordinator, MDH, 717 Delaware Street S. E., Minneapolis, MN 55414.

< National Heart, Lung and Blood Institute Information Center. *Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma*. Bethesda, MD: NIH Publication No. 97-4051. Available from: National Institutes of Health, National Heart, Lung and Blood Institute, at (301) 251-1222, P.O. Box 30105, Bethesda, MD 20824-0105.

< National Heart, Lung and Blood Institute Information Center. *Guidelines for the Diagnosis and Management of Asthma*. Bethesda, MD: National Institutes of Health, National Heart, Lung and Blood Institute. NIH Publication No. 91-3042. (Available from: National Institutes of Health, National Heart, Lung and Blood Institute, at (301) 251-1222, P.O. Box 30105, Bethesda, MD 20824-0105.

< National Heart, Lung and Blood Institute Information Center. *Pocket Guide for Asthma Management and Prevention: A Pocket Guide for Physicians and Nurses*.

Bethesda, MD: National Institutes of Health, National Heart, Lung and Blood Institute, Global Initiative for Asthma.

Evidence for strategy:
Research designed to look at the potential impact of the nationwide implementation of the NIH *Guidelines of Diagnosis and Management of Pediatric Asthma* has not been done. However, it is safe to say that implementing the suggestions of the best experts in the field would be a good thing. The standardization of care recommendations alone, would be of enormous advantage to families, who move from one community or one care provider to another. A family trying to do their best for an asthmatic child deserves to get the same information (and well-researched advice) from all health care sources, including schools, community centers, and day cares.

Has this strategy been implemented in Minnesota?
Yes, the first phase of this strategy has been implemented; namely, the *Guidelines of Care for Children with Special Health Care Needs: Asthma*, including all the 1997 NIH recommendations, was distributed in the spring of 1998 to all school nurses, pediatric nurse practitioners, family practice physicians, and pediatricians licensed to practice in the state of Minnesota. The second phase, community involvement in the promotion of the use of the guidelines, has yet to be developed.

Indicators for this strategy:
- < The identification of community sectors concerned with respiratory health.
- < The development of a plan to promote the use of the guidelines.
- < The number and kinds of activities conducted to promote the use of the guidelines.
- < The number of practitioners using the guidelines.

For more information contact:
- < Barbara Lundeen, at (651) 281-9967 or (800) 728-5420, barbara.lundeen@health.state.mn.us, MDH Minnesota Children with Special Health Needs.
- < Dianne Ploetz, at (612) 676-5460, dianne.ploetz@health.state.mn.us, MDH Asthma Program.

Strategy: Promote coordination among all organizations and systems that work with children and families with asthma.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
Children with asthma along with their families interact with a wide variety of community organizations. Most children are enrolled in their community public school system. Most seek health care through existing systems, either school-based clinics, community clinics, managed care plans, or emergency rooms. Efforts put forward to educate children and their families about asthma and attempts to ensure access to care will be most effective if all involved parties coordinate their efforts. This involves:
- < The identification of all the appropriate groups including children with asthma, parents, individual and group health care providers, school nurses, school-based clinics staff, teachers, coalitions, government divisions concerned with

children and chronic diseases, and organizations concerned with asthma or other child health advocacy.

< The development of a leadership structure to carry out the standardization of expectations regarding asthma management.

< The design of a detailed strategic plan for all of the project components with all partners to determine their roles and level of commitment.

< The solicitation of project funds from federal, state and local community resources.

Additional resources:

Bibliographic resources:

< Goodman, DC. et al. 1994. Why are children hospitalized? The role of non-clinical factors in pediatric hospitalizations. *Pediatrics* 93(6): 896-902.

< Hu, FB. et al. 1997. Prevalence of asthma and wheezing in public schoolchildren: Association with maternal smoking during pregnancy. *Annals of Allergy and Immunology* 79(1):80-84.

< Minnesota Department of Health, Minnesota Children with Special Health Needs (MCSHN*). Asthma Education: An Integrated Approach*. MCSHN, at (651) 215-8956 or (800) 728-5420, MDH, Box 64882, St. Paul, MN 55164. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Asthma".

< Park Nicollet Health Source. *Living with Asthma: A Practical Guide to Understanding and Managing* A*sthma*. Available from Park Nicollet Health Source, at (952) 993-3534 or (800) 372-7776, www.healthsource.org, 3800 Park Nicollet Boulevard, Minneapolis, MN 55416.

< Rand, CS. et al.1994. Adherence to therapy and access to care: The relationship to excess asthma morbidity in African-American children. *Pediatric Asthma, Allergy and Immunology* 8(3):179-184.

< Weitzman, M. et al. 1992. Recent trends in the prevalence and severity of childhood asthma. *Journal of the American Medical Association* 268(19):2673-2677.

< Weizman, M. et al. 1990. Environmental risks for childhood asthma. *American Journal of Diseases of Children*; 144:1189-1194.

< White, M. *What Everyone Needs to Know About Asthma*. Allergy and Asthma Network/Mothers of Asthmatics, Inc., (703) 385-4403, 3554 Chain Bridge Road, Suite 200, Fairfax, VA 22030.

Organizational resources:

< American Lung Association of Minnesota, at (651) 227-8014 or (800) 642-LUNG, www.alamn.org, 490 Concordia Avenue, St. Paul, MN 55103.

< Minnesota Asthma Coalition (MAC). MDH has been collaborating with the American Lung Association of Minnesota since 1999 in establishing and maintaining the MAC. The creation of the MAC serves as a unique opportunity for health and medical professionals, individuals and other groups to come together and work on asthma in a collaborative and coordinated approach. The MAC is comprised of a statewide steering committee and seven regional asthma coalitions. Contact Lyann Yates, at (651)-227-8014 or (800) 642-LUNG, www.mnasthma.org, Manager of the

MAC, American Lung Association of Minnesota, 490 Concordia Avenue, Saint Paul, MN 55103-2441.

< Minneapolis Public Schools Related Services. The *Healthy Learners Asthma Initiative* is a community-wide collaboration between MPS, health care delivery and public health systems, and community organizations. This project aims to decrease student absent days, emergency department visits and inpatient admissions related to asthma by 50 percent. This program will be expanded in the fall of 2002 to include all Minneapolis before and after school student programs. For more information contact Stephanie Bisson-Belseth, at (612) 668-0852, coordinator of Healthy Learners Asthma Initiative at Minneapolis Public Schools Health Related Services, 2225 East Lake Street, Minneapolis, MN 55407.

< Twin Cities Asthma Coalition and the Minneapolis Public Schools Healthy Learners Board *Twin Cities Childhood Asthma Collaborative Project: Controlling Asthma in American Cities Cooperative Agreement.* The Twin Cities Asthma Coalition and the Minneapolis Public Schools Healthy Learners Board are combining efforts to develop a new coalition that will develop coordinated comprehensive population-based pediatric asthma care in the Twin Cities of Minneapolis and St. Paul. The two-year planning grant awarded by Centers for Disease Control and Prevention will provide opportunities to expand and refine successful local initiatives and develop new initiatives. Contact, Jill Heins, at (651) 268-9578, American Lung Association of Minnesota.

Evidence for strategy:
While there is no specific research supporting this strategy as it relates to asthma, it is known from research that collaborative community efforts to address a local concern have great potential to effect change within that community. Pediatric asthma, by its very nature, requires the cooperation of all the pieces of the child's lifestyle, from the parents and health care providers, to the classroom teachers and coaches. Community air quality (issues of pollution, dust, carpeting, etc.) is also a concern. Addressing such global issues requires the involvement of all players to achieve the most effective outcome.

Has this strategy been implemented in Minnesota?
Yes, since 1999 the MDH has been working with the American Lung Association of Minnesota to develop the Minnesota Asthma Coalition (MAC). The MAC is comprised of a statewide steering committee and seven regional asthma coalitions. The mission of the MAC is to enhance the quality of life for people with asthma in Minnesota by promoting awareness, prevention, culturally sensitive education, ensuring access to state-of-the-art care, and providing monitoring, analysis, and dissemination of information.

In 2002, the Healthy Learners Asthma Initiative hired an outside evaluator to assess the program's effect on asthma care and outcomes for students with asthma. The evaluation found that the initiative has had a positive impact in the following areas: attendance, health care utilization, Asthma Action Plans, and increased capacity of schools and clinics to effectively care for children and teens with asthma.

Indicators for this strategy:

- An increase in the number of communities working collaboratively to address and decrease the incidence and severity of pediatric asthma in their locality.
- An increase in the numbers of organizations and systems involved in this collaborative process.
- The identification of local community asthma champions for this collaborative process.
- The completion and implementation of an action plan by the collaborative community team.
- The availability or generation of additional financial or community resources to sustain the efforts of the community group.
- Increased school attendance for children with asthma in the community targeted for intervention.
- Increased participation in school and community activities by children with asthma in the community targeted for intervention.
- Increased ability to self-manage asthma in children from the community targeted for this intervention.
- Reductions in asthma hospitalizations.

For more information contact:

- Barbara Lundeen, at (651) 281-9967 or (800) 728-5420, barbara.lundeen@health.state.mn.us, MDH Minnesota Children with Special Health Needs.
- Dianne Ploetz, at (612) 676-5460, dianne.ploetz@health.state.mn.us, MDH Asthma Program.

Strategy: Increase public awareness about the identification and reduction of asthma environmental triggers for children.

	Systems	Community	Individual
Primary			
Secondary		U	
Tertiary			

Background:

Increasing awareness in all levels of the community about asthma environmental triggers can benefit children and adults with asthma. Allergies and irritants in the environment are among the most common triggers of asthma. For infants, the major trigger is respiratory infections. Identifying, reducing, or eliminating environmental triggers can prevent asthma episodes and reduce the need for medications in some children. Choices made each day can significantly influence a child's ability to manage his or her asthma. For example, a teacher's choice to have a pet in a classroom, a day care provider's decision to carpet or tile a playroom floor, a school board's analysis of how to maintain good air quality within their buildings and playgrounds, or a landlord's policy of fumigating regularly for cockroaches may all have an impact on asthma in children.

The first step in reducing triggers is increasing public awareness of these triggers and their impacts on children. This strategy promotes media campaigns in preschools, day care centers, school systems, and community networks such as radio, television, and newspapers.

Additional resources:

Bibliographic resources:

< Committee on the Assessment of Asthma and Indoor Air. *Clearing the Air: Asthma and Indoor Air Exposures*, Division of Health Promotion and Disease Prevention, Institute of Medicine, at http://books.nap.edu/catalog/9610.html.

< Eggleston, PA. and Bush, RK. 2001. Environmental allergen avoidance: An overview. *Journal of Allergy and Clinical Immunology* 107(3):173-177.

< Environmental Protection Agency. *IAQ Tools for Schools,* at http://www.epa.gov/iaq/schools/index.html.

< Environmental Protection Agency. *IAQ Tools for Schools, Managing Asthma in the School Environment,* at http://www.epa.gov/iaq/schools/asthma/index.html.

< Friedman, M. et al. 2001. Impact of changes in transportation and commuting behaviors during the 1996 Summer Olympic Games in Atlanta on air quality and childhood asthma. *Journal of the American Medical Association 285 (7).*

< Huss, K. et al. 1994. Home environmental risk factors in urban minority asthmatic children. *Annals of Allergy* 72(2):173-177.

< Minnesota Department of Health, Indoor Air Issues web page. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Indoor Air".

< Murray, AB., and Morrison, BJ. 1993. The decrease in severity of asthma in children of parents who smoke since the parents have been exposing them to less cigarette smoke. *Journal of Allergy and Clinical Immunology* 91:102-110.

< National Institutes of Health, National Institute of Heart, Lung and Blood. *Teach Your Patients About Asthma: A Clinician's Guide*. National Institutes of Health, National Institute of Heart, Lung and Blood, at (301) 251-1222, Box 30105, Bethesda, MD 20824.

< President's Task Force on Environment Health Risks and Safety Risks to Children. *Asthma and the Environment: A Strategy to Protect Children*, at http://www.health.gov/environment/TaskForce/fin.pdf.

< Sander, N. 1994. *A Parent's Guide to Asthma. How You Can Help Your Child Control Asthma At Home, School and Play.* New York: Dutton.

< Sander, N. 1994. *Consumer Update on Asthma*. Fairfax, VA: Allergy and Asthma Network.: Allergy and Asthma Network, Mothers of Asthmatics, at (703) 385-4403, 554 Chain Bridge Road, Fairfax, VA 22030.

< U.S. Department of Health and Human Services. *Healthy People 2010*, at http://www.healthypeople.gov.

< Weizman, M. et al. 1990. Environmental risks for childhood asthma. *American Journal of Diseases of Children* 144:1189-1194.

Organizational resources:

< American Lung Association of Minnesota, at (651) 227-8014 or (800) 642-LUNG, www.alamn.org, 490 Concordia Avenue, St. Paul, MN 55103.

< Centers for Disease Control and Prevention, National Center for Environmental Health, Air Pollution and Respiratory Health Branch, http://www.cdc.gov/nceh/airpollution/default.htm.

Evidence for strategy:
There is no research that specifically addresses the issue of public awareness playing a role in the identification and reduction of asthma triggers for children; however, it stands to reason that raising public awareness about health concerns for children is an important step in addressing them. Many people are not aware of the potential impact of a furry pet in a classroom, cigarette smoke across a room, chemicals in carpeting, or indoor air quality in self-contained buildings. Knowledge of these concerns, and the impact of triggers on sensitive children, opens the door to further discussion of these issues and possibly to strategies of change. It is known from the social marketing research that public information campaigns and activities can raise awareness and change attitudes of health issues.

Has this strategy been implemented in Minnesota?
Yes, MDH in collaboration with the Department of Children Families and Learning (DCFL) and the University of Minnesota sponsored a series of ten training sessions throughout Minnesota in 1997 and again in 2000. These trainings provided USEPA IAQ Tools for Schools action kits and instruction on the general principals of IAQ and implementation procedures for developing an IAQ Management Plan.

Currently, MDH has a grant from the USEPA to assist and track the progress of schools that are implementing IAQ Management Plans. In addition, MDH is creating a Model IAQ Management Plan to be used in training sessions. This Model Plan is based on DCFL and USEPA criteria and draws on information from existing plans for Minnesota schools and articles.

Indicators for this strategy:
- < Increased school attendance rates by children with asthma.
- < Increased participation in school and community activities by children and adults with asthma.
- < Increased ability of children and adults to self-manage asthma.
- < Reduced asthma hospitalizations.

For more information contact:
- < Barbara Lundeen, at (651) 281-9967 or (800) 728-5420, barbara.lundeen@health.state.mn.us, MDH Minnesota Children with Special Health Needs.
- < Contact Dianne Ploetz, at (612) 676-5460, dianne.ploetz@health.state.mn.us, MDH Asthma Program.

CATEGORY: Child and Adolescent Growth and Development

TOPIC: CHILDREN'S HEALTH - CHILDHOOD LEAD POISONING

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Implement the statewide plan for targeted childhood lead poisoning screening.	Local and State	✔	✔				
Provide lead prevention and education materials and training for rental property owners, property managers, and tenants.	Local				✔	✔	Rental Property Owners and Managers
Provide one-on-one education for parents and guardians on the reduction or prevention of lead exposure for their families.	Local	✔	✔	Head Start, ECFE	Achievement Plus Parent Groups		Day Care Providers
Provide the public and the regulated community with education on lead issues and exposure.	✔	✔	✔	✔	✔		Pollution Control Agency (PCA), Occupational Safety and Health Association (OSHA), Professional Associations, Media
Monitor and provide assistance with regulated lead work procedures.	✔						PCA, Professional Associations
Monitor training course providers who conduct approved lead training courses.	✔						PCA

The Minnesota Legislature has given the MDH statutory authority to provide primary and secondary lead poisoning prevention activities. These activities aim to prevent lead poisoning in young children and pregnant women (for related strategies see the section on Birth Outcomes and Prenatal care in the *Pregnancy and Birth* category) and to lower the blood lead levels, and prevent further poisonings, of those already adversely affected by lead. To accomplish these goals, the MDH employs its statutory authority in three general areas related to lead: health education and outreach, lead surveillance, and lead regulations. These lead regulatory activities fall into the following four categories:

- Establishing standards for lead in paint, dust, drinking water, and soil.
- Conducting environmental assessments of properties and issuing lead orders to property owners.
- Establishing and regulating lead risk assessment and lead hazard reduction methods.
- Licensing lead-related occupations, approving lead training courses and conducting field and office performance audits.

With respect to lead, the MDH only has authority over child-occupied facilities. These may include residences, childcare facilities, schools, and playgrounds. The MDH does not have authority over lead hazards in commercial buildings and structures. The following is a brief description of how the MDH collects blood lead data, and uses this information to begin the process of responding to childhood lead poisoning cases.

Lead surveillance:
The MDH is responsible for establishing and maintaining a blood lead surveillance system. The results of blood lead tests performed for Minnesotans are entered into this database. All facilities that perform blood lead analysis for Minnesota residents must, by law, report the results to the MDH. The MDH follows the multi-tiered blood lead level approach established by the U.S. Centers for Disease Control and Prevention (CDC) in 1991. The CDC has established a blood lead level of 10 ug/dL-micrograms per deciliter of whole blood-as a level of concern associated with probable adverse health effects in children. Blood lead levels below 10 ug/dL are considered "normal" or acceptable. Blood lead levels above 10 ug/dL may require a combination of medical, environmental, and educational interventions. All levels must be reported, regardless of whether they are venous or capillary samples, and whether the results are elevated or within "normal" limits.

The MDH Lead Program advises local boards of health of elevated blood lead levels in children up to six years of age and pregnant women. By law, the type of intervention required for families and the timeframe within which it occurs are dependent on the blood lead level of the child. Local public health agencies may be involved in providing families with education or a home risk assessment to identify sources of lead exposure.
When local public health agencies do not have the responsibility for follow-up, the MDH conducts the home assessment and lead education. In January 1996, the Minnesota Legislature allowed local boards of health, except those serving cities of the first class, to give their lead assessment

duties to the state. Currently, the MDH Lead Program is responsible for follow-up of childhood lead poisoning cases in 77 Minnesota counties and one city. Venous blood lead levels of 40 ug/dL or greater in adults are reported to the state Department of Labor and Industry=s Occupational Safety and Health Enforcement Division.

Blood lead screening is not mandatory in Minnesota, and is ordered at the discretion of individual physicians. Therefore, the true rate of lead poisoning in Minnesota is unknown. Currently, the CDC recommends a targeted approach to lead screening, based on the presence of certain risk factors in a child=s life. The MDH issued a statewide plan for implementing targeted screening in the state in March 2000. It is hoped that this targeted approach will increase blood lead screening among at-risk Minnesota children. Guidelines for medical case management and clinical treatment of elevated blood lead cases were issued in 2001.

Lead orders:
Currently, elevated blood lead levels (EBLL) of 20 ug/dL or greater, and those that persist in the 15 to 19.9 ug/dL range for 90 days, require an environmental assessment of the child=s primary place of residence. During an environmental assessment, paint, dust and bare soil samples are collected by a licensed risk assessor. Based on the results of this assessment, the public health agency must order a property owner to perform lead hazard reduction work on all lead sources that exceed the standards established for those sources by the MDH. Lead orders require, among other things, that all lead sources are brought to safe levels, all deteriorated lead paint is removed or replaced, and that any sources of damage to leaded surfaces, such as leaking roofs or windows, are repaired or replaced.

In addition to writing orders, the public health agency provides lead education for families. This information assists them in lowering the child=s EBLL and prevents further poisonings for the child, and other children, on the property. Educational interventions are also offered to families with children whose EBLL fall in the 10-14 ug/dL range.

Who can do the work?
Any person performing lead hazard reduction work must use the methods defined in Minnesota. Rules governing residential lead work, designate prohibited and acceptable lead hazard reduction methods. It is the responsibility of the property owner to ensure that any ordered work is completed. The homeowner may choose to do the work, or to hire an individual licensed by the MDH. A work plan, detailing how the orders are to be accomplished, and when the work is to begin, must be submitted to the MDH within 30 days of receiving the orders. Whoever (i.e., the property owner or the licensed individual) is designated to complete the work must also complete and submit the plan. Property owners have 60 days, or as soon thereafter as weather permits, to comply with lead orders.

Lead clearance inspection and case closure:
After lead hazard reduction work has been completed, the risk assessor will reassess the property to make sure that all work has been done in a lead-safe manner. The clearance inspection includes re-sampling the areas of the property originally found in violation of

Minnesota state standards to determine if the lead hazards have been reduced to appropriate levels. A lead poisoning "case" comes to closure after:

- Lead orders are written.
- Lead orders have been completed.
- A clearance inspection demonstrates that the lead sources have been brought to safe levels.

If clearance standards are met, a closure letter is sent to the property owner.

The first three strategies presented here provide an important complement to the required regulatory approach to preventing childhood lead poisoning. For strategies on related environmental health issues, see the category on *Environmental Conditions*.

Regulatory framework:
As part of its regulatory function to prevent lead exposure, the MDH Lead Unit adopted rules in 1991. Revisions to the licensing requirements were made in 1993 with additional revisions in February 1999. Protecting young children and pregnant women from lead exposure requires maintaining reasonable and comprehensive regulations that include ensuring the quality of training for individuals and the regulated community, inspecting lead hazard reduction projects, providing audits of trainers, and continuing to take consistent enforcement action against violators. In addition, working with partners to provide health education, outreach, and technical assistance to both the public and the regulated community enables these groups to make educated decisions regarding lead issues, as well as supports the regulatory functions of the MDH.

Strategy: Implement the statewide plan for targeted childhood lead poisoning screening.

	Systems	Community	Individual
Primary	✔		
Secondary	✔		
Tertiary	✔		

Background:
The purpose of this strategy is to implement the plan for targeted childhood blood lead screening, which provides guidance for screening young children in Minnesota at risk for lead poisoning. The CDC released guidance in 1997 (see additional resources) for state and local public health agencies, and health care providers, to develop a statewide plan for targeted childhood blood lead screening. This guidance strongly urges public and private health care providers to work together to develop a plan, and from it, a tool that providers can use to screen their young patients for lead poisoning. The MDH guidance document was released in March 2000 and takes into account the various risk factors for lead poisoning, which may vary by geographic region. The plan also is consistent with Minnesota Department of Human Services requirements for screening children who are enrolled in Medicaid for lead poisoning.

The CDC=s recommendation for a targeted approach to screening differs from their earlier recommendation of "universal" screening. Universal screening refers to screening all children in a specific area for lead poisoning, regardless of the presence of risk factors. Targeted lead poisoning screening refers to a process where children are screened based on the presence of

various risk factors in the child=s environment or life. These risk factors may include:

- The age of the child.
- The race of the child.
- The income level of the child=s family.
- The age and condition of the child=s home environment.
- The occupation (e.g., employment in a lead industry) of the child=s parent or guardian.

The purposes or outcomes of the screening include:

- The identification of children with elevated blood lead levels.
- The identification and removal or mediation of sources of lead poisoning in the affected child=s environment.
- The implementation of the appropriate interventions to reduce the child=s blood lead level.
- Education for parents on lead poisoning prevention strategies to prevent further lead poisoning for this child and other children in this environment.
- The identification of children at risk for lead poisoning, who may not have yet become lead poisoned.

Additional resources:

Bibliographic resources:

- Brody, DJ., Pirkle, JL., Kramer, RA., et al. 1994. Blood lead levels in the U.S. population: Phase 1 of the Third National Health and Nutrition and Examination Survey (NHANES III, 1988 to 1991). *JAMA*, 272, 277-83.
- Centers for Disease Control and Prevention. 1997, November. *Screening Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials.* Atlanta, GA: Centers for Disease Control and Prevention. The guidance can also be accessed at http://www.cdc.gov/ncen/programs/lead/guide/1997/guide97.htm. The documents listed below are some of the references found in this CDC guidance document.
  - *Conditions required for a source of lead to be a lead hazard.*
  - *Costs and benefits of a universal screening program for elevated blood lead levels in 1-year-old children.* This is a cost-benefit analysis performed by scientists within and outside CDC.
  - *List of studies of effectiveness of personal-risk questionnaires for selecting children for blood lead screening.*
  - *Samples of Medicaid contract language on childhood blood lead screening.*
- Pirkle, JL., Brody, DJ., Gunter, EW., et al. 1994. The decline in blood lead levels in the United States: The National Health and Nutrition Examination Surveys (NHANES). *JAMA*, 272, 284-91.
- Update: Blood lead levels-United States, 1991-1994. (1997, February 21). *Morbidity and Mortality Weekly Report.* This article contains data from Phase 2 of the Third Annual Health and Nutrition Examination Survey (NHANES III), from 1991 to 1994.

Organizational resources:

- Minnesota Department of Health. *Minnesota Environmental Health Profiles.* The CHS agencies receive annual reports on blood lead screening activity, including tests results, published in the *Minnesota Environmental Health Profiles*. For copies, see contact information below.
- Minnesota Department of Health. *Blood Lead Screening Guidelines for*

Minnesota. March 2000. *Childhood Blood Lead Case Management Guidelines for Minnesota.* April 2001. *Childhood Blood Lead Clinical Treatment Guidelines for Minnesota.* July 2001. For copies, see contact information below.

Evidence for strategy:
The Minnesota Legislature has given the MDH statutory authority to provide primary and secondary lead poisoning prevention activities. One component of these activities is the development of a statewide plan for targeted childhood lead poisoning screening, which was completed in March 2000. The MDH guidance contains the most effective, science-based recommendations to date. This guidance takes into account the various risk factors for lead poisoning, which may vary by geographic region. The plan is consistent with Minnesota Department of Human Services requirements for screening children for lead poisoning who are enrolled in Medicaid. Guidelines for medical case management and clinical treatment of elevated blood lead cases were issued in 2001.

Has this strategy been implemented in Minnesota?
Yes, although blood lead screening in Minnesota is not mandatory, many health care providers perform some type of lead screening. The MDH guidance recommends routine targeted screening for all children in Minneapolis and St. Paul if they receive any one of a variety of public assistance services (eg: MA, WIC) or if they demonstrate that they are in a high risk population for lead exposure.

Indicators for this strategy:
- Change in health care providers' knowledge regarding the importance of lead screening.
- Change in health care providers' attitudes regarding importance of lead poisoning screening.
- Number of Minnesota providers and clinics screening for lead poisoning.
- Number of Minnesota children screened for lead poisoning.
- Number of lead poisoning cases in Minnesota.

For more information contact:
- Maureen Alms, at (651) 215-0882, maureen.alms@health.state.mn.us, MDH Environmental Health.
- Daniel Symonik, at (651) 215-0776, daniel.symonik@health.state.mn.us, MDH Environmental Health.

Strategy: Provide lead prevention and education materials and training for rental property owners, property managers, and tenants.

	Systems	Community	Individual
Primary		✔	
Secondary			
Tertiary			

Background:
This strategy is used to foster better understanding in the rental property community (e.g., rental property owners, property managers, and tenants) of lead poisoning hazards, and lead-safe hazard reduction. This strategy is also used to foster better communication and cooperation between rental property owners and tenants

with regard to lead hazards in their rental property. The desired outcomes of providing materials and trainings include:

- Increasing property owners=, managers=, and tenants= knowledge of the dangers of lead poisoning to young children.
- Creating an attitude among property owners, managers, and tenants that childhood lead poisoning is an entirely preventable disease about which they can do something.
- Increasing and improving property owners=, managers=, and tenants= skills and behaviors in maintaining lead-safe property.

These outcomes are specifically intended to prevent children from living in rental properties that contain lead hazards. They are a part of the MDH public health goal to reduce childhood lead poisoning, which also includes the following outcomes:

- Preventing children living in rental property from becoming exposed to lead hazards.
- Reducing children=s exposure to lead.
- Decreasing the incidence of lead poisoning cases in individual communities and counties in Minnesota.

The workshop model is community based. While the MDH provides funds, supplies, and some expert speakers, a community-based organization (CBO) hosts the workshop and assists in publicizing it, and local public health staff present information specific to the community. The workshops may include:

- Legal trends and the Federal Lead Paint Disclosure Law.
- Health effects, sources of lead, and regulatory policy regarding lead.
- Hands-on training in working safely with lead and testing for lead.
- Information on financial resources available for lead property fix-up.

Depending on resources, incentives are provided for participants to support the message of learning to live safely with lead. Incentives have included lead videos, cleaning supplies, and home test kits. Childcare has been provided at some workshops. There is a nominal fee ($10 per person is requested) to attend the workshops, which provides an investment in the strategy, and is used to offset the cost of a light meal and other program costs.

Additional resources:
This strategy or model was implemented in 1999-2000 and is currently being evaluated.

Evidence for strategy:
The MDH incorporates evaluation into all aspects of the workshops. In addition to a lead knowledge pretest and an evaluation completed at the end of the workshop, rental property owners who participate are called about two months after the workshop and are asked questions about the ways they have reduced lead hazards.

Has this strategy been implemented in Minnesota?
Yes, since 1997, the rental property owner and tenant workshops have been periodically implemented in Minneapolis, St. Paul, and in four locations across the state.

Indicators for this strategy:

- Change in knowledge of rental property owners and tenants regarding lead hazards and hazard control.
- Change in attitudes of rental property owners and tenants so that they regard

lead hazards as a serious health risk for young children, but one they can help prevent.
- Change in skills and preventive behaviors of rental property owners and tenants regarding maintaining lead-safe property.
- Number of lead poisoning cases in properties owned by workshop participants.

For more information contact:
- Andrea Michael, at (651) 215-0891, andrea.michael@health.state.mn.us, MDH Environmental Health.
- Daniel Symonik, at (651) 215-0776, daniel.symonik@health.state.mn.us, MDH Environmental Health.

Special notes:
Staff have been organizing the rental property owner and tenant workshops since the spring of 1997. The staff designated above can be contacted for details on how these workshops have been implemented. The evaluation data obtained by MDH staff from these workshops can also be reviewed to understand the short-term and long-term benefits of this type of intervention.

Strategy: Provide one-on-one education for parents and guardians on the reduction or prevention of lead exposure for their families.

	Systems	Community	Individual
Primary			✔
Secondary			✔
Tertiary			✔

Background:
This strategy is used to educate parents and guardians on various aspects of lead sources and lead poisoning prevention. This intervention occurs directly with families (parents or guardians) of lead-poisoned children and families with children at risk for lead poisoning, and also includes general lead education for interested families and parents.

One of the goals of lead education is to encourage families to seek and comply with recommended interventions for preventing children=s exposure to lead, as well as to help families with a lead-poisoned child to reduce their child=s blood lead level. The desired outcomes from family education include an increase in parents= and guardians= awareness and knowledge of lead hazards in the home; identification of children at risk for lead poisoning and those who have already been exposed to lead; increase, improvement, or both in parents= and guardians= skill levels at maintaining a lead safe home; performance of appropriate interventions to reduce the child=s elevated blood lead level to a safe level; and prevention of further exposure for affected children and other children in the environment.

The general message is that the parent or guardian is central to the process of reducing or preventing lead exposure for a child. When a family has a child with an elevated blood lead level, this process may also involve a support system that includes the public health agency, health care providers, and others concerned with the child=s welfare. An explanation of how these partners can help is useful for families with a lead-poisoned child. For these families,

and for general lead education, additional useful information may include symptoms of lead poisoning solutions to making families lead-safe, and resources for help, as well as facts about the health effects of lead, its sources, special concerns (pregnancy and nursing), and healthy foods and ways to eat to fight lead.

An educational session may be enhanced by leaving educational materials with families, and, in cases with a lead-poisoned child, a "plan" form or page to write down special instructions such as the date of the child=s next doctor=s appointment for follow-up blood lead testing.

In order to facilitate these one-on-one family lead-education sessions, the MDH Lead Program has produced an educational tool; a flip chart entitled *Healthy Homes/Healthy Kids*. It was originally developed for Community Health Services (CHS) agencies to use when working with families of a lead-poisoned child. This flip chart may also be used in a clinical setting with families of children at risk for lead poisoning and as a general lead-education tool in various educational settings. It provides standardized lead-education information for educators who may have a little, or a lot of, previous experience with the lead issue. The tool was designed in flip-chart form, with a visual or graphic side displayed toward the family, and an information or "script" side to cue the educator with lead prevention messages. The graphic images were designed to convey and reinforce the education message explained by the educator. Very little text was used on the graphic page, to make it appropriate for use with low-literacy and non-English-speaking families or individuals, with the assistance of a qualified interpreter. Some pages of the flip chart have been designed as fact sheets to leave with the families, including a "plan" page for writing special instructions when appropriate.

Additional resources:
The literature regarding adult education, learning, and behavioral theory principles all apply to lead education and contributed to the development of the MDH Lead Program=s flip chart. Two useful resources include:

- Minnesota Department of Revenue Training Services. (1994). *The Learner Guide: Learner-centered Learning.* St. Paul, MN
- Minnesota Department of Revenue Training Services. Principals of Adult Learning. (1983). *Occupational Health Nursing*, 31(6), 17-19.

Evidence for strategy:
A variety of educational strategies have been used in Minnesota and elsewhere to educate people about lead poisoning (see the section on resources). The development of the content and format of the MDH flip chart was based on key informant interviews and a work group representing public health educators, nurses, and sanitarians from the public sector; small-group discussions with parents; and discussions with federal agencies involved in prevention and treatment of lead poisoning. In addition, staff at the National Safety Council=s National Lead Information Clearinghouse were queried about the questions they received most often through the Center=s lead hotline.

The flip chart was pretested during actual lead-education sessions with parents and

guardians. Educators and families were surveyed after the sessions to get their feedback on its usefulness and effectiveness. Its content and design were periodically pretested, as drafts evolved, with the lead-education flip chart work group.

Has this strategy been implemented in Minnesota?
Yes, the MDH Lead Program flip chart was disseminated at no cost to all CHS agencies, and to some private and community clinics. Additional copies are available while supplies last. There is an introductory section in the flip chart with instructions for use; the MDH Lead Program staff are available to answer questions about the flip chart and its uses; and the Lead Program has lead-education material, including videos and written documents, which support the messages in the flip chart. Most, if not all, of these are already made available to CHS agencies, and additional copies are always available upon request.

In addition to giving each CHS agency the flip chart, MDH has provided a copy of the new lead-education video, *Sesame Street Lead Away*, produced by the Children=s Television Network. This 15-minute video features Sesame Street characters and can be used to entertain and educate children about lead while their parents are involved in lead-education sessions.

Indicators for this strategy:
- Change in parents= and guardians= knowledge about lead hazards and their sources.
- Change in parents= and guardians= awareness of lead hazards in the home.
- Change in parents= and guardians= skill level at maintaining a lead-safe home.
- Decrease in child=s blood lead level after home visit.

For more information contact:
Andrea Michael, at (651) 215-0891, andrea.michael@health.state.mn.us, MDH Environmental Health.

Special notes:
In January 1996, the Minnesota Legislature allowed most of the counties in Minnesota to relinquish the responsibility for performing lead risk assessments to the state. Although MDH is now responsible for investigating most of the cases of elevated blood lead levels in greater Minnesota, the counties remain the frontline for providing effective lead-education messages to citizens. They are encouraged to continue their lead-education responsibilities, and to call the MDH at, (651) 215-0890, if any assistance is needed.

Strategy: Provide the public and the regulated community with education on lead issues and exposure.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
The purpose of this strategy is to inform the public and the regulated community about exposure to lead, about what to do if a lead exposure event occurs, and of the availability of resources, lists, guidelines, and regulatory information. This information is provided through presentations, newsletters, and fact sheets.

The kinds of information available include:

- Resources, including numerous studies of lead exposure and methods used in the industry to remove or isolate potential lead hazards.
- Lists, including lead contractors, training providers, consulting groups, labs, professional associations, and program contacts, as they relate to lead.
- Guidelines, including fact sheets, brochures, and educational articles (local and national).
- Regulatory information, including state and federal rules and regulations, as they relate to lead related activity.

Additional resources:

- EPA documents: *Protect Your Family From Lead in the Home* (651) 215-0890 from the MDH Lead Compliance Unit.
- *Safely Working with Lead* fact sheets. (651) 215-0890 from the MDH Lead Compliance Unit.

Evidence for strategy:
General principals of adult education and behavioral change theory have contributed to this strategy. The materials mentioned above have been evaluated.

Has this strategy been implemented in Minnesota?
Yes, the MDH Lead Unit has developed and distributed *Working Safely with Lead* documents to the general public at health fairs, events, and by request. They have been distributed to the regulated community at various professional associations in Minnesota, and as part of the training of individuals for the various disciplines licensed within the Lead program. On an annual basis, the MDH Asbestos/Lead Compliance Unit publishes the *Asbestos/Lead Link* newsletter, which is distributed locally to licensed contractors and businesses and public health staff. In addition, the Lead Unit has made presentations to a variety of professional organizations and associations throughout Minnesota.

Indicators for this strategy:

- Numbers of materials distributed.
- Number of telephone inquiries to the MDH Lead Unit.
- Circulation of the newsletter.
- Number of presentations conducted.
- Number of different associations, organizations, and businesses that receive presentations.

For more information contact:
MDH Lead Compliance Unit, at (651) 215-0890.

Strategy: Monitor and provide assistance with regulated lead work procedures.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Compliance with lead work procedures has a direct relationship with minimizing the exposure of children and pregnant women to lead. Regular field surveillance of lead abatement projects is being developed with a target rate of 25 percent of all notified residential projects. Sites are inspected to ensure that people performing the work are properly trained and licensed and that they

follow lead safe work procedures. Field surveillance of lead projects is necessary to ensure that children and pregnant women are protected from exposure to lead. This portion of the program is being developed. No historical data exists for comparison of compliance rates.

Compliance with the lead abatement rules means abatement projects meet all requirements of rules. The MDH Lead Unit records all inspections, the number of violations, and the number of inspected projects in compliance with the lead rules and statutes.

Additional resources:
N/A

Evidence for strategy:
Data indicate that continuous compliance monitoring of regulated work procedures affects the behavior of contractors and workers.

Has this strategy been implemented in Minnesota?
Yes, the MDH Lead Unit receives notifications from certified contractors for lead projects. Staff inspect approximately 25 percent of all lead work sites. Sites found to be in compliance are entered into a database. In some instances, the Lead Unit receives complaints regarding improper lead removal activities.

When violations are observed during an inspection, the inspector informs the responsible individual or company, and in some cases may recommend a cease and desist of all work activity, especially if immediate danger to public health is known. If violations have been cited, the inspector makes a recommendation for enforcement action using the MDH administrative penalty order. Once the violations have been corrected and finalized, the inspector enters the information into a database for tracking purposes.

Indicators for this strategy:
- Number of notifications for lead projects.
- Number of inspections conducted.
- Number of complaints received of improper lead removal activities.
- Number of violations cited and kinds of action taken.
- Amount of assessed penalties collected.
- Number of inspected projects in compliance with the lead rules and statutes.

For more information contact:
MDH Lead Compliance Unit, at (651) 215-0890.

Strategy: Monitor training course providers who conduct approved lead training courses.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Regulatory agencies recognize that a crucial part of maintaining a competent workforce is having effective trainers and training providers. The programs that regulate trainers have the task of performing audits of those who offer state or federal training programs in order to ensure consistency,

course content, and overall quality of those courses.

Lead statutes and rules require that five disciplines (worker, supervisor, inspector, risk assessor, and project designer) be trained and certified. There are six training providers in Minnesota that offer initial and refresher training courses. Lead related training courses are permitted, which ensures that individuals involved in lead work receive appropriate instruction to perform their jobs safely and according to the lead law and rules.

Additional resources:
Bibliographic resources:
- Environmental protection Agency. (1995). *Train-the-Trainer Guidance* document. Available through the MDH Lead Compliance Unit. (651) 215-0890.
- Minnesota Rules, parts 4761.1050 to 4761.1090 (Training Provisions).

Organizational resource:
- Laurel & Associates, Ltd. (1993). Train-the-Trainer seminar. 917 Vilas Avenue, Madison, WI 53715; (608) 255-2010.

Evidence for strategy:
Data indicate that continuous compliance monitoring of trainers and training providers contributes to the compliance of training providers. Audits ensure that the information presented in training courses is consistent with the Minnesota Lead rules.

Has this strategy been implemented in Minnesota?
Yes, the MDH Lead Unit performs audits of permitted training courses on a regular basis. If problems or issues with the training provider are observed, the MDH will make recommendations for the training course content or instructor to improve prior to their next training session. The MDH also can use enforcement procedures to correct deficiencies or violations of the training provisions outlined in the Minnesota Lead Rules.

Indicators for this strategy:
- Number of initial and renewal training courses.
- Number of training audits performed.
- Number of enforcement actions taken.
- Knowledge of course participants of lead procedures, laws, and rules.
- Practices of course participants that are safe and fall within the law and rules.

For more information contact:
MDH Lead Compliance Unit, at (651) 215-0890.

CATEGORY: Child and Adolescent Growth and Development

TOPIC: CHILDREN'S HEALTH – EARLY IDENTIFICATION OF CHILDREN WITH SPECIAL HEALTH NEEDS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Identify children with special health needs through community assessment.	✔	✔	✔		✔		
Utilize standard definitions and methods to identify children with special health needs.	✔	✔	✔		✔		
Using a tracking system (Follow Along Program) for at risk children to improve and enhance the identification of children, birth to three, and their families who are in need of intervention or services.	✔	✔	✔	✔	✔		
Increase knowledge about Minnesota Newborn Metabolic Screening Program expansion and include this in education activities with pregnant and new mothers.	✔	✔	✔	✔	✔		

Identification of children with special needs is necessary in order to assure the development of a family-centered, community-based, comprehensive, coordinated, and culturally competent service delivery system. In addition, standard definitions and methods of identification must be developed for program and policy needs such as:

- Monitoring the Year 2010 prevention objectives.
- Monitoring quality of care.
- Identifying children and families in need of care coordination.
- Determining eligibility for public programs serving children.
- Determining eligibility for the new state children's health insurance programs.
- Determining appropriate pediatric capitation and risk-sharing arrangements.
- Assessing Title V program performance.
- Exempting certain groups of children from Medicaid managed care arrangements.

There is currently a lack of consensus, within the children with special health needs community, as to the best approach or instrument for defining and identifying children with special health needs. With respect to identification, three basic approaches are taken:

- A diagnostic or condition-based approach.
- A functional status approach.
- A service-based approach.

Combined approaches for defining children with special health needs are both possible and preferable. Three valid and reliable tools for identification, each with different strengths and limitations, exist and employ the three approaches in isolation or in combination. In addition, there are definitions used to determine program eligibility, as well as one adopted by the federal Maternal and Child Health (MCH) Bureau, which needs to be operationalized. The Minnesota Children with Special Needs (MCSHN) program at the MDH continues to collect information and monitor the status of the development of the methods and tools to identify children and gather information about their status. The strategies listed in this section describe the need for ongoing identification and referral of children with special health needs, as well as some of the definitions, tools, and methods that can be used for this purpose in community assessments.

For related strategies, see "Children and Adolescents," "Promote Access to Health Care," and "Eliminate the Disparities" in the *Service Delivery System* category; and the strategies in the *Mental Health* and *Pregnancy and Birth* categories.

Strategy: Identify children with special health needs through community assessment.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			✔
Tertiary			

Background:
It is critical to identify the number of children with special health needs in any community as part of the community assessment and planning process. While, in relation to other target populations, the

actual number of children with special health needs is small, those children and their families are uniquely dependent upon the community and its health care systems to prevent premature death and long-term complications, as well as to achieve optimal functioning and thus reduce the potential years of life lost and decrease the community's economic burden. This strategy will assist communities and service providers in planning and policy development, as well as in the design of systems for children with special needs and their families.

In the MDH *Health Status Reports*, MCSHN publishes information based upon definitions, methods, and tools which can be used to identify children with special health needs in a community assessment (see the strategy on standard definitions and methods for related information). The information in the *Health Status Reports* is intended to help identify the number of children affected (and potentially affected) by the problem, as well as the severity and the impact of disability on their quality of life. This invaluable information in policy development and service delivery planning includes state-level data, as well as information by county.

The *Health Status Reports* provide the number of children with special health needs based on three definitions of special health needs:

- Narrowly defined: Children with significant limitations resulting from one or more chronic conditions. This definition will identify about 5.5 percent of those children with special health needs. (Newacheck).
- Moderately defined: Children with one or more of the following: health conditions which are virtually certain to last for at least one year and which cause either a limitation in function, activity, or social role; dependency on medication, special diet, medical technology, assistive device, or personal assistance to compensate for or minimize limitation of function; the need for medical care or related services over and above the usual for the child's age. This definition will identify about 18 percent of those children with special health needs. (Stein).
- Broadly defined: All children with chronic conditions who require more than routine health care. This definition will identify about 30 percent of those children with special health needs. (Newacheck and MCHB).

In addition, the section on children with special needs in the *Health Status Reports* includes data on the number of children on Supplemental Security Income (SSI), the Tax Equity and Fiscal Responsibility Act (TEFRA), and in MCSHN (Clinic, Treatment, Evaluation, Early Intervention services, and the Follow Along Program).

Higher rates of mortality, morbidity, and disability are known to be associated with specific but complex variables. For example, children in poor families experience a disproportionate burden of health problems, a higher risk of severe illness and chronic conditions, and a greater limitation of activity than do children in more affluent families. Similar variables that should be considered when conducting a community assessment, particularly in regard to children with special health needs, are poverty, race, educational level, family structure, social class, occupational level, and access to

health care. See the strategies on "Eliminate Barriers to Health Care – Children and Adolescents with Special Health Care Needs" in the *Service Delivery Systems* category for related information.

Additional resources:

- Gay, J., Muldoon, J., Neff, J., and Wing, L. 1997. Profiling the health service needs of populations. Description and uses of the NACRI classification of congenital and chronic health conditions. *Pediatric Annuals* 26:655-663.
- Montgomery, LE., Kiely, JL., and Pappas, G. 1996. The effects of poverty, race and family structure on US children's health: Data from the NHIS, 1978 through 1980 and 1989 through 1991. *American Journal of Public Health* 86(10):1401-1405.
- Newacheck, P., and Taylor, W. 1992. Childhood chronic illness: Prevalence, severity, and impact. *American Journal of Public Health* 82(3):364-371.
- Newacheck, P., Strickland, B., Shonkoff, J., Perrin, J., et al. 1998. Epidemiologic profile of children with special health care needs. *Pediatrics* 102:117-123.
- Stein, REK., Bauman, LJ., Weskbrook, LE., Coupey, SM., and Ireys, HT. 1993. Framework for identifying children who have chronic conditions: The case for a new definition. *Journal of Pediatrics* 122, 342-347.
- Stein, REK., Bauman, LJ., and Weskbrook, LE. 1997. The questionnaire for identifying children with chronic conditions (QuICCC): A measure based on a noncategorical approach. *Pediatrics* 99:513-521.

Evidence for strategy:

Assessment is a basic public health function and the basis of solid planning, development of effective services, and allocation of resources. The tools and methods used to estimate the numbers of affected children in any county are well-researched and documented. See the next strategy, "Utilize standard definitions and methods to identify children with special health needs" for information on specific tools and methods.

Has this strategy been implemented in Minnesota?

Yes, estimates of the numbers of children with special health needs for every county in Minnesota are available in the *Health Status Reports*. These estimates were based on and derived from, the definitions, tools, and methods mentioned above, and in the next strategy.

Indicators for this strategy:

- Number of communities including the identification of children with special health needs in their community assessment.
- Methods chosen to identify children with special health needs in the assessments.
- Number of children identified.
- Number and type of policies made that include this information in their decision-making process.
- Type of organizations and systems changes made based on the consideration of this information.
- Type of organizations and systems that make policy and operation changes.
- Kind of changes made.

For more information contact:

MDH, Minnesota Children with Special Health Needs program, at (800) 728-5420 or (651) 215-8956 (metro).

Strategy: Utilize standard definitions and methods to identify children with special health needs.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	
Tertiary	✔	✔	

Background:
Currently, there is no consensus on one standardized definition to identify these children. However, several standardized methods may be used to identify children with special health needs. The MCSHN programs at MDH continue to collect information and to monitor the development of the definitions and methods used to identify children with special health needs. The definitions and methods described below are valid and reliable for identifying children with special health needs.

Definitions of Children With Special Health Needs:

- State Title V programs that focus on children with special health care needs define children as eligible for certain programs by using a list of diagnostic conditions. Other state programs develop definitions within the context of the purpose of the program. The Federal Social Security Insurance Program defines children as having special health needs based on their diagnosis and function.
- The federal MCH Bureau's definition. This definition is as follows: "Children with special health care needs are those who have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions and who require health and related services of a type or amount beyond that required by children generally." This definition will be used for planning and systems development by the Bureau's Division for Children with Special Health Care Needs. Additional efforts are underway to operationalize this definition so that it can be used to work with Medicaid and managed care organizations to determine appropriate benefit policies, risk adjustment methods, and improved quality performance measures for special needs children.

Methods of identifying children with special health needs:

- QuICCC. Questionnaire for Identifying Children with Chronic Conditions (Stein, et al.) identifies children and adolescents by using the consequences of conditions as a method of identifying children with chronic health conditions and is completely independent of diagnosis. The QuICCC defines ongoing health conditions as disorders that:
  - Have a biologic, psychologic, or cognitive basis, and
  - Have lasted or are virtually certain to last for at least one year, and
  - Produce one or more of the following sequellae:
    - Limitation of function, activity, or social role in comparison with healthy age peers in the general areas of physical, cognitive, emotional, and social growth and development.
    - Dependency on one of the following to compensate for or minimize limitation of function, activities, or social role:

medications, special diet, medical technology, and personal assistance.
- Need for medical care or related services, psychologic services, or educational services over and above the usual for the child's age, or for special ongoing treatments, intervention, or accommodation at home or school.

This tool, (QuICCC) consists of 39 interview questions that are designed to be used over the phone or in person, which takes 5-7 minutes to administer. This instrument has been tested with different populations of children and has been found to identify children with conditions traditionally thought to represent special health care needs. A shorter version, the QuICC-R, is being tested to determine the differences in the children identified, if any. The QuICC-R contains 16 items with an estimated administrative time of two minutes. It is estimated this method identifies 18 percent of the population of children with special needs.

- National Association of Children's Hospitals and Related Institutions (NACHRI) Classification System. This method was developed to assist in estimating prevalence, profiling utilization and costs, pricing and capitation risk adjustment, and tracking patient satisfaction and quality indicators. It is based on diagnosis and function and it identifies children with existing chronic conditions, not those at risk. The classification system provides a conceptual and operational means through ICD-9-CM codes and supplementary status V codes to identify children who have a congenital or chronic health condition expected to last 12 months or longer. The system then classifies these children by type of condition, body system, severity and disease progression. The classification system is based on the operational definition of chronic health condition, which includes the following criteria:
  - It is a physical, mental, emotional, behavioral, or developmental disorder.
  - It is expected to last 12 months or longer.
  - If variable in severity or disease progression, there must be an expectation that at least 75 percent of patients will have the condition 12 months or longer.

  The system is being tested and will be released as licensed software after the software and documentation is completed.
- Child Health Questionnaire (CHQ). This children and family questionnaire is based on health and functional impairments. It examines 14 concepts including physical functioning, physical and mental role/social limitations, and general health perceptions. The purpose is to profile the physical and psychological well-being of children to support problem identification and care planning.
- The Revised Living with Illness Measure (LWIM) Screener (August 1999 version). THE LWIM has five items and 14 components. The respondent is asked to respond yes or no to five content items related to specific consequences of a condition (need/use prescription medications, more than usual/routine service use, limited ability to do things,

need/receive special therapy, and need/receive treatment or counseling for emotional, developmental or behavioral problem). If the response is "yes" the follow-up component asks about the presence and duration of the condition(s).

Additional resources:

QuICCC

- Stein, REK., Bauman, U., Weskbrook, LE., Coupey, SM., and Ireys, HT. 1993. Framework for identifying children who have chronic conditions: The case for a new definition. *Journal of Pediatrics* 122:342-347.
- Stein, REK., Bauman, LJ., and Weskbrook, LE. 1997. The questionnaire for identifying children with chronic conditions (QuICCC): A measure based on a noncategorical approach. *Journal of Pediatrics* 99: 513-521.
- The QuICCC manual and a sample copy of the instrument is available for $30. Permission to use the instrument requires the purchase of a license at a nominal licensing fee. Checks are to be made out to "PACTS PAPERS/ AECOM" and sent to Dr. Ruth E. K. Stein, Department of Pediatrics, Albert Einstein College of Medicine, Monefiore Medical Center, 3332 Rochambeau Avenue, Bronx, New York 10467.

NACHRI

- Gay, J., Muldoon, J., Neff, J., and Wing, L. 1997. Profiling the health service needs of populations: Description and uses of the NACRI classification of congenital and chronic health conditions. *Pediatric Annuals* 26(11): 655-663.
- The National Association of Children's Hospitals and Related Institutions, Ira Allen, Assistant Director, 401 Wythe Street, Alexandria, VA 22314, at 703-684-1355, Fax: 703-684-1589, iallen@NACHRI.org.

Child Health Questionnaire

- Health Care Assessment Lab, Health Institute, NEMC #345, 750 Washington St., Boston, MA 02111, at (800) 572-9394. For technical questions and information on how and where the tools are currently being used, contact: Jeanne Landgraf, at 617-375-7800, JML@healthact.com.

Other:

- Institute For Child Health Policy. September 2000. *Strategies for identifying children with special health care needs*, available at www.ichp.edu.

Evidence for strategy:

The QuICCC and NACHRI are well-researched and documented. The QuICCC-R is still being tested. The Living With Illness (LWI) has undergone extensive testing in population-based samples although findings have not yet been published.

Has this strategy been implemented in Minnesota?

No.

Indicators for this strategy:

- Numbers and kinds of health care providers that use these tools.
- Numbers of children with special needs who are identified by using these tools.
- Kinds of program decisions made based on the use of these tools.
- Kinds of policy decisions made based on the use of these tools.

For more information contact:
MDH Minnesota Children With Special Health Needs Programs, at (800) 728-5420 or (651) 215-8956 (metro).

Strategy: Using a tracking system (Follow Along Program) for at risk children to improve and enhance the identification of children, birth to three, and their families who are in need of intervention or services.

	Systems	Community	Individual
Primary	✔		✔
Secondary	✔		✔
Tertiary			

Background:
A tracking, monitoring, or follow along program for children, especially those at risk for developmental, mental health or health issues, has the capability of identifying children and assuring intervention and referral to appropriate services at an early age. Early identification and intervention prevents the onset of and/or reduces the impact of secondary complications or sequelae of chronic illness or disability.

An estimated 30 percent of children are "at risk". By the time children enter school, 10-12 percent of children have some degree of disability. In addition, many of these families need access to services to support the caregiving of their child. Many of these children could be identified earlier and provided appropriate interventions. Early intervention is effective in reducing risks and developmental problems as well as increasing optimal health and development.

Minnesota has a tracking program called the Follow Along Program. It is Part C of the federal law, Individuals with Disabilities Education Act (IDEA) and it includes early intervention services. The Follow Along Program is administered by the MDH Children with Special Health Needs Section. The goals of the Follow Along Program include:

- Support parents' efforts to enrich their children's lives by facilitating access to existing health, education, and social services.
- Provide a simple and easy way for parents and health care providers to exchange information about the growth and development of children.
- Help parents keep their children under the care of a primary care physician, thereby establishing a "medical home" for their child.
- Facilitate local, regional, and statewide planning efforts by compiling and disseminating data regarding children followed in the program.
- Enhance ongoing efforts to increase the level of interagency and interpersonal communication, cooperation, and trust.

In Minnesota the Follow-Along Program assures the availability of a coordinated interagency resource for assessment, referral, and program planning for children identified by the Follow Along Program. Children not eligible for Early Childhood Special Education (ECSE) are also followed by the Follow Along Program and provided with appropriate services.

The Follow Along Program is managed at the county level by 84 local agencies. When a child is referred to the program, they are enrolled in the program during a contact

with the family, usually a home visit. Ages and Stages Questionnaires (ASQ's) are mailed to the family typically at 4, 8, 12, 16, 20, 24, 30, and 36 months. The parents complete the ASQ's and return them to the agency for scoring. If the child passes all areas, the families are notified and are provided with an age appropriate activity sheet. If the child fails in any area, or if the family identifies areas of concern, the agency contacts the family, discusses options and makes referrals for assessment/evaluation or services as requested by the family.

The Follow Along Program is supported by a computer software program that collects information about the child, determines the appropriate schedule of ASQ's for each child, generates letters, and generates reports for local use. The MDH receives aggregate data with all identifying information removed, which is used for program planning and evaluation.

Additional Resources:

- Blackman, J. *Warning signals: Basic criteria for tracking at-risk infants and toddlers*.
- Blackman, J., Lindgren, S., Hein, H., and Harper, D. *Long term surveillance of high risk children*.
- Chan, B., Ohnsorg, F. 1999. Issues of Part H (Part C) program access in Minnesota. *Infants and Young Children* 12(1):82-90.
- Squires, J., Bricker, D., and Potter, L. *Revision of a Parent Completed Screening Tool: Ages and Stages Questionnaires*.
- *The ASQ User's Guide for the Ages and Stages Questionnaires: A Parent Completed, Child-monitoring System*. 1999. Brookes Publishing Company, Second Edition.

Evidence for Strategy:
The Follow Along Program was evaluated in 1995. On the average, counties participating in the Follow Along Program had four or more children per 1000 involved in Part C than those that were not participating.

Has this strategy been implemented in Minnesota?
Yes, 84 counties and two reservations are currently using the Follow Along Program.

Indicators for this Strategy:
- Number of children enrolled in the Follow Along Program.
- Number of children referred and qualified and not qualified for ECSE services.
- Services at enrollment and services wanted, referred to, qualified, not qualified, not available, declined by the family or refused by the referral agency at specified periods during active involvement in the program.
- Number of children with a medical home.
- Number of children who Pass/Fail per ASQ per domain.

For more information contact:
Lola Jahnke, Follow Along Program Coordinator, at (651) 281-9999, lola.jahnke@health.state.mn.us/, MDH MN Children with Special Health Needs Program (MCSHN), 85 East 7th Place, PO Box 64882, St. Paul, MN 55164-0882. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Services for Children with Special Health Needs".

Strategy: Increase knowledge about Minnesota Newborn Metabolic Screening Program expansion and include this in education activities with pregnant and new mothers.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary			

Background:
The Newborn Metabolic Screening Program located in the MDH expanded the number, or panel, of conditions for which it screens. The previous routine screening panel of five conditions was increased to approximately 24 conditions in a phased-in process during 2001. The expansion is possible due to the implementation of tandem mass spectrometry (MS/MS) technology into the Newborn Metabolic Screening Laboratory.

The panel of screened conditions includes phenylketonuria (PKU), congenital hypothyroidism, galactoasemia, hemoglobinopathies, congenital adrenal hyperplasia as well as selected disorders of amino acid metabolic disorders, organic acidemias and fatty acid oxidation disorders.

The newborn metabolic screening sample collection methods and procedures remain essentially the same even with the addition of MS/MS technology to the Program.

- The sample is collected and processed in the same way, i.e., whole blood collected between 24 and 48 hours after birth by heel stick onto the filter paper portion of the Newborn Screening Card.
- The infant's primary care practitioner is notified of presumptive positive results and advised of appropriate follow-up procedures. This notification occurs by both telephone call and faxed report.
- In most cases, confirmatory diagnostic evaluation of the additional disorders requires consultation with a pediatric metabolic specialist at the University of Minnesota or Mayo Clinic. The primary care practitioner is given pediatric specialist contact information and a description of the suspected clinical disorder.
- The pediatric specialist consults directly with the primary care provider to develop an immediate plan for assessment and intervention with the infant and his or her family.
- The primary care practitioner should consider referral to the Public Health Nursing Infant Follow Along and Tracking Program. Information is provided about this resource (see the "Additional Resources" section below).

Additional Resources:
Bibliographic resources:

- American Academy of Pediatrics/Newborn Screening Task Force. 2000. Serving the family from birth to the medical home. *Pediatrics* 106(suppl):383-427.
- Burton, BK. 1998. Inborn errors of metabolism in infancy: A guide to diagnosis. *Pediatrics* 102(6) http://pediatrics.org/cgi/content/full/6/e69

Organizational resources:

- GeneClinics. This is a clinical information resource relating genetic testing to the diagnosis, management, and genetic counseling of individuals and

families with specific inherited disorders. Website is located at the University of Washington with funding from the National Institutes of Health: http://www.geneclinics.org/index.html

- Minnesota Children with Special Health Needs (MCSHN) Program at MDH. The "Information and Assistance," at (651) 215-8956 (metro) or (800) 728-5420, can be used for resource information on parent support organizations, financial assistance, and information about other systems and resources serving children with special needs and their families. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Services for Children with Special Health Needs."
- The Newborn Metabolic Screening Program website contains information about screened disorders, a brochure for parents in PDF format, resource contact information. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Newborn Metabolic Screening".
- Newborn Screening.com http://www.NewbornScreening.Com/ Find current news and clinical information on newborn metabolic screening included on newborn screening panels.
- Online Mendilian Inheritance of Man. http://www.ncbi.nlm.nih.gov/Omin/. This database is a catalog of human genes and genetic disorders authored and edited by Dr. Victor McKusick and colleagues at Johns Hopkins and elsewhere.

Evidence for strategy:
Selections of conditions included in the expanded screening panel are guided by *Principles for Screening Programs* published by Wilson and Jungst (1968):

- If the conditions screened are detected early, morbidity and mortality can be prevented or lessened.
- Conditions included in the screen are amenable to treatment and outcomes will be improved with early intervention.
- Facilities for diagnosis and treatment should be available.
- There is an acceptable and reliable test for the conditions for which screening is done.
- There should be a defined phenotype for the target disorder. Clinical presentations of the conditions are documented and have been published in peer reviewed journals and texts.

Has this strategy been implemented in Minnesota?
Yes, though technically a pilot project, the expansion of the Minnesota Newborn Metabolic Screening Program was implemented in 2001 on all newborns statewide.

Indicators for this strategy:

- Infants with the screened disorders will be detected.
- Diagnosis and intervention will result in less morbidity and mortality.

For more information contact:
Minnesota Children with Special Health Needs (MCSHN) Program, at (651) 215-8956 (metro) or (800) 728-5420, and ask to speak with the Newborn Metabolic Follow up staff, state genetic counselor, or MDH newborn metabolic

screening laboratory. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Services for Children with Special Health Needs".

CATEGORY: Child and Adolescent Growth and Development

TOPIC: CHILDREN'S HEALTH – IRON DEFICIENCY ANEMIA

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct diet assessments and provide nutritional guidance to assure the adequacy of iron intake.	✔	✔	✔				
Conduct hematological screening at all WIC and Child and Teen Check clinics to determine the hemoglobin status of infants and children.	✔	✔	✔				
Assure referral to a physician if Hgb is below the anemia cut-off level.	✔	✔	✔				
Assure that iron supplementation is completed.	✔	✔	✔				
Establish a procedure to assure that children identified with low Hgb are automatically screened for lead.	✔	✔	✔				
Provide education on anemia prevention to local health care providers, particularly those serving refugee populations.	✔	✔	✔	✔	✔		
Provide nutrition and health education to all families in high-risk populations.	✔	✔	✔	✔	✔		

Iron deficiency is the most common known form of nutritional deficiency in the U.S. In young children, iron deficiency increases the risk of delays in motor and mental development, which decreases motor activity, social interaction, and attention to tasks. These delays may persist past school age if iron deficiency is not fully reversed. Therefore, prevention of iron deficiency in this age group is crucial. (NOTE: The promotion of breastfeeding, which will also positively affect the incidence of iron deficiency, is covered in more detail in the section on breastfeeding in the *Pregnancy and Birth* category.)

Strategy: Conduct diet assessments and provide nutritional guidance to assure the adequacy of iron intake.

	Systems	Community	Individual
Primary			✔
Secondary			✔
Tertiary			

Background:
Iron deficiency may result in developmental and behavioral disturbances in infants and young children. A rapid rate of growth and low dietary iron may predispose an infant to deletion of iron stores by the age of four to six months. As a result, a reliable source of dietary iron is essential for every infant and child's growth and development. Primary prevention of iron deficiency is most important for two-year-old children, because they, of all age groups, are at the greatest risk for iron deficiency caused by inadequate iron intake.

Primary prevention of iron deficiency means ensuring an adequate iron intake. The adequacy of infants' and children's diets is a major determinant of their iron status. To assure that an infant's or child's diet contains adequate iron, nutritional guidance should be provided for new and expectant parents. Nutritional guidance and a follow-up visit should be available for those children with low hemoglobin levels (Hgb/s) to assure that iron supplements are taken to completion and to assess their diets for adequacy of iron intake.

Refugee populations appear to have a higher risk for the development of iron-deficiency anemia. For those children at higher risk, earlier detection can prevent Hgb from dropping to dangerously low levels, which require hospitalization. Screening at WIC clinics is required only once a year, but it can be done every six months, when indicated. Education regarding anemia and its prevention should be offered in appropriate languages or in a format targeted toward low-literacy audiences.

Additional resources:
- Centers for Disease Control and Prevention. (1998, April 2). Recommendations to prevent and control iron deficiency in the United States. *MMWR.*
- Institute of Medicine. (1993). *Iron Deficiency Anemia: Recommended Guidelines for the Prevention, Detection, and Management of Anemia Among U.S. Children and Women of Childbearing Age.* Institute of Medicine.
- Minnesota WIC. *Pediatric Surveillance System Data for Anemia Prevalence Data on WIC Children.* Contact: Maggie Donohue, (651) 281-9913.

Evidence for strategy:
The relationship between dietary iron and the body's iron stores is well known. Dietary iron is essential for replenishing and maintaining the body's stores. The iron content of an infant's diet is a major determinant of the infant's iron status as a young child, as indicated by declines in the prevalence of iron-deficiency anemia corresponding to improvements in infant feeding practices.

Has this strategy been implemented in Minnesota?
Yes, all WIC clinics include a dietary assessment for key nutrients, including dietary sources of iron, as part of the certification process for participants. All low hgb/s identified at WIC clinics are routinely referred to a physician for therapy and follow-up. However, Minnesota children who do not participate in WIC are not screened in the same consistent manner as those participating in WIC.

Indicators for this strategy:
- Number of clinics and providers routinely and consistently screening infants and toddlers for iron deficiency.
- Number of dietary assessments completed.
- Number of infants and toddlers identified.
- Number of providers offering nutritional guidance for new and expectant parents.
- Number of patients receiving nutritional guidance.

For more information contact:
Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.

Strategy: Conduct hematological screening at all WIC and child and teen check clinics to determine the hemoglobin status of infants and children.

	Systems	Community	Individual
Primary			
Secondary			✔
Tertiary			✔

Background:
Iron status can be assessed through several laboratory tests. Because each test assesses a different aspect of iron metabolism, results of one may not always agree with those of others. Hematological tests based on characteristics of red blood cells (i.e., Hgb concentration, hematocrit, mean cell volume, and red blood cell distribution width) are generally more widely available and less expensive than biochemical tests and should be readily utilized at Minnesota's WIC and Child and Teen Check clinics.

Because of their low cost and the ease and rapidity of performing them, the tests most commonly used to screen for iron deficiency are Hgb concentrations and hematocrit (Hct). These measures reflect the amount of the body's functional iron. Because changes in Hgb concentration and Hct occur only at the late stages of iron deficiency, both tests are late indicators of iron deficiency. Nevertheless, these tests are essential for determining iron deficiency anemia.

Additional resources:
- Centers for Disease Control and Prevention. (1998, April 2). Recommendations to prevent and control iron deficiency in the United States. *MMWR.*

- Institute of Medicine. (1993). *Iron Deficiency Anemia: Recommended Guidelines for the Prevention, Detection, and Management of Anemia Among U.S. Children and Women of Childbearing Age.*
- Minnesota WIC program. *Pediatric Surveillance System Data for Anemia Prevalence Data on WIC Children.* For more information, contact: Maggie Donohue, (651) 281-9913.

Evidence for strategy:
Iron status of individuals cannot be adequately assessed without conducting screening tests. However, the cost, feasibility, and variability of measurements other than Hgb concentration and Hct currently preclude their use for screening. The decision to screen people at risk for iron deficiency should be based on the prevalence of iron deficiency in that population. In the U.S., children from low-income families (at or below the poverty level), and black and Mexican-American children are at higher risk for iron deficiency than are children from middle- or high-income families (those living above the poverty level) and white children, respectively. These populations are among those served by WIC and the Child and Teen Check program.

Has this strategy been implemented in Minnesota?
Yes, all WIC Programs are required to screen for iron-deficiency anemia. Infants have a blood draw around nine months of age, and children have blood screen for iron-deficiency anemia on a yearly basis (or every six months if Hct or Hgb is found to be below the cut-off level).

Indicators for this strategy:
- Number of WIC Clinics screening or assessing for iron status.
- Number of Child and Teen Check clinics screening or assessing for iron status.
- Number of hematological assessments completed.
- Number of children identified and referred as a result of being screened.
- Type of screening methods used.

For more information contact:
Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.

Strategy: Assure referral to a physician if Hgb is below the anemia cut-off level.

	Systems	Community	Individual
Primary			
Secondary			✔
Tertiary			✔

Background:
In programs doing hematological assessments, a written referral to a physician for therapy and follow-up should be made for infants and toddlers whose Hgb is below the anemia cut-off. Therefore, every program or clinic that conducts hematological assessments must have referral process in place.

Because of the relative low cost, and the ease and rapidity in performing them, the tests most commonly used to screen for iron deficiency are Hgb concentrations and hematocrit (Hct). These measures reflect the amount of functional iron in the body. The concentration of the iron-containing protein,

Hgb, indicates the proportion of whole blood occupied by red blood cells. Hgb levels fall only after levels of functional iron fall. Because changes in Hgb concentration and Hct occur only at the late stages of iron deficiency, both tests are late indicators of iron deficiency. Nevertheless, these tests are essential for determining iron-deficiency anemia.

Age- and sex-specific cut-off values for anemia are based on the fifth percentile from the third National Health and Nutrition Examination Survey (NHANES III). Cut-off values for children are as follows:

- For children between one and two years, the cut-off hemoglobin concentration is 11.0; the cut-off hematocrit is 32.9.
- For children between two and five years, the cut-off hemoglobin concentration is 11.1; the cut-off hematocrit is 33.0.

Additional resources:
None.

Evidence for strategy:
The protocol for the tests used to screen for iron-deficiency anemia and the cut-off levels are based on science and have been tried in clinics throughout the country. The need to refer to physicians for treatment is also a tried-and-true method to assure proper and effective treatment.

Has this strategy been implemented in Minnesota?
Yes, all WIC clinics screen for iron-deficiency anemia. All low Hgb/s identified at WIC clinics are routinely referred to a physician for therapy and follow-up.

Indicators for this strategy:

- Number of infants and toddlers identified with Hgb below the anemia cut-off level.
- Number of infants and toddlers referred to physicians for treatment and follow-up.
- Number of health care clinics and providers with mechanisms in place to assure smooth referral processes.
- Level of satisfaction with the referral process among clients.

For more information contact:
Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.

Strategy: Assure that iron supplementation is completed.

	Systems	Community	Individual
Primary			
Secondary			✔
Tertiary			✔

Background:
Iron supplementation is an important first step in treating anemia. Recommendations for iron supplementation have little prospect for success in preventing iron-deficiency anemia without compliance with the regime. The observed compliance with supplemental iron regimens is poor. Therefore, medical personnel, as well as public health program personnel, need to check back with parents via appointment or by phone to monitor iron therapy compliance.

The CDC recommends that iron supplements be taken for four weeks. If,

after four weeks of compliance with the treatment regime (and the absence of acute illness), the anemia has not resolved, CDC advises further diagnostic evaluation of the anemia. These tests may indicate that iron deficiency is not the cause of the anemia; if so, further referral is warranted at that point.

Additional resources:

- Centers for Disease Control and Prevention. (1998, April 2). *Recommendations to Prevent and Control Iron Deficiency in the United States.*
- Institute of Medicine. (1993). *Iron Deficiency Anemia: Recommended Guidelines for the Prevention, Detection, and Management of Anemia Among U.S. Children and Women of Childbearing Age.*
- Minnesota WIC program. *Pediatric Surveillance System Data for Anemia Prevalence Data on WIC Children.* For more information, contact: Maggie Donohue, (651) 281-9913.

Evidence for strategy:
As with any treatment regimen, the medical condition - in this case, anemia - will not be resolved unless the full course of treatment is followed. Oftentimes, parents will stop giving the iron drops because the child objects to the taste. As a healthcare professional, it is important to follow-up by repeating the anemia screening in four weeks.

Has this strategy been implemented in Minnesota?
Unknown, it is likely that some clinics are more successful than others in determining whether their clients complete the iron supplementation regime, but this is not systematically documented.

Indicators for this strategy:

- Number of appointments made and kept to monitor compliance with the iron supplementation regimen.
- Number of phone contacts made to monitor compliance with the iron supplementation regimen.
- Number of compliant clients.

For more information contact:
Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.

Strategy: Establish a procedure to assure that children identified with low Hgb are automatically screened for lead.

	Systems	Community	Individual
Primary	✔		
Secondary	✔		✔
Tertiary			✔

Background:
Lead intake can cause microcytic anemia, which cannot be differentiated from iron-deficiency anemia with an Hgb measure. For those children with low Hgb, a lead screen should be done. Whenever possible, the lead screen should occur at the same time as the Hgb measure, or a mechanism should be in place to refer the client for the lead screen. For related strategies, see the section on childhood lead poisoning in this category.

Additional resources:

- Centers for Disease Control and Prevention. 1997, November. *Screening*

Young Children for Lead Poisoning: Guidance for State and Local Public Health Officials. U.S. Centers for Disease Control and Prevention. World Wide Web Page: http://www.cdc.gov/ncen/programs/lead/guide/1997/guide97.htm

- Goyer R. A. (1995). Nutrition and metal toxicity. *American Journal of Clinical Nutrition, 61 (supplement)*, 646S-650S.
- Minnesota Department of Health, *Blood Lead Screening Guidelines for Minnesota*. (2000, March); *Childhood Blood Lead Case Management Guidelines for Minnesota*. (2001, April); and Childhood Blood Lead Clinical Treatment Guidelines for Minnesota. (2001, July). For copies, contact Daniel Symonik, (651) 215-0776, daniel.symonik@health.state.mn.us, or Maureen Alms, (651) 215-0882, maureen.alms@health.state.mn.us, MDH Environmental Health.

Evidence for strategy:
Iron-deficiency anemia can contribute to lead poisoning in children by increasing the gastrointestinal tract's ability to absorb heavy metals, including lead (Goyer).

Has this strategy been implemented in Minnesota?
No, though many health care providers in Minnesota perform some type of lead screening, there is no systematic procedure to assure that children identified with low Hgb are automatically screened for lead.

Indicators for this strategy:
- Number of clinics and providers screening for both Hgb and lead.
- Number of infants and toddlers referred for lead screening as a result of a low Hgb.
- Number of clinics and providers with mechanisms in place for these kinds of referrals.

For more information contact:
- Maureen Alms, at (651) 215-0882, maureen.alms@health.state.mn.us, MDH Environmental Health.
- Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.
- Daniel Symonik, at (651) 215-0776, daniel.symonki@health.state.mn.us, MDH Environmental Health.

Strategy: Provide education on anemia prevention to local health care providers, particularly those serving refugee populations.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
There is an increased prevalence of acquired iron-deficiency anemia in immigrant populations, which is supported by several research papers. A high consumption of regular cow's milk (24 oz.) appears to contribute significantly to its development by displacing iron-rich foods. Health care workers who serve immigrant populations need to communicate the deleterious effects anemia may have on children's growth and development, as well as feeding practices that would prevent anemia. In-services and other educational forums can be used to address this issue, and should include strategies to increase health care workers' cultural competence. For related strategies,

see the section on eliminating disparities in the *Service Delivery Systems* category.

Additional resources:

- Bronner. 1996, spring. Cultural sensitivity and cultural competence. *The Perinatal Nutrition Report*, 2(4).
- Center for Cross-Cultural Health. *Six Steps Toward Cultural Competence: How to Meet the Health Care Needs of Immigrants and Refugees.* For copies, contact: the Center for Cross-Cultural Health, (612) 624-4668.
- Graham, EA., Carlson, TH., et al. 1997. Delayed bottle weaning and iron deficiency in Southeast Asian toddlers. *Western Journal of Medicine.*
- Lynch, EW., and Hanson, MJ. 1992. *Developing Cross-Cultural Competence, A Guide for Working with Young Children and Their Families.* Paul H. Brooks Publishing Company.
- Mills, AF. 1990. Surveillance for anemia: risk factors in patterns of milk intake. *Archives of Disease in Childhood*, 65, 428-31.
- Minnesota Department of Health. *Anemia Prevention Project for Hmong Children.* Copies available from the MDH WIC program. For more information, contact: Cindy Jacobson, (651) 281-9912 or cindy.Jacobson@health.state.mn.us.

Evidence for strategy:
Professional education is necessary for health care providers to be effective in their counseling. In the case of iron-deficiency anemia, refugee populations are especially at risk. In many cases, anemia is a new condition to that population and may not translate easily into the language. It is advisable for health care professionals to attend educational forums or classes regarding cultural competency to better understand the populations they serve.

Has this strategy been implemented in Minnesota?
Currently, the MDH WIC Program is working on such a strategy with the Hmong community in Ramsey County.

Indicators for this strategy:

- Number and type of materials developed to provide information to health care providers on anemia in refugee populations.
- Number of health care providers receiving the materials.
- Number of trainings, in-services, etc., conducted for health care providers on anemia and refugee populations.
- Increase in knowledge, as measured in pre- and post-tests, among providers.
- Changes in screening and educational practices among providers with regard to anemia.

For more information contact:
Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.

Strategy: Provide nutrition and health education to all families in high-risk populations.

	Systems	Community	Individual
Primary			✔
Secondary			✔
Tertiary			✔

Background:
Screening and appropriate nutritional and

health education must occur with all high-risk populations. This includes children from low-income families, children eligible for the WIC program, migrant children, and recently arrived refugee children. All high-risk children should initially be screened between 9 and 12 months of age, and again six months later and annually between the age of two and five years.

Education regarding anemia and its prevention should be offered in appropriate languages and in a format targeted toward low-literacy audiences.

Additional resources:

- Barness LA., ed., 1993. *Pediatric Nutrition Handbook.* 3rd edition. Elk Grove Village, IL: American Academy of Pediatrics.
- Centers for Disease Control and Prevention. 1998, April 2. Recommendations to prevent and control iron deficiency in the United States. *MMWR*.
- Institute of Medicine. 1993. *Iron Deficiency Anemia: Recommended Guidelines for the Prevention, Detection, and Management Among U.S. Children and Women of Childbearing Age.*
- Public Health Service. (1994). *Clinician's Handbook of Preventive Services: Put Prevention Into Practice.* Washington, DC: U.S. Department of Health and Human Services, Public Health Service, Office of Disease Prevention and Health Promotion.
- U.S. Department of Agriculture and U.S. Department of Health and Human Services. 1995. *Nutrition and Your Health: Dietary Guidelines for Americans.* 4th edition. Washington, DC: U.S. Department of Agriculture and U.S. Dept. of Health and Human Services. (*Home and Garden Bulletin* no. 232).
- U.S. Preventive Services Task Force. (1996). *Guide to Clinical Preventive Services*. 2nd edition. Alexandria, VA: International Medical Publishing.

Evidence for strategy:

The CDC report, *Recommendations to Prevent and Control Iron Deficiency in the United States*, states "primary prevention of iron deficiency in infants and preschool children should be achieved through diet." Information on diet and feeding is available in the resources listed under "Additional Resources" above.

Has this strategy been implemented in Minnesota?

Yes, screening and nutritional and health education are hallmarks of the WIC Program, which exists throughout Minnesota.

Indicators for this strategy:

- Number of families identified as at high risk for iron-deficiency anemia.
- Number of high-risk families screened according to guidelines.
- Number of high-risk families receiving appropriate nutritional and health education.
- Number of families understanding the information presented to them.

For more information contact:

Cindy Jacobson, at (651) 281-9912, cindy.jacobson@health.state.mn.us, MDH WIC Program.

Category:

ALCOHOL, TOBACCO AND OTHER DRUGS

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 1: Reduce the behavioral risks that are primary contributors to morbidity and mortality.

CATEGORY: ALCOHOL, TOBACCO AND OTHER DRUGS

Appendix

The use of alcohol, tobacco and other drugs causes problems that are pervasive and touch every area of our lives, including the social and economic fabric of our culture. They contribute to chronic disease, intentional and unintentional injuries, decreased productivity, social and family disruption, lack of educational attainment, medical and insurance costs and costs for treatment and law enforcement. Problems caused by the use of alcohol, tobacco and other drugs are "equal opportunists" in that they affect all races, socioeconomic groups, ages, geographic areas, religions and employment opportunities.

Alcohol and Other Drug Use:
Alcohol and other drug use affect mortality and morbidity, as well as intended and unintended injury, unplanned pregnancy, poor birth outcomes, childhood development, adolescent health, mental health, violence, infectious diseases, and chronic disease. Since alcohol is used by more people than all other drugs combined, it causes many more problems, including higher mortality and morbidity, than other forms of illicit drug use.

All Minnesotans are affected directly or indirectly by alcohol-related problems. Many people are affected directly as a result of their own use or that of a family member, friend, co-worker, neighbor, etc. However, everyone is affected indirectly by the costs (*e.g.*, higher health care costs, taxes, and insurance rates, as well as lost productivity) of alcohol use.

According to *Alcohol Use in Minnesota: Extent and Cost* (Minnesota Department of Health, 1995), the estimated economic cost of alcohol use in Minnesota in 1991 totaled $1.74 billion. This amount is equivalent to about $400 for every Minnesota resident. Approximately four percent of all Minnesota deaths during 1991 were alcohol-related. On average, each alcohol-related death in Minnesota occurred 22 years before full life expectancy. In 1991, there were 1,581 alcohol-related deaths, which translates to 34,177 years of potential life lost.

Minnesotans generally report drinking at levels higher than residents of most other states. In 1999, 16.4 percent of adults reported acute drinking (five or more drinks on at least one occasion) and 4.7 percent of adults reported chronic drinking (having 60 or more drinks in the past 30 days) (BRFSS, 1999). According to the 2001 Minnesota Student Survey, 30 percent of ninth graders and 52 percent of twelfth graders reported drinking in the past 30 days. The twelfth graders reported acute drinking at a rate higher than the national prevalence (33.5 percent, as compared to 29.7 percent).

Alcohol use is a major risk factor for some cardiovascular diseases, including cardiomyopathy, arrhythmias, hypertension, and hemorrhagic stroke. Among cancers, heavy alcohol consumption has been most strongly associated with upper airway and digestive tract cancers. According to a study published in the *Journal of the American Medical Association* (February 18, 1998), women who consume two to five alcoholic drinks a day have a 41 percent higher risk of developing breast cancer than nondrinkers. Alcohol use is also a major risk factor for liver disease.

A 1998 study by National Institute on Alcohol Abuse and Alcoholism reported that the younger a person begins drinking, the greater the chance that person will develop a clinically defined alcohol disorder like alcoholism or alcohol abuse. Young people

who begin drinking before age 15 are four times more likely to develop alcoholism and two times as likely to develop alcohol abuse as those who begin drinking at age 21.

An analysis of the National Longitudinal Alcohol Epidemiologic Survey conducted for the National Institute on Alcohol Abuse and Alcoholism in 2000 reported that people who began drinking while underage are up to three times more likely to report drinking and driving and up to seven times more likely to report being in a car crash than those who started drinking at age 21 or older.

Tobacco:
In Minnesota and nationally, tobacco use is by far the leading cause of preventable death. More deaths can be attributed to tobacco use than to alcohol, drugs, firearms, motor vehicle crashes, and HIV/AIDS combined.[i] In 1999, approximately 5,618 Minnesota deaths (14.6 percent of all deaths) were related to cigarette smoking.[ii] The leading causes of death related to cigarette smoking include cardiovascular disease, cancer, respiratory disease (emphysema and chronic bronchitis), and fatal fires. The toll of tobacco use is even greater when deaths associated with second hand smoke (also known as environmental tobacco smoke or ETS), spit tobacco (also known as smokeless or chew tobacco), and cigar smoking as well as non-fatal illness and disability, are considered.

The National Institutes of Health estimate that second-hand smoke is the 3rd leading cause of preventable death, responsible for 53,000 lives lost every year. It contains 43 known carcinogens and is the cause of cancer, heart disease, respiratory diseases such as asthma and bronchitis, chronic ear infections and has been linked to sudden infant death syndrome (SIDS)[iii].

The costs associated with the deaths, disease and disability caused by smoking are remarkable and are rising nationally and in Minnesota. The smoking attributable economic costs to the state, in terms of direct medical expenses and lost productivity, is currently estimated at $2.6 billion, a significant increase over the $1.3 billion estimate for 1995.[iv] By this estimate, the cost of smoking is seven times greater than the excise tax revenue generated from the sale of tobacco products.

Following a decade of increase, youth smoking rates started to drop in 2001.[v] The issue of tobacco use among Minnesota youth is of particular importance because most adult smokers began smoking before the age of 18.[vi] According to the 2001 Minnesota Youth Tobacco Survey, 38.7 percent of high school students and 12.6 percent of middle schoolers are current tobacco users.[vii] Smoking initiation steadily rises throughout adolescence, with an end result of 17,000 Minnesota kids becoming new daily smokers each year.[viii] Future adult smoking rates will most effectively be decreased by addressing current youth rates.

Targeting contributors to use:
Use of alcohol, tobacco and other drugs can be influenced by the social and cultural settings in which people live.[viv]
Many people use these substances as a temporary escape from problems of day-to-day life and to overcome stress. For instance, high rates of smoking are associated with indicators of social and economic inequality, such as low income, single parenthood, unemployment and homelessness.[viv] As previously mentioned, problems caused by the use of alcohol,

tobacco and other drugs are "equal opportunists." Nevertheless, their chronic health implications disproportionately affect those most vulnerable to the social and economic situations in which they live.

To be effective, policies need to influence environmental conditions to prevent use and abuse, support users in overcoming the effects of use, misuse and/or addiction, as well as address some of the underlying social issues described above. Working with partner agencies to advocate for job skills training programs, housing assistance, affordable childcare, discrimination, unemployment and social isolation are just a few ways that the roots of alcohol, tobacco and other drug use and misuse can be targeted.

[i] Institute of Medicine, *Growing Up Tobacco Free*, Washington, DC: National Academy Press, 1994.

[ii] Centers for Disease Control and Prevention, *Tobacco Control State Highlights 200: Impact and Opportunity*, Atlanta, GA, Department of Health and Human Services, 2002.

[iii] National Cancer Institute, *Smoking and Tobacco Control Monograph No. 10: Health Effects of Environmental Tobacco Smoke*, December 1999

[iv] Centers for Disease Control and Prevention, *Tobacco Control State Highlights 200: Impact and Opportunity*, Atlanta, GA, Department of Health and Human Services, 2002.

[v] Minnesota Department of Children, Families and Learning, Minnesota Student Survey Results, 2001.

[vi] Centers for Disease Control and Prevention, *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*, Washington, DC: US Department of Health and Human Services, 1994.

[vii] Minnesota Department Health, *Teens and Tobacco in Minnesota – Results from the Minnesota Youth Tobacco Survey*, 2000.

[viii] Minnesota Department Health, Unpublished Data from MN Youth Tobacco Survey, 2000.

[viv] World Health Organization Europe, *Social Determinants of Health: The Solid Facts*, EUR/ICP/CHVD, 1998.

CATEGORY: Alcohol, Tobacco and Other Drugs

TOPIC: ALCOHOL AND OTHER DRUG USE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Assess and if necessary work to change community norms about alcohol and other drugs.	✔	✔		✔	✔		
Reduce youth access to alcohol.	✔				✔	✔	
Decrease the appeal of alcohol products by examining, publicizing and reducing advertising and marketing that may influence their use as well as by conducting counter-advertising.	✔	✔		✔	✔		
Promote alternatives to alcohol use for those who choose not to or should not drink.	✔			✔	✔	✔	
Encourage work sites, schools, communities and others to examine and consistently enforce their policies about alcohol, tobacco and other drugs.	✔	✔	✔	✔	✔	✔	
Reduce alcohol-related problems by increasing the price of	✔						

	Governmen-tal Public Health Agencies	Health Plans	Hospitals & Clinics	Education-al Systems	Community-based Organizations	Businesses/ Work Sites	Other
beverage alcohol products.							
Encourage health care providers to screen and, if necessary, counsel and/or refer patients for alcohol and other drug abuse problems, including prenatal alcohol exposure.	✔	✔	✔		✔	✔	Allied Health Care and Social Service Providers
Develop materials, conduct education, and/or implement activities that emphasize the positive role males can play by supporting their partners to be alcohol-free in order to ensure healthy pregnancy outcomes.	✔	✔	✔		✔		
Public education and other prevention initiatives should involve premarital, prenatal, and postpartum education that emphasizes parental responsibility starting from healthy pregnancy practices to active and positive parenting.	✔	✔	✔		✔		

For over 20 years the prevention of alcohol and other drugs has focused on two primary efforts: awareness raising/education and school-based programs. Though these efforts have drawn much attention to the problem of youth alcohol and other drug use, their overall impact alone was minimal. Numerous variables affect alcohol and other drug use, including adult behavior, advertising and promotion, availability, price, and perceived and real community and cultural norms. A population-based health promotion approach which includes a combination of awareness raising, education, and formal and informal policy changes and adaptations in multiple community settings provides an opportunity to address these issues more comprehensively.

The alcohol and other drug strategies that follow utilize such a population-based approach. Numerous segments of the community have a role, and both formal and informal policies are suggested.

These strategies are written for a general audience. In order to successfully implement population-based approaches in a specific community, it is imperative to involve the community in the choosing and implementing the strategies. It is also important to assure that the cultural and ethnic makeup of the community has been considered and that those implementing the strategies are culturally competent. For more information on community involvement, see the website for strategies at: www.health.state.mn.us/strategies/. Click on "Community Engagement".

Effective program planning means thinking about evaluation from the beginning. Using a theory of action, considering stakeholders, and planning program evaluation in the beginning will help assure that the strategies will be logical and measurable.

Many of the following strategies are similar to, and have been informed by, lessons learned from tobacco-use prevention and control activities. Please refer to the tobacco section of this category *Alcohol, Tobacco, and Other Drugs* for related information and additional strategies that can be readily adapted to the prevention of alcohol-use problems.

Strategy: Assess and if necessary work to change community norms about alcohol and other drugs.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
The purpose of this strategy is to identify and target for change those community norms that may support the misuse of alcohol and the use of other drugs. Doing so involves the following steps:
Assessment:

- Assess both the community norms and community opinion about alcohol and other drug use by adults and youth through youth and adult prevalence surveys, community opinion surveys, focus groups, and key informant surveys.
- Examine regulations about alcohol use in the community and whether or not they are consistently enforced. This will include inventorying statutes, ordinances, and rules for schools, workplaces, and parks as well as

determining how consistently they are being enforced.
- < Examine availability of alcohol in the community. Are there a large number of outlets? Are they densely situated? Is it easy for adults and youth to obtain alcohol products?
- < Examine the prevalence of alcohol and other drug use at community celebrations and social gatherings for both adults and youth.
- < Look at how alcohol is portrayed in the media. All too often it is associated with having fun and being attractive in advertising. How does your local media portray it in their news stories. See the strategy about reducing the appeal of alcohol for ways to counter this kind of coverage.

Changing norms: Regardless of whether you are working to reduce drinking and driving, underage drinking, prenatal alcohol exposure, or other alcohol-related problems, a successful approach requires working with all segments of the community.
- < Publicize information about the results of the assessments. If there is a gap between public perception of the problem and what the community says it wants, publicize the discrepancy through local media, newsletters, and community meetings as a means to begin or continue community dialogue on the issue.
- < Persistent and consistent messages about alcohol and other drug use that are clear and accurate are necessary in order to change norms.
- < Work to ensure effective policies about alcohol and other drug use are in place in schools, businesses and in the community.
- < Promote consistent enforcement of policies and laws about selling, providing and consuming alcohol. Provide beverage server training for alcohol beverage vendors. See examples in the strategy about encouraging worksites, schools and communities to examine their strategies and promoting alternative for those who choose not to or should not drink.
- < Support and reinforce positive action by the families, schools, faith communities, civic and service organizations and others to educate the community about the harmful effects of prenatal alcohol exposure.

Additional resources:
Bibliographic resources:
- < Jones-Webb, R., Short, B., Wagenaar, A., Toomey, T., Murray, D., Wolfson, M., and Forster, J. 1997. Environmental predictors of drinking and drinking-related problems in young adults. *Journal of Drug Education* 27(1): 67-82.
- < Jones-Webb, R., Toomey, TL., Short, B., Murray, DM., Wagenaar, A., and Wolfson, M. 1997. Relationships among alcohol availability, drinking location, alcohol consumption, and drinking problems in adolescents. *Substance Use and Misuse* 32(10):1261-1285.
- < Saltz, RF. 1997. Evaluating specific community structural changes: Examples from the assessment of responsible beverage service. *Evaluation Review* 21(2): 246-267.
- < Scribner RA, Cohen DA, Fisher W. 2000. Evidence of structural effect for alcohol outlet density: a multilevel analysis. *Alcoholism: Clinical and Experimental Research* 24(2): 188-195.

Organizational resources:
- < Center for Substance Abuse Prevention has published *Preventing Problems Related to Alcohol Availability: Environmental Approaches*. It contains

several ideas that can be used for this strategy and other strategies in this section. For more information, go to www.samhsa.gov/centers/csap/csap.html

- < Miles Canning and Associates has information on beverage server training, (952) 470-9025.
- < Minnesota Department of Health has developed the Community Health Promotion Kit, which has materials in the Chemical Health Section of the Kit to help conduct assessments. Every local public health agency in Minnesota received a copy of the kit. It is also available on the Minnesota Department of Health Web Site at http://www.health.state.mn.us/divs/fh/chp/hpkit/
- < Minnesota Department of Public Safety, Alcohol and Gambling Enforcement Division, has information on beverage server training, (651) 296-6159.
- < Minnesota Licensed Beverage Association has information on beverage server training, (651) 772-0910.
- < Minnesota Prevention Resource Center has designed a public information campaign related to role modeling and responsible adult alcohol use, *Alcohol Requires Responsibility*. The campaign includes information designed for various audiences, press releases, a camera-ready logo and a 60 second radio spot. It is available as a printed copy or on a CD ROM. For a complete kit go to www.miph.org or call (763) 427-5310 or (800) 782-1878.
- < Ramsey and Hennepin County Zero Alcohol Providers (ZAP) Program. For more information contact Julie Rohovit, jrohovit@qwest.net or (612) 379-3254.
- < Western Center for the Application of Prevention Technology (CAPT) has developed a resource entitled *Building a Successful Prevention Program,* which includes information on assessment. For more information, go to http://www.open.org/~westcapt/

Evidence for strategy:
The Center for Substance Abuse Prevention has published information on effective strategies to reduce alcohol and other drug abuse problems. For more information, go to www.samhsa.gov/centers/csap/csap.html

The City of St. Paul restricted alcohol access at the Grand Old Day community celebration and reduced complaints about alcohol-related behaviors from both participants and residents.

Alcohol outlets that provided beverage server training for employees may qualify for discounted insurance rates.

The Ramsey and Hennepin County Zero Alcohol Providers (ZAP) Program has worked with several Twin Cities Colleges to change norms about college student's drinking. They have worked to change the norms about underage drinking on the campuses they work with by reducing youth access to alcohol and also reducing party houses where underage students attend drinking parties. For more information contact Julie Rohovit, jrohovit@qwest.net or (612) 379-3254.

Has this strategy been implemented in Minnesota?
Yes, different components of this strategy have been implemented in various communities throughout the state. Many of these strategies have been carried out by local public health departments.

Indicators for this strategy:
- < Youth use of alcohol and other drugs.
- < Community opinion about alcohol use.

- < Youth drinking and using other drugs and driving.
- < Riding with friends who have been drinking, using other drugs, or both.
- < Alcohol-related automobile crashes, injuries, and fatalities.
- < DWI arrests.
- < Density of alcohol outlets within a community.

For more information contact:
MDH, Chemical Health Promotion Program, at (651) 215-8954.

Special notes:
Assessing and affecting the norms and attitudes about alcohol and other drug use is a very promising approach to reducing the problems caused by these substances.

Strategy: Reduce youth access to alcohol.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Assess the access youth have to alcohol in the community. Given that research suggests that the three most common sources of alcohol for youth are friends, commercial sources, and other adults, and that a relationship exists between alcohol availability, consumption, and drinking problems in adolescents, successful efforts to reduce alcohol use will examine commercial as well as social (e.g., friends, family members) sources.

- < Examine anecdotal information, law enforcement and inspection records, compliance checks results, and survey data about the way youth obtain alcohol (e.g., by purchasing or stealing or getting it from older siblings, friends, or parents).
- < Work with law enforcement to conduct alcohol compliance checks with underage buyers regularly. Publicize the results and impose penalties on those who sell to underage buyers. Acknowledge those who do not sell to them.
- < Implement administrative (civil) penalties for those license holders that sell to underage buyers.
- < Publicize information about the results of the assessments and also the legal consequences for those (including parents and others) who provide alcohol to youth. Local media, newsletters, and parent meetings can be used to disseminate this information. Persistent and consistent messages are necessary.
- < Take steps to change norms and reduce access, including enforcing laws about selling and providing alcohol to youth, encouraging parents to secure and monitor alcoholic beverages, and providing beverage server training for alcohol beverage vendors.

Additional resources:
Bibliographic resources:

- < Forster, JL., McGovern, PG., Wagenaar, AC., Wolfson, M., Perry, CL., and Anstine, PS. 1994, June. The ability of young people to purchase alcohol without age identification in northeastern Minnesota, USA. *Addiction* 89(6): 699-705.
- < Forster, JL., Murray, DM., Wolfson, M., and Wagenaar, AC. 1995, July. Commercial availability of alcohol to young people: Results of alcohol purchase attempts. *Preventive Medicine*

24(4) 342-347.

< Perry, CL., Williams, CL., Veblen-Mortenson, S., Toomey, TL., Komro, KA., Anstine, PS. McGovern, PG., Finnegan, JR., Forster, JL., Wagenaar, AC., and Wolfson, M. 1996, July. Project Northland: Outcomes of community wide alcohol use prevention program during early adolescence. *American Journal of Public Health* 86(7): 956-965.

Organizational resources:

< The Center for Substance Abuse Prevention has published *Preventing Problems Related to Alcohol Availability: Environmental Approaches.* It contains several ideas that can be use for this strategy and other strategies in this section. For more information, go to www.samhsa.gov/centers/csap/csap.html

< The Douglas County Public Health Department has collected and published a list of parents who agree not to provide alcohol for youth at High School Graduation parties. Call (320) 763-6018 for more information.

< Minnesota Join Together Coalition to Reduce Underage Drinking is also working on changing statewide policies and practices regarding youth access to alcohol. For more information on this project www.miph.org/mjt or call (763) 427-5310 or (800) 782-1878.

< The Minnesota Prevention Resource Center has designed two kits about reducing underage drinking. The first is a public information campaign related to role modeling and responsible adult alcohol use, *Alcohol Requires Responsibility*. The campaign includes information designed for various audiences, press releases, a camera-ready logo and a 60 second radio spot. It is available as a printed copy or on a CD ROM. The second kit, *It Can Cost You*, contains information to raise adults' awareness of the consequences of providing alcohol to underage youth. For information on these kits, go to www.miph.org or call (763) 427-5310 or (800) 782-1878.

< The University of Minnesota School of Public Health, Division of Epidemiology, has conducted research projects to assess the effectiveness of policy change as a strategy to reduce youth access to alcohol and to assess the effectiveness of comprehensive school, parent, and community action to prevent and reduce alcohol use among youth. These projects have produced materials to support communities in policy change, including model ordinances, counter-advertising, and school curricula. For more information on these projects go to www.epi.umn.edu/alcohol or call (612) 626-7435.

Evidence for strategy:

Policy change has been demonstrated to be effective as a strategy to reduce youth access to alcohol. Comprehensive school, parent, and community action has been shown to be effective in preventing and reducing alcohol use among youth.

Several communities have implemented local alcohol ordinances that require annual compliance checks for licensed beverage holders to reduce commercial youth access to alcohol. The results of second and subsequent rounds of compliance checks show much lower rates of sales to underage buyers.

Has this strategy been implemented in Minnesota?

Yes, different components of this strategy have been implemented in various communities throughout Minnesota. Many

of these strategies are being conducted by local public health departments.

Indicators for this strategy:
- < Youth use of alcohol and other drugs.
- < Lower rates of sales to underage buyers in compliance checks.
- < Youth drinking and using other drugs and driving.
- < Riding with friends who have been drinking, using other drugs, or both.
- < Alcohol-related automobile crashes, injuries, and fatalities.
- < DWI and Not-A-Drop arrests.

For more information contact:
MDH, Chemical Health Promotion Program, at (651) 215-8954.

Strategy: Decrease the appeal of alcohol products by examining, publicizing, and reducing advertising and marketing that may influence their use, as well as by conducting counter advertising.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
This strategy is designed to decrease exposure to and the appeal of alcohol advertisements and other pro-alcohol influences, particularly those targeting children and adolescents. This can be accomplished by taking the following steps:
- < Inventory and, if necessary, publicize the prevalence of alcohol outdoor advertising. This could involve counting how many outdoor ads for alcohol products children see along school bus routes.
- < Examine and publicize the number of alcohol ads including scoreboards and clocks at arenas, stadiums and other entertainment centers.
- < Examine and publicize the number of alcohol marketing items in convenience stores, grocery stores, drug stores, and other places. Examples may include In and Out (or Push and Pull) decals on doors, clocks, change holders, mats on checkout counters, ads on the sides of shopping baskets or carts, banners, etc.
- < Examine and publicize the presence of alcohol at county fairs and community events that are supposed to be family events. Look at policies for alcohol sales, advertising and sponsorship. Is the alcohol sales area open to everyone? Can alcoholic beverages be taken out of the area? Also examine the prevalence of alcohol-related items that may be purchased or given away as prizes. These could include mirrors, key chains, coolers, glasses, mugs cups, beach balls, floating toys, balls, t-shirts, hats, backpacks, beach towels, lighters, etc.
- < Assure that, at a minimum, outdoor advertising (billboards) follows the Outdoor Advertisers Association of America's guidelines. The Outdoor Advertisers Association of America guidelines prohibit the placement of adult product ads within 500 feet of schools, hospitals, and religious institutions.
- < Educate the public about the exposure of children and other vulnerable groups to this marketing strategy.
- < Provide information to make young males aware of the overall adverse biological effects of alcohol abuse on their masculinity by emphasizing the long-term effects on sexual performance,

sperm quality and quantity, and testosterone levels.

< Consider policies that could be implemented include banning outdoor advertising for adult products and limiting in-store advertising to black-and-white signs with brand name and price only. (See the "conduct counter advertising" strategy in the tobacco section for information on how to conduct counter advertising. Although it is written for tobacco, it can be easily modified for alcohol using the information above.)

Additional resources:

Bibliographic resources:

< Grube, JW., and Wallack L. 1994, February. Television beer advertising and drinking knowledge, beliefs, and intentions among school children. *American Journal of Public Health*, 84(2): 254-259.

< Leiber, L. 1997. Commercial and character slogan recall by children aged 9-11 years: Budweiser frogs vs. Bugs Bunny. For more information, contact the Trauma Foundation, Center on Alcohol Advertising, at (510) 649-8942.

< Montonen, M. 1996. *Alcohol and the Media.* (European Series No. 62). Copenhagen: WHO Regional Publications.

Organizational resources:

< Hennepin County Prevention Center, (612) 348-6122, has worked on reducing alcohol advertising and can be helpful.

< Marin Institute has a set of six slide shows on alcohol policy. One of the sets is *Alcohol Advertising and Marketing: Targeting the Youth Market*. If you would like to borrow the slides, contact the MDH Chemical Health Promotion Program, at (651) 215-8954.

< Minnesota Prevention Resource Center, www.miph.org, (763) 427-5310 or (800) 782-1878, distributes a community- and school-based tobacco media-advocacy curriculum for youth, *Send the Camel Packing* which could also be adapted for alcohol issues

Evidence for strategy:

Research has demonstrated that youth can readily identify characters used to promote both tobacco and alcohol products. In one study six-year-olds could more readily identify the Camel cigarette Joe Camel character than Mickey Mouse. Other research has shown that youth are very aware of beer brands and beer advertising characters like the Budweiser frogs and lizards and that, by age 11, many can identify the brand or brand(s) they will drink when they are older. While research has shown the need for reduction in alcohol advertising, little is known about what strategies are effective. (For related evidence with tobacco advertising, see the counter advertising strategy in the tobacco strategies section of the *Alcohol, Tobacco and Other Drugs* category.)

A national phone survey of 6- to 17-year-old children conducted by the Campbell Mithun Esty advertising agency found that Budweiser Beer advertisements were the children's favorites. Budweiser ads were more popular than those for Pepsi, Nike, Nissan, Coke, Barbie, Snickers, McDonalds, Hostess, etc.

Several cities including Baltimore and Chicago have passed ordinances banning outdoor alcohol and tobacco advertising, and several other cities are considering this strategy. The U.S. Supreme Court let stand a Court of Appeals decision that upheld the Baltimore ordinance.

Has this strategy been implemented in Minnesota?
Yes, the Hennepin County Prevention Center, at (612) 348-6122, has worked on this strategy and can be helpful, as can the Minnesota Prevention Resource Center, www.miph.org, (763) 427-5310, or (800) 782-1878.

Indicators for this strategy:
< The number of alcohol billboards in a community.
< The number of alcohol product logos in grocery stores, convenience stores, golf courses, bowling alleys, ski areas, race tracks, fairgrounds, parks, etc., that are frequented by children in a community.

For more information contact:
MDH, Chemical Health Promotion Program, at (651) 215-8954.

Special notes:
The alcohol industry invests $1 billion annually in product advertising and promotions in the U.S. It is not likely the industries would spend that much money if it was not effective.

Strategy: Promote alternatives to alcohol use for those who choose not to or should not drink.

	Systems	Community	Individual
Primary	U	U	
Secondary	U	U	
Tertiary			

Background:
Many people choose not to use alcohol; others, for a variety of reasons, should not use alcohol. They include pregnant women or those planning pregnancies, people who are under age 21, those driving or operating machinery or other equipment, on medications that are contraindicated with alcohol, and addicted to or predisposed to abusing alcohol. Implementing this strategy will support these healthy choices.

Limit or eliminate the availability of alcohol products at community events is one way to help implement this strategy. If alcohol products cannot be eliminated then make sure there is a designated area for adults only to consume alcohol. This strategy reduces the opportunities for youth to obtain alcohol, provides an option for individuals and families who do not want either themselves or their children to be exposed to alcohol consumption and its related behaviors, and provides positive role modeling for youth.

Provide responsible hosting techniques for individuals, restaurants, bars, and organizations that entertain groups to offer non-alcoholic, tasty, attractive drinks for people who should not or choose not to use alcohol. This is also a valuable strategy for organizations and individuals working with older adults.

Encourage health care providers to help promote these guidelines.

Additional resource:
< Minnesota Prevention Resource Center has information on responsible hosting and recipes for no-alcoholic beverages, www.miph.org or (763) 427-5310, or (800) 782-1878.

Evidence for strategy:
The City of St. Paul restricted alcohol access at the Grand Old Day community celebration and reduced complaints about

alcohol-related behaviors from both participants and residents.

Anecdotal evidence indicates that people who should not or choose not to drink alcohol feel more comfortable at social gatherings when beverage choices include attractive, tasty non-alcoholic beverages. Having alternate beverages available reaffirms a social norm supporting the choice not to drink alcohol.

Has this strategy been implemented in Minnesota?
Yes, responsible hosting has been done in numerous communities around the state. The city of St. Paul limited alcohol use to a designated adult area for the Grand Old Day celebration several years ago and found far fewer complaints of intoxicated behavior and at the same time no decrease in attendance at the event.

Indicators for this strategy:
< Percentage of premature births, fetal death rate, and alcohol- and tobacco-use patterns of women of childbearing age.
< Alcohol availability and use at community functions.
< Number of responsible hosting events.

For more information contact:
MDH, Chemical Health Promotion Program, at (651) 215-8954.

Special notes:
It is important for a community to acknowledge and support those people who choose not to or should not use alcohol.

Strategy: Encourage work sites, schools, communities, and others to examine and consistently enforce their policies about alcohol, tobacco, and other drugs.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Policies are easier to implement in a community with healthy norms about alcohol and other drug use. Policy approaches can also strongly influence community norms. There are many private and public organizations that have or can have policies, either formal or informal, about alcohol, tobacco, and other drugs. These include schools, businesses, health care providers, faith communities, youth-serving organizations, local governments, and service organizations. Steps to take in implementing this strategy include:
< Examine policies about alcohol, tobacco, and other drug use including alcohol, tobacco, and drug-free workplaces and schools; smoke-free public places; alcohol use at organizational events and by employees; responsible hosting at community and organization events; sober cab/ride programs; alcohol and tobacco screening by health care providers; and employee and student assistance programs.
< Encourage businesses and organizations to examine their policies for financial investments in alcohol and tobacco companies, as well as what kind of advertising appears in the periodicals to which they subscribe and those that they publish.

- Examine policies for youth including funding priorities for education and youth activities; inclusion of youth in planning processes; mentoring programs; youth alcohol, tobacco, and other drug-use rules and laws and their enforcement; and adult abstinence from alcohol and tobacco use while they are acting as chaperones for youth events.
- Examine policies for older adults including involvement in community and school planning efforts, funding priorities for senior services and activities, education for older adults about the use of prescription and non-prescription drugs and alcohol and the dangers of combining them, and mentoring programs using older adults.

Policies must be consistently enforced in order to be effective. To simply have a policy and not consistently enforce it like having no policy at all.

Additional resources:

- Central Center for the Application of Prevention Technology has materials and information related to policy approaches to alcohol and other drug use. For information go to www.ccapt.org or call (763) 427-5310 or (800) 782-1878.
- Minnesota Join Together Coalition to Reduce Underage Drinking is also working on changing statewide policies and practices regarding youth access to alcohol. For more information on this project www.miph.org/mjt or call (763) 427-5310 or (800) 782-1878.
- University of Minnesota School of Public Health, Division of Epidemiology, has conducted research projects to assess the effectiveness of policy change as a strategy to reduce youth access to alcohol and to assess the effectiveness of comprehensive school, parent, and community action to prevent and reduce alcohol use among youth. These projects have produced materials to support communities in policy change, including model ordinances, counter advertising, and school curricula. They have also compiled samples of policies locally and nationally. For more information go to www.epi.umn.edu/alcohol or call (612) 626-7435

Evidence for strategy:
Research conducted by the University of Minnesota in 1995-1996 demonstrated that the three most common sources for youth to obtain alcohol were friends, commercial sources, and other adults. They also conducted research that showed that there was a relationship between alcohol availability and consumption, and drinking problems in adolescents.

The City of St. Paul restricted alcohol access at the Grand Old Day community celebration and reduced complaints about alcohol-related behaviors from both participants and residents.

Alcohol outlets that provided beverage-server training for employees qualify for discounted insurance rates.

Focus groups of high school students have clearly said that they want policies enforced and that if they are not they are “a joke.”

The state of Illinois has experienced a 13.7 percent decrease in alcohol-related crash fatalities since they reduced the legal blood alcohol content from .10 percent to .08. Neighboring states that have not reduced the legal blood alcohol content have not seen

similar decreases in alcohol-related crash fatalities.

Research has been conducted that demonstrates that alcohol screening followed by brief intervention by health care providers has an impact on patients' alcohol use. See strategy on encouraging health care providers to screen for alcohol use for more information.

Has this strategy been implemented in Minnesota?
Yes, many organizations and groups are examining, strengthening, and implementing policies like these.

Indicators for this strategy:
< An inventory of policies.
< The effectiveness of policies.

For more information contact:
< MDH, Chemical Health Promotion Program, at (651) 215-8954 for information about alcohol and other drug use.
< MDH, Tobacco Prevention and Control Section, at (651) 215-8952 for information about tobacco.

Strategy: Reduce alcohol-related problems by increasing the price of beverage alcohol products.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
Increasing the cost of alcohol can be accomplished by raising taxes on alcoholic beverages. Increasing the cost of alcohol use reduces both the amount of alcohol consumed and alcohol-related problems. Although this is especially true with young people, it has also been demonstrated to reduce alcohol use among chronic drinkers. Many youth and adults have limited financial resources, which makes them sensitive to price increases.

Excise taxes on alcoholic beverages have not kept up with other costs. While the consumer price index increased 15 percent between 1991 and 1996, the prices of alcoholic beverages increased between 6 and 7 percent during the same period. In Minnesota the tax rate has not changed since 1987. The current Minnesota tax on a liter of distilled spirits is $1.33, whereas the tax on a gallon of strong beer is just under 15 cents (and just under eight cents for 3.2 percent beer). The real value of the state alcohol taxes has declined by over 50 percent since 1966. In many communities a six-pack of beer costs less than non-alcoholic beverages such as soft drinks, fruit drinks, or bottled water.

Beer is the alcoholic beverage of choice in Minnesota. In 1999 the per-capita consumption among current drinkers (aged 14 and over) in the state was 53.64 gallons of beer, 4.01 gallons of wine, and 4.04 gallons of distilled spirits. Considering the huge discrepancy between the taxes on distilled spirits and that on beer, and the amounts consumed, an increase in the beer tax could help reduce alcohol-related problems.

Increasing taxes on alcohol can only be done by the state or federal government. Efforts to accomplish this strategy will involve working with state and federal government representatives.

Additional resources:

- Coate, D. and Grossman, M. 1998, April. Effects of alcoholic beverage prices and legal drinking ages on youth alcohol use. *Journal of Law and Economics*, XXXI, pp. 145, 151, 164.
- Cook, PJ. and Moore, JM. 1993. T*axation of Alcoholic Beverages: Economic Research on the Prevention of Alcohol-related Problems*. Hilton, M. & G. Bloss, eds., National Institute on Alcoholism and Alcohol Abuse.
- Grossman, M., Chaloupka, F., Saffer, H. and Laixuthai, A. 1994. Effects of alcohol price policy on youth: Assumptions of economic research. *Journal of Research on Adolescents*, 4(2), 347-364.
- Minnesota Department of Health. (1995). *Alcohol Use in Minnesota: Extent and Cost.* Call (651) 281-9830 for copies.
- World Health Organization. (1996). *Alcohol Policy and the Public Good.* www.who.int

Evidence for strategy:

The World Health Organization (WHO) has concluded that per-capita alcohol consumption is significantly related to the prevalence of alcohol-related problems in a given community. Heavy and even alcohol-dependent drinkers are influenced at least as much as, if not more than, lighter drinkers by price changes. WHO also states that alcohol behaves like other commodities: if price goes up, consumption goes down, and vice versa.

Coate, Douglas and Grossman have estimated that even a small increase in the price of beer (10 cents per package or six-pack) would reduce drinking by 16-21 year-olds by an 11 percent for those who drink once a week and 15 percent for those who consume three to five cans/bottles of beer on a typical drinking day.

Has this strategy been implemented in Minnesota?

No.

Indicators for this strategy:

- State and federal excise tax rates per gallon of alcoholic beverage.
- Revenue generated by alcoholic beverage sales in Minnesota.
- Per-capita consumption of alcoholic beverages.
- Comparison of changes in alcohol consumption and alcohol-related problems in states that do not increase taxes.

For more information contact:

- MDH, Chemical Health Promotion, at (651) 215-8954.
- Minnesota Department of Revenue, Special Taxes Division, at (651) 297-2151, for information on alcoholic beverage excise tax rates and revenues.

Strategy: Encourage health care providers to screen and, if necessary, counsel and/or refer patients for alcohol- and other drug-abuse problems, including prenatal alcohol exposure.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:

Most people consider health care providers to be highly credible sources of health information and support. As such, they are

uniquely positioned to prevent and reduce alcohol misuse, to help patients quit misusing alcohol and other drugs, and to influence public policy. The purpose of this strategy is to engage the health care delivery providers and systems in addressing alcohol- and other drug-abuse problems. Ways to accomplish this include:

< Provide information to health care systems and health care providers about the importance of screening, counseling, and referral for their patients' alcohol- and other drug-abuse problems. The information provided would include the variety and severity of alcohol- and other drug-abuse problems and the important role providers can play by addressing them.
< Pregnancy may be an ideal time to intervene in the life of a woman. Primary care providers, such as physicians play a key role because they are considered trustworthy and credible sources of health information. Alcohol screening and brief intervention may be the most valuable steps in universal prevention, and are becoming the standard among health professionals. This process typically includes screening, brief intervention, referral, and follow-up.
< Encourage health care systems to make systemic changes that include assuring that questions about alcohol and other drug use are asked of every patient from adolescence onward. Having a process to respond to concerns that arise from the screening will also be important.

The United States Public Health Services' Clinical Guidelines for Tobacco can be adapted to fit alcohol. They recommend a model that includes: agreement (among community partners), asking patients use, advising and assessing (brief intervention), assist (referral), arrange (follow-up).

All will benefit from a system that is prepared to counsel or refer for more help any patient whose responses to the screening indicate a potential problem with alcohol or other drugs.

Additional resources:

Bibliographic resources:

< Barry, KL., and Fleming, MF. 1990. Computerized administration of alcoholism screening tests in a primary care setting. *Journal of the American Board of Family Practice* 3:93-98.
< Bradley, K. et al. 1998, July 8. Alcohol screening questionnaires in women *JAMA*, Vol. 280, No. 2
< Buchsbaum, DG., Welsh, J., Buchanan, RG., and Elswich, RH., Jr. 1995. Screening for drinking problems by patient self-report. Even "safe" levels may indicate a problem. *Archives of Internal Medicine* 155(l):104-108.
< Cleary, PD., Miller, M., Bush, BT., Warburg, MW., Delbanco, TL., and Aronson, MD. 1988. Prevalence and recognition of alcohol abuse in a primary care population. *American Journal of Medicine* 85:455-471.
< Clement, S. 1986. The identification of alcohol-related problems by general practitioners. *British Journal of Addiction* 81:257-264.
< Moore, RD., Bone, LR., Geller, G., Marnon, JA., Stokes, EJ., and Levine, DM. 1989. Prevalence, detection, and treatment of alcoholism in hospitalized patients. *Journal of the American Medical Association* 261(3):403-407.
< Minnesota Department of Health. 2000. *Preventing Fetal Alcohol Syndrome: Screening for Maternal Alcohol Use. Video, Facilitator and Leader's Guides*.

- National Institute on Alcohol Abuse and Alcoholism (NIAAA) *Identification of At-Risk Drinking and Intervention with Women of Childbearing Age*. NIH Publication No. 99-4368.
- U.S. Department of Health and Hyman Services. 1997. *A Guide to Substance Abuse Services for Primary Care Clinicians.*

Organizational resources:

- Dakota County Public Health Department has been working with health plans and medical centers in their county to institute a plan to deliver integrated, consistent alcohol abuse services. For more information, contact (651) 552-3100.
- Minnesota Department of Health's Community Integrated Service System (CISS) Program has developed recommended practices and planning tools for clinical and community interventions around alcohol and tobacco To obtain those materials, see Appendix E of this document, "Community Prevention Tools" or go to www.health.state.mn.us/ Search on "CISS tools", or call (651) 281-9830.

Evidence for strategy:
Research has shown that there is easy-to-use, effective screening tools that accurately indicate alcohol-use problems. The National Institute on Alcoholism and Alcohol Abuse states "screening for substance abuse need not take long and can be conducted effectively in a variety of settings." The Institute of Medicine has recommended that questions about alcohol use be included among routine behavioral and lifestyle questions of all persons who seek care in a medical setting.

According to the *Treatment Improvement Protocol* published by the Center for Substance Abuse Treatment (USDHHS, 1997), providers should present results of the screening, and in the case of a positive screen, make a determination about the course of action. They could include a brief intervention, a follow-up assessment, or an outside referral.

An NIAAA 1999 publication entitled *Identification of At-Risk Drinking and Intervention with Women* the "key to prevention of fetal alcohol syndrome is to screen all women of childbearing age for alcohol use disorders to identify those at risk and then to use appropriate counseling techniques to reduce or eliminate drinking before conception."

A survey by the MDH indicated that women said that if their doctor told them not to drink during pregnancy, they would be more likely to stop drinking. The same survey indicated that many doctors did not believe they would have much impact on their patients' decisions about alcohol use during pregnancy.

Has this strategy been implemented in Minnesota?
Yes, the Dakota County Public Health Department has been working with health plans and medical centers in their county to institute a plan to deliver integrated, consistent alcohol abuse services. For more information, contact (651) 552-3100.

In 1999 Hennepin County Community Health Department embarked on a coordinated approach toward prevention of maternal alcohol use within the County's public health clinics. This plan included a survey of prenatal care providers to learn their screening practices, patient education efforts, and knowledge and opinions about maternal alcohol screening and Fetal

Alcohol Syndrome. The project also includes a pilot-test of screening and education procedures; development of a manual of "best practices" for clinics to use; and training physicians and nurses. The survey and process used to develop it is available for review. For more information call (612) 348-5704.

Indicators for this strategy:

< Numbers of provider and health care systems instituting screening, counseling, and referral procedures.
< Percentage of clients counseled about alcohol use.

For more information contact:

< MDH, Chemical Health Promotion, at (651) 215-8954.
< MDH, Fetal Alcohol Syndrome (FAS) Prevention Program, at (651) 281-9850.
< Chemical Health Division of the Minnesota Department of Human Services, at (651) 582-1856, for information on chemical dependency assessment and treatment.

Strategy: Develop materials, conduct education, and/or implement activities that emphasize the positive role males can play by supporting their partners to be alcohol-free in order to ensure healthy pregnancy outcomes.

	Systems	Community	Individual
Primary	U	U	
Secondary	U	U	
Tertiary			

Background:

Although the scientific literature does not show a strong biological connection between male alcohol consumption and adverse birth outcomes such as Fetal Alcohol Syndrome (FAS) and alcohol related effects, males certainly play a critical social and psychological role.

This strategy encourages public education efforts to go beyond its exclusive focus on women, by developing messages that accentuate the "mutually complementary" roles that men and women play in preventing FAS. Emphasis should be placed on the important social, psychological, and behaviorally supportive role men perform in a healthy pregnancy. For example a supportive male can sign a contract along with his partner not to drink alcohol during the pregnancy. A supportive male partner can also redirect the couple's socializing to non-alcohol events, situations, or groups.

This strategy needs to be specially tailored for high-risk women who are not in stable relationships. Male partners in these situations are often both passive and active barriers to a women's positive behavior change. Setting up a contract for support with a key family member, peers, or any other influential person with whom the woman comes in contact, might be more useful.

Some researchers maintain that education efforts should also make young males aware of the overall adverse biological effects of alcohol abuse on their masculinity by emphasizing the long-term effects on sexual performance, sperm quality and quantity, and testosterone levels.

Additional resources:

< May, PA. 1995. A multiple-level, comprehensive approach to the prevention of Fetal Alcohol Syndrome (FAS) and other Alcohol-Related Birth

Defects (ARBD). *International Journal of the Addictions*, 30 (12), 1549-1602.
< Mueller, DP. 1994. *Alcohol, Tobacco and Pregnancy: The Beliefs and Practices of Minnesota Women*. Wilder Research Center, Amherst H. Wilder Foundation.
< Wilsnack, SC. 1991. Sexuality and women's drinking: Findings from a U.S. National Study. *Alcohol Health Research World,* 15: 147-150.

Evidence for strategy:
According to the literature, the influence of the partner's drinking is an important personal and environmental factor that increases women's risk for problem drinking. The partner's drinking plays a strong causal role, because alcohol-dependent women have a high prevalence of partners with drinking problems themselves, who in turn help maintain the woman's own problem drinking.

A 1994 survey of women in Minnesota found that women who drank during pregnancy reported that people close to them (spouses, parents, family and friends) also drank. The women surveyed perceived that those close to them would be concerned about whether the woman drank during pregnancy or not. The women surveyed thought if those close to them expressed concern about the woman's drinking during pregnancy, that they would be inclined to change their behavior.

Has this strategy been implemented in Minnesota?
Yes, The Center for Health Promotion at the Minnesota Department of Health developed a media and public information campaign in 1999 that included a public service announcement (PSA) and an educational pamphlet that addressed the influential and positive role of male partners, friends, and families. The PSA is entitled *Wedding* and depicts a young couple at a wedding, the woman visibly pregnant. The husband supports the woman's decision not to join in the wine toasting festivity by having a coffee instead. The brochure is entitled *Women Listen To Those Who Care.*

Indicators for this strategy:
< Numbers of messages developed that discuss role of males and others in a healthy pregnancy.
< The variety of vehicles for the message (brochures, media, education programs).
< The numbers of males reached through this approach.
< Changes in knowledge and attitudes as a result of this approach.

For more information contact:
< MDH Maternal and Child Health Section, FAS Prevention Program, at (651) 281-9850.
< Minnesota Prevention Resource Center (612) 427-7841, e-mail: mprc-order@miph.org

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Strategy: Public education and other prevention initiatives should involve premarital, prenatal, and postpartum education that emphasizes parental responsibility starting from healthy pregnancy practices to active and positive parenting.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary			

Background:
This strategy encourages overall positive and healthy parenting from supporting good prenatal care to improving family bonding and function in order to prevent substance abuse in general, and fetal alcohol syndrome more specifically. Initiatives should reinforce positive cultural values of parenting, promote joint (both partners) prenatal visits and care, promote joint responsibility for home and family life, and promote other specific activities for health, safety and positive lifestyles.

Additional resources:
Bibliographic resource:
< Ihlen, BM, Amundson, A, Sande HA, and Daae, L. 1993. Changes in the use of intoxicants after onset of pregnancy. *British Journal of Addiction* 85: 1627-1631.

Organizational resources:
< March of Dimes, Minnesota Chapter, 5233 Edina Industrial Blvd., Edina, MN, 55439; (952) 835-3033. The mission of the March of Dimes is to improve the health of babies by preventing birth defects and infant mortality.
< MELD (formerly Minnesota Early Learning Design), 219 N. 2nd St. Suite 200, Minneapolis, MN 55401. (612) 332-7563. MELD is a nonprofit organization that, for nearly 30 years, has dedicated itself to strengthening families and preventing the negative consequences of ineffective parenting. MELD's mission is to enhance the capacity of those who parent to raise nurtured, competent children.

Evidence for strategy:
The research indicates that "institutionalizing" premarital, prenatal, and postpartum education about alcohol-related birth defects (ARBD), infant growth and development, and childcare in general could be very beneficial and show both short and long term effects. This information may be most effective when people are intensely aware of pregnancy concerns and are therefore, more approachable.

Has this strategy been implemented in Minnesota?
Yes, the MDH Maternal Alcohol Use and Prenatal Alcohol Exposure Prevention/Intervention Initiative grant program funds projects throughout the state that includes premarital, prenatal, postpartum health and parenting education. Programs have traditionally focused on reaching populations at-risk, including pregnant and parenting teens.

Indicators for this strategy:
< Percentage of parents who are knowledgeable about good prenatal care, ARBD, and positive child care practices.
< The number and kind of parenting education and support programs in a community that include premarital, prenatal, and postpartum education about ARBD, infant growth and development, and child care.

For more information contact:
MDH, FAS Prevention Program, at (651) 281-9850.

CATEGORY: Alcohol, Tobacco and Other Drugs

TOPIC: TOBACCO

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Reduce Exposure to Secondhand Smoke (SHS).	✔		✔	✔	✔	✔	Local media, law enforcement, parks and recreation, parents
Restrict Tobacco Advertising and Utilize Existing Counter-advertising Resources.	✔	✔	✔	✔	✔	✔	
Increase the Price of Tobacco Products.	✔						
Assure Access to Treatment of Tobacco Addiction (i.e., cessation services).	✔	✔	✔	✔	✔	✔	Local media, insurance companies
Implement Comprehensive School-based Tobacco Prevention.				✔	✔		Parents
Engage in Youth Anti-tobacco and General Tobacco Prevention and Control Advocacy.	✔	✔		✔	✔		Media
Reduce Youth Access to Tobacco Products.	✔				✔	✔	Media, legislature, law enforcement

In Minnesota and nationally, tobacco use is by far the leading cause of preventable death. More deaths can be attributed to tobacco use than to alcohol, drugs, firearms, motor vehicle crashes, and HIV/AIDS combined. Although most death and disability contributed to tobacco occurs in adults, tobacco use is really a pediatric epidemic. More than 2000 kids become regular smokers every day[1]. Nearly 90 percent of all smokers begin as kids (Source: 1994 U.S. Surgeon General Report). But there is a proven solution to this pediatric epidemic. Comprehensive tobacco control programs, including youth prevention and youth/adult cessation, reduce smoking while saving lives and saving money in reduced health care costs.

In the past, traditional tobacco control programs were limited to a single strategy. The success of state tobacco control programs in California and Massachusetts, however, shows that a multifaceted approach over a sustained period of time was needed to reduce smoking, save lives and reduce health care costs. That is why the U.S. Centers for Disease Control and Prevention recommends that states use a multifaceted approach because the tobacco industry hooks our kids in many different ways. These programs must be comprehensive, well funded, and sustained over time.

The key to success is a comprehensive program that includes the following key elements: clean indoor air policies; media campaigns about tobacco industry lies, the dangers of secondhand smoke and nicotine addiction; cigarette tax increases; school/community-based education; statewide cessation/treatment resources; and, enforcing youth access laws[2]. Because youth are the target of primary and secondary prevention programs, youth leadership and advocacy throughout can enhance the efficacy of programs to reduce tobacco use and its negative health outcomes.

Strategy: Reduce Exposure to Secondhand Smoke (SHS).

	Systems	Community	Individual
Primary	U	U	
Secondary	U	U	
Tertiary			

Background:
Placing effort on eliminating secondhand smoke is an important part of a comprehensive tobacco prevention plan. Secondhand smoke, as a Class A carcinogen and responsible for 53,000 deaths a year nationally, is now considered the third leading cause of preventable death. It also has immediate health consequences such as asthma attacks and other respiratory distress. Reducing the public's opportunity to be exposed to secondhand smoke reduces their risk of developing the diseases it causes. Creating smoke-free public places also decreases youth smoking rates. Research repeatedly shows that youth, who are exposed to smoking, at home and/or in public settings, are more likely to smoke as adolescents. When communities and establishments adopt non-smoking policies, it reinforces to youth that smoking is not an

[1] Substance Abuse and Mental Health Services Administration, U.S. Dept of Health and Human Services (HHS), "Summary Findings from the 2000 National Household Survey on Drug Abuse," 2001

[2] State Programs Can Reduce Tobacco Use, National Cancer Policy Board, Institute of Medicine, National Research Council, 2000

acceptable option for them. They have fewer opportunities to try smoking and are less likely to become regular smokers. Additionally, smoke-free public places encourage current smokers to quit or cut down. They increase the success rates for those wanting to quit by providing positive reinforcement of a non-smoking lifestyle.

The only way to prevent the harm caused by secondhand smoke is to reduce the public's exposure to it. A number of strategies can be employed to achieve this. Education, recognition of smoke-free venues, family, institutional and governmental policies and the enforcement of those policies, all contribute to smoke free environments. These tactics are most effective when operating together. Educating about the dangers of secondhand smoke without providing opportunities to visit smoke-free areas creates a barrier to those heeding the message. Likewise, policy change does not occur without the first step of public education. Activities to accomplish this strategy include:

- Through local media, highlight the problems of SHS exposure in the community and advocate for change.
- Develop and implement an ordinance and/or voluntary organizational policies related to tobacco-free environments.
- Assure that businesses, workplaces, schools, and/or law enforcement enforce current local ordinances that reduce exposure to SHS.
- Develop and implement tobacco free policies for youth and adults on public and private school grounds and sponsored activities/events.
- Develop and implement tobacco free policies for youth and adults on public recreation grounds and sponsored activities/events.
- Promote tobacco-free homes and/or cars in order to reduce exposure of children to SHS.

Additional resources:

- *Strategies For Reducing Exposure to Environmental Tobacco Smoke, Increasing Tobacco-Use Cessation, and Reducing Initiation in Communities and Health-Care Systems,* 49:RR-12, November 10, 2000. Available at: http://www.cdc.gov/tobacco/researchdata/environmental/MMWRrr4912press.htm.
- Centers for Disease Control and Prevention. 1994. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Washington, D.C. USDHHS. http://www.cdc.gov/tobacco/sgryth2.htm.
- Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. *Tobacco Information and Prevention Source (TIPS) – Environmental Tobacco Smoke*. Available at: http://www.cdc.gov/tobacco/ets.htm.
- Centers for Disease Control and Prevention. 1998, updated 2000. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups: A Report of the Surgeon General.* Washington, D.C. USDHHS. Available at: http://www.cdc.gov/tobacco/sgr-minorities.htm.
- Lynch, BS. and Bonnie, RJ., editors. 1994. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths.* Washington, D.C.: Institute of Health: National Academy Press.

Evidence for strategy:
Studies show that a smoke-free environment protects nonsmokers from SHS and encourages smokers to reduce or quit smoking. As the number of smoke-free environments increase, children and adolescents will be exposed to more nonsmoking role models and non-smoking will become the more apparent norm. In addition, multi-component mass media campaigns and smoking bans and restrictions are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, the Minnesota Clean Indoor Air Act (MCIAA) restricts smoking in public places including restaurants, bars, day care premises, health care facilities and clinics, public schools, hotels, retail stores, and office buildings. Across Minnesota, municipalities are passing ordinances requiring restaurants and other work sites to be smoke-free. All data thus far has confirmed that such policies have no adverse effect on the hospitality industry.

Indicators for this strategy:
- < The number and percentage of environments that restrict smoking or are smoke-free.
- < Extent of compliance and level of enforcement of existing ordinances**.**

For more information contact:
- < Dale Dorschner, at (651) 215-0887, dale.dorschner@health.state.mn.us, MDH Indoor Air Program.
- < MDH, Tobacco Prevention and Control Section, at (651) 215-8952.

Strategy: Restrict Tobacco Advertising and Utilize Existing Counter-advertising Resources.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Minnesota's settlement with the tobacco industry in 1998 required the industry change its marketing practices so that it is not directed at teens. Of course, there are many ways for the industry to circumvent this mandate. In fact, since the tobacco settlement, tobacco industries' advertising budgets have increased dramatically. Successful marketing of a product is key in building it as part of the social norm. The tobacco industries know this and spend billions in their advertising budgets. Because of its pervasive presence, restricting industry advertising and counter-advertising (i.e., advertising non-smoking or anti-industry messages) are critical to the success of a comprehensive tobacco prevention program. Ways to accomplish this include:
- < Utilize existing counter-marketing pieces in community advocacy/ education plans.
- < Work with public and non-public schools to enact and enforce a no-tobacco company marketing/sponsorship policy on school grounds (i.e., clothing, gear, book covers, etc.).
- < Assess the amount of tobacco advertising/promotion in retail stores, events, and products.
- < Work through individual retailers to voluntarily restrict tobacco advertising visible to youth.

Additional resources:

< Hu, T., Sung, HY., and Keeler, TE. 1995. Reducing cigarette consumption in California: Tobacco taxes vs. an anti-smoking media campaign. *Am J Public Health*, 85:1218-22.
< National Center for Tobacco-Free Kids. 1999. *Public Education Campaigns Reduce Tobacco Use*.
< Secker-Walker, RH., Worden, JK., et al. 1997. A mass media program to prevent smoking among adolescents: Costs and cost effectiveness. *Tobacco Control*, 6:207-212.
< U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. 1999. *Best Practices for Comprehensive Tobacco Control Programs*. Atlanta GA.

Evidence for strategy:
Companies invest billions of dollars each year marketing their products and ideas for the simple reason that it works. Marketers know that the brands that advertises more than its competitors increase its market share and, as a result, its return on investment.

Has this strategy been implemented in Minnesota?
Yes, Minnesota's settlement with the tobacco industry resulted in the removal of all tobacco-promoting billboards in the state.

Community coalitions around the state are engaging youth to assess the level of point-of-sale tobacco advertising in their community.

Minnesota's statewide counter-advertising campaign, Target Market, has been in effect for over two years. Marketing industry evaluations show that the messages are resounding with kids and creating a 'brand' that teens identify with as being their movement against corporate tobacco.

Indicators for this strategy:
< Increasing counter-advertising and media advocacy pieces published in local media.
< The amount of point-of-sale advertising in the community.
< Local support for Target Market messaging and activities.

For more information, contact:
MDH, Tobacco Prevention and Control Section, at (651) 215-8952.

Strategy: Increase the Price of Tobacco Products.

	Systems	Community	Individual
Primary		U	
Secondary		U	
Tertiary			

Background:
Increasing the price of tobacco is identified by the CDC and others as a part of a comprehensive tobacco prevention and control program. A significant increase in state cigarette taxes works to reduce teen smoking while at the same time increasing state revenues. Although elected officials are the only ones who can ultimately increase tobacco taxes, the role of public health is to educate about the effectiveness of this approach and advocate for significant increases.
< Educate community leaders and the general public on the direct relationship between tobacco prices and smoking

rates, especially among youth, as a way to build constituent support.
< Educate elected officials on the direct relationship between tobacco price and smoking rates, especially youth rates.
< Advocate for increased state tobacco excise tax.

Additional resources:
Bibliographic resources:
< Centers for Disease Control and Prevention. 1994. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General.* Washington, D.C.: USDHHS. http://www.cdc.gov/tobacco/sgryth2.htm
< Centers for Disease Control and Prevention. 1998. Response to increases in cigarette prices by race/ethnicity, income, and age groups - United States 1976-1993. MMWR 47(29): 605-609, http://www.cdc.gov/tobacco/research data/economics/mmwr5114.intro.htm.

Organizational resource:
< Campaign For Tobacco Free Kids, 2001, www.tobaccofreekids.org.
< ImpacTEEN, University of Illinois at Chicago, www.impacteen.org.

Evidence for strategy:
This strategy is strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org). Research data show that each 10 percent increase in the price of a pack of cigarettes reduces the number of kids who smoke by 6.5 percent and the number of adults who smoke by 2 percent.

Has this strategy been implemented in Minnesota?
Minnesota's current cigarette tax is 48 cents per pack and ranks 26th among all state cigarette taxes. It has not been increased in ten years. Recent opinion polls show that Minnesotans overwhelmingly support increases in the cigarette tax as a way to alleviate the current budget deficit. In 2002, 17 states increased their cigarette tax and 12 states have per pack taxes over $1.

In January 2002, the Minnesota Smoke-Free Coalition launched an initiative called Healthy Kids Minnesota to reduce smoking, especially among kids, save lives and save money by increasing the cigarette tax $1. If Minnesota increased the cigarette tax by $1 to $1.48 per pack, it would reduce the number of kids who smoke by 18.5 percent and raise $300 million to $350 million in additional state revenue each year. Adult smoking would decrease by nearly 6 percent.

Indicators for this strategy:
< The level of support for a tax increase.
< The excise tax amount in Minnesota.

For more information, contact:
< MDH, Tobacco Prevention and Control Section, at (651) 215-8952.
< MN Smoke-Free Coalition, at (651) 641-1223.

Strategy: Assure Access to Treatment of Tobacco Addiction (i.e., cessation services).

	Systems	Community	Individual
Primary			
Secondary			
Tertiary	U		U

Background:
While population based strategies, such as

policies that reduce exposure to second hand smoke or raising the cost of tobacco, create an environment that encourages smokers to quit and remain non-users, each tobacco user still must quit at an individual level. Accessibility to cessation services is necessary within a comprehensive approach to tobacco prevention and control, to provide tobacco users with the tools that will help them attain their goals of reduction and/or quitting. Population and individual based approaches complement each other by both creating the community norm of non-use while acknowledging the assistance some tobacco users need to comply with the new social norm. Activities to achieve this strategy include:

- Assess, identify, and promote cessation programs/resources in the community.
- Promote youth serving cessation services/resources through local youth organizations and schools.
- Through local media, highlight meaningful cessation messages and cessation resources in the community.
- Work with local clinics, hospitals and health plans, especially those targeting youth, to implement U.S. Public Health Services clinical cessation guidelines.
- Advocate for easier access to clinical and non-prescription cessation treatments (i.e., insurance coverage, tax-exempt nicotine replacement therapy, youth-specific cessation resources).

Additional resources:

Bibliographic resource:

- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. 1999. *Best Practices for Comprehensive Tobacco Control Programs - August 1999*. Atlanta GA, http://www.cdc.gov/tobacco/research_data/stat_nat_data/bestprac-dwnld.htm.

Organizational resources:

- Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Tobacco Information and Prevention Source (TIPS) – Cessation, http://www.cdc.gov/tobacco/cess.htm.
- Centers for Disease Control and Prevention. National Center for Chronic Disease Prevention and Health Promotion. Tobacco Information and Prevention Source (TIPS) – How To Quit, http://www.cdc.gov/tobacco/how2quit.htm.
- Minnesota Partnership for Action Against Tobacco (MPAAT), www.mpaat.org; Minnesota's Tobacco Helpline, at 800-270-7867.

Evidence for strategy:

The surgeon general includes tobacco cessation assistance as one of the elements of a comprehensive tobacco prevention and control program. Numerous studies show that while a small percentage of individuals can quit their tobacco use "cold turkey", successful quit attempts increase significantly with the use of cessation assistance. Among assistance options, Nicotine replacement therapy (NRT, i.e. the 'gum' or the 'patch') has it's own success rate; however, it is greatly improved when used in combination with a counseling service. Note that there currently are no conclusive studies on the best approach to youth nicotine addiction treatment and cessation. While investigations are still underway, it is recommended that youth be able to access the treatments and services that are available to adults. Multi-component mass media campaigns to increasing cessation are strongly recommended by the Centers for Disease

Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org/).

Has this strategy been implemented in Minnesota?
Yes, many health insurance plans include coverage for NRT and/or counseling services. For individuals without this type of coverage, the Minnesota Partnership for Action Against Tobacco provides both NRT and counseling services. Many other organizations, such as worksites, schools, and community centers, also provide cessation services for a variety of costs.

Indicators for this strategy:
- < Increase in youth and adult former smoker rates.
- < Participation in cessation programs.
- < Calls to MN Tobacco Helpline.

For more information, contact:
MDH, Tobacco Prevention and Control Section, (651) 215-8952.

Strategy: Implement Comprehensive School-based Tobacco Prevention Activities.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			U

Background:
A school-based effort that embraces a comprehensive approach by offering tobacco use prevention policy, evidence-based curriculum, students services, strategies for parents to stay involved with their student and community linkages to programs and services has been demonstrated to be the most efficacious in reducing and preventing tobacco use of youth.

- < Implement evidence-based prevention curriculum in public and non-public schools in grades K-12 with a skill-building emphasis in middle/junior high school and reinforcement throughout the high school years.
- < Develop, implement, communicate and enforce tobacco-free policies for youth and adults on public and non-public school grounds and events.
- < Assure that cessation services are available.
- < Provide student services staff with training in tobacco prevention, diversion, aftercare services and community resources.
- < Develop and implement strategies to involve parents and family members in reinforcing tobacco use prevention messages.
- < Work with community organizations to support tobacco use prevention and use school and community resources.

Additional resources:
Bibliographic resources:

- < Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. 1999. *Best Practices for Comprehensive Tobacco Control Programs*, http://www.cdc.gov/tobacco/bestprac.htm.
- < Centers for Disease Control and Prevention, 1994. *Guidelines for School Health Programs to Prevent Tobacco Use and Addiction*. Available at: http://www.cdc.gov/nccdphp/dash/healthtopics/tobacco/guidelines/index.htm.
- < Centers for Disease Control and

Prevention, Office of Smoking and Health. *Reducing Tobacco Use, A Report of the Surgeon General –2000*. Available at: http://www.cdc.gov/tobacco/sgr_tobacco_use.htm

< *Communities and Schools: Building Partnerships in Youth Tobacco Use Prevention, A Summary Report* (a Minnesota report), www.mnschoolhealth.com.

Organizational resource:

< Minnesota Department of Health/Minnesota Department of Children, Families and Learning, Coordinated School Health, www.mnschoolhealth.com (Comprehensive School-based tobacco use prevention training, tools and information).

Evidence for strategy:

Evidence for school-based strategies have come from experts in the field and researched programs tested and evaluated in a variety of school settings. Effective school-based programs include:

< Instruction that is grade and age sensitive with the most intensive instruction recommended during the middle school years and reinforcement throughout high school.

< Evidence-based curricula that addresses peer pressure and other social influences to use tobacco, anxiety management, self-esteem building, communication skills, development of personal relationships, resistance and refusal skills, media literacy as it relates to tobacco marketing and advertising, misperceptions about the norms and the consequences of tobacco use. National evaluation results of the evidenced-based *Life Skills Training* curricula indicated a reduced smoking prevalence of students by 40 to 80 percent initially with longer-term reductions of 20 to 25 percent by the senior year of high school. The *Project TNT (Toward No Tobacco)* was found to reduce the initiation of cigarette smoking by 26 percent compared to a control group over a period of two years.

< Comprehensive programs providing policies that attend to the school environment; use of evidenced-based curricula; training for staff; student services that offer pre-assessment, counseling, referral or cessation programs and aftercare; ways for parents to be involved.

< Linkages to community tobacco prevention programs, youth activities and mass media messages that supplement and reinforce tobacco use prevention messages.

< Opportunities for students to get involved in anti-tobacco projects in their school and community.

Has this strategy been implemented in Minnesota?

Yes, schools are in various phases of implementing the four components of a comprehensive school-based tobacco use prevention program (policy, curriculum and instruction, student services and parent/family involvement). Tools are available that describe the components with strategies for implementation (comprehensive school-based tobacco use prevention program/Surround model, assessment tool, policy manual, student services model, family/parent involvement resources).

Four pilot Surround sites, implementing the comprehensive school-based tobacco use prevention model reached 3,000 middle school students. Early student evidence indicates there was a significant increase in

the number of students that practiced ways to say no to tobacco.

Six hundred teachers have been trained in evidence-based curricula for middle level students. Training has been offered in *Life Skills Training, Project T.N.T* and additional teachers have been trained in *Project Alert.*

Sixteen middle schools in eleven districts are continuing to implement an evidenced-based curriculum through the assistance of mini-grants for planning and teacher training.

Indicators for this strategy:

< The number of schools implementing evidence-based curricula during the middle school years.
< The number of districts that have reviewed and updated their policies for content; communicated their policies to students, staff and parents; and have enforcement procedures that include discipline measures as well as student services to address nicotine addiction.
< Increased number of districts that utilize a student services pre-assessment team to address student tobacco use through a continuum of services.
< Increased cessation opportunities and information resources available to youth, staff and parents.

For more information contact:

< Minnesota Department of Children, Families and Learning, Prevention Division - Tobacco Use Prevention Programs, and Safe and Drug Free Schools, at (651) 582-8403 or (651) 582-8691.
< MDH, Tobacco Prevention and Control Section, at (651) 215-8952.

Strategy: Engage in Youth Anti-tobacco and General Tobacco Prevention and Control Advocacy.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:

Work in the fields of youth development and public health have shown that youth respond better to prevention programs when they play a key role in their development and implementation. Involving youth can better ensure that the messages and tactics being used resound with their peers. In advocacy, youth can at times provide a voice and rationale that adults cannot. Additionally, involving youth in all aspects of prevention campaigns engages the next generation to consider the role public health will play in their personal and professional adult lives. Ways to engage youth include:

< Support and facilitate youth in playing a leadership role in the planning, implementing, and evaluation of tobacco prevention and advocacy efforts.
< Engage youth in policy advocacy for CDC-recommended levels of tobacco prevention and control funding, increased tobacco product excise tax, non-preemptive smoke-free legislation, insured tobacco cessation services, etc.

Additional resources:

Bibliographic resource:

< Positive youth development constructs, *Journal of the American Psychological Association*, June, 2002.

Organizational resources for youth development:

- Konopka Institute, http://allaboutkids.umn.edu/konopka/.
- MN 4-H, www.fourh.umn.edu.
- MN Alliance with Youth, www.mnyouth.org.
- National Youth Leadership Council, www.nylc.org.
- Search Institute, www.search-institute.org.
- TC / MN BEST, www.tcbest.org.

Organizational resources for Minnesota youth-led examples:

- Big 8 Prevention Pack, www.big8preventionpack.org.
- Target Market, www.tmvoice.com.

Organizational resources for other states' youth-led tobacco examples:

- Get Outraged, www.getoutraged.com.
- Just Eliminate Lies, www.jeliowa.org.
- Kids Involuntarily Inhaling Secondhand Smoke, www.kiiss.org.
- New Jersey REBEL, www.njrebel.com.
- No Limits, www.nolimitsnebraska.com.
- Students Working Against Tobacco, www.okswat.com.

Evidence for strategy:
Prevention scientists and youth development practitioners have identified several key criteria related to healthy youth development. Anti-tobacco approaches that promote positive youth development seek to achieve one or more of the following objectives:

- Promote bonding with caring adults.
- Promote social, emotional, cognitive, behavioral and moral competence.
- Foster self-determination and self-efficacy.
- Foster clear and positive self-identity and confidence in the future.
- Provide opportunities for pro-social involvement.
- Provide recognition for positive involvement.

Has this strategy been implemented in Minnesota?
Yes, youth across Minnesota have been involved in tobacco prevention and control efforts for many years. Examples include seats on the MN Health Improvement Partnership – Tobacco Endowment Advisory group, local coalition members, classroom educators, compliance checkers and Target Market activists.

Indicators for this strategy:

- Youth are represented at coalition meetings and on related boards.
- Youth actively participate in discussions, decision-making, implementation and evaluation whenever feasible and to the greatest degree possible.
- Youth take the lead in contacting elected officials, county health boards, school boards, the media, etc. to make their voices heard.
- Youth are held accountable for work/decisions directly related to their involvement.
- Youth demonstrate advanced development in media advocacy skills, public speaking, peer and cross-age teaching, problem-solving and critical thinking skills, values development, positive social skills enhancement, self-efficacy, increased awareness/support from school and community adults, etc.
- Youth are recognized for their anti-tobacco efforts at public ceremonies, in local newspapers, in school district publications, at national and global health conferences, etc.

For more information, contact:
MDH, Tobacco Prevention and Control Section, at (651) 215-8952.

Strategy: Reduce Youth Access to Tobacco Products.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Each year, 13,700 Minnesota kids become daily smokers, purchasing and consuming a total of 19.7 million packs of cigarettes. Estimates show that 112,000 Minnesota children now under 18 will die prematurely from smoking, if this trend continues. Strict enforcement of statewide and local youth access to tobacco laws, as part of a comprehensive tobacco control approach, is effective at getting cigarettes out of the hands of Minnesota's youth. This can be accomplished by:

- Strengthen local laws prohibiting sales to minors.
- Through community groups and/or local media, highlight adolescent tobacco problems, existing youth access laws and/or results of compliance checks.
- Assure local enforcement of youth access laws and prescribed penalties for on-compliance.
- Encourage adoption of voluntary policies and employee training by tobacco retailers.
- Through local media and organizations, promote meaningful messages discouraging adult provision of tobacco to minors.

Additional resource:

- U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health. 1999. *Best Practices for Comprehensive Tobacco Control Programs - August 1999*. Atlanta GA.

Evidence for strategy:
Experts debate the effectiveness of youth access work by itself, but it's apparent that youth access, combined with a comprehensive tobacco control initiative - including statewide and local efforts, education, public awareness, policy change and youth involvement - is effective. Those working in the area of youth access have most recently turned their attention and focus to enforcing compliance checks and penalties on retailers who sell tobacco products to children and teens. In addition, multi-component mass media campaigns and smoking bans and restrictions are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
The tobacco control community launched efforts in the early 1990s in local municipalities to pass stricter youth access laws in an attempt to reduce illegal accessibility of tobacco products to children and teens.

In 1997, these local laws led the Minnesota State Legislature to pass a statewide youth access law, which provided a uniform floor of provisions to reduce youth access to tobacco without pre-empting local control. This law allows local communities to retain the power to implement and enforce the law.

Indicators for this strategy:

- < Strength of local laws prohibiting sales to minors.
- < Compliance check pass/fail rates.
- < Degree of enforcement of youth access laws and prescribed penalties.
- < Number of tobacco retailers training their employees.
- < Numbers and kinds of messages discouraging adult provision of tobacco to minors.

For more information, contact:
MDH, Tobacco Prevention and Control Section, at (651) 215-8952.

APPENDIX:

The Community 6 A's: Recommended Practices for Talking with Youth About Alcohol Use

The Community 6 A's: Recommended Practices for Talking with Youth About Tobacco Use

The Community 6 A's:

Recommended Practices for Talking With Youth About Alcohol Use

Minnesota Department of Health
Center for Health Promotion
PO Box 64882
St. Paul, MN 55164-0882
(651) 281-9830

April 2001

These Recommended Practices were developed for the Community Integrated Service Systems (CISS) project to support local communities in their efforts to improve service delivery systems for prevention and health promotion. The Federal Bureau of Maternal and Child Health funded the project.

April 2001

Table of Contents

Introduction

A community (any group of people) may wish to follow six steps to successfully intervene, at the community level, in youth drinking. The Community 6 A's described here are the recommended practices for talking with youth about alcohol use. Intervening means everything from talking about alcohol, to determining if youth and their peers are drinking, to helping a drinking, pregnant youth seek help to stop drinking.

The six practices, or Community 6 A's, are intended to be sequential. They may happen, step by step, in one conversation, or over several.

Not everyone in the community will play an active role in every step of preventing youth from drinking alcohol. But all of the community partners will want to be aware and supportive of the community's efforts. Community partners are people who have contact with youth and are committed to serving their needs. Community partners can be found in schools, faith communities, businesses, law enforcement agencies, etc.

The Community 6 A's will support the work of health professionals who are addressing alcohol use among youth in clinical settings.

Terms that you find in *italics* are defined in the Glossary of Terms beginning on page 12. The paragraphs that are grayed pertain specifically to talking with pregnant young women and their partners.

The rationale for these practices can be found in the full report *Promising Practices for Alcohol and Tobacco Prevention Among Youth* developed for the MN Department of Health CISS Project, November 2000. The full report and this summary are available from www.health.state.mn.us/divs/fh/chp/ciss/index.htm.

The Community 6 A's

The Community 6 A's are the recommended practices for talking with *youth* about alcohol use. Implementing these practices, step by step, will create healthy norms around drinking alcohol in your community. The practices are:

Agree

The first step towards a successful *community* intervention is for *community partners* to meet and agree upon their vision, mission and goals about alcohol use among youth. What community norms do you hope to instill? What messages do you want youth to understand about drinking?

Ask

Each community partner has a role in asking, or *screening* youth about alcohol use. Talking with youth about alcohol use and giving the *consistent messages* agreed upon in the first step helps community partners instill positive *community norms* around drinking alcohol.

Advise and Assess

Each *community partner* has a role in advising or educating youth about the consequences of alcohol use, and assessing if a change in behavior is needed. This may also be called a *brief intervention*.

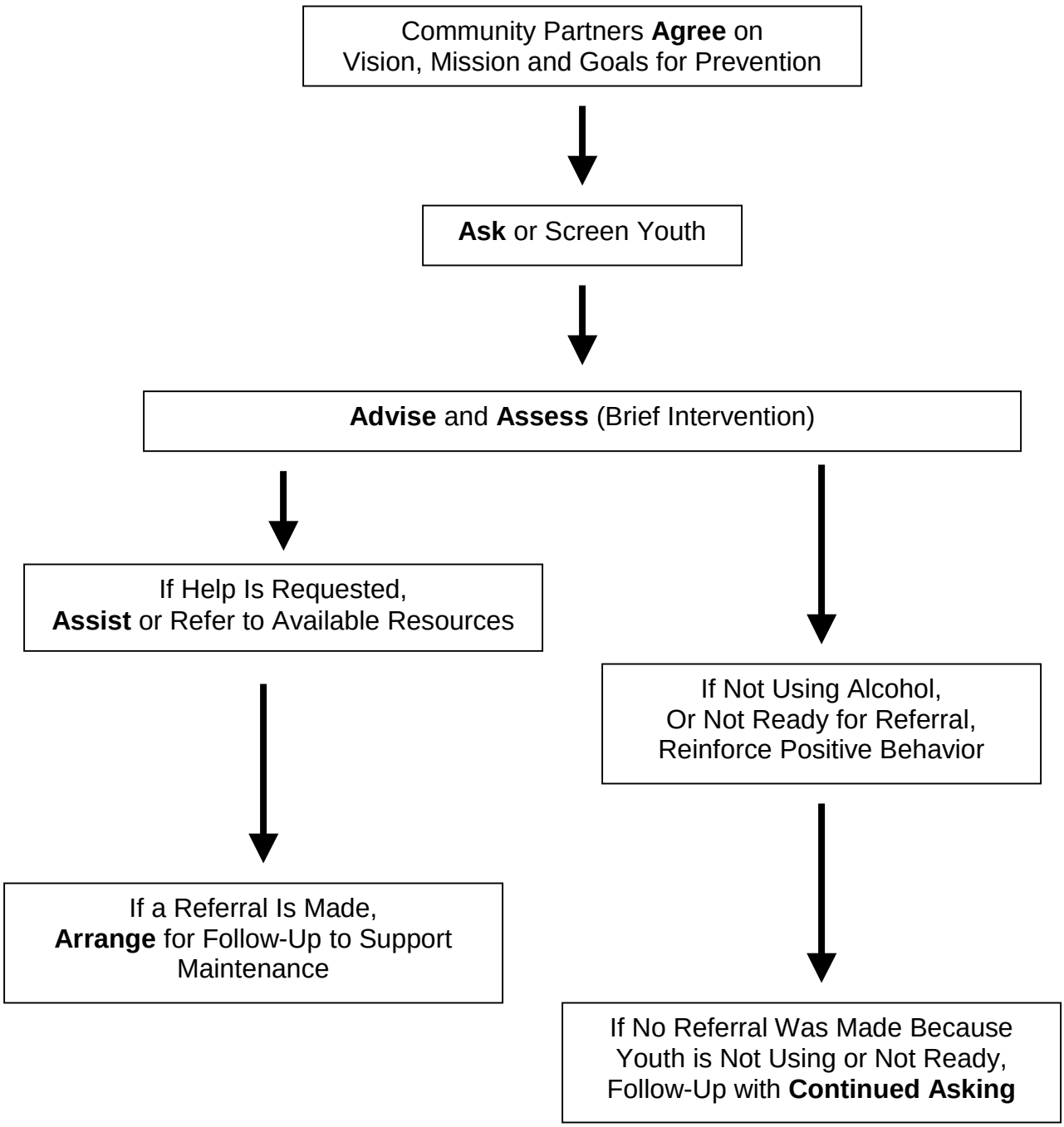
Assist

Each community partner has a role in assisting youth with finding help, if needed, for their alcohol use. This may also be called a *referral*.

Arrange

Each community partner has a role in arranging for *follow-up* to support youth in changing their drinking behavior.

The Theory of Action
For Preventing Alcohol Use Among Youth



Agree

The first step towards a successful community intervention is for *community partners* to meet and reach consensus on their vision, mission and goals about alcohol use among youth.* What community norms do you hope to instill? What messages do you want youth to understand about alcohol use?

Practical Steps for Community Partners:

- Learn about the community's demographic composition and norms about alcohol use. This knowledge will help the community partnership develop appropriate, effective and consistent messages, programs and services for youth.
- Participate directly or indirectly in the continuum of asking, assessing, advising, assisting and arranging follow-up for alcohol intervention among youth.
- Provide messages, programs and services for youth that are *culturally specific* and relevant.
- Serve as public advocates for alcohol use prevention among youth.
- Act as role models for alcohol use prevention among youth.
- Develop and test all prevention messages for youth with youth.
- Focus the prevention efforts on both the general population and those the community defines as "*at risk*".
- Receive training on each of the practices. This will assure the quality of your prevention effort.
- Determine how their sites may be a place to practice one or all of the strategies for talking with youth about alcohol use.
- Assure that alcohol prevention programs are *multifaceted*, use a *trained-peer format*, include short and long-term goals, and are *evaluated*.
- Work with *Coordinated School Health* prevention efforts that focus on building skills for decision-making, refusal and communication.

* For tools to assist you in building a community partnership and reaching consensus on goals and messages, please see *Prevention Planning Tools: A Self-Guided Set of Tools For Use with Community Partners,* developed for the MN Department of Health CISS Project, April 2001. These worksheets are available from www.health.state.mn.us/divs/fh/chp/ciss/index.htm.

Ask

Talking with youth about alcohol use and giving the *consistent messages* agreed upon in the first step helps community partners instill positive *community norms* around drinking alcohol.

Practical Steps for Community Partners:

- Ask youth about their alcohol use in terms of quantity (how much), frequency (how often) and duration (for how long).
- Support a common standard for identifying drinking behaviors among youth. (A *validated screening tool* should be used if one is available and appropriate to the setting.)
- Assess youth based on the five stages through which youth proceed to use alcohol: anticipation, initiation, experimentation, habituation and addiction.*
- Explain concerns and/or screening results, and provide an explicit and consistent message about the possible consequences of alcohol use.
- Encourage and reinforce non-drinking. Periodically ask again, or re-screen for alcohol use.
- Ask young women who are pregnant or who have recently delivered about their alcohol use. Use a *validated alcohol screening tool* if appropriate and proven effective with a pre-natal population.
- Screen young women and their partners, giving them an explanation of screening results; education about the possible negative effects of alcohol to the fetus and infant; and an explicit and consistent message to abstain from alcohol during pregnancy, when breastfeeding and when caring for children.

* For more information about these stages, please see page 15.

Advise and Assess

Each *community partner* has a role in advising or educating youth about the consequences of drinking alcohol, and assessing if a change in behavior is needed. This may also be called a *brief intervention*.

Practical Steps for Community Partners:

- Send consistent messages about the consequences of drinking and reinforce the benefits of not drinking.
- Use a respectful approach and center on the needs of the youth. Include *structured feedback* and *participation*. Emphasize the youth's responsibility for change.
- Determine the youth's readiness to change by identifying the youth's particular *stage of change*: pre-contemplation, contemplation, determination, action, maintenance or relapse.*
- Negotiate goals and review strategies for behavior change through the use of *motivational interviewing*.
- Combine a variety of approaches to help move youth toward behavior change. These approaches include: raising awareness of the problem, giving advice, removing barriers, providing feedback and clarifying goals.

- Provide information about alcohol use that includes the impact of alcohol on a youth's body and mind, and on a developing fetus; ways to stop drinking; and coping strategies for the challenges of adolescence, sobriety and pregnancy.
- Use a respectful approach and center on the needs of the young woman. Include structured feedback and participation. Emphasize the woman's responsibility for change.
- Educate about the impact of drinking alcohol during pregnancy. Focus on the myths and misconceptions about the impact of alcohol to the developing fetus; the myths and misconceptions about it's effect on labor and delivery; and misconceptions about the role of alcohol in stress management and weight control.
- Provide information on the impact of alcohol on the developing fetus; ways to stop drinking during pregnancy and breastfeeding; and coping strategies for the challenges of pregnancy and sobriety.
- Assess a young woman's partner and/or the father of the unborn baby for alcohol use. A partner's drinking, as well as a young woman's living/social/familial circumstances, contributes to her risk for use.
- Give verbal support and reinforcement, including information about the benefits of abstaining from alcohol during and after pregnancy.

* For more information about these stages, please see page 16.

Assist

Each community partner has a role in assisting youth with finding help, if needed, for their alcohol use. This may also be called a *referral*.

Practical Steps for Community Partners:

- Identify available and accessible resources for youth regarding alcohol use.

- Refer to resources based on specific needs and the youth's readiness to change by considering and respecting the youth's:
  - drinking history;
  - existing emotional/behavioral/psychiatric conditions;
  - social and familial factors;
  - gender, cultural and ethnic background.

- Promote activities that include awareness raising, education, diversion programs, and accessible alcohol treatment programs designed specifically for the needs of youth.

- Coordinate referrals through interagency agreements and based on the specific needs of the pregnant youth. The referral includes information about the young woman's history of alcohol use before and anytime during pregnancy, and her current use.

Arrange

Each community partner has a role in arranging for *follow-up* to support youth in changing their drinking behavior.

Practical Steps for Community Partners:

- Reinforce and encourage positive behavior changes through regular follow-up with youth.
- Negotiate with youth, and track and monitor progress towards reduction or cessation of drinking.
- Continue to ask, or re-screen the young woman who is pregnant or has recently delivered, and assess her need for additional support and referral for treatment/cessation.
- Follow-up with pregnant youth to plan, implement and monitor positive changes in drinking behavior.

Glossary of Terms

at risk — those who may be particularly vulnerable to alcohol and/or tobacco use. The federal office of Substance Abuse Prevention often identifies youth "at risk" as: abused and/or neglected youth, homeless or runaway youth, physically or mentally handicapped youth, pregnant teens, school drop-puts, children of abusers of alcohol and other drugs, latchkey children, and economically disadvantaged youth. However, some claim that *all* youth, by definition are "at risk" for alcohol/tobacco use.

assessment — a structured evaluation by a trained professional of a client's substance use history and concurrent problems. It is the second step in a process that starts with screening, moves to evaluation and diagnosis, and finally to treatment, if warranted.

brief intervention — a primary prevention strategy to help individuals and their families make necessary changes in problem behaviors and to take responsibility for self-care. Common and critical components include:

- concrete identification of the problem to the individual and determining readiness to change
- advice to change or alter behaviors in order to achieve and maintain a particular health goal
- monitoring of progress and feedback to the individual

community — a community can be defined by geography, culture, a school, a family, etc. Different groups within a "community" may have different norms.

community norms — community norms are the prevailing attitudes that determine what is acceptable and unacceptable behavior. Community norms may be based on perception or reality.

community partners — community members that come together with an identified commitment to work together towards a common goal. The key players can include individual residents, health care providers, business, state, and local health departments, private and non-private healthcare organizations, labor, educators, environmental advocates, community-based organizations, and the media. Partnerships among diverse community groups increase the possible effectiveness of public health interventions.

consistent messages — words or phrases that convey meanings intended to influence behavior change or promote healthy behaviors. Consistent messages are supportive of each other and communicate a same value. Consistent messages do not necessarily use the exact same words.

Coordinated School Health emphasizes the interrelationships among components and collaboration among staff, school administrators, and concerned community members to take concerted actions to achieve a common vision. A school health program that effectively addresses student health would include eight components: health education, health services, healthy and safe school environment, school counseling, mentoring and social services, parent and community involvement, healthy and nutritious food services, physical education, and health promotion.

culturally specific structures and programs that mirror, complement and empower the cultures being served.

evaluation the process of analyzing an intervention to determine (1) whether the stated objectives occurred, (2) the effect of the intervention on the target population, and/or (3) to assess if procedures used were consistent with the project's design. There are three primary types of evaluation outcome, impact, and process.

follow-up the process of communicating to individuals the results of services and the appropriate information and recommendations.

intervention an activity that prevents disease or injury, or that promotes health in a group of people. Interventions can occur on an individual, community, or *system* level.

motivational interviewing a method of helping people to recognize and take action regarding a problem behavior, including alcohol and tobacco use. Motivational interviewing collects information from the individuals in order to promote self-esteem, increase feelings of self-efficacy, generate cognitive dissonance, and direct the conflict towards behavior change.

referral a way in which individuals, families, groups, organizations are assisted to use available resources to prevent or resolve a problem. The steps in this process include:

- establish a working relationship
- establish the need for referral
- set objectives for a referral
- explore available resources
- guide to resources
- evaluate

screening involves obtaining information in a standard way to identify those with probable substance abuse problems or those at high risk of developing substance abuse problems. Screening for alcohol and tobacco use might involve:

- unstructured interviews
- questionnaires
- biomarkers (i.e. measuring blood alcohol level)

stages of change	a model of behavior change outlining six stages through a person moves in order to make positive behavior changes. The six stages are: precontemplation, contemplation, determination, action, maintenance, and relapse. The model maintains that a person must be "ready" in order to enter, continue, and adhere to a particular change strategy. *Note: There are other models of behavior change that may be used. This document features Prochaska-DiClemente, however this does not imply that it is the exclusive model.*
structured feedback	a strategy of brief intervention in which the individual is given the opportunity to carefully consider their present situation. It emphasizes the individual's responsibility for change through explicit messages and clear goals for behavior change.
system	a set of parts coordinated to accomplish a set of goals. In essence, a system is a set or group of interconnected, interdependent components that form a complex whole. Systems involve three essential elements: 1) purpose or goals; 2) components-structures and processes; and 3) components that must communicate in order to be coordinated. The central thread of any system is information and the flow of information between various links of the communication network that supports the operation of the systems.
trained-peer format	youth of similar ages have certain advantages over adults in teaching their peers Their "cognitive framework" will be more similar to their peers, so they may be more able to understand the subject matter in the same way as their peers, and be able to present it in terms their peers understand. Also, because they are more like those they are teaching, they will be better able to model the behavior. The teaching peers receive training, and in turn teach their peers. Programs that utilize this method of teaching and learning are said to have a "trained-peer format".
treatment	a variety of interventions to address an individual's use and abuse of tobacco, alcohol, or other drugs. Elements of comprehensive treatment include detoxification if needed, abstinence orientation, self-help group attendance, group therapy, education, family involvement and treatment, pharmacotherapy and aftercare.
youth	the time of life between childhood and maturity. Adolescence.
validated screening tool	a research instrument that actually measures what it was designed to measure. The best-developed substance use screening instruments are specifically designed to measure alcohol use. These typically focus on extracting information on the amount and frequency of alcohol use or on identifying alcohol-related behavior problems.

The Development of Substance Use Behavior: Stages and Process

It is generally accepted that youth move through five stages to become users of alcohol and tobacco. These five stages are: **anticipation**, **initiation**, **experimentation**, **habituation** and **addiction**.

During these stages, various psychosocial risk factors influence substance use behavior, behavior that is socially rooted and reinforced. Despite the age at which youth first try alcohol or tobacco, they all seem to progress through a series of stages that take them from receptivity to dependence.

- The first stage is *anticipation*. It is the preparatory stage where attitudes and beliefs about alcohol/tobacco are formed. At this stage, the youth may see drinking or smoking as a way to appear older, deal with stress, make friends, or be independent. The psychosocial risk factors include the media and adult role models.

- The second stage is *initiation*. It is the stage at which youth first try alcohol or tobacco. Peers are typically key to providing encouragement for beginning use. The psychosocial risk factors include peer influences, the belief that use in normal, and the availability of alcohol or tobacco.

- The third stage is *experimentation*. This stage usually involves repeated, though irregular patterns of use. Use is usually in response to a situation, such as a party. The psychosocial risk factors include social situations and peers, low self-efficacy to refuse (they don't feel confident about refusing), and the availability of alcohol or tobacco.

- The fourth stage is *habituation*. This is the stage of regular use. Youth may smoke or drink across a variety of situations and personal interactions. The psychosocial risk factors include peers who smoke and drink, and lack of restrictions on smoking or drinking in the home, school and community.

- The final stage is *addiction*. This stage is characterized by a physiological need for tobacco or alcohol. This need involves a tolerance for nicotine or alcohol, withdrawal symptoms if the youth tries to quit, and a high chance of a relapse after quitting.

Since young people may become regular users in two to three years, the middle school, junior high, and senior high school years are a critical time for prevention efforts. Over the seven years of adolescence, from 11-17, developmentally appropriate prevention programs should be delivered.

Source: U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of Smoking and Health, 1994.

Stages of Change

Prochaska and DiClemente describe six stages that people pass through in the course of changing problem behaviors such as alcohol or tobacco use. These stages are **precontemplation**, **contemplation**, **determination**, **action**, **maintenance**, and **relapse**.

The Stages of Change model, as it is called, is based on the trans-theoretical model that involves 10 processes of change: consciousness raising, self-liberation, social liberation, self-reevaluation, environmental reevaluation, counter conditioning, stimulus control, reinforcement management, dramatic relief, and helping relationships.

- The first step to change is *precontemplation*. Precontemplators are not considering the possibility of change, and may even avoid behavior change. People in this stage need information and feedback to raise their awareness of the problem and the need to change.

- The second step to change is *contemplation*. Contemplators are ambivalent about the need to change, they weigh the risks and benefits without a definite commitment to make a change. People in this stage are gathering information and use self-reevaluation to move them to take action.

- The third step to change is *determination*. Determination is the stage of high motivation. People in this stage require affirmation, support, and guidance to select strategies that will help them take action and succeed.

- The fourth step to change is *action*. In this stage people take specific steps to bring about behavior change. People in this stage use self-liberation and report more self and social reinforcement for their behavior change. They also use more helping relationships for support and understanding.

- The fifth step to change is *maintenance*. During this stage, the challenge is to sustain the behavior change and prevent relapse.

- The sixth step to change is *relapse*. People in this stage need support and social reinforcement to return to the maintenance stage.

Source: Prochaska JO and DiClemente CC. (1983) Stages and Processes of Self-Change of Smoking: Toward an Integrative Model of Change. *Journal of Consulting and Clinical Psychology*. Vol 51, No. 3:390-395.

Citation for *Promising Practices* Report

This is a summary of the full report: *Promising Practices for Alcohol and Tobacco Prevention Among Youth* developed for the MN Department of Health CISS Project, November 2000. The full report and this summary are available from www.health.state.mn.us/divs/fh/chp/ciss/index.htm.

The Community 6 A's:

Recommended Practices for Talking With Youth About Tobacco Use

Minnesota Department of Health
Center for Health Promotion
PO Box 64882
St. Paul, MN 55164-0882
(651) 281-9830

May 2001

These Prevention Planning Tools were developed for the Community Integrated Service Systems (CISS) project to support local communities in their efforts to improve service delivery systems for prevention and health promotion. The Federal Bureau of Maternal and Child Health funded the project.

May 2001

Table of Contents

Introduction

A community will wish to follow six strategies, the Community 6 A's, to successfully intervene at the community level around tobacco use among youth. Intervening means everything from talking with youth about tobacco use, to determining if youth and their peers are using tobacco, to helping a pregnant youth seek help to stop smoking. Tobacco use includes smoking and chewing tobacco.

The strategies, or Community 6 A's, are listed below. Later, they are broken down into practical steps. The strategies are intended to be sequential. They may happen at one encounter, or over several.

Not everyone in the community will play an active role in every step of preventing youth from using tobacco. But all of the community partners will want to be aware and supportive of the community's efforts. Community partners are people who have contact with youth and who are committed to serving the needs of youth in the community. Community partners can be found in schools, faith communities, businesses, law enforcement agencies, etc.

The Community 6 A's are steps the community partners might take to support health professionals who are addressing tobacco use among youth in clinical settings.

Terms that you find in *italics* are defined in the Glossary of Terms beginning on page 12. The paragraphs that are grayed pertain specifically to talking with pregnant young women and their partners.

The rationale for these strategies and steps can be found in the full report *Promising Practices for Alcohol and Tobacco Prevention Among Youth* developed for the MN Department of Health CISS Project, November 2000. The full report and this summary are available from www.health.state.mn.us/divs/fh/chp/ciss/index.htm.

The Community 6 A's

The Community 6 A's are the recommended practices for talking with *youth* about tobacco use. They are:

Agree
The first step towards a successful community intervention is for the *community partners* to meet and agree upon consensus on their vision, mission and goals about tobacco use among youth. What community norms do you hope to instill? What message do you want youth to understand about smoking and chewing tobacco?

Ask
Each community partner has a role in asking, or *screening* youth about tobacco use. Talking with youth about tobacco use and giving the *consistent messages* agreed upon in the first step helps community partners instill positive *community norms* around tobacco.

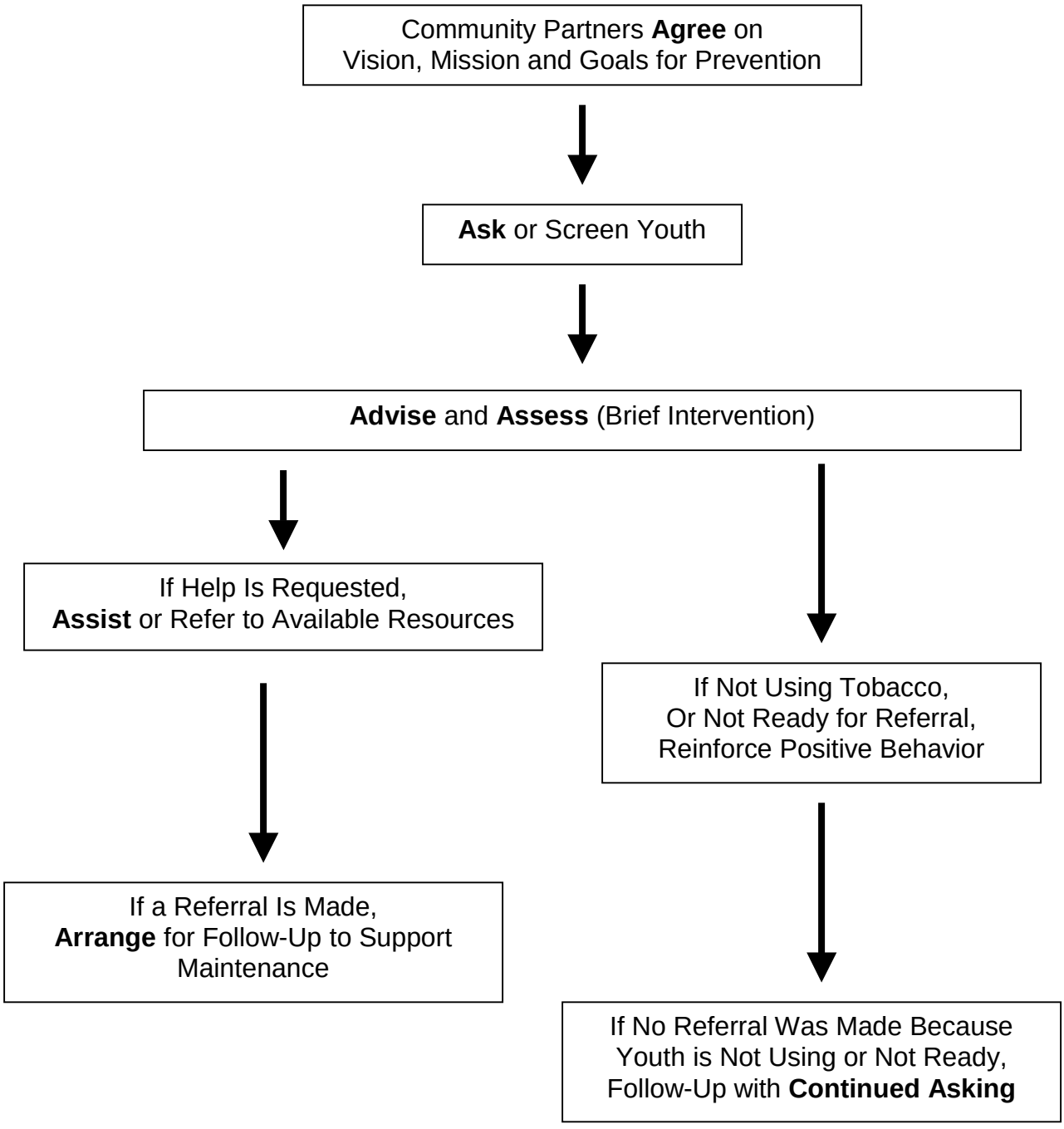
Advise and Assess
Each *community partner* has a role in advising or educating youth about the consequences of tobacco use, and assessing if a change in behavior is needed. This may also be called a *brief intervention*.

Assist
Each community partner has a role in assisting youth with finding help, if needed, for their tobacco use. This may also be called a *referral*.

Arrange
Each community partner has a role in arranging for *follow-up* to support youth in changing their behavior.

This continuum of activity in a community will create a standard and consistent message about tobacco use for all. It will also provide a standard and a network of support during preconception, conception and pregnancy for those seeking the birth of healthy children.

The Theory of Action
For Preventing Tobacco Use Among Youth



Agree

The first step towards a successful community intervention is for the *community partners* to meet and reach consensus on their vision, mission and goals about tobacco use among youth.* What community norms do you hope to instill? What message do you want youth to understand about smoking and chewing tobacco?

Practical Steps for Community Partners:

Learn about the community's demographic composition and norms about tobacco use. This knowledge will help the community partnership develop appropriate, effective and consistent messages, programs and services for youth.

- Participate directly or indirectly in the continuum of asking, assessing, advising, assisting and arranging follow-up for tobacco intervention among youth.
- Provide tobacco intervention messages, programs and services for youth that are *culturally specific* and relevant.
- Serve as public advocates for tobacco use prevention among youth.
- Act as role models for tobacco use prevention among youth.
- Develop and test all prevention messages targeting youth about tobacco use with youth.
- Focus the tobacco use prevention efforts on both the general population and those the community defines as "*at risk*".
- Receive training on each of the practices for talking with youth about tobacco use: asking, assessing, advising, assisting and arranging follow-up, to assure the quality of the activity.
- Determine how their sites may be a place to practice one or all of the strategies for talking with youth about tobacco use.
- Assure that tobacco prevention programs are *multifaceted*, use a *trained-peer format*, include short and long-term goals, and are *evaluated*.
- Work with *Coordinated School Health* prevention efforts that focus on building skills for decision-making, refusal and communication regarding tobacco use.

* For tools to assist you in building a community partnership and reaching consensus on goals and messages, please see *Prevention Planning Tools: A Self-Guided Set of Tools For Use with Community Partners,* developed for the MN Department of Health CISS Project, April 2001. These worksheets are available from www.health.state.mn.us/divs/fh/chp/ciss/index.htm.

Ask

Talking with youth about tobacco use and giving the *consistent messages* agreed upon in the first step helps community partners instill positive *community norms* around tobacco.

Practical Steps for Community Partners:

- Ask youth about their tobacco use in terms of quantity (how much), frequency (how often) and duration (for how long).

- Support a common standard for identifying behaviors among youth. (A *validated screening tool* should be used if one is available and appropriate to the setting.)

- Assess youth based on the five stages through which youth proceed to use tobacco: anticipation, initiation, experimentation, habituation and addiction.*

- Explain concerns and/or screening results, and provide an explicit and consistent message about the possible consequences of tobacco use.

- Community partners encourage and reinforce the non-use of tobacco and periodically ask again, or re-screen for smoking and chewing tobacco.

- Ask young women who are pregnant or who have recently delivered about their smoking. Use a *validated screening tool* if appropriate and proven effective with a pre-natal population.

- Screen young women and their partners, giving them an explanation of screening results, education about the possible negative effects of smoking to the fetus and infant, including the risks from second-hand smoke and an explicit and consistent message to abstain from smoking during pregnancy, and when caring for children.

* For more information about these stages, please see page 15.

Advise and Assess

Each *community partner* has a role in advising or educating youth about the consequences of tobacco use, and assessing if a change in behavior is needed. This may also be called a *brief intervention*.

Practical Steps for Community Partners:

- Send consistent messages about the consequences of tobacco use and to reinforce the benefits of non-use.
- Use a respectful approach and center on the needs of the youth. Include *structured feedback* and *participation*. Emphasize the youth's responsibility for change.
- Determine the youth's readiness to change by identifying the youth's particular *stage of change*: pre-contemplation, contemplation, determination, action, maintenance or relapse.*
- Negotiate goals and review strategies for behavior change through the use of *motivational interviewing*.
- Combine a variety of approaches to help move youth toward behavior change. These approaches include: raising awareness of the problem, giving advice, removing barriers, providing feedback and clarifying goals.
- Provide information about smoking that includes the impact of tobacco on a youth's body and mind, and on a developing fetus; ways to stop or reduce smoking; and coping strategies for the challenges of adolescence and pregnancy.
- Use a respectful approach and center on the needs of the young woman. Include structured feedback and participation. Emphasize the woman's responsibility for change.
- Educate about the impact of smoking, including second-hand smoke during pregnancy. Focus on: the myths and misconceptions about the impact of tobacco to the developing fetus; the myths and misconceptions about it's effect on labor and delivery; and misconceptions about the role of smoking in stress management and weight control.
- Provide information on the impact of tobacco on the developing fetus; ways to stop during pregnancy and breastfeeding; and coping strategies for quitting smoking during pregnancy.
- Assess a young woman's partner and/or the father of the unborn baby for smoking. A partner's, as well as a young woman's living/social/familial circumstances, contributes to her risk for use.
- Give verbal support and reinforcement, including information about the benefits of not smoking during and after pregnancy.

* For more information about these stages, please see page 16.

Assist

Each community partner has a role in assisting youth with finding help, if needed, for their tobacco use. This may also be called a *referral*.

Practical Steps for Community Partners:

- Identify available and accessible resources for youth regarding tobacco use.

- Refer to resources based on specific needs and the youth's readiness to change by considering and respecting the youth's:
  - tobacco use history;
  - existing emotional/behavioral/psychiatric conditions;
  - social and familial factors;
  - gender, cultural and ethnic background.

- Promote activities that include awareness raising, education, diversion programs, and accessible tobacco treatment programs designed specifically for the needs of youth.

- Coordinate referrals through interagency agreements and based on the specific needs of the pregnant youth. The referral includes information about the young woman's history of smoking before and anytime during pregnancy, and her current use of tobacco.

Arrange

Each community partner has a role in arranging for *follow-up* to support youth in changing their behavior.

Practical Steps for Community Partners:

- Reinforce and encourage positive behavior changes through regular follow-up with youth.
- Negotiate with youth, and track and monitor progress towards smoking or chewing tobacco reduction or cessation.
- Continue to ask, or re-screen the young woman who is pregnant or has recently delivered, and assess her need for additional support and referral for cessation.
- Follow-up with pregnant youth to plan, implement and monitor positive changes in smoking tobacco.

Glossary of Terms

at risk — those who may be particularly vulnerable to alcohol and tobacco use. The federal office of Substance Abuse Prevention often identifies youth "at risk" as: abused and/or neglected youth, homeless or runaway youth, physically or mentally handicapped youth, pregnant teens, school drop-puts, children of abusers of alcohol and other drugs, latchkey children, and economically disadvantaged youth. However, some claim that all youth, by definition are "at risk" for alcohol or tobacco use.

assessment — a structured evaluation by a trained professional of a client's substance use history and concurrent problems. It is the second step in a process that starts with screening, moves to evaluation and diagnosis, and finally to treatment, if warranted.

brief intervention — a primary prevention strategy to help individuals and their families make necessary changes in problem behaviors and to take responsibility for self-care. Common and critical components include:

- concrete identification of the problem to the individual and determining readiness to change
- advice to change or alter behaviors in order to achieve and maintain a particular health goal
- monitoring of progress and feedback to the individual

community — a community can be defined by geography, culture, a school, a family, etc. Different groups within a "community" may have different norms.

community norms — community norms are the prevailing attitudes that determine what is acceptable and unacceptable behavior. Community norms may be based on perception or reality.

community partner — community members that come together with an identified commitment to work together towards a common goal. The key players can include individual residents, health care providers, business, state, and local health departments, private and non-private healthcare organizations, labor, educators, environmental advocates, community-based organizations, and the media. Partnerships among diverse community groups increase the possible effectiveness of public health interventions.

consistent messages — words or phrases that convey meanings intended to influence behavior change or promote healthy behaviors. Consistent messages are supportive of each other and communicate a same value. Consistent messages do not necessarily use the exact same words

Coordinated School Health emphasizes the interrelationships among components and collaboration among staff, school administrators, and concerned community members to take concerted actions to achieve a common vision. A school health program that effectively addresses student health would include eight components: health education, health services, healthy and safe school environment, school counseling, mentoring and social services, parent and community involvement, healthy and nutritious food services, physical education, and health promotion.

culturally specific structures and programs that mirror, complement and empower the cultures being served.

evaluation the process of analyzing an intervention to determine (1) whether the stated objectives occurred, (2) the effect of the intervention on the target population, and/or (3) to assess if procedures used were consistent with the project's design. There are three primary types of evaluation outcome, impact, and process.

follow-up the process of communicating to individuals the results of services and the appropriate information and recommendations.

intervention an activity that prevents disease or injury, or that promotes health in a group of people. Interventions can occur on an individual, community or *system* level.

motivational interviewing a method of helping people to recognize and take action regarding a problem behavior, including alcohol and tobacco use. Motivational interviewing collects information from the individuals in order to promote self-esteem, increase feelings of self-efficacy, generate cognitive dissonance, and direct the conflict towards behavior change.

referral a way in which individuals, families, groups, organizations are assisted to use available resources to prevent or resolve a problem. The steps in this process include:

- establish a working relationship
- establish the need for referral
- set objectives for a referral
- explore available resources
- guide to resources
- evaluate

screening involves obtaining information in a standard way to identify those with probable substance abuse problems or those at high risk of developing substance abuse problems. Screening alcohol and tobacco use might involve:

- unstructured interviews
- questionnaires
- biomarkers (i.e. measuring blood tobacco level)

stages of change — a model of behavior change outlining six stages through a person moves in order to make positive behavior changes. The six stages are: precontemplation, contemplation, determination, action, maintenance, and relapse. The model maintains that a person must be "ready" in order to enter, continue, and adhere to a particular change strategy. *Note: There are other models of behavior change that may be used. This document features Prochaska-DiClemente, however this does not imply that it is the exclusive model.*

structured feedback — a strategy of brief intervention in which the individual is given the opportunity to carefully consider their present situation. It emphasizes the individual's responsibility for change through explicit messages and clear goals for behavior change.

system — a set of parts coordinated to accomplish a set of goals. In essence, a system is a set or group of interconnected, interdependent components that form a complex whole. Systems involve three essential elements:
1) purpose or goals;
2) components-structures and processes; and
3) components that must communicate in order to be coordinated.
The central thread of any system is information and the flow of information between various links of the communication network that supports the operation of the systems.

trained-peer format — youth of similar ages have certain advantages over adults in teaching their peers Their "cognitive framework" will be more similar to their peers, so they may be more able to understand the subject matter in the same way as their peers, and be able to present it in terms their peers understand. Also, because they are more like those they are teaching, they will be better able to model the behavior. The teaching peers receive training, and in turn teach their peers. Programs that utilize this method of teaching and learning are said to have a "trained-peer format".

treatment — a variety of interventions to address an individual's use and abuse of alcohol, tobacco, or other drugs. Elements of comprehensive treatment include detoxification if needed, abstinence orientation, self-help group attendance, group therapy, education, family involvement and treatment, pharmacotherapy and aftercare.

youth — the time of life between childhood and maturity. Adolescence.

validated screening tool — a research instrument that actually measures what it was designed to measure. The best-developed substance use screening instruments are specifically designed to measure tobacco use. These typically focus on extracting information on the amount and frequency of tobacco use or on identifying tobacco-related behavior problems.

The Development of Substance Use Behavior: Stages and Process

It is generally accepted that youth move through five stages to become users of tobacco and tobacco. These five stages are: **anticipation**, **initiation**, **experimentation**, **habituation** and **addiction**.

During these stages, various psychosocial risk factors influence substance use behavior; behavior that is socially rooted and reinforced. Despite the age at which youth first try alcohol or tobacco, they all seem to progress through a series of stages that take them from receptivity to dependence.

- The first stage is *anticipation*. It is the preparatory stage where attitudes and beliefs about alcohol/tobacco are formed. At this stage, the youth may see drinking or smoking as a way to appear older, deal with stress, make friends, or be independent. The psychosocial risk factors include the media and adult role models.

- The second stage is *initiation*. It is the stage at which youth first try alcohol or tobacco. Peers are typically key to providing encouragement for beginning use. The psychosocial risk factors include peer influences, the belief that use in normal, and the availability of alcohol or tobacco.

- The third stage is *experimentation*. This stage usually involves repeated, though irregular patterns of use. Use is usually in response to a situation, such as a party. The psychosocial risk factors include social situations and peers, low self-efficacy to refuse (they don't feel confident about refusing), and the availability of alcohol or tobacco.

- The fourth stage is *habituation*. This is the stage of regular use. Youth may smoke or drink across a variety of situations and personal interactions. The psychosocial risk factors include peers who smoke and drink, and lack of restrictions on smoking or in the home, school and community.

- The final stage is *addiction*. This stage is characterized by a physiological need for tobacco or alcohol. This need involves a tolerance for nicotine or alcohol, withdrawal symptoms if the youth tries to quit, and a high chance of a relapse after quitting.

Since young people may become regular users in two to three years, the middle school, junior high, and senior high school years are a critical time for prevention efforts. Over the seven years of adolescence, from 11-17, developmentally appropriate prevention programs should be delivered.

Source: U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Office of Smoking and Health, 1994.

Stages of Change

Prochaska and DiClemente describe six stages that people pass through in the course of changing problem behaviors such as alcohol or tobacco use. These stages are **precontemplation**, **contemplation**, **determination**, **action**, **maintenance**, and **relapse**.

The Stages of Change model, as it is called, is based on the trans-theoretical model that involves 10 processes of change: consciousness raising, self-liberation, social liberation, self-reevaluation, environmental reevaluation, counter conditioning, stimulus control, reinforcement management, dramatic relief, and helping relationships.

- The first step to change is *precontemplation*. Precontemplators are not considering the possibility of change, and may even avoid behavior change. People in this stage need information and feedback to raise their awareness of the problem and the need to change.

- The second step to change is *contemplation*. Contemplators are ambivalent about the need to change; they weigh the risks and benefits without a definite commitment to make a change. People in this stage are gathering information and use self-reevaluation to move them to take action.

- The third step to change is *determination*. Determination is the stage of high motivation. People in this stage require affirmation, support, and guidance to select strategies that will help them take action and succeed.

- The fourth step to change is *action*. In this stage people take specific steps to bring about behavior change. People in this stage use self-liberation and report more self and social reinforcement for their behavior change. They also use more helping relationships for support and understanding.

- The fifth step to change is *maintenance*. During this stage, the challenge is to sustain the behavior change and prevent relapse.

- The sixth step to change is *relapse*. People in this stage need support and social reinforcement to return to the maintenance stage.

Source: Prochaska JO and DiClemente CC. (1983) Stages and Processes of Self-Change of Smoking: Toward an Integrative Model of Change. *Journal of Consulting and Clinical Psychology*. Vol 51, No. 3:390-395.

Citation for full *Promising Practices* Report

This is a summary of the full report: *Promising Practices for Alcohol and Tobacco Prevention Among Youth* developed for the MN Department of Health CISS Project, November 2000. The full report, and this summary are available from www.health.state.mn.us/divs/fh/chp/ciss/index.htm.

Category:

CHRONIC / NONINFECTIOUS DISEASE

The strategies presented in this category can be used to help achieve the following public health improvement goals from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 1: Reduce the behavioral risks that are primary contributors to morbidity and mortality.

GOAL 12: Promote early detection and improved management of non-infectious disease and chronic conditions.

GOAL 13: Promote optimal oral health for all Minnesotans.

CATEGORY: CHRONIC/ NONINFECTIOUS DISEASE

Every year, chronic diseases claim the lives of more than one and a half million Americans. These diseases account for seven of every 10 deaths in the U.S. each year and for more than 60 percent of total medical expenditures. Chronic diseases represent the seven leading causes of death among men aged 50-64 and the 10 leading causes of death among women in that age group. Among younger men and women (aged 35-49) chronic diseases also take a heavy toll. Most premature deaths among populations of color and the disadvantaged are due to chronic illness. These conditions account for the largest part of the health gap between African Americans and white Americans. The prolonged illness and disability associated with many chronic diseases result in decreased quality of life for millions of Americans.

Much of the chronic disease burden is preventable. To a considerable degree, the major chronic disease killers (e.g., heart disease, stroke, cancer, and diabetes) occur as a result of peoples' responses to their physical and social environments. As technology and industrialization advance, there is less demand for physical activity, unhealthy meals are often faster and less expensive than healthier meals and there is easy access to an abundance of tobacco and alcohol. People's health-damaging responses (physical inactivity, poor nutrition, tobacco use, and misuse of alcohol) contribute to and/or exacerbate heart disease, stroke and cancer, as well as other chronic conditions such as asthma, diabetes, dental carries, osteoporosis and arthritis. As such, poor lifestyle choices account for much of the chronic disease burden. Effectively addressing these underlying causes of disease therefore, has a multiplier-effect, resulting in the prevention of multiple disease outcomes.

Chronic diseases do not have to be an inevitable consequence of aging. Because chronic diseases develop over decades, they can be reduced if individuals engage in healthier behaviors. However, individuals' behaviors are largely determined by the social and physical environments in which they live. It is there that norms are established and where people find support for, or barriers to, healthy behaviors. If a community does not support healthy behaviors, it is much more difficult for an individual to make lasting behavioral changes. For example, a community can support healthy choices by advocating for safe, well-lighted sidewalks that encourage walking to local stores, parks, and other services. Traffic calming measures and bike lanes can promote cycling to school or work. Communities can come together to develop green spaces and build play equipment. Businesses or community centers can donate space for farmers to bring in fresh produce to sell at affordable prices.

For those chronic diseases that can be effectively treated in their early stages, screening should be considered an essential element of the health care system. Breast, cervical, and colorectal cancers; high blood pressure; and elevated cholesterol are among the diseases and conditions for which screening is known to save lives as well as money. Targeted screening of populations at high risk is effective for conditions such as diabetes.

Quality improvement programs can assist health care delivery systems to improve access and quality of care and result in improved programs of screening and follow-up intervention for identified risks.

In order to create a healthy community, we must promote strategies which involve all sectors of the community, including families, schools, work sites, local government, and community organizations. The entire community needs to take an active and positive role in changing those community factors that continue to place people at risk.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: ARTHRITIS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct health communications campaigns to enhance health knowledge, attitudes, beliefs and behaviors of people with arthritis, their families and health care providers.	✔	✔	✔		✔	✔	
Promote the availability and utilization of arthritis self-management programs.	✔	✔	✔	✔	✔	✔	

Arthritis is the leading cause of disability in Minnesota and the United States. The term "arthritis" covers more than 100 diseases and conditions that affect the joint, the surrounding tissues, and other connective tissues. Arthritis includes osteoarthritis, rheumatoid arthritis, lupus, fibromyalgia, juvenile arthritis, gout, Lyme arthritis, carpal tunnel disease and others.

An estimated 29.5 percent of Minnesota's population – over one million adults – have arthritis, according to the Minnesota Department of Health's 2000 Minnesota Behavioral Risk Factor Surveillance System. And that number will grow.

As the population ages and more people develop risk factors for arthritis, the number of actual cases will increase significantly. This increase in cases will require more health care dollars and increase the demand for arthritis programs and services. How communities meet these demands will have a significant impact on the quality of life for all of those affected.

There is increasing recognition that there are identifiable risk factors for arthritis that can be modified. A public health approach that identifies and implements strategies to decrease risk and improve the health of an entire population is needed to make a significant impact on the burden of arthritis we will face in Minnesota as the baby boom population ages.

Those risk factors that are not modifiable: female gender, age, and genetic predisposition, do not offer opportunities themselves for modifying risk, however they do add import to providing tools and information to those with unmodifiable risk factors so they might compensate by modifying risk factors under their control. Risk factors that may be modifiable and are associated with increased risk of arthritis include:

- Obesity. Weight management to maintain or decrease body weight can lower risk for certain types of arthritis - particularly osteoarthritis of the knee in women and gout in men. Regular physical activity is key to weight management.
- Joint injuries. Prevention of sports injuries, occupation-related injuries and repetitive use joint injuries can decrease risk of arthritis.
- Infections. Lyme disease is endemic in Minnesota and rates of disease are significantly higher in Minnesota than the national average. Fourteen percent of Minnesota cases of Lyme disease have had continuing complications including arthritis. There is increasing recognition that food borne pathogens may trigger reactive arthritis in some people.

There are effective treatments for arthritis that can prevent or delay disability and relieve pain and improve quality of life. Early diagnosis is important so that management strategies appropriate to the type of arthritis can be initiated. For some types of arthritis there is a window of opportunity for early treatment that will most effectively modify the course of the disease. In recent years, several new drug treatments have improved the safe management and effectiveness of treatment.

In addition to medical treatments, self-management strategies including appropriate diet and physical activity, medication management, working with health care providers, managing fatigue and depression, use of community resources, have been

demonstrated to improve health status and quality of life.

Strategy: Conduct health communications campaigns to enhance health knowledge, attitudes, beliefs and behaviors of people with arthritis, their families and health care providers.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Many people with arthritis and their families feel that arthritis is just a usual consequence of aging and that people just need to "live with it." Health communications campaigns can help community members learn about community resources for more information about arthritis or services available, as well as provide information on self-management strategies, like regular physical activity, individuals can use to manage their condition.

Effective community-wide campaigns are multi-component and may include risk factor screening and education, community events, and referral to community programs. Campaigns can provide consumers with the information they need to include self-management behaviors in their daily lives and support efforts to promote supportive environments.

Media coverage of campaigns or events can add additional reach and impact to the message. Local media are often interested in stories and information that describe community activities or provide useful information to their audiences. Consider placing articles in, or pitching stories about community events to, local newspapers (including weekly papers and community information papers), local radio stations, work-site newsletters, school newsletters, or other community publications. Materials already developed by the national or state Arthritis Program (see resources below) may be used, or information may be locally developed.

Additional resources:

- Arthritis Foundation National Office, at (800) 283-7800, http://www.arthritis.org/, 1330 West Peachtree Street, Atlanta, GA 30309.
- Arthritis Foundation North Central Chapter, (Serving Minnesota, North Dakota and South Dakota), at (651) 644-4108, (800) 333-1380, http://www.arthritis.org/communities/chapters/chapter.asp?chapid=30, 1902 Minnehaha Avenue West, St. Paul, MN 55104-1029.
- Centers for Disease Control and Prevention, Arthritis Program, at http://www.cdc.gov/nccdphp/arthritis/index.htm.
- The Minnesota Arthritis Program of the MDH provides information and health communications resources on their website and from the program. Current health communication campaigns include *Arthritis Doesn't Need to Slow You Down*, and *Physical Activity the Arthritis Pain Reliever*. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Arthritis". Contact: Pam York, at (651) 281-9831, Pam.York@health.state.mn.us.

Evidence for strategy:
Numerous community-based research projects have demonstrated the effectiveness of health communications campaigns in increasing awareness and providing information to direct individuals to additional information as well as increasing community awareness. Self-management strategies have a strong research base in demonstrating decreased pain, decreased physician visits and improved quality of life.

Has this strategy been implemented in Minnesota?
Yes, the MDH Arthritis Program has conducted two statewide health communications campaigns in collaboration with the Arthritis Foundation North Central Chapter. In addition, community wide campaigns have been conducted in many communities in the state.

Indicators for this strategy:
- < Number of events or information opportunities conducted.
- < Number of people reached with events or information activities.
- < Number of people participating in event activities.
- < Number and content of articles published and the circulation of these publications.
- < Number of times PSAs or paid placements are played and their estimated reach.
- < Recognition, understanding, or implementation of messages, as measured in surveys or interviews or by observation.

For more information contact:
- < Pam York, at (651) 281-9831, Pam.York@health.state.mn.us, Minnesota Arthritis Program Director, MDH Nutrition and Physical Activity Unit.

Strategy: Promote the availability and utilization of arthritis self-management programs.

	Systems	Community	Individual
Primary			
Secondary	**U**	**U**	**U**
Tertiary	**U**	**U**	**U**

Background:
Self-management strategies are an important part of treatment plans for people with arthritis and can significantly improve participants ability to manage pain, fatigue, and depression, maintain the ability to participate in important daily life activities including employment, and work effectively with health care providers and medical interventions. Community-based self-management education programs have demonstrated effectiveness in improving self-management behaviors among participants.

The Arthritis Foundation has evidenced-based programs for land and water based physical activity and the multi-topic arthritis self-help course. These programs are offered in many communities across the state, but currently the availability of programs does not meet the demand. The Arthritis Foundation provides training for program leaders who then offer programs in their community. More leaders are needed for these programs to achieve better distribution across the state. In addition community referral and information systems need to be developed to inform potential participants. The MDH Arthritis Program and Arthritis

Foundation North Central Chapter are collaborating to provide training for all three programs across the state.

Additional resources:

- Arthritis Foundation National Office, at (800) 283-7800, http://www.arthritis.org/. 1330 West Peachtree Street, Atlanta, GA 30309.
- Arthritis Foundation North Central Chapter, (Serving Minnesota, North Dakota and South Dakota), at (651) 644-4108, (800) 333-1380, http://www.arthritis.org/communities/chapters/chapter.asp?chapid=30**,** 1902 Minnehaha Avenue West, St. Paul, MN 55104-1029.
- Centers for Disease Control and Prevention, Arthritis Program, at http://www.cdc.gov/nccdphp/arthritis/index.htm.
- The MDH Minnesota Arthritis Program of the MDH provides links to information about the current offering of training and community programs as well as providing information about the programs and evaluation data of programs in Minnesota. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Arthritis". Contact: Pam York, at (651) 281-9831, Pam.York@health.state.mn.us.

Evidence for strategy:
University conducted research has demonstrated that the Arthritis Foundation self-management education programs reduce pain and decrease physician visits. Evaluations of programs in Minnesota consistently demonstrate that participants learned techniques for effectively managing arthritis.

Has this program been implemented in Minnesota?
Yes, all programs are offered in Minnesota, but currently program availability is not well distributed geographically and is not sufficient to meet demand.

Indicators for this strategy:

- Number of participants and number who complete the program.
- Availability of programs in the community and ability to meet demand.
- Trained leaders continue to offer programs in the community.
- Organizations providing referral to community programs.
- Participant evaluations.
- Participants enrolling in subsequent self-management education options.

For more information contact:

- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, Minnesota Arthritis Program Project Director, MDH Nutrition and Physical Activity Unit.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: DIABETES

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental and Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Promote healthy behaviors to prevent type 2 diabetes and other chronic diseases.	✔	✔	✔	✔	✔	✔	✔
Implement education and support programs for people with diabetes.	✔	✔	✔	✔	✔	✔	✔
Convene a coalition to address the issues of diabetes in the community.	✔	✔	✔	✔	✔	✔	✔
Create and publicize a profile of the impact of diabetes in the community.	✔	✔	✔	✔	✔	✔	✔
Provide diabetes education and training for health professionals.	✔	✔	✔	✔	✔		✔
Facilitate improvement of diabetes care in clinical settings.	✔	✔	✔		✔	✔	✔

An estimated 256,000 - more than one in 19 Minnesotans - have diabetes. Of those, 91,000 do not know they have the disease. Prevalence of diagnosed diabetes increased 52 percent in Minnesota between 1995 and 1999.

Many people with diabetes in Minnesota do not receive recommended preventive care services or do not receive them at the recommended frequency. Among people with diabetes in Minnesota, nearly one in three has not had their feet checked for sores by a health professional in the last year. Nearly one in five has not had a dilated eye exam within the last two years. Nearly half do not check their blood glucose even once per day.

Overweight and physical inactivity are major risk factors for developing diabetes. Nearly one in six Minnesotans is obese and nearly one in four have no leisure time physical activity. Populations at especially high risk for developing diabetes include elders, American Indians, Hispanics/Latinos, African Americans and those with lower socioeconomic status. Newly arrived Minnesotans, such as Hmong and Somali immigrants, also face increased risk for diabetes the longer they are exposed to the high fat diets and physical inactivity prevalent in the U.S.

Uncontrolled diabetes can lead to shortened life, blindness, kidney failure, amputations, heart disease, and stroke, as well as birth defects and death among babies of women with uncontrolled diabetes. Yet, diabetes and its potential complications can be delayed or prevented. The strategies outlined here are based on approaches that have supporting scientific or economic evidence that they can contribute to better diabetes control and ultimately prevent complications.

Implementing these diabetes strategies will help communities achieve the *Healthy Minnesotans* Diabetes Objectives (under Goal #12), and national goals for diabetes such as *Healthy People 2010*. The MDH Community Engagement Process can be helpful in implementing improvement strategies. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Community Engagement".

The indicators listed in this section are based on the population-based program evaluation model found in the *CHS Planning Manual: Guidelines for Minnesota's Community Health Boards 2000-2003*. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines". A few examples of process and intermediate (bridging) indicators are included with each strategy. The indicators can generally be tailored to fit all levels of intervention: the larger system, the community, and the individual. Indicators of health outcomes, which can only be measured after strategies have been sustained long-term, have not been included here, but are reflected in the *Healthy Minnesotans* Diabetes Objectives.

The strategies presented here are intended to reduce the impact of diabetes in Minnesota. To have the greatest effect, gradually implement multiple strategies in this and other sections. For related strategies, see these sections:

< Physical Activity/Inactivity, Nutrition, and Heart Disease, Heart Attack and

Stroke (this category)
- < Depression (*Mental Health*)
- < *Disability/Decreased Independence*
- < Birth Outcomes and Prenatal Care (*Pregnancy and Birth*)
- < Eliminate Barriers and Improve Access to Health Care, and Eliminate Disparities (*Service Delivery Systems*)

Landmark Diabetes Research Trials:
The Diabetes Control and Complications Trial (DCCT) was a large, multi-center, prospective study showing that lowering blood glucose concentration slows or prevents the development of diabetic complications: eye disease by 76 percent kidney disease by 50 percent, and nerve disease by 60 percent.

- < DCCT Research Group 1993. *The New England Journal of Medicine* 329:977-86.
- < *Implications of the Diabetes Control and Complications Trial* (American Diabetes Association): http://www.diabetes.org Select "For Health Care Professionals," then select "Clinical Practice Recommendations," then "Position Statements."
- < DCCT Fact Sheet (NIDDK): http://www.niddk.nih.gov/ Select "Health Information: Diabetes," then select "Order Forms: Publication Titles," then "Fact Sheets: DCCT."

The United Kingdom Prospective Diabetes Study (UKPDS) was the largest and longest randomized controlled trial on type 2 diabetes. The UKPDS confirmed that lowering blood glucose and blood pressure reduces the incidence of complications for people with type 2 diabetes.

- < Turner RC, et al. 1998. *Lancet*, 352:837-53; and UKPDS 39 1998. *British Medical Journal* 317:713-20.
- < *Implications of the United Kingdom Prospective Diabetes Study* (American Diabetes Association): http://www.diabetes.org. Select "For Health Care Professionals," then select "Clinical Practice Recommendations," then "Position Statements."

The Diabetes Prevention Program (DPP) is the first major clinical trial of Americans at high risk for type 2 diabetes to show that lifestyle changes in diet, exercise, and losing a little weight can prevent or delay the disease.

- < Diabetes Prevention Program Research Group. 2002. *New England Journal of Medicine* 346:393-403.
- < Program Web Site: http://www.preventdiabetes.com

For more information contact:
Minnesota Diabetes Program (MDP) MDH, Health Promotion and Chronic Disease Division, P.O. Box 64882, St. Paul, MN 55164-0882. Phone: (651) 281-9849. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

The Minnesota Diabetes Program can be a resource for:

- < Diabetes program technical assistance.
- < Examples and best practices from those who have tested these strategies.
- < Guidelines and clinical care improvement tools.
- < An annual conference/workshop on cultural competency and diabetes care issues for health professionals.
- < Diabetes data, fact sheets and reports.
- < Linkages to other diabetes resources and stakeholders in the community.

Strategy: Promote healthy behaviors to prevent type 2 diabetes and other chronic diseases.

	Systems	Community	Individual
Primary	U	U	U
Secondary			U
Tertiary			

Background:
High-fat diets, physical inactivity, smoking, and obesity are potentially modifiable risk factors for a number of chronic diseases, including diabetes. These health risk behaviors are also important factors in the development of the complications of diabetes, such as, vision loss, kidney failure, heart disease, and amputations.

Research has demonstrated that engaging in healthy lifestyle behaviors, such as, regular moderate physical activity and consuming a healthy diet can help prevent the complications of diabetes. Recent studies indicate that engaging in these same healthy behaviors may also help delay or prevent the onset of type 2 diabetes.

Strategy examples include:
- Conduct community-awareness campaigns about diabetes and its risk factors, providing accurate and culturally sensitive information through a variety of media (print, audio, video).
- Assess the risk factors of individuals for developing diabetes* and encouraging those at increased risk to seek medical advice and adopt healthier lifestyles.
- Disseminate culturally sensitive and appropriate educational materials and programs focused on reducing diabetes risk factors, especially in populations at high risk for the disease (e.g., persons of color, American Indians, the elderly, those with a family history of diabetes, those overweight or obese, etc.).
- Integrate diabetes prevention messages into existing health promotion activities, such as, those emphasizing nutrition, physical activity, heart health, etc.
- Implement health promotion curricula and models for encouraging healthy behaviors in schools, childcare centers, and child or youth oriented programs.
- Create communities that support healthy lifestyles by identifying environmental and policy barriers in the community (e.g., absence of sidewalks, lack of healthy food options in grocery stores and restaurants, etc.) and partnering with community organizations, activists, and policymakers to address the problems identified.

* Note: Although over 30 percent of type 2 diabetes cases remain undiagnosed, studies show that community-based screening is not effective because it misses those most likely to benefit. However, communities are encouraged to identify at-risk populations using a verbal or written questionnaire and encourage those individuals to seek appropriate medical care. Targeted diagnostic screening of populations at high risk for diabetes should be considered only if resources and treatment programs are adequate, screening costs are acceptable, and the impact on public health is significant. See *Diabetes Care* (2000) 23:1563-80.

Additional resources:
- Centers for Disease Control and Prevention. 2001. *Guide to Community Preventive Services* examines the effectiveness of population-based strategies in improving the health of those with diabetes (http://www.thecommunityguide.org Select "Diabetes" or "Physical Activity").
- Centers for Disease Control and

Prevention. 2001. Increasing physical activity: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report* 50 (#RR-18):1-14 http://www.cdc.gov/mmwr/PDF/RR/RR5018.pdf

< Diabetes Risk Test - American Diabetes Association (On-line calculator: http://www.diabetes.org/ Select "Basic Diabetes Information," then select "Risk Factors." Paper Risk Test in English and Spanish: 1-800-DIABETES).

< Jackson RJ. and Kochtitzky C. 2001. *Creating a Healthy Environment: The Impact of the Built Environment on Public Health*, Sprawl Watch Clearinghouse Monograph Series and the CDC (http://www.sprawlwatch.org/health.pdf)

< Perry, CL. 1999. *Creating Health Behavior Change: How to Develop Community-wide Programs for Youth*. Thousand Oaks, CA: Sage Publ. Inc., (http:// www.sagepub.co.uk).

Evidence for strategy:
Several studies indicate that diet and exercise interventions can lead to significant decreases in the incidence of type 2 diabetes for people at greatest risk of the disease. Healthy diet and regular exercise has also been shown to prevent the complications of diabetes. Most benefits were seen from moderate risk factor reduction.

Public awareness campaigns emphasizing healthy lifestyle behaviors for people with diabetes have been shown to be successful at enhancing the community's awareness of the seriousness and impact of the disease, and at helping to improve attitudes toward engaging in healthy behaviors.

Has this strategy been implemented in Minnesota?
A growing number of local examples exist:

< WOLF (Work Out Low Fat) is a collaboratively developed and tested school-based program promoting physical activity and low fat eating to reduce risk factors of type 2 diabetes in youth. American Indian traditions are emphasized in WOLF's behavior-based curricula for grades 1-4. The program has been implemented in urban, rural, and reservation schools and has recently been revised with the assistance of the American Indian Diabetes Prevention Advisory Task Force representing all eleven Minnesota tribes. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

< Diabetes coalitions in Rice and northern Koochiching counties successfully conducted community education and awareness campaigns about healthy, preventive behaviors through local radio, television and print media, health fairs, and community workshops. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Indicators for this strategy:
There are a variety of indicators or measures that could be used to evaluate this strategy. Use measures that will be most helpful and meaningful to you and consider using more than one measure to assess the process and gauge the impact. The following examples are based on the MDH *Guidelines for Program Evaluation*, a section in the *CHS Planning Manual: "Guidelines for Minnesota's Community Health Boards*

2000-2003." For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

Process Indicators:

< Number of community resources used.
< Number of local organizations that contributed to the intervention.
< Number of ways the intervention has been publicized.
< Percent of the community reached by the intervention.
< Total cost of the intervention.

Intermediate (Bridging) Indicators:

< Number of people aware of the intervention.
< Number of people who participated in the intervention.
< Number of people reporting change in attitude, belief, and/or behavior due to the intervention.
< Community or participant satisfaction with the intervention.
< Sustainability of the intervention.

For more information contact:
The MDH Minnesota Diabetes Program, (651) 281-9849. For more information see the strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Strategy: Implement education and support programs for people with diabetes.

	Systems	Community	Individual
Primary			
Secondary	U	U	U
Tertiary			U

Background:
Maintaining blood glucose, blood pressure, and lipids at near-normal levels will prevent or delay the complications of diabetes. Adopting healthy eating practices and moderate exercise can also help prevent complications. Successfully managing diabetes requires ongoing vigilance and adherence to an individualized care regimen. Because more than 90 percent of diabetes care is self-managed, on-going, accessible education and support for people with diabetes are essential to achieving these goals and preventing complications that can severely disable people with diabetes. Diabetes education may encompass many topics, including behavioral change, coping skills, and use of complementary therapies.

Examples of consumer education and support include:

< Conduct a community needs assessment and address the education, support and care needs of people with diabetes, especially those most at risk (seniors, youth, people with disabilities, and people of color).
< Provide on going, culturally appropriate diabetes educational materials and programs to augment clinic-based education and make them accessible through a variety of settings (community centers, worksites, schools, faith centers, libraries, people's homes, etc.).
< Sponsor or promote education and support programs for people with diabetes and their families that encourage healthy behaviors at all ages (e.g., support groups, walking clubs, camps for kids, etc.).
< Provide reminders of routine preventive medical care (e.g., annual eye exams, kidney function tests, flu shots, cholesterol checks, etc.).

- Encourage health care providers to counsel people with diabetes on good self-care practices, and link them with programs to help reduce their risk of complications (e.g, smoking cessation, weight loss, exercise clubs, etc.).
- Expand awareness of insurance and Medicare coverage for diabetes services, devices and education, and low-cost alternatives for the uninsured.

Additional resources:
Bibliographic resource:

- Centers for Disease Control and Prevention. 2001. Strategies for reducing morbidity and mortality from diabetes through health-care system intervention and diabetes self-management education in community settings: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report* 50 (#RR-16):1-15 http://www.cdc.gov/mmwr/PDF/RR/RR5016.pdf

Organizational resources:

- The Health Disparities Collaborative for Diabetes is a national initiative with a goal of improving the health outcomes for medically underserved people with diabetes. It offers a broad range of educational resources (http://www.healthdisparities.net/).
- The MDH Diabetes Community Collaboration Project (DCCP) is a unique model for local coalitions to effectively address diabetes in their community. See the MDH Diabetes Program web page for more information (see next resource for web page address).
- The MDH Diabetes Program web page offers a more extensive listing of strategies and resources for diabetes education and support, as well as a report from *Voices of the Community: Focus Group Findings and Recommendations* for education and support from African American, American Indian, Hispanic, and Hmong people with diabetes in Minnesota. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".
- National Diabetes Education Program (NDEP) *Diabetes Community Partnership Guide* includes a wealth of ideas, facts, tips and strategies for community-based diabetes education and support activities. NDEP also offers a variety of culturally appropriate educational materials (http://www.ndep.nih.gov).

Evidence for strategy:
The Diabetes Control and Complications Trial, the U.K. Prospective Diabetes Study, the Diabetes Prevention Program (see the Introduction to the diabetes strategies for more information about these clinical trials), and other research studies have demonstrated that maintaining near-normal levels of blood glucose, lipids, and blood pressure can significantly delay or prevent the complications of diabetes. There is growing evidence that diabetes educational and support programs can help people better manage their disease. For summaries of self-management education efficacy studies, see the American Association of Diabetes Educators (http://www.aadenet.org. Select "Research," then "Review Papers").

Interventions such as smoking cessation and annual flu shots can also have a profound impact on the health and well being of people with diabetes. Smoking cessation is one of the few interventions that can safely

and cost-effectively be recommended for all patients. And, although people with diabetes are more likely to die with the flu, nearly 50 percent do not get an annual flu shot. Evidence for these activities are evaluated periodically by the American Diabetes Association (http://www.diabetes.org select "For Health Care Professionals," then select "Clinical Practice Recommendations").

Case management and disease management strategies are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services. Diabetes self-management education in community gathering places (adults, type 2 diabetes) and in the home (adolescents, type 1 diabetes) are recommended. The Task Force found insufficient evidence to recommend or strongly recommend diabetes self-management education in the home (all ages, type 2 diabetes), for adolescents in educational camps and in the worksite. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Has this strategy been implemented in Minnesota?

Yes, many approaches have been taken:

< Coalitions participating in the Diabetes Community Collaboration Program (DCCP) reported success in conducting consumer education programs using multiple media resources. The coalitions also initiated diabetes support groups and other activities to encourage good self-care and healthy behaviors. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

< Three Minnesota community clinics participating in the national Health Disparities Collaborative for Diabetes are meeting the needs of diverse populations who face language, cultural, financial, and other challenges by offering tailored outreach and support programs, such as, an African American diabetes cooking class, a Hmong diabetes support group, and bilingual, bicultural lay health educators.

< Both the Minnesota Extension Service and Migrant Health Services, Inc. developed diabetes programs to aid the migrant farm worker community in the state. Both programs trained lay health aids to deliver health educational information and to serve as liaisons to clinical and social services.

Indicators for this strategy:

There are a variety of indicators or measures that could be used to evaluate this strategy. Use measures that will be most helpful and meaningful to you, and consider using more than one measure to assess the process and gauge the impact. The following examples are based on the MDH *Guidelines for Program Evaluation*, a section in the *CHS Planning Manual: "Guidelines for Minnesota's Community Health Boards 2000-2003."* For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

Process Indicators:

- Number of methods or programs being used to provide diabetes education and support in the community or clinics.
- Number of intended population(s) reached by the educational efforts.
- Number of educational topics addressed by the effort.
- Number of people with diabetes included in the planning, design and evaluation of materials and methods.
- Number of times the materials and programs have been evaluated and revised or updated.
- Satisfaction with the education and support received through the program

Intermediate (Bridging) Indicators:

- Number of people with diabetes reporting increased knowledge about the disease, healthy lifestyles, and recommended preventive care.
- Number of people with diabetes reporting improved self-care practices
- Number of people with diabetes. accessing routine preventive services (e.g., annual eye exams).
- Number of programs in the community and clinics providing education and support for people with diabetes and their family members.

For more information contact:
The MDH Minnesota Diabetes Program, at (651) 281-9849. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Strategy: Convene a coalition to address the issues of diabetes in the community.

	Systems	Community	Individual
Primary			
Secondary	U	U	
Tertiary	U	U	

Background:
A diabetes coalition is a longstanding group that is convened to develop a vision, goals, and long-term strategies for diabetes in the community. A well-formed coalition has broad representation of local people with expertise in community health and a commitment to at-risk populations. Successfully formed coalitions gain critical buy-in from community stakeholders and bring invaluable experience and credibility to programs. By bringing together clinics and community groups, diabetes coalitions facilitate efficient delivery of programs and use of resources, enhance communication among diabetes stakeholders, and ensure that consistent diabetes messages are provided to the community. Coalitions are a powerful strategy for comprehensively addressing diabetes and improving outcomes in the community.
Roles of a diabetes coalition are to:

- Create a shared vision and goals for diabetes control and prevention.
- Provide a stable forum to facilitate community wide initiatives.
- Ensure that multiple perspectives are considered when addressing diabetes.
- Design, implement, and evaluate a comprehensive diabetes program.
- Strengthen and support the capacity of local health systems to sustain improvements.
- Ensure the success of activities by gaining buy-in from key partners.

Additional resources:

- *The Community Tool Box: Bringing Solutions to Light.* Created by the University of Kansas. Contains tools to assist communities with the tasks necessary for community health and development (such as grant writing or evaluation) and links to other helpful web pages (http://ctb.lsi.ukans.edu/).
- The Diabetes Community Collaboration Project (DCCP) is a unique model for effective coalition building to address diabetes in their community. Also see the MDH Diabetes Program web page.
- *Diabetes Today* is a training program that helps communities organize to address diabetes issues. The program draws on a community's strengths to create community-based initiatives to help people deal with diabetes (http://www.diabetestodayntc.org/).
- The MDH Community Engagement process describes steps to take in mobilizing community partners. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Community Engagement".
- National Diabetes Education Program (NDEP) *Diabetes Community Partnership Guide* is a comprehensive "how-to" kit to help launch diabetes activities in any community (http://www.ndep.nih.gov).

Evidence for strategy:

Experience has shown that community coalitions can be effective in reducing risk factors for disease, improving access and utilization of health services, stimulating improvements in care delivery, improving the coordination and consistency of educational messages, and elevating the health status of individuals in the community.

Has this strategy been implemented in Minnesota?

Yes, as demonstrated by two examples:

- The Minnesota Diabetes Steering Committee (MDSC), a statewide diabetes coalition convened by the MDH, developed a 10-year state plan for reducing disabilities due to diabetes for 2000. Numerous successful diabetes interventions were implemented as a result. The MDSC is currently updating the state plan to serve as a guide to 2010. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".
- Coalitions in Rice and northern Koochiching counties participating in the MDH Diabetes Community Collaboration Program developed interventions that included: diabetes resource guides; education programs for providers and patients; innovative care service models; and a community-wide diabetes patient registry. The number of diabetes services in those communities increased dramatically, and improvements were made in the care. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Indicators for this strategy:

There are a variety of indicators or measures that could be used to evaluate this strategy. Use measures that will be most helpful and meaningful to you and consider using more than one measure to assess the process and gauge the impact. The following examples are based on the MDH *Guidelines for Program Evaluation*, a section in the *CHS*

Planning Manual: "Guidelines for Minnesota's Community Health Boards 2000-2003." For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

Process Indicators:

- < Numbers of coalition members and community sectors represented.
- < Degree to which coalition membership reflects the diversity of the stakeholders, including people with diabetes.
- < Number of planning components the coalition has developed (community diabetes goals, work groups, etc.).
- < Amount of financial or in-kind resources that have been leveraged by the coalition.
- < Number and types of initiatives that have been implemented by the coalition.
- < Number of people served by the coalition's initiatives.

Intermediate (Bridging) Indicators:

- < Number of changes facilitated by the coalition, and number of goals and objectives met.
- < Number and types of changes made in the practices of individuals and organizations represented on the committee.
- < Number of people in the community reporting greater access to diabetes information, services and resources.
- < Number of people in the community reporting greater awareness of diabetes and its risk factors.
- < Number of people in the community reporting a positive change in knowledge and attitudes about diabetes.

For more information contact:
The MDH Minnesota Diabetes Program, at (651) 281-9849. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Strategy: Create and publicize a profile of the impact of diabetes in the community.

	Systems	Community	Individual
Primary			
Secondary	U	U	
Tertiary	U	U	

Background:
There are many reasons to create a profile of diabetes. Such information can be used to raise community awareness, build the case for making diabetes a priority, and provide direction to activities.

A diabetes profile defines the impact of diabetes on individuals and the community and highlights issues and unmet needs. The profile may include the number of people with diabetes and related demographic information, the clinical and social services available, and important diabetes-related needs and concerns in the community.

Creating a valid, reliable diabetes profile involves gathering the appropriate information through partnerships, seeking broad community input when interpreting data, and sharing the information with appropriate audiences.

Examples of diabetes profile uses are to:

- < Identify and describe the diabetes population.
- < Create an inventory of diabetes-related

services and resources in the community.
< Indicate the needs and concerns of individuals with diabetes, the community, and health systems.
< Set improvement goals and provide direction to activities.
< Shape community health policies and priorities.
< Galvanize support for diabetes initiatives by focusing attention on the impact of diabetes in the community.

Additional resources:
Bibliographic resources:
< Centers for Disease Control and Prevention. 1992. *Using Chronic Disease Data: a Handbook for Public Health Practitioners.* Atlanta: US Department of Health and Human Services, Public Health Service. Copies are available at (404) 488-5269.
< *The Community Tool Box: Bringing Solutions to Light* contains a chapter on "Assessing Community Needs and Resources." (http://ctb.lsi.ukans.edu).
< *PATCH (Planned Approach to Community Health): A Guide for the Local Coordinator* contains a chapter on "Collecting and Organizing Data" (http://www.cdc.gov/nccdphp/patch/).

Organizational resources:
< *Diabetes Today*, a training program offered by the CDC and based on the PATCH model includes training to describe the burden of the diabetes in a specified geographical community. (http://www.diabetestodayntc.org/).
< The MDH Community Engagement process offers examples and tools for conducing a community analysis, needs assessment, and resource inventory. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Community Engagement".
< The MDH Diabetes Community Collaboration Project (DCCP) is a unique coalition model that involves profiling diabetes in the community. The Diabetes Program also has a number of clinical data collection tools and tips. See the MDH Diabetes Program at the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Data Sources:
< *The Community Health Status Indicators Project* is a potential source of diabetes and related data for your community (http://www.naccho.org/project2.cfm).
< The Minnesota Community Health Profiles include health risk indicators and demographic data for all Minnesota counties and the entire state (http://www.mnplan.state.mn.us/datanetweb/health.html)

Evidence for strategy:
Diabetes data have been successfully employed by national and local organizations to support and direct diabetes improvement initiatives. Timely and accurate information is essential for raising awareness about the impact of diabetes among decision-makers, developing population-based targeted strategies, and allocating appropriate resources to improve care and health outcomes.

Has this strategy been implemented in Minnesota?
Yes, two examples are described below.
< Diabetes coalitions in Rice and northern Koochiching counties participating in the MDH Diabetes Community Collaboration Program constructed comprehensive diabetes profiles

describing demographics, diabetes prevalence, health care resources and services for diabetes, local patterns of care, and barriers to preventive care for both patients and providers. The profiles helped the coalitions to direct their interventions to more effectively address identified needs. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

< Several collaborative projects between the MDH and health systems (health plans and clinics) collected data from patient and provider surveys, claims records, chart audits, and focus groups to describe diabetes patient attributes and self-care practices, care delivery patterns, health status, and diabetes-related attitudes, concerns and needs by people with diabetes and their providers. These data have been used to prioritize and focus diabetes improvement activities.

Indicators for this strategy:
There are a variety of indicators or measures that could be used to evaluate this strategy. Use measures that will be most helpful and meaningful to you, and consider using more than one measure to assess the process and gauge the impact. The following examples are based on the MDH *Guidelines for Program Evaluation*, a section in the *CHS Planning Manual: "Guidelines for Minnesota's Community Health Boards 2000-2003."* For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

Process Indicators:

< Number of differing types of data summarized in the profile.
< Proportion of the community that is described in the profile.
< Degree to which important data or populations are missing from profile.
< Number of profile copies distributed
< Number of articles published or presentations given on key findings.
< Percentage of the community reached by the publications and presentations.
< Costs of production, distribution, publications and presentations.
< Number of times the profile is updated or renewed.
< Number of data sources included on an ongoing basis.
< Number of organizations contributing information to renew or update the profile.

Intermediate (Bridging) Indicators:

< Number of people or target community audiences that are aware of and use the profile.
< Frequency and number of different ways people or audiences use the profile.
< Satisfaction with the value and usefulness of profile.
< Number of organizations contributing funding and/or staff resources to create the profile.
< Number of organizations having established funding and/or staff resources to regularly renew the profile.
< Total value of regular funding and staff resources contributed or established for renewing or updating the profile.

For more information contact:
The MDH Minnesota Diabetes Program, at (651) 281-9849. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Strategy: Provide diabetes educational opportunities to health professionals.

	Systems	Community	Individual
Primary			
Secondary	U		
Tertiary	U		

Background:
Medical research is continually making new advances in the treatment of diabetes and the prevention of complications. This ongoing change makes it difficult for providers to be familiar with the most recent information on diabetes. Disseminating information on current diabetes care recommendations to all health professionals is essential in translating new research into practice and making the best health care available to people with diabetes.

Strategy examples include:
- < Provide and promote accessible diabetes educational forums and clinical updates for health professionals.*
- < Distribute effective, state-of-the-art tools and resources for diagnosing, treating, and managing diabetes, supporting clinical decisions, and reminding patients and providers of care recommendations and needed services.
- < Promote the use of evidence-based diabetes care guidelines in all clinical settings. Provide reminders of care recommendations (e.g., wall posters, wallet cards, reference guides, flow sheets, etc.).
- < Provide instruction in cultural competency and care improvement methods to all diabetes care providers.
- < Develop ways of communicating diabetes-related research findings and new products quickly and effectively to all health professionals.
- < Encourage schools that train health professionals to emphasize chronic disease management in their curricula.

* Providing diabetes education involves: engaging partners representing health care opinion leaders and respected organizations in the community; determining educational needs; and devising effective educational approaches for busy professionals. For example, distributing written materials is usually less effective than group forums that enable networking and information sharing.

Additional resources:
Bibliographic resources:
- < *Guidelines for Diabetes Care in Long-term Care Facilities*, 4th ed. 2000. Minneapolis/St. Paul Diabetes Educators. To order, see the MDH Diabetes Program website at the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".
- < Renders, CM., et al. 2001. Interventions to improve the management of diabetes in primary care, outpatient, and community settings: A systematic review. *Diabetes Care* 24:1821-1833 (http://care.diabetesjournals.org/).

Organizational resources:
- < Local professional diabetes conferences and workshops include the annual MDH *Changing Faces of Diabetes in Minnesota*. See the MDH Diabetes Program website for a listing.
- < The MDH Diabetes Program offers a number of diabetes care improvement resources for health professionals as well as links to online diabetes-related tools, materials, research updates, continuing education programs, and other information. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

< National Guideline Clearinghouse is a public resource for evidence-based clinical practice guidelines (http://www.guideline.gov).

Evidence for strategy:
Studies of the impact of professional education show a relationship between improvements in provider performance and patient health outcomes where a variety of educational strategies were involved. A direct relationship with positive health outcomes is most apparent when reinforcing educational elements, such as case discussion and interactive learning opportunities, are used. The combination of patient and provider diabetes education efforts has been shown to result in the greatest improvement in health outcomes.

Instruction on case management and disease management is strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org.

Has this strategy been implemented in Minnesota?
Yes, portions of this strategy have been implemented by a number of organizations.

< Many Minnesota diabetes education centers and others offer ongoing diabetes-related continuing education opportunities for health professionals in a variety of formats and venues. Low attendance is rarely a problem and the demand for such programs remains high.
< The Institute for Clinical Systems Improvement (ICSI), in partnership with local health plans and clinics, offers evidence-based practice guidelines and cosponsors an annual quality conference for health professionals with the Institute for Healthcare Improvement.
< The Minneapolis / St. Paul Diabetes Educators continue to lead a collaborative effort to offer diabetes care guidelines appropriate to long-term care settings. A program to help implement the guidelines was successfully pilot-tested in two nursing facilities. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".
< Two MDH collaborations with health plans (IDEAL & DQIC) developed effective clinical care improvement programs (complete with manuals, tool kits and instructional forums), testing them in a variety of primary care settings. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".

Indicators for this strategy:
There are a variety of indicators or measures that could be used to evaluate this strategy. Use measures that will be most helpful and meaningful to you, and consider using more than one measure to assess the process and gauge the impact. The following examples are based on the MDH *Guidelines for Program Evaluation*, a section in the *CHS Planning Manual: "Guidelines for Minnesota's Community Health Boards 2000-2003*. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

Process Indicators:

< Number of diabetes-related educational programs, materials or guidelines made available and promoted to professionals.
< Number of programs offering instruction

in cultural competency and care improvement methods.
< Number of health professionals accessing the educational programs.
< Cost of offering and promoting diabetes professional educational opportunities.
< Number of organizations participating in offering or promoting diabetes-related educational programs or materials to health professionals.
< Number of best practices and experiences shared between health professionals in the community.
< Number of ways diabetes-related research findings and new products are communicated to health professionals.

Intermediate (Bridging) Indicators:
< Number of organizations designating resources for diabetes clinical care improvement activities.
< Number of health professionals reporting greater awareness of the diabetes care improvement resources available to them.
< Number of health professionals who believe that they are following diabetes care guideline recommendations.
< Health professionals' satisfaction with their level of knowledge regarding diabetes management, and guideline recommendations.
< Number of providers or care delivery sites who assess their rates for recommended diabetes preventive ervices.
< Health professionals' satisfaction with the diabetes education offered to them.
< Number of health professional training institutions (e.g. medical and nursing schools) that include chronic disease management in their curricula.

For more information contact:
The MDH Minnesota Diabetes Program, at (651) 281-9849. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/.
Click on "Diabetes".

Strategy: Facilitate improvement of diabetes care in clinical settings.

	Systems	Community	Individual
Primary			
Secondary	U		
Tertiary	U		

Background:
Many Minnesotans with diabetes do not have access to, or are not receiving, recommended care. Diabetes is a complex disease. Effective clinical management requires the interaction of many professionals and coordination of a broad spectrum of services.

To provide the highest quality of diabetes care, health professionals must also know and actively practice state-of-the-art care, and must have systems to support, monitor, and improve care continually. Although most providers support the use of diabetes guidelines, many struggle to follow them in clinical systems that are not designed for chronic disease care. In order to improve their care delivery systems to accommodate chronic disease management, providers may need to seek external support and assistance. Strategy examples include:
< Encourage providers to regularly assess their care in comparison to guideline recommendations, and to make continuous improvements.

- Support providers in adopting a patient-centered, team approach to diabetes care involving multiple caregivers (e.g. the physician, diabetes educator, dietitian, public health nurse, specialists, pharmacists, social services, etc.).
- Offer incentives and resources supporting diabetes care improvement interventions in all clinical settings (e.g., funding, training, staffing, information systems, a quality improvement process, tools, and other resources).
- Develop mechanisms for health professionals to share their diabetes care practices and improvement experiences, tools, and strategies.
- Promote best practices and innovations that demonstrate:
  - Comprehensive, guideline-recommended diabetes care.
  - Reduction in health disparities.
  - Coordination with other services and linkages to community resources.
  - Population-based care management.
  - Creative solutions that increase access to limited services.
  - Meeting the needs of all people with diabetes (including children, pregnant women, seniors, and ethnically diverse populations).

Additional resources:

Bibliographic resources:

- Bender, AD., et al. 1999. Quality and outcomes management in the primary care practice." *Journal of Medical Practice Management* 14:236-40.
- Centers for Disease Control and Prevention. 2001. Strategies for reducing morbidity and mortality from diabetes through health-care system intervention and diabetes self-management education in community settings: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report* 50 (#RR-16):1-15 (http://www.cdc.gov/mmwr/PDF/RR/RR5016.pdf).
- Peterson, K., and Vinicor, F. 1998. Strategies to improve diabetes care delivery. *Journal of Family Practice* 47(suppl):S55-62.

Organizational resources:

- The Health Disparities Collaborative for Diabetes is a national initiative with a goal of improving the health outcomes for medically underserved people with diabetes. Participating primary care clinics offer their strategies, tools, and lessons learned from improving care, at: (http://www.healthdisparities.net/).
- The MDH Diabetes Program offers several tested interventions that include instructional manuals and tools to aid diabetes clinical care improvements. See their website for more information, and links to related online resources. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".
- National Diabetes Education Program (NDEP) offers many tools and resources, including *Team Care: Comprehensive Lifetime Management for Diabetes*, *A Guide for Health Professionals* (http://www.ndep.nih.gov).
- National Guideline Clearinghouse is a public resource for evidence-based clinical practice guidelines (http://www.guideline.gov).

Evidence for strategy:

Studies of clinical quality improvement have shown that successful endeavors require strong leadership, a sustained investment in resources and time, and changes made to the

systems and policies that govern clinical services and communications at all levels. Numerous studies have indicated that following diabetes practice recommendations and adopting a patient-centered team approach to care delivery can greatly improve patient health and quality of life, and prevent complications through better disease management.

Case management and disease management improvement strategies are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org.

Has this strategy been implemented in Minnesota?
Yes, the following are just a few examples of the many approaches taken:

- Since 1986, the MDH has facilitated diabetes care improvement programs in clinics and nursing facilities statewide using a quality improvement process. Participating sites were successful in making meaningful improvements to their diabetes care. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Diabetes".
- Three Minnesota community clinics participating in the national Health Disparities Collaborative for Diabetes successfully used a quality improvement approach to meet the needs of diverse populations with diabetes, particularly people who face language, cultural, financial, and other barriers to maintaining good health.
- Numerous local clinics have built reminder systems that work for both patients and providers, greatly increasing the number of diabetes preventive services delivered on a routine basis.
- Several tribal clinics and care delivery systems in both rural and urban settings have successfully used mobile care units to deliver specialized diabetes care, such as, foot checks and eye exams to people who have difficulty accessing such care.
- Numerous health plans and clinics in the state have reported that activities, such as, nurse-led case management programs and group diabetes clinic visits can be very beneficial in helping people manage their diabetes.

Indicators for the strategy:
There are a variety of indicators or measures that could be used to evaluate this strategy. Use measures that will be most helpful and meaningful to you and consider using more than one measure to assess the process and gauge the impact. The following examples are based on the MDH *Guidelines for Program Evaluation*, a section in the *CHS Planning Manual: "Guidelines for Minnesota's Community Health Boards 2000-2003.* For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "CHS Planning Guidelines".

Process Indicators:

- Number of organizations contributing resources to support diabetes care improvement activities.
- Total value of the resources contributed toward improving diabetes care
- Number of clinical care sites implementing diabetes care improvement programs.
- Number of different diabetes care improvement strategies implemented in clinical settings.

- Number of best practices and experiences shared with other health professionals.
- Number of providers reporting improved rates of recommended diabetes preventive services (e.g.: eye and foot exams, A1C and kidney function tests, blood pressure and cholesterol checks).

Intermediate (Bridging) Indicators:

- Number of organizations designating resources for diabetes care improvement.
- Number of health professionals reporting awareness of the diabetes care improvement resources available to them.
- Number of providers routinely measuring the quality of their diabetes care (e.g., compare their care to guideline recommendations).

- Number of health professionals participating in a patient-centered, team approach to diabetes care.
- Health professionals' satisfaction with the quality of their diabetes care.
- Health professionals' satisfaction with the diabetes care improvement resources available to them.

For more information contact:
The MDH Minnesota Diabetes Program, at (651) 281-9849. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/.
Click on "Diabetes".

CATEGORY: Chronic/Noninfectious Disease

TOPIC: EARLY DETECTION OF CANCER

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
One stop screening.		✔	✔				
Special screening days.	✔	✔	✔		✔	✔	
Lay recruiters/ outreach workers.	✔	✔	✔		✔		
Inreach systems.		✔	✔				
Peer-based community education program.	✔			✔	✔	✔	
Media plus telephone "hotline".	✔	✔	✔		✔		

The strategies summarized in this section focus on secondary prevention of breast and cervical cancer, i.e., early detection and screening. Although questions have been raised recently about the validity of several of the major mammography trials, it is still widely believed that mammography saves lives and screening recommendations remain unchanged. It is also generally accepted that if all women were regularly screened for cervical cancer, invasive cervical cancer would be virtually eliminated. Regarding primary prevention of breast cancer, causal associations between modifiable risk factors such as diet, exercise, alcohol intake and breast cancer risk have not been established. The extent to which modification of these risk factors will specifically reduce morbidity and mortality from breast and cervical cancer is not known. At the current time, strategies for the primary prevention of Human Papillomavirus (HPV) infection are similar to those needed to reduce the transmission of other sexually transmitted diseases. See the section, STD/HIV/AIDS in the *Infectious Disease* category.

Strategy: One stop screening.

	Systems	Community	Individual
Primary			
Secondary	✔		
Tertiary			

Background:
This strategy involves coordination of services during a clinical visit to allow a patient to get all needed screening on a single visit. For breast cancer screening, this would mean having mammogram appointments available on the same day, at the same location as the clinical breast exam and/or Pap smear. This can be implemented and institutionalized with hospital mammography departments and their associated clinics, clinics that have their own mammography equipment or at clinics that arrange portable mammography on site on a periodic basis.

Additional resources:
- Minnesota Department of Health. *MBCCCP Outreach and Patient Education Manual.* For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".
- US Department of Health and Social Services, Centers for Disease Control and Prevention. 1997. *Reach Women for Mammography Screening*, and *Successful Strategies of National Breast and Cervical Cancer Early Detection Program (NBCCEDP) Grantees*. Atlanta: For copies, contact CDC at (770) 488-4751 or e-mail cancerinfo@cdc.gov or on-line at www.cdc.gov/nccdphp/dcpc.

Evidence for strategy:
This strategy reduces several logistical barriers to completion of comprehensive screening. Surmounting these barriers is vital to successfully reaching and screening underserved low-income women in particular. With a one-stop strategy, barriers such as childcare, transportation and time off from work need only be addressed once rather than for multiple appointments.

Has this strategy been implemented in Minnesota?
Yes, this has been a key strategy encouraged by the Minnesota Breast and Cervical Cancer Control Program (MBCCCP) in its

work with providers around the state. It has been used successfully in many settings both in the Twin Cities Metropolitan Area and in non-metro clinics.

Indicators for this strategy:
- Number and proportion of scheduled women who complete screening.
- Proportion of women in target population who are up to date with screening.

For more information contact:
MDH Cancer Control Section, at (612) 676-5500. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".

Strategy: Special screening days.

	Systems	Community	Individual
Primary			
Secondary	✔		
Tertiary			

Background:
This strategy builds on the one-stop strategy and involves the creation of special screening days that offer clinical breast exam, mammography and Pap smears at convenient community locations. Locations may include community-based clinics, churches, community centers and worksites. Screening days are best accompanied by heavy promotion using local media in the days leading up to the event. Creating a welcoming and celebratory atmosphere draws women in who are then more likely to return in the future. This strategy is particularly well suited to working with hard to reach populations and is enhanced by the use of culturally appropriate materials. Local outreach workers can help promote the event and assist with patient navigation and follow-up during and after the screening day.

Additional resources:
- Minnesota Department of Health. *MBCCCP Outreach and Patient Education Manual.* See "For more information contact:" below for contact information. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".
- US Department of Health and Social Services, Centers for Disease Control and Prevention. 1997. *Reach Women for Mammography Screening*, and *Successful Strategies of National Breast and Cervical Cancer Early Detection Program* (NBCCEDP) Grantees. Atlanta: For copies, contact CDC at (770) 488-4751 or e-mail cancerinfo@cdc.gov or on-line at www.cdc.gov/nccdphp/dcpc.

Evidence for strategy:
This strategy has been effective in recruiting different racial and ethnic minority groups, especially African American and Hispanic/Latino women to the Minnesota Breast and Cervical Cancer Control Program.

Has this strategy been implemented in Minnesota?
Yes, the Minnesota Breast and Cervical Cancer Control Program has used this strategy successfully since 1997. Specific examples of successful screening events include collaborations between Centro, North Memorial Mammography and Hennepin County Medical Center to create

screening events in the Hispanic Community.

Indicators for this strategy:
- Number of women who schedule appointments.
- Number of women who complete schedule appointments.
- Proportion of targeted women who are up to date with screening.

For more information contact:
MDH Cancer Control Section, at (612) 676-5500. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".

Strategy: Lay recruiter/outreach workers.

	Systems	Community	Individual
Primary			
Secondary			✔
Tertiary			

Background:
This strategy involves the hiring and training of local lay outreach workers to conduct one-on-one recruitment for screening to a community based clinic or hospital or medical center. Lay outreach workers who are from the community know their community best and can effectively identify and approach local businesses and organizations to directly recruit women for screening.

Additional resources:

- Flynn, BS., Gavin, P., Worden, JK., et al. 1997. Community education programs to promote mammography participation in rural New York State. *Prev Med,* 26:102-108.
- Slater, JS., Ha, CN., Malone, ME., et al. 1998. A randomized community trial to increase mammography utilization among low-income women living in public housing. *Prev Med*, *27*:862-870.
- Suarez, L., Nichols, DC., Brady, CA. 1993. Use of role models to increase Pap smear and mammogram screening in Mexican-American and black women. *Am J Prev Med,* 9*:*290-296.
- US Department of Health and Social Services, Centers for Disease Control and Prevention. 1997. *Reach Women for Mammography Screening*, and *Successful Strategies of National Breast and Cervical Cancer Early Detection Program (NBCCEDP) Grantees*. Atlanta: For copies, contact CDC at (770) 488-4751 or e-mail cancerinfo@cdc.gov or on-line at www.cdc.gov/nccdphp/dcpc

Evidence for strategy:
This model has been used to provide outreach and education for many conditions and used extensively in the National Breast and Cervical Early Detection Program. It has substantially increased the number of Latino women enrolled in the Minnesota Breast and Cervical Cancer Control Program.

Has this strategy been implemented in Minnesota?
Yes, this model has been used by the MBCCCP for three years. "Lay recruiters" have been hired to work in targeted communities and have successfully increased the number of Latino women screened in the MBCCCP.

Indicators for this strategy:
- Number of women screened from targeted community.
- Proportion of women in targeted community who are up to date on screening.

For more information contact:
MDH Cancer Control Section, at (612) 676-5556. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".

Strategy: Inreach systems.

	Systems	Community	Individual
Primary			
Secondary	✔		
Tertiary			

Background:
Implementing inreach in local health care settings such as clinics, hospitals or private practices can identify women in need of screening and connect them with screening services. Nurses, lay health advisors, senior advisors and other clinic staff can identify unscreened women in hospital specialty clinics that may not routinely offer preventive services. Chart and or/or billing audits can also be used to systematically identify women who need screening. Using data collected from charts, tickler systems can prompt practitioners to refer women or letters can be generated to women who are due (or overdue) for screening This strategy can be incorporated into ongoing systems developed for continuous quality improvement around preventive services.

Additional resources:
Bibliographic resources:
- Margolis, KL., Lurie, N., McGovern , PG., Tyrrell, M., Slater, JS. 1998. Increasing breast and cervical cancer screening in low-income women. *J Gen Intern Med* 13:515-521.
- McCarthy, BD., Ulcickas, Y., Bolton, MB. et al. 1997. Redesigning primary care processes to improve the offering of mammography. *J Gen Int Med* 12:357-363.
- US Department of Health and Social Services, Centers for Disease Control and Prevention. 1997. *Reach Women for Mammography Screening*, and *Successful Strategies of National Breast and Cervical Cancer Early Detection Program (NBCCEDP) Grantees*. Atlanta: For copies, contact CDC at (770) 488-4751 or e-mail cancerinfo@cdc.gov or on-line at www.cdc.gov/nccdphp/dcpc

Organizational resource:
- Agency for Healthcare Quality and Research. Put Prevention into Practice. http://www.ahcpr.gov/clinic/ppipix.htm

Evidence for strategy:
This strategy has been scientifically tested and shown to increase breast and cervical cancer screening at a local clinic, especially among American Indian women. Inreach has been incorporated into models for prevention systems, which have been well studied and documented in the literature.

Has this strategy been implemented in Minnesota?
Yes, waiting room recruitment for mammography was successfully implemented at Hennepin County Medical Center. MBCCCP screening network providers have used billing databases to identify women who have not been screened

and invited them for screening. Many clinics have prevention flow sheets and systems to flag charts of women in need of specific preventive services, including breast and cervical cancer screening.

Indicators for this strategy:
- Number and kinds of health care settings that utilize inreach systems.
- Number and kinds of health care settings that utilize inreach systems.
- Number and ethnicity of lay workers trained as inreach workers.
- Number of women up-to-date with screening within a health care setting.

For information contact:
MDH Cancer Control Section, at (612) 676-5556. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".

Strategy: Peer-based community education program.

	Systems	Community	Individual
Primary			
Secondary		✔	✔
Tertiary			

Background:
This strategy uses social networks (e.g., churches, public housing, community groups) to influence women's screening behavior in groups by providing them with an opportunity to learn about the benefits of screening, share opinions and experiences about screening with peers and commit to screening, in some cases, by making an appointment. This is a resource-intensive strategy and requires good information about the target population. Examples include *Friend to Friend* and *Tell a Friend.*

Additional Resources:
Bibliographic resources:
- Calle, E., Miracle-McMahill, H. 1994. Personal contact from friends increases mammography usage. *Am J Prev Med* 10:361-366.
- Margolis, KL., Lurie, N., McGovern, PG., Tyrrell, M., Slater, JS. 1998. Increasing breast and cervical cancer screening in low-income women. *J Gen Intern Med* 13:515-521.

Organizational resource:
- American Cancer Society, at (800)-ACS-2345.

Evidence for strategy:
This strategy has been scientifically tested and shown to increase breast cancer screening among low-income women in public housing in Minneapolis.

Has this strategy been implemented in Minnesota?
The American Cancer Society and the YWCA of Duluth have used this strategy successfully.

Indicators for this strategy:
- Number of women attending events.
- Number of women screened in community.
- Proportion of women in community who are up to date on screening.

For more information contact:
MDH Cancer Control Section, at (612) 676-5500. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".

Strategy: Media plus telephone "hotline".

	Systems	Community	Individual
Primary			
Secondary		✔	✔
Tertiary			

Background:
Use of mass media such as television, radio or newspaper can get the word out about services. Linking this "call to action" with a "hotline" or toll free number that women can call to learn more about screening and resources in their community enhances the effectiveness of media promotion. In addition, if the hotline can help schedule a woman for an appointment, it is much more likely that she will follow through. Individuals who are knowledgeable about screening programs and the availability of services should staff the phone line.

Additional resource:
- Ludman, EJ., Curry, SJ., Meyer, D., Taplin, SH. 1999. Implementation of outreach telephone counseling to promote mammography participation. *Health Educ Behav 26*(5):689-702

Evidence for strategy:
This has been used effectively in promoting the MBCCCP at a local and statewide level. Advertising on major network and local TV stations coupled with the use of a toll free line for follow-up and scheduling assistance has resulted in thousands of women receiving appointments for screening.

Has this strategy been implemented in Minnesota?
Yes, see above.

Indicators for this strategy:
- Number of women calling for information.
- Number of women calling for information.
- Number women scheduling appointments.
- Number of scheduled women who complete appointments.
- Proportion of women in targeted community who are up to date on screening.

For more information contact:
MDH Cancer Control Section, at (612) 676-5500 For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Cancer Control".

CATEGORY: Chronic/Noninfectious Disease

TOPIC: HEART DISEASE, HEART ATTACK AND STROKE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct targeted cholesterol screening and follow-up activities.	✔	✔	✔		✔	✔	
Conduct targeted hypertension detection and follow-up activities.	✔	✔	✔		✔	✔	

Heart disease, the leading cause of death and stroke, is the third leading cause of death among Minnesota men and women of all racial and ethnic groups. The rate of premature deaths due to heart disease and stroke is greater among African Americans than among white Americans. Three health-related behaviors (tobacco use, poor diet, and lack of physical activity) are the major risk factors for heart disease and stroke. Though the number of Americans dying from heart disease and stroke has been decreasing, the number living with heart disease and stroke is increasing. We can expect these numbers to rise unless the increases in tobacco use among some groups, the increases in obesity among children and adults, and the lack of change in physical activity levels and poor diet are reversed. Please see the Nutrition and Physical Activity/Inactivity sections of this category, as well as to the *Alcohol, Tobacco, and Other Drugs* category, for related prevention strategies.

To continue the declines in deaths from heart disease and stroke and improve the quality of life for those living with these conditions, we need renewed efforts to enlist those individuals at high risk and enable the public at large to change unhealthy behaviors. Primary prevention strategies for heart disease, heart attack, and stroke are covered in the other areas mentioned above. In addition, we must develop quality improvement efforts to improve services for early identification and control of risk factors (e.g. elevated blood pressure or blood cholesterol), services to those affected by heart attacks or strokes (to maximize the time window for early intervention with clot-dissolving drugs), and services for patient assessment and education (to prevent development of risk). The strategies presented here address these needs.

Strategy: Conduct targeted cholesterol screening and follow-up activities.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary			

Background:
High blood cholesterol is one of the major risk factors for heart disease, the leading cause of death in the U.S. and Minnesota. Although blood cholesterol levels have declined in the U.S. population since the early 1980s, nearly 20 percent of American adults have high blood cholesterol (e.g., cholesterol levels greater than 240 mg/dL.). Approximately 50 percent of Americans have levels above the optimal range (e.g., less than 200 mg/dL). Persons with high blood cholesterol have about twice the risk of coronary heart disease of persons in the optimal range. Nearly 30 percent of adults need dietary or other treatment for high blood cholesterol.

This strategy describes implementation of a targeted hypercholesterolemia screening program to identify adults with high blood cholesterol in the community and work through the public health and health care systems to provide them with appropriate medical treatment and supportive follow-up activities. Methods to identify hypercholesterolemic individuals include standardized blood cholesterol measurement services offered to groups such as work site populations.

Follow-up activities include assisting individuals in seeking appropriate care to treat high blood cholesterol. Follow-up activities supportive of behavioral change to treat high blood cholesterol include programs promoting diets low in fat (especially saturated fat) and high in fruits and vegetables, weight management, and aerobic physical activity. Please see the sections on Nutrition and Physical Activity/Inactivity within this category for additional prevention strategies. Follow-up activities supportive of pharmacologic treatment include referring individuals to appropriate medical care and implementing strategies to promote medication compliance.

Additional resources:

- American Heart Association, at (800) 331 6889, www.americanheart.org, Northland Affiliate 4701 W. 77th St., Minneapolis, MN 55436.
- National Institutes of Health, National Heart, Lung and Blood Institute, www.nhlbi.nih.gov. This site includes resources included that target multicultural populations.

Evidence for strategy:
Research has demonstrated that lowering blood cholesterol reduces the risk of heart disease. Studies conducted in a variety of settings have demonstrated that targeted screening is effective in identifying those individuals needing intervention and provides a basis for tailored referral of services necessary for appropriate care.

The federal guidelines have been derived from an enormous amount of clinical and community-based research.

Has this strategy been implemented in Minnesota?
Yes, there are numerous successful efforts similar to the activities described in this strategy.

Indicators for this strategy:

- Number of individuals screened and referred for hypercholesterolemia.
- Number of individuals with hypercholesterolemia able to reduce high blood cholesterol and maintain control of normal blood cholesterol.

For more information contact:

- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Conduct targeted hypertension detection and follow-up activities.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary			

Background:
High blood pressure is a risk factor for heart disease and the single most important risk factor for stroke. Approximately 50 million Americans have high blood pressure and of those with high blood pressure, nearly one-third do not know they have it. Although the prevalence of high blood pressure has decreased in the U.S., only 21 percent of persons with hypertension are adequately

treated and have their blood pressure under control. The Minnesota Behavioral Risk Factor Surveillance System (BRFSS) queries respondents on whether they have been told by a doctor, nurse, or other health professional that they have high blood pressure. Based on this survey, 21.5 percent of Minnesota's adults report they have been told they have high blood pressure. There is evidence from the National Health and Nutrition Examination Survey (NHANES) that questions like this which reflect hypertension awareness prevalence may under-represent actual hypertension prevalence by 50 percent. African Americans and persons with lower educational and income levels also tend to have higher levels of blood pressure.

This strategy describes implementation of a targeted hypertension screening program to identify individuals in the community with high blood pressure and work through the public health and health care systems to provide them with appropriate medical treatment and supportive follow-up activities. Methods to identify hypertensive individuals include standardized blood pressure measurement clinics or services offered to community groups such as work site populations, particularly those employing lower-educational-status employees, community groups representing lower-income-level populations, multicultural, and older adults.

Follow-up activities include assisting individuals in seeking appropriate care to treat hypertension. Follow-up activities supportive of behavioral change to treat hypertension include programs promoting reduced alcohol consumption, smoking cessation, weight management, aerobic physical activity, and dietary measures to reduce sodium intake, increase fruit and vegetable intake, reduce fat intake, and maintain appropriate potassium, calcium, and magnesium intake. Please see the *Alcohol and Other Drugs* category and the Nutrition and Physical Activity/Inactivity sections of this category for additional prevention strategies. Follow-up activities supportive of pharmacologic treatment include referring individuals to appropriate medical care and implementing strategies supportive of medication compliance.

Additional resources:

- American Heart Association, at (800) 331 6889, or www.americanheart.org, Northland Affiliate 4701 W. 77th St., Minneapolis, MN 55436.
- National Institutes of Health, National Heart, Lung and Blood Institute, www.nhlbi.nih.gov. This site includes resources included that target multicultural populations.

Evidence for strategy:
Evidence strongly indicates the importance of blood pressure control in the prevention of stroke. Targeted screening has been demonstrated to identify those in need of referral and follow-up and to improve utilization of effective treatment modalities.

The federal guidelines have been derived from an enormous amount of clinical and community-based research.

Has this strategy been implemented in Minnesota?
Yes, there are numerous successful efforts similar to the activities described in this strategy.

Indicators for this strategy:

- Number of individuals screened and referred for hypertension.
- Number of individuals with hypertension able to reduce high blood pressure and maintain control of normal blood pressure.

For more information contact:

- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: NUTRITION

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct community-wide campaigns to promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables and adequate calcium intake.	✔	✔	✔	✔	✔	✔	
Conduct school-based programs to promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables and adequate calcium intake.	✔	✔		✔	✔		
Implement Fitness Fever in communities, schools, and work sites.	✔	✔	✔	✔	✔	✔	
Conduct work site programs that promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables and adequate calcium intake.	✔	✔	✔	✔	✔	✔	
Provide counseling and education by health care providers and organizations to promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables, and adequate calcium intake.	✔	✔	✔				

Good nutrition is essential to health and well being, as well as to healthy growth and development. Some dietary factors are protective against disease, whereas others contribute substantially to the burden of preventable illness and premature death. Dietary factors are associated with four of the 10 leading causes of death: coronary heart disease, some types of cancer, stroke, and type 2 diabetes mellitus. Dietary factors are also associated with osteoporosis, which is the major underlying cause of bone fractures in older Minnesotans and weight management.

Many Americans consume foods high in fat, often at the expense of foods (such as fruits, vegetables, and grain products) that promote good health. Eating five servings of fruits and vegetables daily not only contributes to decreased risk of cancer, heart disease, and stroke, but also protects during pregnancy by preventing neural tube defects. Most Minnesotans do not consume the recommended five-to-nine servings of fruits and vegetables daily. Inadequate iron intake is a problem among growing children, teenaged girls, and women. In young children, adequate iron intake is essential to health and growth, and also to intellectual development and school success (see the category on *Child and Adolescent Growth and Development* for more strategies on Iron-Deficiency Anemia). Although adequate calcium intake is essential to developing and maintaining strong bones and preventing osteoporosis, high blood pressure, and stroke, most Americans' intake of calcium is inadequate.

Reducing the prevalence of nutritional risk factors is essential to reducing the chronic disease burden. Schools, work sites, restaurants, and other community venues offer opportunities to influence and support healthy nutritional behaviors and create supportive environments. The strategies included here focus on promoting increased consumption of fruits and vegetables and low-fat, calcium-rich foods. This approach maximizes the positive messages around protective dietary factors and promotes increased consumption of low-fat foods with high nutrient value.

The 5 A Day for Better Health Program is a nationwide effort. The MDH is a state partner in this national public-private partnership between the National Cancer Institute, the Produce for Better Health Foundation (representing the produce industry), and state health departments, which aims to achieve the *Healthy People 2010* objective of five-or-more servings a day of fruits and vegetables.

Strategy: Conduct community-wide campaigns to promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables and adequate calcium intake.

	Systems	Community	Individual
Primary		✔	✔
Secondary			
Tertiary			

Background:
Healthy eating critically affects prevention and control of numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Surveys show that dietary fat consistently ranks at the top

of the list of consumer nutrition concerns; however, public interest in reducing dietary fat does not appear to be translated into sufficient knowledge about how to do it. In addition, only about one of four Americans eats the recommended five servings of fruits and vegetables daily, and most women and girls aged 10 years and older do not consume adequate calcium to support optimal bone growth and prevent osteoporosis.

Effective community-wide campaigns are multi-component and include support and self-help groups, nutritional counseling, risk factor screening and education, community events, and access to healthy foods. Campaigns can provide consumers with the information they need to include healthy eating habits in their daily lives and support efforts to promote supportive environments and community norms for healthy eating.

Media coverage of campaigns or events can add additional reach and impact to the message. Local media are often interested in stories and information that describe community activities or provide useful information to their audiences. Consider placing articles in, or pitching stories about community events to, local newspapers (including weekly papers and community information papers), local radio stations, work-site newsletters, school newsletters, or other community publications. Materials already developed by the national or state 5 A Day Program or other organizations (see resources below) may be used, or information may be locally developed.

Plan a community event that offers community members the opportunity to build skills or confidence in healthy eating patterns. Events might focus on choosing or preparing new or unfamiliar foods, promoting the good taste of healthy foods, promoting healthy eating as a family or community activity, or informing community members about a new opportunity for healthy eating (e.g., a new restaurant with healthy menu items for adults or children or the annual opening of a farmer's market or other facility).

Additional resources:

Bibliographic resource:

- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. Contact: CSPI, 1875 Connecticut Ave., N W, Suite 300, Washington, D.C. 20009-5728, at (202) 332-9110.
- Center for Civic Partnerships. 2002. *Fresh ideas for community nutrition and physical activity,* 1851 Heritage Lane, Suite 250, Sacramento, CA 95815, at (916) 646-8680, www.civicpartnerships.org. This web site includes models used in multicultural communities.
- Guidelines for school health programs to promote lifelong healthy eating. 1996. *MMWR Recommendations and Reports* 45(RR-9).
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide*. NIH Publication No. 89-1493.
- Reducing dietary fat: Putting theory into practice. 1997. Supplement to the *Journal of the American Dietetic Association* 97(7 suppl.).
- Satter, E. 1987. *How to Get Your Kid to Eat But Not Too Much*. Palo Alto, CA: Bull Publishing Company.

- U.S. Department of Health and Human Services. 1993. *Promoting Healthy Diets and Active Lifestyles to Lower-SES Adults, Market Research for Public Education.*

Organizational resources:

- American Association of Retired Persons (AARP), 601 E Street, NW, Washington, DC 20049, at (202) 434-2277 or www.aarp.org.
- American Cancer Society, at (800) ACS-2345, www.cancer.org.
- American Heart Association, at (800) 331-6889, or www.americanheart.org, Northland Affiliate 4701 W. 77th St., Minneapolis, MN 55436.
- Association of State and Territorial Chronic Disease Program Directors. *Osteoporosis Tool Kit*. Contact: Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Dairy Council of the Upper Midwest, at (651) 488-0261, www.whymilk.com, 2015 Rice St, St. Paul, MN 55113-6891.
- Fitness Fever Website, http://www.fitnessfever.com.
- 5 A Day program materials. A variety of ready-to-use promotional materials from the 5 A Day program are available, including CD-Rom public service announcements (PSAs) for radio featuring Graham Kerr, Videotape PSAs, scripts for radio PSAs and press releases, and camera-ready art in hard copy or on disk. Contact: Fran Doring, (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- 5 A Day Resource List Contact: Fran Doring, at (651) 281-9843 or fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Minnesota 5 A Day for Better Health Coalition, MDH Nutrition and Physical Activity Unit, Center for Health Promotion. Contact: Fran Doring, 5 A Day Coordinator, at (651) 281-9843 or fran.doring@health.state.mn.us.
- National Cancer Institute Cancer Information Service, at (800) 4-CANCER.
- National Cancer Institute, National Institutes of Health Website: http://www.dccps.nci.nih.gov/5aday.
- National 5 A Day Program websites www.5aday.com, and www.5aday.gov. These sites include materials targeted to multicultural populations.
- Sisters Together Move More Eat Better, www.hsph.harvard.edu/sisterstogether. This project is targeted toward African American women.

Evidence for strategy:

Numerous nationally funded, community-based research and demonstration projects, including the Minnesota Heart Health Program, have demonstrated the effective use of community-wide campaigns and media in health promotion programs. These projects have shown that the use of media, particularly in conjunction with other program components, can increase the public's awareness of the importance of proper nutrition, can change attitudes in support of healthier eating patterns, and can increase the level of readiness among community members to make changes in their behaviors.

Has this strategy been implemented in Minnesota?

Yes, a number of local public health

agencies and other community organizations conduct community education programs to promote healthy eating and work with local media to provide information for and to gain coverage of local health promotion events related to nutrition topics.

Indicators for this strategy:

- Number of events or information opportunities conducted.
- Number of people reached with events or information activities.
- Number of people participating in event activities.
- Number and content of articles published and the circulation of these publications.
- Number of times PSAs or paid placements are played and their estimated reach.
- Recognition, understanding, or implementation of messages, as measured in surveys or interviews or by observation.

For more information contact:

- Fran Doring, at (651) 281-9843 fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831 pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Conduct school-based programs to promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables and adequate calcium intake.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:

Healthy eating is essential to healthy growth and development and critically affects the prevention and control of numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Most American children do not eat the recommended five servings of fruits and vegetables daily, and most women and girls aged 10 years and older do not consume adequate calcium to support optimal bone growth and prevent osteoporosis. Many children eat diets that are higher in fat, include many high-fat, high-salt, high-sugar snack foods, and, as a result, are lower in nutrients than is recommended. Healthy eating patterns and regular physical activity are key to preventing and managing obesity among children.

Schools provide an important opportunity for children to learn and practice healthy eating behaviors. There are many tested and validated curricula available for school settings that address primary risk factors for chronic disease and promote healthy eating patterns. The school meals program offers an opportunity to provide the proper nutritional balance in the breakfasts and lunches served. It also offers an opportunity

for students to try new fruits and vegetables and to see what foods that are low in fat can taste like. Schools can benefit from community participation in managing the implementation of these programs, including working with teachers and students and school food-service staff to assist in this work.

Extracurricular programs for students, including extended-day programs, offer another opportunity for students to learn about healthy foods and safe food preparation, especially snack preparation. A variety of materials are available, especially from the 5 A Day Program, the Fitness Fever Program, and the MDH Nutrition and Physical Activity Unit, which can be used in these activities (see the resources section below for more information).

Schools provide a setting where food and beverage choices are available not only for school meals, but also for social events and other snacks during and after school. Schools need to consider the impact of these choices and identify ways they can maximize them as learning opportunities. Schools may fund school activities with revenue generated by snack food and beverage sales in schools. Consideration should be given to the unplanned messages these practices give children. The process also raises issues of competing goals for schools. Work with your school community to develop and implement a nutrition policy that supports the development of healthy nutritional practices including healthier snacks and juices in vending machines. This can provide students and staff with opportunities to make healthy eating choices.

Additional resources:

Bibliographic resources:

- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. Contact: CSPI, at (202) 332-9110, 1875 Connecticut Ave., N W, Suite 300, Washington, D.C. 20009-5728.
- Center for Civic Partnerships. *Fresh ideas for community nutrition and physical activity*. (2002). 1851 Heritage Lane, Suite 250, Sacramento, CA 95815, at (916) 646-8680, www.civicpartnerships.org. This reference includes models used in multicultural communities.
- *Competitive Food Standards Recommendations*. 2000. School Nutrition Consensus Panel, California Center for Public Health Advocacy, at (530) 297-6000.
- Guidelines for school health programs to promote lifelong healthy eating. 1996. *MMWR Recommendations and Reports* 45(RR-9).
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide*. NIH Publication No. 89-1493.
- Reducing dietary fat: Putting theory into practice. 1997. Supplement to the *Journal of the American Dietetic Association* 97(7 suppl.).
- USDA Team Nutrition, www.fns.usda.gov/tn, *yourSELF* Middle School Nutrition Education Kit, *Changing the Scene*, school nutrition policy program, *The Power of Choice*, program for after school programs.

Organizational resources:

- American Heart Association, at (800) 331-6889, www.americanheart.org,

Northland Affiliate 4701 W. 77th St., Minneapolis, MN 55436.

- *California Adolescent Nutrition and Fitness (CANFit)*, at (510) 644-1533, or www.canfit.org. These projects are targeted toward low-income African American, American Indian, Latino and Asian/Pacific Islander youth.
- California Project LEAN. www.caprojectlean.org or www.dhs.cahwnet.gov/lean, *Jump Start Teens* and *Playing the Policy Game: Preparing Teen Leaders to Take Action on Healthy Eating and Physical Activity.*
- Dairy Council of the Upper Midwest, at (651) 488-0261, 2015 Rice St, St. Paul, MN 55113-6891.
- Fitness Fever Website, http://www.fitnessfever.com.
- 5 A Day program materials. A variety of ready-to-use promotional materials from the 5 A Day program are available, including CD-Rom public service announcements (PSAs) for radio featuring Graham Kerr, Videotape PSAs, scripts for radio PSAs and press releases, and camera-ready art in hard copy or on disk. Contact: Fran Doring, at (651) 281-9843 or fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- 5 A Day Resource List Contact: Fran Doring, at (651) 281-9843 or fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Minnesota 5 A Day for Better Health Coalition, MDH Nutrition and Physical Activity Unit, Center for Health Promotion. Contact: Fran Doring, 5 A Day Coordinator, at (651) 281-9843 or fran.doring@health.state.mn.us.
- National Cancer Institute Cancer Information Service, at (800) 4-CANCER.
- National Cancer Institute, National Institutes of Health Website, http://www.dccps.nci.nih.gov/5aday.
- National 5 A Day Program websites www.5aday.com, and www.5aday.gov. These sites include materials targeted to multicultural populations.

Evidence for strategy:
Much research demonstrating the effectiveness of school-based programs in influencing children's eating patterns has taken place at the elementary school level, including the Child and Adolescent Trial for Cardiovascular Health (CATCH) and Minnesota Heart Health Program, which included sites in Minnesota, and the Power Plus program conducted in Minnesota. Research demonstrates that programs that are most successful are behaviorally focused, devote adequate time and intensity, incorporate self-evaluation or self-assessment and feedback, and intervene in the school environment to support behavioral change. Family involvement and interventions in the larger school environment can enhance school-based programs.

Has this strategy been implemented in Minnesota?
Yes, many Minnesotan communities have implemented school programs to promote healthy nutrition. In 1998, more than 75 classrooms implemented the Power Plus Program, a school-based intervention for fourth- and fifth-grade students designed to increase fruit-and-vegetable consumption through curriculum and environmental change; and in 2001, more than 750

elementary schools in Minnesota participated in Fitness Fever Program.

Indicators for this strategy:
- Number of schools participating in programs to promote healthy eating.
- Number of schools that have implemented school or district school-nutrition policies.
- Number of schools that have included healthy eating activities in their extracurricular and extended day programs.
- Number of students participating in these programs.
- Student satisfaction with these activities.
- Teachers' reports of changes in students' knowledge, attitudes, and behavior.
- Parents' reports of changes in students' knowledge, attitudes, and behavior.

For more information contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Implement fitness fever in communities, schools, and work sites.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Healthy eating is essential to healthy growth and development and critically affects the prevention and control of numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Most Americans do not eat the recommended five servings of fruits and vegetables daily. Many Americans eat diets that are higher in fat, include many high-fat, high-salt, high-sugar snack foods, and, as a result, are lower in nutrients than is recommended.

Schools and work sites provide important opportunities to learn and practice healthy eating behaviors. The Fitness Fever Program was developed to promote healthy eating and regular physical activity outside the school setting for students in grades one through six. A companion program for work sites was developed and introduced in 1998. This provides an easy way for school staff and parents, as well as other community members, to participate with the schoolchildren. Communities have been encouraged to support Fitness Fever by conducting community events during the program to reinforce the healthy eating and physical activity messages. These have included holding events such as family fun nights (with food tasting, physical activity opportunities, and educational information) and implementing the work site version of Fitness Fever with those in their workplace or other workplaces with which they interact.

Additional resources:
Bibliographic resources:
- Guidelines for school health programs to promote lifelong healthy eating. 1996. *MMWR Recommendations and Reports* 45(RR-9).
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work*,

A Planner's Guide. NIH Publication No. 89-1493.

- Reducing dietary fat: Putting theory into practice. 1997. Supplement to the *Journal of the American Dietetic Association* 97(7 suppl.).

Organizational resources:

- Fitness Fever Website, http://www.fitnessfever.com.
- 5 A Day program materials. A variety of ready-to-use promotional materials from the 5 A Day program are available, including CD-Rom public service announcements (PSAs) for radio featuring Graham Kerr, Videotape PSAs, scripts for radio PSAs and press releases, and camera-ready art in hard copy or on disk. Contact: Fran Doring, (651) 281-9843, or fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- 5 A Day Resource List. Contact: Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Minnesota 5 A Day for Better Health Coalition, MDH Nutrition and Physical Activity Unit, Center for Health Promotion. Contact: Fran Doring, 5 A Day Coordinator, at (651) 281-9843 or fran.doring@health.state.mn.us.
- National Cancer Institute Cancer Information Service, at (800) 4-CANCER.
- National Cancer Institute, National Institutes of Health Website, http://www.dccps.nci.nih.gov/5aday.
- National 5 A Day Program websites www.5aday.com, and www.5aday.gov. These sites include materials targeted to multicultural populations.

Evidence for strategy:

Much research demonstrating the effectiveness of school-based programs in influencing children's eating patterns has taken place at the elementary school level, including the Child and Adolescent for Cardiovascular Health (CATCH) and Minnesota Heart Health Program, which included sites in Minnesota, and the Power Plus program conducted in the state. The Fitness Fever Program was developed using the principles shown in these research studies to be important determinants of success. Evaluation research of the Fitness Fever program over the past two years has shown significant effects on children's awareness and attention to healthy eating patterns. Results demonstrate the positive effects on children's behavior when adults participate along with the children and additional community support is provided. Evaluation of schools participating three or more years demonstrated positive changes in student and staff awareness and physical activity behavior as well as positive changes in the school environment.

Has this strategy been implemented in Minnesota?

Yes, many Minnesotan communities have implemented activities to support Fitness Fever in their schools, communities, and work sites. In 2001, more than 750 elementary schools in Minnesota participated in the program.

Indicators for this strategy:

- Number of schools, work sites, and other organizations participating in Fitness Fever.
- Student satisfaction with these activities.
- Teachers' reports of changes in students' knowledge, attitudes, and behavior.

- Parental reports of changes in students' knowledge, attitudes, and behavior.
- Number of community activities implemented to support the program.
- Media coverage of the Fitness Fever Program and related events.

For more information contact:

- Joni Geppert, at (651) 281-9819, joni.geppert@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9843, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Conduct work site programs that promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables and adequate calcium intake.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:

Healthy eating critically affects the prevention and control of numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Surveys show that dietary fat consistently ranks at the top of the list of consumer nutrition concerns; however, public interest in reducing dietary fat does not appear to be translated into sufficient knowledge about how to do it. In addition, only about one of four Americans eats the recommended five servings of fruits and vegetables daily, and most women and girls aged 10 years and older do not consume adequate calcium to support optimal bone growth and prevent osteoporosis.

Work sites are important settings for supporting healthy food choices for workers by providing opportunities to demonstrate ways to incorporate healthy eating choices day to day, by providing information and education for workers to help them and their families live healthier lives, and by creating environments that support workers' healthy choices.

The most successful work site programs are integrated with employee health care providers. These programs are able to assess individual risk and tailor work site programs to meet individual needs. The work site, in many ways, becomes an extension of the health care system and provides the education and skill-building opportunities to support needed behavioral change.

Most work sites do not have the resources to provide such programs, but those with more modest resources can provide employees with the knowledge and skills to support behavioral change. A variety of ready-to-use programs and materials are available for use in work sites. The MDH has developed several work site modules through its own employee health promotion program, which are available for use in other settings, including the work site version of Fitness Fever.

In addition to providing educational services through newsletters, displays, presentations, and other materials, work sites can provide a supportive environment for healthy nutritional choices. Environmental support efforts include providing healthy choices in

onsite food service through vending machines and/or cafeteria or other food service, and developing work site nutrition policies that offer guidelines and suggestions for healthy food choices offered at meetings and events.

Additional resources:
Bibliographic resources:

- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. Contact: CSPI at (202) 332-9110, 1875 Connecticut Ave., N W, Suite 300, Washington, D.C. 20009-5728.
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide*. NIH Publication No. 89-1493.
- Reducing dietary fat: Putting theory into practice. (1997). Supplement to the *Journal of the American Dietetic Association* 97(7 suppl.).

Organizational resources:

- American Cancer Society, at (800) ACS-2345, www.cancer.org.
- American Heart Association, at (800) 331-6889, www.americanheart.org, Northland Affiliate 4701 W. 77th St., Minneapolis, MN 55436.
- Dairy Council of the Upper Midwest, at (651) 488-0261, 2015 Rice St., St. Paul, MN 55113-6891.
- Fitness Fever Website, http://www.fitnessfever.com.
- 5 A Day program materials. A variety of ready-to-use promotional materials from the 5 A Day program are available, including CD-Rom public service announcements (PSAs) for radio featuring Graham Kerr, Videotape PSAs, scripts for radio PSAs and press releases, and camera-ready art in hard copy or on disk. Contact: Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- 5 A Day Resource List. Contact: Fran Doring, (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Minnesota 5 A Day for Better Health Coalition, MDH Nutrition and Physical Activity Unit, Center for Health Promotion. Contact: Fran Doring, 5 A Day Coordinator, at (651) 281-9843, fran.doring@health.state.mn.us.
- National Cancer Institute Cancer Information Service, at (800) 4-CANCER.
- National Cancer Institute, National Institutes of Health Website, http://www.dccps.nci.nih.gov/5aday.
- National 5 A Day Program websites www.5aday.com, and www.5aday.gov. These sites include materials targeted to multicultural populations.

Evidence for strategy:
Work site interventions are moving in the direction of a public health approach (designed to include all employees at the work site), rather than a clinical approach (directed only at high-risk individuals). More detailed data is available demonstrating the success of highly targeted and individualized programs, including coordination with health care providers and risk-appropriate counseling and education. Intervention strategies involving a broader employee population with demonstrated success have included the tailoring of interventions to people's needs, experiences, and stages of change; timing of intervention strategies to reinforce new behaviors and

prevent relapse; peer involvement and support; and community support at all levels.

Has this strategy been implemented in Minnesota?
Yes, many work sites in Minnesota offer a variety of health promotion programs onsite. Services may be provided by employees of the organization with responsibility for employee health promotion or by contracting with public health, health care, or other health promotion organizations.

Indicators for this strategy:
- Number of events or information opportunities conducted.
- Number of people reached with events or information activities.
- Number of people participating in event activities.
- Recognition, understanding, or implementation of messages as measured in surveys or interviews.
- Work site nutrition policies implemented.

For more information contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Provide counseling and education by health care providers and organizations to promote healthy low-fat eating, including promoting the daily consumption of five or more servings of fruits and vegetables, and adequate calcium intake.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Healthy eating critically affects prevention and control of numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Surveys show that dietary fat consistently ranks at the top of the list of consumer nutrition concerns; however, public interest in reducing dietary fat does not appear to be translated into sufficient knowledge about how to do it. In addition, only about one of four Americans eats the recommended five servings of fruits and vegetables daily, and most women and girls aged 10 years and older do not consume adequate calcium to support optimal bone growth and prevent osteoporosis.

Health care providers and health care organizations can play a key role in communicating to the public the amount and types of foods that are needed to prevent disease and promote health. Health care providers and organizations are seen as important sources of health information by consumers and, with this credibility, are in an important position to communicate the importance of adopting healthy lifestyles for chronic disease prevention. Health care

providers are in a unique position to provide individualized information appropriate to lifestyle, risk, and health status. They can encourage behavioral change, support individuals in overcoming barriers, and make referrals to other providers or organizations when appropriate.

Special attention should be focused on populations that are disproportionately at risk for conditions that respond positively to changes in eating patterns. These populations include those with low incomes, those with less education, populations of color, those with disabilities, and those with other risk factors (e.g., physical inactivity, smoking, and obesity).

To enhance the success of people adopting more healthy eating patterns, education should provide consumers with the information they need to include healthy eating habits in their daily lives and support efforts to promote supportive environments and community norms for healthy eating. In addition to providing information, education, and referral to clients seen in the health care setting, health care providers and health care organizations can provide needed support and partnership to community health promotions for dietary change and play a key role in implementing other strategies included in this section.

Additional resources:

Bibliographic resources:

- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. Contact: CSPI, at (202) 332-9110, 1875 Connecticut Ave., N W, Suite 300, Washington, D.C. 20009-5728.
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide*. NIH Publication No. 89-1493.
- Reducing dietary fat: Putting theory into practice. 1997. Supplement to the *Journal of the American Dietetic Association* 97(7 suppl).

Organizational resources:

- American Cancer Society, at (800) ACS-2345, www.cancer.org.
- American Heart Association, at (800) 331-6889, www.americanheart.org, Northland Affiliate 4701 W. 77th St., Minneapolis, MN 55436.
- Dairy Council of the Upper Midwest, at (651) 488-0261, 2015 Rice St., St. Paul, MN 55113-6891.
- Fitness Fever Website, http://www.fitnessfever.com.
- 5 A Day program materials. A variety of ready-to-use promotional materials from the 5 A Day program are available, including CD-Rom public service announcements (PSAs) for radio featuring Graham Kerr, Videotape PSAs, scripts for radio PSAs and press releases, and camera-ready art in hard copy or on disk. Contact: Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- 5 A Day Resource List. Contact: Fran Doring, at (651) 281-9843 or fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Minnesota 5 A Day for Better Health Coalition, MDH Nutrition and Physical Activity Unit, Center for Health Promotion. Contact: Fran Doring, 5 A Day Coordinator, at (651) 281-9843, fran.doring@health.state.mn.us.

- National Cancer Institute Cancer Information Service, at (800) 4-CANCER.
- National Cancer Institute, National Institutes of Health Website, http://www.dccps.nci.nih.gov/5aday.
- National 5 A Day Program websites www.5aday.com, and www.5aday.gov, These sites include materials targeted to multicultural populations.

Evidence for strategy:
Numerous studies have shown that physicians and other health care providers consider preventive health services to be important and believe they have a central role in providing preventive services. Consumers also consistently identify physicians and nurses as primary sources of health information and consider their advice on health promotion activities to be a primary motivator for behavior change. This important resource is currently underutilized, as studies also show that many primary care practitioners, especially physicians, overestimate the amount of preventive care they provide. Decreasing time provided for health care visits and lack of reimbursement for preventive care services and patient education are significant barriers to providing nutrition education and referral to nutrition professionals for services.

Has this strategy been implemented in Minnesota?
Yes, some health care organizations have developed programs to promote healthy lifestyles (e.g., phone lines staffed by nutritionists to counsel patients, magazines, TV spots, newsletters, restaurant challenges) and include clinical preventive services, as well as partnering with other organizations in community health promotion activities to promote healthy eating patterns. Successful models for lifestyle change have been implemented with patients with diabetes and can be transferred more broadly.

Indicators for this strategy:
- Number of people reached with counseling or information activities.
- Number and content of articles published and the circulation of these publications.
- Recognition, understanding, or implementation of messages as measured in surveys or interviews or by observation.
- Number of people reporting some implementation of recommendations.
- Number of people referred to appropriate behavioral change programs.
- Number of people completing behavioral change programs.
- Number of people with improved health status measures resulting from behavioral change.

For more information contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: ORAL HEALTH

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct outreach activities to increase access to dental services for children.	✔	✔	✔	✔	✔		Dentists, Dental Hygienists, other health care professionals
Promote the prevention of early childhood caries.	✔	✔	✔	✔	✔		Dentists, Dental Hygienists, other health care professionals
Promote tobacco use prevention and cessation in dental offices.	✔	✔	✔	✔	✔		Dental offices, Insurance companies
Increase the appropriate use of sealants with children.	✔	✔	✔	✔	✔		Dentists, Dental Hygienists, other health care professionals

Preventable oral diseases continue to affect Minnesotans of all ages and all population groups. This is the case despite nearly universal compliance with the Minnesota fluoridation statute and multiple other methods of receiving both topical and ingested fluoride; an increased transfer of science-based oral health practices; increased demand and utilization of oral health services; and increased proactive involvement by dental advocacy groups and organizations.

However, specific groups, such as the elderly (especially homebound and institutionalized seniors), low-income individuals, children and adults with special health needs, communities of color and recent immigrants, continue to have unique oral health issues, such as, access and cost. Additional barriers such as geography, transportation, cultural customs and language complicate the oral health care issues faced by many of these populations.

Optimal oral health is fundamental to an individual's overall physical, social, and emotional well being. In addition to the obvious health advantages that accrue through freedom from pain, discomfort, and suffering, sound oral health contributes to an individual's quality of life through its affects on self-image and self-esteem, and the role those perceptions play in the social, educational, and employment marketplaces.

In addition to those presented here, other effective oral health strategies include community water fluoridation; daily brushing with a fluoride-containing toothpaste and flossing; regular professional dental care; oral health educational programs in schools and communities; eliminating use of tobacco products and choosing smoke-free environments; healthy eating habits; using protective gear to prevent oral-facial sports injuries; and maintaining only milk, formula or water in baby bottles.

Strategy: Conduct outreach activities to increase access to dental services for children.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
The purpose of this strategy is to improve children's access to preventive and restorative dental services, primarily those child recipients of public health care programs.

Minnesota's publicly funded health care programs provide for comprehensive preventive and restorative dental services for children. However, with inadequate current funding levels for dental public health care programs, optimum utilization by participants and eligible participants, and health care provider availability continue to be policy issues. Outreach activities, however, have continued to receive renewed emphasis in both the federal Medicaid and the state MinnesotaCare programs.

Full enrollment of eligible children in these programs will be a significant step in removing consumers' financial barriers to both medical and dental care. For related strategies see those on "Health Care Coverage" in the *Service Delivery System*

category. In addition, increased dental health provider reimbursement levels and critical access dental provider designations for the purpose of receiving enhanced payment rates for dental services to public program recipients appears to have stabilized the participating dental health care provider network.

In the past several years, dental access issues have been addressed by diverse constituents of interested individuals and groups, including but not limited to organized dental associations, dental educational institutions, governmental agencies, and dental insurance plans.

Additional resources:
Bibliographic resources:

- Centers for Disease Control and Prevention, *Improving Oral Health: Preventing Unnecessary Disease Among All Americans*, at (770) 488-6054, www.cdc.gov/OralHealth/, Atlanta, GA.
- Center on Human Development and Disability. 2001. *Promoting Oral Health of Children with Neurodevelopmental Disabilities and Other Special Health Needs*, University of Washington, Seattle, WA.
- Edelstein, BL. 1997. *Public Financing of Dental Coverage for Children: Medicaid, Medicaid Managed Care and State Programs*, Children's Dental Health Project, National Center for Education in Maternal and Child Health.
- General Accounting Office/HEHS-98-93. 1998. *Demographics of Non-enrolled Children Suggest State Outreach Strategies*.
- U.S. Department of Health and Human Services. 2000. *Opportunities to Use Medicaid in Support of Oral Health Services,* Maternal and Child Health Bureau, Health Resources and Services Administration.
- U.S. Department of Health and Human Services. 2000. *Oral Health in America: A report of the Surgeon General*.

Organizational resources:

- Minnesota Dental Association, at (651) 646-7454, 2236 Marshall Avenue, St. Paul, MN.
- Minnesota Department of Human Services, Health Care Purchasing and Services Delivery Division, at (651) 297-7303, 444 Lafayette Road, St. Paul, MN.

Evidence for strategy:
Dental access is a large, multi-faceted problem with inter-twining and co-dependent variables. In many parts of the country, different strategies and combinations of strategies are being tested. There may never be a single formula that works in all situations, but time will demonstrate that some strategies are more effective optimizing dental health care access than others.

Numerous studies have demonstrated that children with health/dental insurance are more likely to receive preventive and primary care than are uninsured children. While a substantial number of Minnesota's children have coverage through their parents' employer, other children have publicly-funded coverage through either Medicaid or MinnesotaCare. Extensive national analyses of Medicaid-eligible children not enrolled in the Medicaid program have revealed multiple barriers that are being addressed by outreach and educational efforts.

These barriers include families' lack of knowledge about the Medicaid program

itself, a lack of perceived need for the program's benefits, a lack of knowledge about eligibility criteria, stigma associated with the program, cultural and language issues, complicated enrollment processes. A variety of states (as documented in the 1998 GAO report cited above) have demonstrated that innovative and targeted outreach programs can overcome many of these barriers and thereby increase enrollment.

Has this strategy been implemented in Minnesota?
Yes, Minnesota has implemented dental health initiatives authorized to address access issues. Included in these programs are payment rate increases for children's x-rays and exams; payment rate increases for critical access dental providers; established dental access advisory committee; expanded authorization for dental hygienists; expanded duties for dental auxiliary personnel; licensure of foreign-trained dentist; retired dentist program; volunteered services considered toward Rule 101 participation agreement; dental practice donation program; dental access grants; community clinic expansion grants; dental access grants to teaching institutions and clinical training sites; dental student loan forgiveness program; dental services demonstration project; and regulatory simplification for state health program providers.

In addition, the state provides funds to improve outreach strategies for its MinnesotaCare program. While this activity is targeted towards increasing enrollment in a state-subsidized program that is primarily medical insurance, its implications are applicable to dental health issues.

Indicators for this strategy:
- < Percentage of children enrolled in the MA program that has received preventive dental services.
- < Percentage of children enrolled in the MinnesotaCare program that has received preventive dental services.
- < Percentage of licensed dentists, by county, with MA patients.

For more information contact:
Mildred Hottmann Roesch, at (651) 281-9895, mildred.roesch@health.state.mn.us, MDH Dental Health Program, Division of Family Health.

Strategy: Promote the prevention of early childhood caries.

	Systems	Community	Individual
Primary		U	U
Secondary			
Tertiary			

Background:
The purpose of this strategy is to reduce the rate of early childhood caries in children aged four and under through providing education and health promotion about the involvement of infectious agents in this disease process. The primary target audiences of education and health promotion are pregnant women, mothers of infants, and primary providers of health care services.

Early childhood caries (ECC) is a condition of extensive dental caries found in infants and toddlers. It is referred to by a number of other names, including baby bottle tooth decay and nursing caries. Like other forms of dental decay, ECC is caused by

cariogenic bacteria, or bacteria that are capable of causing dental decay. ECC may often require expensive treatment in a hospital setting.

Many academicians and researchers perceive EEC as a pediatric health problem not just a dental health problem because cariogenic bacteria have been demonstrated to transfer from mother to infant. New research has also demonstrated transmission of cariogenic bacteria from father to child and also laterally from child to child in a day care setting. Accordingly, prevention and health promotion activities should begin with the pregnant woman in the prenatal period.

Additional resources:
Bibliographic resources:

- Febres, C., Echeverri, EA., and Keene, HJ. 1997. Parental awareness, habits, and social factors and their relationship to baby bottle tooth decay. *Pediatric Dentistry* 19:22-27.
- National Center For Education in Maternal and Child Health. November, 1998. *Early Childhood Caries Resource Guide*, Arlington, VA.
- Slavkin, HC. 1997. First encounters: Transmission of infectious oral diseases from mother to child. *Journal of the American Dental Association,* 128:773-778.
- Tinanoff, N., and O'Sullivan, DM. 1997. Early childhood caries: Overview and recent findings. *Pediatric Dentistry* 19:12-16.
- University of Iowa, College of Dentistry and Medicine. 2000. *Oral management of pediatric patients for non-dental professionals: A study guide*.

Organizational resource:

- University of Minnesota School of Dentistry, Children's Dental Clinic, at (612) 625-7171, 515 Delaware Street SE, Minneapolis, MN.

Evidence for strategy:
In their 1997 review of the literature of the etiology, implications, and prevention of dental caries in infants and toddlers, Tinanoff and O'Sullivan describe a number of studies, all based on education and counseling of parents about early childhood caries (ECC). Most of these studies demonstrated a reduction of ECC prevalence in the research group. The authors conclude, however, that there is a need to explore additional methods to foster preventive behavior in parents whose children are at high risk for ECC.

Has this strategy been implemented in Minnesota?
There are number of new initiatives being implemented through grants and organizational efforts that address the infectious nature of dental decay; the use of topical fluoride varnishes; expanding the function of dental auxiliary to provide treatment modalities to children; utilizing the practice settings and services of pediatric physicians and nurses to provide dental health education and topical fluoride varnishes; and adoption of a public health/medical model to treat dental caries.

Indicators for this strategy:

- Number and kinds of education and health promotion activities conducted.
- Number of women and health care providers reached.
- Changes in knowledge regarding ECC.
- Number of health care providers who consider ECC to be both a pediatric and a dental health issue.

< Changes in infant feeding practices.
< Reduction of incidence of ECC.

For more information contact:
Mildred Hottmann Roesch, at (651) 281-9895, mildred.roesch@health.state.mn.us, MDH Dental Health Program, Division of Family Health.

Strategy: Promote tobacco use prevention and cessation in dental offices.

	Systems	Community	Individual
Primary		U	U
Secondary		U	U
Tertiary			

Background:
The purpose of this strategy is to increase the collaboration between and among dental professionals to incorporate tobacco use prevention and cessation protocols into dental offices' practice in order to reduce tobacco use among patients.

The role of tobacco use in oral diseases has been extensively described and documented, particularly in the area of soft tissue changes, periodontal diseases, leukoplakia, and cancers of the oral cavity and pharynx. All forms of tobacco use including use of smokeless tobacco and second hand smoke are of concern in the epidemiology of oral diseases.

In his forward to the 1986 surgeon general report on the health consequences of using smokeless tobacco, then-Surgeon General, C. Everett Koop, stated, "It is critical that our society prevent the use of this health hazard (smokeless tobacco) and avoid the tragic mistake of replacing the ashtray with the spittoon."

As noted in the strategy narrative in the section on tobacco use in this document, research indicates the greatest impact of prevention programs results from a broad range of strategies and sustained participation among the public, private, and nonprofit sectors. Thus the dental office becomes an ideal site for professional reinforcement of all forms of tobacco use prevention and cessation, especially the use of smokeless tobacco. Screening for tobacco use is not uniformly integrated into either medical or dental practices. However, research demonstrates that health care providers in physician and dental offices play pivotal roles in prevention and cessation messages, particularly for adolescents. Adolescents, while difficult to reach with prevention messages, value these health care professionals as credible sources of information. Involvement of multiple types of health care providers enhances the success of the prevention and cessation messages. See the Tobacco section of the *Alcohol, Tobacco and Other Drugs* category for related prevention strategies.

Additional resources:
< Agency for Health Care Policy and Research. 1996. *Smoking Cessation: Clinical Practice Guidelines,* (Number 18). Rockville, MD: U.S. Department of Health and Human Services. AHCPR Publication #96-0692.
< Promoting oral health: Interventions for preventing dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries, *MMWR*, November, 2001.
< National Institutes of Health. 1986. *The Health Consequences of Using*

Smokeless Tobacco: A Report of the Advisory Committee to the Surgeon General, NIH Publication #86-2874, Bethesda, MD, Department of Health and Human Services.

< National Institutes of Health. 1994. *Tobacco and the Clinician: Interventions for Medical and Dental Practice*, Smoking and Tobacco Control Monograph No. 5, Bethesda, MD: Department of Health and Human Services, NIH Publication #94-3693.

Evidence for strategy:
The Agency for Health Care Policy and Research (AHCPR) convenes panels of experts to review scientific studies and develop clinical guidelines for health care practitioners based on those studies. In its monograph on smoking cessation, the AHCPR notes that clinicians have unique access to individuals who use tobacco since more than 70 percent of smokers visit a clinician each year. Recommendations within AHCPR guidelines are rated based on strength of evidence. Its recommendation that all health care clinicians should repeatedly and consistently deliver smoking cessation interventions to their patients was given its highest rating.

Has this strategy been implemented in Minnesota?
The MDH Dental Health Program along with the MN Dental Hygienists' Association and the American Cancer Society have formed a tobacco issues focus group to promote increased dental office activities surrounding the issues of tobacco use and prevention, such as patient identification, patient record documentation, and education and cessation patient centered activities. Second-hand smoke issues are also being addressed.

Indicators for this strategy:
< Percentage of children and adolescents who have received screening, counseling, and referral related to nicotine use and/or addiction.
< Percentage of dental practices that incorporate practice guidelines related to tobacco use into patient care (e.g., AHCPR guidelines).

For more information contact:
Mildred Hottmann Roesch, at (651) 281-9895, mildred.roesch@health.state.mn.us, MDH Dental Health Program, Division of Family Health.

Strategy: Increase the appropriate use of sealants with children.

	Systems	Community	Individual
Primary	U		U
Secondary			
Tertiary			

Background:
The purpose of this strategy is to increase the appropriate use of dental sealants for children to reduce dental caries on the occlusal surfaces of posterior teeth through consumer and provider education and to support grants to school-based/linked dental sealant projects.

Dental sealants are plastic physical barriers that keep food particles and microorganisms from adhering to pits and fissures on the teeth. Applied in just a few minutes, usually to the first and second permanent molars, they harden within 60 seconds. Sealants are a preventive measure and are highly effective in protecting teeth from dental

decay. Properly applied dental sealants combined with optimal fluoride use can eliminate dental caries in many children.

Since sealants can be applied successfully in school and other "field" settings, a proven way to reach low-income children is through school-based programs with links to local dental partners. Sealants have become an important, noninvasive oral health strategy that works.

Additional resources:

- National Maternal and Child Oral Health Resource Center. 2000. *Dental Sealant Resource Guide*, Arlington, VA.
- Selwitz, RH. The prevalence of dental sealants in the U.S. population: Findings from NHANES III, 1998-91. *Journal of Dental Research* 75:652-61, Special Issue.
- Siegal, MD., and Kumar, JV. 1995. Workshop on guidelines for sealant see, preface and recommendations. *Journal of Public Health Dentistry* 55(5), Special Issue.

Evidence for strategy:
Over the last 15 to 20 years, a number of epidemiologic studies have demonstrated the efficacy of sealants. When used in conjunction with fluoridation and other accepted oral health practices teeth can remain virtually caries-free for a lifetime. Community water fluoridation and school-based dental sealant delivery programs are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, even though dental sealants are not always appropriately utilized, they are available in (all) dental offices and all public health dental clinics. School-based/linked dental sealant programs are encouraged and promoted.

Indicators for this strategy:

- Decreased rate of dental caries on occlusal surfaces of posterior teeth.
- Increased percentage of children who have received a sealant on one or more teeth.

For more information contact:
Mildred Hottmann Roesch, at (651) 281-9895, mildred.roesch@health.state.mn.us, MDH Dental Health Program, Division of Family Health.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: OSTEOPOROSIS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct health communications and behavior change campaigns directed at youth and young adults promoting adequate calcium intake and regular physical activity to maximize bone density development to prevent osteoporosis.	✔	✔	✔	✔	✔	✔	
Conduct health communications and behavior change campaigns directed at mid-life and older women promoting adequate calcium intake and regular physical activity to minimize loss of bone density, identification of risk factors and appropriate interventions for detection and management of osteoporosis.	✔	✔	✔	✔	✔	✔	

Osteoporosis is a disease in which bones become progressively more fragile and more likely to break over time. It is the most common human bone disease and estimated to affect more than 10 million people with 19 million more at risk for osteoporosis and fractures because of low bone mass. As the population ages, the prevalence of osteoporosis is expected to increase significantly, affecting 41 million by 2015.

Osteoporosis causes 1.5 million fractures annually at an estimated annual cost of $13.8 billion in direct medical expenses. This cost is expected to increase to more than $60 billion by 2020 if nothing is done to address this problem. One of two women will have an osteoporotic fracture in her lifetime. This is equal to her combined risk of breast, uterine, and ovarian cancer. Although there are fewer cases of osteoporosis among men, they still suffer 1/3 of all hip fractures that occur.

Following a fracture, some people recover fully. Others, however, suffer chronic pain and disability and 10 to 20 percent die within one year. While more women than men fracture their hips, men are more likely to die in the following year. Osteoporosis may result in loss of independence, depression, social isolation and decreased well-being.

Bone is a living, changing tissue that experiences regular additions and subtractions throughout our lifetime. Until age 30, we build bone faster than old bone disappears. Girls reach 97 percent of their peak bone mass by age 19. Adequate calcium and Vitamin D intake and regular, weight-bearing physical activity are needed for maximal development of bone mass. Currently only 13 percent of girls get enough calcium to reach their potential peak bone mass. After age 35, both women and men begin to lose bone mass as a normal part of aging. If peak bone mass was not adequate, this leads to low bone density and an increased risk of fracture.

Osteoporosis cannot be cured; it can be prevented or treated. The cornerstones of the primary prevention of osteoporosis are promoting lifelong healthy eating patterns with adequate calcium intake and physically active lifestyles. Primary prevention strategies to promote strong bones are less costly than treating osteoporosis and serve to promote overall health, fitness, and quality of life. As new treatment and screening methods enter the marketplace, consumers and health professionals need objective and non-proprietary information and education to enable them to make the best prevention and treatment choices possible.

Strategy: Conduct health communications and behavior change campaigns directed at youth and young adults promoting adequate calcium intake and regular physical activity to maximize bone density development to prevent osteoporosis.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Osteoporosis begins in childhood with poor diet and physical activity habits and may go undetected until a fracture occurs in old age. Prevention of osteoporosis involves taking steps to maximize and maintain bone mass.

Many of the preventive actions have multiple health benefits and are common to other disease prevention and health promotion recommendations. Key steps are:

- Getting enough calcium and Vitamin D.
- Getting regular physical activity.

See strategies and resources in this category for "Nutrition" and "Physical activity/Inactivity" promotion for additional information.

The National Bone Health Campaign, *Powerful Bones, Powerful Girls*, is a multi-year campaign using a social marketing approach to promote optimal bone health among girls 9 to 12 years. Resources for this campaign include a Web site for girls, print materials, and radio and print advertisements for girls and parents. The campaign is a result of a partnership between the Centers for Disease Control and Prevention, the Office for Women's Health, and the National Osteoporosis Foundation. The goal is to educate and encourage girls to establish lifelong healthy habits, especially increased calcium consumption and physical activity.

Additional resources:
Bibliographic resources:

- Association of State and Territorial Chronic Disease Program Directors. *Osteoporosis Tool Kit*, and *Osteoporosis 2000: A Resource Guide for State Programs.* Contact: Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. CSPI, at (202) 332-9110, 1875 Connecticut Ave., N.W., Suite 300, Washington, D.C. 20009-5728.

Organizational resources:

- Dairy Council of the Upper Midwest, at (651) 488-0261,www.whymilk.com. 2015 Rice St, St. Paul, MN 55113-6891.
- The National Osteoporosis Foundation. c/o AMA, www.nof.org. 515 North State Street, Chicago, IL 60610.
- The National Resource Center for Osteoporosis and Related Bone Disorders, www.osteo.org, 1150 17th Street, NW, Suite 500, Washington, D.C. 20036-4603.
- *Powerful Bones, Powerful Girls*, National Bone Health Campaign, www.cdc.gov/nccdphp/dnpa/bonehealth and the website for girls www.cdc.gov/powerfulbones. For information about materials available from MDH, contact Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us

Evidence for strategy:
Numerous community-based research projects have demonstrated the effectiveness of health communications campaigns in increasing awareness and providing information to direct individuals to additional information as well as increasing community awareness. *The Powerful Bones Powerful Girls* campaign is based on formative and published research.

Has this strategy been implemented in Minnesota?
Yes, osteoporosis education programs have been conducted by several local agencies in Minnesota.

Indicators for this strategy:

- Number of events or information opportunities conducted.
- Number of people reached with events or information activities.

- Number of people participating in event activities.
- Recognition, understanding, or implementation of messages, as measured in surveys or interviews or by observation.

For more information contact:

- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical activity Unit.

Strategy: Conduct health communications and behavior change campaigns directed at mid-life and older women promoting adequate calcium intake and regular physical activity to minimize loss of bone density, identification of risk factors and appropriate interventions for detection and management of osteoporosis.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:

Osteoporosis and low bone mass are a major public health threat for approximately 55 percent of the U.S. population aged 50 and older. Osteoporosis is an under-diagnosed and under-treated condition. Information for midlife women should include information the importance of nutrition and physical activity to continued bone health and identify risk factors for osteoporosis. Information for perimenopausal and postmenopausal women should include information about the continued importance of nutrition and physical activity, risk factors for osteoporosis, appropriate use of screening and need and options for drug therapy.

Based on clinical research results, the National Osteoporosis Foundation (NOF) cites the following as key risk factors for osteoporotic fractures for women; men are believed to have similar risks, but more study is needed. Non-modifiable risk factors are:

- Personal history of fracture as an adult.
- History of fracture in a first-degree relative.
- Caucasian or Asian ethnicity.
- Advanced age.
- Dementia.

Potentially modifiable risk factors are:

- Current cigarette smoking.
- Low body weight (<127 pounds).
- Estrogen deficiency.
- Early menopause (<age 45).
- More than one year without menstruation during childbearing years.
- Low calcium intake (lifelong).
- Alcoholism.
- Impaired eyesight despite adequate correction.
- Recurrent falls.
- Inadequate physical activity.
- Poor health/frailty.

Note: While Caucasians and Asians appear to be at higher risk, risk for those of other races or ethnicities can still be substantial.

National Osteoporosis Foundation Guidelines describing women who should be considered for bone mineral testing include:

- All women 65 years of age with no risk factors.
- All postmenopausal women age 65 years of age or less with additional risk factors for osteoporosis.
- All postmenopausal women 65 years of age and older with fractures.

See strategies and resources in this category for "Nutrition" and "Physical activity/Inactivity" promotion for additional information.

Additional resources:
Bibliographic resources:
- Association of State and Territorial Chronic Disease Program Directors. *Osteoporosis Tool Kit*, and *Osteoporosis 2000: A Resource Guide for State Programs*. Contact: Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. Contact: CSPI, at (202) 332-9110, 1875 Connecticut Ave., N.W., Suite 300, Washington, D.C. 20009-5728.
- Robert Wood Johnson Foundation. *National Blueprint: Increasing Physical Activity Among Adults Aged 50 and Older*. 2001. www.rwjf.org.

Organizational resources:
- American Association of Retired Persons (AARP), at (202) 434-2277, www.aarp.org, 601 E Street, NW, Washington, DC 20049
- Dairy Council of the Upper Midwest, at (651) 488-0261, www.whymilk.com. 2015 Rice St, St. Paul, MN 55113-6891.
- The National Osteoporosis Foundation c/o AMA, www.nof.org., 515 North State Street, Chicago, IL 60610.
- The National Resource Center for Osteoporosis and Related Bone Disorders, www.osteo.org. 1150 17th Street, N.W., Suite 500, Washington, D.C. 20036-4603.

Evidence for strategy:
Numerous community-based research projects have demonstrated the effectiveness of health communications campaigns in increasing awareness and providing information to direct individuals to additional information as well as increasing community awareness. Communications campaigns related to osteoporosis have been successful in other states.

Has this strategy been implemented in Minnesota?
Yes, osteoporosis education programs have been conducted by several local agencies in Minnesota.

Indicators for this strategy:
- Number of events or information opportunities conducted.
- Number of people reached with events or information activities.
- Number of people participating in event activities.
- Recognition, understanding, or implementation of messages, as measured in surveys or interviews or by observation.

For more information contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: PHYSICAL ACTIVITY/INACTIVITY

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct community-wide campaigns to promote physical activity.	U	U	U	U	U	U	
Conduct school-based programs to promote regular physical activity.	U	U		U	U		
Implement Fitness Fever in communities, schools, and worksites.	U	U	U	U	U	U	
Increase access to safe physical environments conducive to physical activity.	U	U	U	U	U	U	
Conduct worksite programs to promote physical activity.	U	U	U	U	U	U	
Provide counseling and education by health care providers and organizations to promote regular physical activity and healthy weight management.	U	U	U		U	U	
Implement HealthPartners 10,000 Steps® program.	U	U	U	U	U	U	

Regular physical activity provides short-term benefits and reduces long-term risks for disability and premature death. Moreover, physical activity need not be strenuous to be beneficial; people of all ages benefit from moderate physical activity, defined as 30 minutes of brisk walking five or more times a week. Regular physical activity substantially reduces the risk of dying of coronary heart disease, the leading cause of death, and decreases the risk of diabetes, high blood pressure, colon cancer, and possibly cancers of the breast and prostate. (See the sections within this category on Heart Disease, Heart Attack and Stroke; Diabetes; Early Detection of Cancer; Arthritis; and Osteoporosis for more prevention strategies.) Regular physical activity also helps to manage weight; contributes to the development and maintenance of healthy bones, muscles, and joints; and reduces symptoms of anxiety and depression. For many people with arthritis, physical activity helps to relieve pain and maintain joint mobility.

Physical inactivity is increasingly a cultural norm. Our culture prizes laborsaving technology and spectatorship and we have ever-increasing opportunities for sedentary activity from television, video games, and computers. We need, therefore, to find ways to counter these cultural trends to overcome the barriers to regular physical activity.

While those who are already active will gain additional health benefit from increasing their levels of physical activity, the greatest benefits to the health of the population will come from increasing the number of active individuals. Most recent research findings concur that some physical activity is better than no activity, and more physical activity is better than some.

Enjoyable participation in physical activities easily done throughout life should be emphasized. Communities, schools, and worksites can offer support by providing access to safe physical environments conducive to physical activity, such as, walking and other non-motorized forms of transportation in addition to providing recreation and sports opportunities appropriate for different ages and abilities.

Strategy: Conduct community-wide campaigns to promote physical activity.

	Systems	Community	Individual
Primary		U	U
Secondary			
Tertiary			

Background:
Physical activity has a critical impact in preventing and controlling numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Effective community-wide campaigns can provide consumers with the support they need to include physical activity in their daily lives and promote supportive environments and community norms for regular physical activity. Community-wide campaigns are multi-component and include support and self-help groups, physical activity counseling, risk factor screening and education, community events, and access to or development of facilities for physical activity such as walking trails.

Media coverage of campaigns adds additional reach and impact. Local media are often interested in stories and information that describe community activities or provide useful information to their audiences. Consider placing articles or pitching stories about community facilities or events to local newspapers (including weekly papers and community information papers), local radio stations, worksite newsletters, school newsletters, or other community publications. Materials already developed by the Centers for Disease Control and Prevention or other organizations (see resources below) may be used or information may be locally developed.

Plan a community event that offers community members the opportunity to build skills or confidence in a particular activity or activities, promotes the fun in physical activities, promotes physical activity as a family or community activity, or informs community members about a new opportunity for recreation (e.g. a new walking or biking trail or a new ice rink or other facility) and is a newsworthy event that will gain coverage from local media. For information about physical activity promotion campaigns specific to arthritis and osteoporosis, see those strategies within this category.

Additional resources:

Bibliographic resources:

< Center for Civic Partnerships. *Fresh Ideas for Community Nutrition and Physical Activity.* 2002. 1851 Heritage Lane, Suite 250, Sacramento, CA 95815, at (916) 646-8680, www.civicpartnerships.org. This resource includes models implemented in multicultural communities.

< Centers for Disease Control and Prevention. 2001. Increasing physical activity: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report* 50 (No. RR-18):1-18, www.cdc.gov/mmwr/.

< Centers for Disease Control and Prevention. 2002. *Physical Activity Evaluation Handbook.* http://www.cdc.gov/nccdphp/dnpa/physical/handbook/index.htm.

< Centers for Disease Control and Prevention. 1999. *Promoting Physical Activity: A Guide for Community Action.* Champaign, IL: Human Kinetics.

< Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General,* www.cdc.gov/nccdphp/sgr/sgr.htm.

< National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide,* NIH Publication No. 89-1493.

< Robert Wood Johnson Foundation. *National Blueprint: Increasing Physical Activity Among Adults Aged 50 and Older.* 2001. www.rwjf.org.

< Sisters Together Move More Eat Better, www.hsph.harvard.edu/sisterstogether This project is targeted toward African American women.

< U.S. Department of Health and Human Services. 1993. *Promoting Healthy Diets and Active Lifestyles to Lower-SES Adults, Market Research for Public Education.*

Organizational resources:

< American Association of Retired Persons (AARP), 601 E Street, NW, Washington, DC 20049, at at (202) 434-2277 or www.aarp.org.

- Association of State and Territorial Chronic Disease Program Directors. *Osteoporosis Tool Kit*. Contact: Fran Doring, MDH Nutrition and Physical Activity Unit, at (651) 281-9843, fran.doring@health.state.mn.us.
- Be Active Minnesota, non-profit foundation with a mission to improve the well being of Minnesotans through the support and promotion of physical activity, at (877) 483-4333 or www.beactiveminnesota.org.
- Centers for Disease Control and Prevention. *Ready. Set. It's Everywhere You Go.* This physical activity promotion kit includes video and audio public service announcements PSAs, camera-ready art, and a guidebook with information about marketing strategies, working with the media, and developing programs and events. Contact: Chris Kimber, MDH, Health Education Unit, (651) 281-9875 or chris.kimber@health.state.mn.us.
- The National Osteoporosis Foundation c/o AMA, 515 North State Street, Chicago, IL 60610, www.nof.org.
- The National Resource Center for Osteoporosis and Related Bone Disorders, 1150 17th Street, NW, Suite 500, Washington, D.C. 20036-4603, www.osteo.org.

Evidence for strategy:
Worldwide research and demonstration projects designed to test community-wide campaigns to promote physical activity have been shown to be a critical component in changing behavior and improving community health status. This strategy is strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, a number of local public health agencies and other community organizations conduct community-wide campaigns to promote physical activity. Examples include the Minnesota Heart Health Program and the Crookston Health Promotion Coalition.

Indicators for this strategy:
- Number of events or information opportunities conducted.
- Number of people reached with events or information activities.
- Number of people screened, counseled, and educated about physical activity and risk factors.
- Number of people participating in events, support groups, utilizing walking trails, etc.
- Number of times public service announcements (PSAs) are played, as well as their estimated reach.
- Recognition, understanding, or implementation of messages as measured in surveys or interviews.

For more information contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us, MDH Health Education Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH, Nutrition and Physical Activity Unit.

Strategy: Conduct school-based programs to promote regular physical activity.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Regular physical activity is essential to healthy growth and development and critically affects the prevention and control of numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Almost one-half of young people aged 12-21 and more than one-third of U.S. high school students do not participate in vigorous physical activity on a regular basis. As children get older, their participation in physical activity decreases.

Schools provide an important opportunity to learn and practice regular physical activity and to have fun participating in physical activity. School-based physical education curricula that provide for the majority of the class time as active time and policies that increase the amount of time spent in physical education class in addition to policies that support increased time for physical activity (recess, walk to and from school, and before and after school programs) are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services. CATCH (Child and Adolescent Trial for Cardiovascular Health), SPARK (Sports, Play and Active Recreation for Kids), WOLF (Work Out Low Fat), and EPEC (Exemplary Physical Education Curriculum) are examples of evaluated curricula. The Centers for Disease Control and Prevention's *Kids Walk to School* program is an example of policy and environmental support to increase physical activity. *Fit, Healthy and Ready to Learn* offers policy direction on creating a supportive, healthy school environment. Schools can benefit from community participation in managing the implementation of these programs, including working with teachers and students to assist in these efforts.

Additional resources:
Bibliographic resources:

- California Project LEAN. www.caprojectlean.org or www.dhs.cahwnet.gov/lean, *Jump Start Teens* and *Playing the Policy Game: Preparing Teen Leaders to Take Action on Healthy Eating and Physical Activity.*
- *CATCH (Child and Adolescent Trial for Cardiovascular Health)*, school-based curriculum, www.nhlbi.nih.gov.
- Center for Civic Partnerships. *Fresh Ideas for Community Nutrition and Physical Activity.* 2002. 1851 Heritage Lane, Suite 250, Sacramento, CA 95815, at (916) 646-8680, www.civicpartnerships.org.
- Centers for Disease Control and Prevention. 2002. *Physical Activity Evaluation Handbook.* http://www.cdc.gov/nccdphp/dnpa/physical/handbook/index.htm.
- Centers for Disease Control and Prevention. 2001. Increasing physical activity: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report,* 50(No. RR-18):1-18. www.cdc.gov/mmwr/.
- Centers for Disease Control and Prevention. 1999. *Kids Walk to School*.

Contact: www.cdc.gov/nccdphp/dnpa/kidswalk.htm.

< Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General*, www.cdc.gov/nccdphp/sgr/sgr.htm.

< Centers for Disease Control and Prevention. 2000. *Promoting Better Health for Young People Through Physical Activity and Sports*. Contact: Healthy Youth at (888) 231-6405 or www.cdc.gov/nccdphp/dash/presphysactrpt/.

< Corbin, CB., and Pangrazi, RP. 1998. *Physical Activity for Children: A Statement of Guidelines,* National Association for Sport and Physical Education (NASPE). Reston, VA: NASPE Publications.

< *EPEC (Exemplary Physical Education Curriculum)*, school-based curriculum. Contact: Gretchen Blink, EPEC Project Coordinator, at (877) 464-3732 (toll-free) or gblink@michiganfitness.org or visit www.michiganfitness.org.

< *Generation Fit*. American Cancer Society, at (800) ACS-2345, www.cancer.org.

< Guidelines for school and community programs to promote lifelong physical activity among young people. *MMWR Recommendations and Reports*. 1997. Vol.46, available at www.cdc.gov in publications.

< National Association of State Boards of Education (NASBE), *Fit, Healthy and Ready to Learn*. Contact: NASBE at (800) 220-5183 or http://www.cdc.gov/nccdphp/dash/healthtopics/physical_activity/promoting_health/pdfs/ppar_a17.pdf .

< SPARK (Sports, Play and Active Recreation for Kids), school-based curriculum. Contact: (800) SPARK-PE or visit www.foundation.sdsu.edu/projects/spark/index.html.

< WOLF (Work Out Low Fat), school-based curriculum emphasizing American Indian traditions. Contact: Anne Kollmeyer, MDH, Diabetes Unit, at (651) 281-9846 or anne.kollmeyer@health.state.mn.us.

Organizational resource:

< *California Adolescent Nutrition and Fitness (CANFit)* www.canfit.org or (510) 644-1533. These projects are targeted toward low-income African American, American Indian, Latino and Asian/Pacific Islander youth.

Evidence for strategy:

The Centers for Disease Control and Prevention's Task Force on Community Preventive Services strongly recommends this strategy (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?

Yes, many Minnesota schools have implemented the curricula listed above. In addition, a number of schools assess their policies on physical education and other opportunities for physical activity in order to increase the amount of time students may be active.

Indicators for this strategy:

< Number of schools offering physical education.

< Number of schools offering physical education curricula that maximize active time in class.

< Number of schools with supportive policies for before and after school physical activity opportunities.
Number of students participating in

physical activity time before, during, and after school.
< Student satisfaction with these activities.
< Teachers' reports of changes in students' knowledge, attitudes, and behavior.
< Parents' reports of changes in students' knowledge, attitudes, and behavior.

For more information contact:
< Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
< Peg Heaver, (651) 284-3822, peg.heaver@health.state.mn.us, MDH Coordinated School Health Program.
< Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us, MDH Health Education Unit.
< Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Implement Fitness Fever in communities, schools, and worksites.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Schools and work sites provide important opportunities to learn and practice regular physical activity. The Fitness Fever Program was developed to promote healthy eating and regular physical activity outside the school setting for students in grades one through six. A companion program for worksites is also available. This program provides an easy way for school staff and parents, as well as other community members, to participate with the school children. Communities have been encouraged to support Fitness Fever by conducting community events to reinforce the program's healthy eating and physical activity messages. Community activities have included such events as family fun nights (with food tasting, physical activity opportunities, and educational information) and the implementation of the worksite version of Fitness Fever in their own workplaces or in other workplaces with which they interact.

Additional resources:
Bibliographic resources:
< Centers for Disease Control and Prevention. 2002. *Physical Activity Evaluation Handbook.* http://www.cdc.gov/nccdphp/dnpa/physical/handbook/index.htm.
< Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General* www.cdc.gov/nccdphp/sgr/sgr.htm.
< Centers for Disease Control and Prevention. 2000. *Promoting Better Health for Young People Through Physical Activity and Sports*. Contact: Healthy Youth at (888) 231-6405 or www.cdc.gov/nccdphp/dash/presphysactrpt.
< Corbin, CB., and Pangrazi, RP. 1998. *Physical Activity for Children: A Statement of Guidelines,* National Association for Sport and Physical Education (NASPE). Reston, VA: NASPE Publications.
< Guidelines for school and community programs to promote lifelong physical activity among young people. 1997. *MMWR Recommendations and Reports*, Vol.46, available at www.cdc.gov.

Organizational resource:
< Fitness Fever Website, www.fitnessfever.com.

Evidence for strategy:
School-based approaches have had consistently strong effects on increasing physical activity in elementary school students when the intervention orients the physical education program toward delivering moderate-to-vigorous physical activity. Much research has taken place at the elementary school level, including the Child and Adolescent Trial for Cardiovascular Health (CATCH) and the Minnesota Heart Health Program, which included sites in Minnesota. The Fitness Fever Program was developed using the principles shown in these research studies to be important determinants of success. Evaluation research of the Fitness Fever program has shown significant effects on children's awareness and attention to regular physical activity. Results demonstrate the positive effects on children's behavior when adults participated along with the children and additional community support was provided. Evaluation of schools participating 3 or more years demonstrated positive changes in student and staff awareness and physical activity behavior as well as positive changes in the school environment.

Has this strategy been implemented in Minnesota?
Yes, many Minnesota communities have implemented activities to support Fitness Fever in their schools, communities, and worksites. In 2001, more than 750 elementary schools in Minnesota participated in Fitness Fever Program.

Indicators for this strategy:
< Number of schools, work sites, and other organizations participating in Fitness Fever.
< Student satisfaction with these activities.
< Teachers' reports of changes in students' knowledge, attitudes, and behavior.
< Teachers' reports of changes in staff's knowledge, attitudes, and behavior and changes in the school environment.
< Parents' reports of changes in students' knowledge, attitudes, and behavior.
< Number of community activities implemented to support the program.
< Media coverage of Fitness Fever Program and related events.

For more information contact:
< Joni Geppert, at (651) 281-9819, joni.geppert@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
< Peg Heaver, at (651) 284-3822, peg.heaver@health.state.mn.us, MDH Coordinated School Health Program.
< Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Increase access to safe physical environments conducive to physical activity.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Physical activity has a critical impact in preventing and controlling numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis.

One of the barriers to regular physical activity that people commonly identify is a lack of safe convenient spaces for recreation. Strategies to provide access to safe convenient spaces needed for a supportive environment for physical activity include:

- Working with community organizations and planning bodies to improve safety of public recreational spaces, such as, parks, neighborhood streets and sidewalks, or community centers to facilitate their use for physical activity.
- Working with community organizations and planning bodies to plan for and support commuter bike lanes and trails for biking, walking, skiing, and other recreational facilities.
- Working with community centers, as well as community recreation facilities, such as, ice rinks and ball fields, schools, and parks to increase the time available for safe public use of these recreation facilities.

Additional resources:

Bibliographic resources:

- Burden, D. Street design guidelines for healthy neighborhoods. *Local Government Commission.* www.lgc.org/transportation/street.html.
- Burden, D. Streets and sidewalks, people and cars: A citizens' guide to traffic calming. *Local Government Commission.* www.lgc.org/transportation/street.html.
- Centers for Disease Control and Prevention. *How Land Use and Transportation Systems Impact Public Health.* http://www.cdc.gov/nccdphp/dnpa/aces.htm.
- Centers for Disease Control and Prevention. 2001. Increasing physical activity: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report*, 50 (No. RR-18):1-18. www.cdc.gov/mmwr/.
- Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General* www.cdc.gov/nccdphp/sgr/sgr.htm.
- Centers for Disease Control and Prevention. 1999. *Promoting Physical Activity: A Guide for Community Action.* Champaign, IL: Human Kinetics.
- Corbin, CB., and Pangrazi, RP. 1998. *Physical Activity for Children: A Statement of Guidelines*, National Association for Sport and Physical Education (NASPE). Reston, VA: NASPE Publications.
- Minnesota Council on Physical Activity and Sports, MDH, and Minneapolis Heart Institute Foundation. *Let's Go For A Walk: Planning Guide for A Walkable Community*, Contact: Chris Kimber, MDH Health Education Unit, at (651) 281-9875, chris.kimber@health.state.mn.us. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Physical Activity".

Organizational resource:

- Be Active Minnesota, non-profit foundation with a mission to improve the well being of Minnesotans through the support and promotion of physical activity, at (877) 483-4333 or www.beactiveminnesota.org.

Evidence for strategy:

The proximity of physical activity resources to homes or worksites has been shown to be an important determinant of their use. The Centers for Disease Control and

Prevention's Task Force on Community Preventive Services strongly recommends this strategy (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, many local communities have worked with available programs to develop trails (Two Harbors, Crookston), make shopping malls available for walkers (Breckenridge), and improve neighborhood safety so it is easier to be active outside.

Indicators for this strategy:
- < Increase in the number of facilities.
- < Increase in the available hours for facilities.
- < Increase in the use of facilities.
- < Increased perception of safety.
- < Decrease in neighborhood crimes.

For more information contact:
Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us, MDH Health Education Unit.

Strategy: Conduct worksite programs to promote physical activity.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Physical activity has a critical impact in preventing and controlling numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Effective information and education programs can provide consumers with the information and skills they need to include physical activity in their daily lives and support efforts to promote supportive environments and community norms for physical activity.

Worksites offer important opportunities for providing healthy choices for workers; for demonstrating ways to incorporate physical activity in their day to day lives; for providing information and education to help workers and their families live healthier lives; and for creating environments that support workers' healthy choices.

The most successful worksite programs are integrated with employee health care providers. These programs are able to assess individual risk and tailor worksite programs to meet individual needs. The worksite, in many ways becomes an extension of the health care system and provides the educational and skill-building opportunities needed to support behavioral change.

Most worksites do not have the resources available to provide such a program, but programs with more modest resources can provide employees with knowledge and skills to support behavioral change. A variety of ready-to-use programs and materials are available for use in worksites.

The MDH has developed several worksite modules through its own employee health promotion program that are available for use in other settings, including the worksite version of Fitness Fever.

In addition to providing educational services through newsletters, displays, presentations, and other materials, worksites can provide a supportive environment for regular physical

activity. Environmental support efforts include providing opportunities for physical activity at the worksite and facilitating their use. Some worksites may be able to provide onsite exercise facilities for employee use or be able to negotiate options for employee use of area recreation facilities at dedicated hours or for reduced fees. Opening stairwells so that they can be used instead of elevators is an inexpensive way to increase the availability of physical activity opportunities at the worksite. Placing motivational signs close to elevators and escalators encouraging the use of nearby stairs for health benefits or weight loss have proven effective in increasing the percentage of people taking the stairs. Flexibility in use of lunch and other breaks will facilitate employees' use of some of this time for physical activity. Employee walking clubs or sports teams can also encourage physical activity.

Additional resources:

Bibliographic resources:

- Centers for Disease Control and Prevention. 2001. Morbidity and increasing physical activity: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report*, 50 (No. RR-18):1-18. www.cdc.gov/mmwr/.
- Centers for Disease Control and Prevention. 2002. *Physical Activity Evaluation Handbook.* http://www.cdc.gov/nccdphp/dnpa/physical/handbook/index.htm.
- Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General*, www.cdc.gov/nccdphp/sgr/sgr.htm.
- Corbin, CB., and Pangrazi, RP. 1998. *Physical Activity for Children: A Statement of Guidelines*, National Association for Sport and Physical Education (NASPE). Reston, VA: NASPE Publications.

Organizational resources:

- American Cancer Society, at (800) ACS-2345, www.cancer.org.
- American Heart Association, http://www.americanheart.org/.
- Association of State and Territorial Chronic Disease Program Directors. *Osteoporosis Tool Kit*. Contact: Fran Doring, MDH Nutrition and Physical Activity Unit, at (651) 281-9843, fran.doring@health.state.mn.us.
- Fitness Fever Website, www.fitnessfever.com.
- The National Osteoporosis Foundation c/o AMA, 515 North State Street, Chicago, IL 60610, www.nof.org.
- The National Resource Center for Osteoporosis and Related Bone Disorders, 1150 17th Street, NW, Suite 500, Washington, D.C. 20036-4603, www.osteo.org.

Evidence for strategy:

Strategies that appear most successful include the tailoring of interventions to people's needs, experiences, and readiness for change; timing of intervention strategies to reinforce new behaviors and prevent relapses; peer involvement and support; and community support at all levels. Individually adapted health behavior change programs tailored to a person's readiness for change or specific interests is strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services. Building, strengthening and maintaining social networks that provide supportive

relationships for behavior change through workplace programming is also strongly recommended by the Task Force. This would include setting up a buddy system, contracting with another person to complete a specific level of activity, or establishing walking groups or other groups to provide friendship and support. The Task Force also recommends point-of-decision prompts (signage) to encourage use of stairs.

Has this strategy been implemented in Minnesota?
Yes, many worksites in Minnesota offer a variety of health promotion programs. Services may be provided by employees of the organization with responsibility for employee health promotion or by contracting with public health, health care, or other health promotion organizations.

Indicators for this strategy:
- Number of events or information opportunities conducted.
- Number of people reached with events or information activities.
- Number of people participating in activities or utilizing facilities.
- Recognition, understanding, or implementation of messages as measured in surveys or interviews.

For more information contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us, MDH Health Education Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Provide counseling and education by health care providers and organizations to promote regular physical activity and healthy weight management.

	Systems	Community	Individual
Primary		U	U
Secondary			
Tertiary			

Background:
Health care providers and health care organizations can play a key role in communicating to the public the amount and types of physical activity that are needed to prevent disease and promote health. Health care providers and organizations are seen as important sources of health information by consumers and with this credibility are in an important position to communicate the importance of adopting healthy lifestyles for chronic disease prevention. Health care providers are in a unique position to provide individualized information appropriate to lifestyle, risk, and health status. They can encourage behavioral change, support individuals in overcoming barriers, and make referrals to other providers or organizations when appropriate.

Special attention should be focused on populations who are disproportionately at risk for conditions that respond positively to physical activity. These populations include those with low incomes, those with less education, populations of color, those with disabilities, and those with other risk factors such as smoking and obesity.

To enhance the success of people adopting a more physically active lifestyle, activities should be recommended that are enjoyable and easily worked into an individual's daily

schedule. The new message for physical activity has been broadened: although rigorous exercise programs can indeed be beneficial, even regular, moderate-intensity physical activity can provide substantial health benefits. From a public health vantage point, those people who are most inactive have the most to gain from increasing their physical activity.

In addition to providing information, education and referral to clients seen in the health care setting, health care providers and health care organizations can provide needed support and partnership to community health promotions for physical activity and play a key role in implementing other strategies included in this section.

Additional resources:

Bibliographic resources:

< Biltz, G., and Pronk, N. 1996. *Physical Activity and Health: Operating Guidelines for the Center for Health Promotion Around Physical Activity.* Minneapolis, MN: HealthPartners.
< The causes and health consequences of obesity in children and adolescents. 1998. Supplement to *Pediatrics* 101(3 suppl.).
< Centers for Disease Control and Prevention. 2002. *Physical Activity Evaluation Handbook.* http://www.cdc.gov/nccdphp/dnpa/physical/handbook/index.htm.
< Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General* www.cdc.gov/nccdphp/sgr/sgr.htm.
< Centers for Disease Control and Prevention. 1992. *Physician-based Assessment and Counseling for Exercise (PACE).*
< Corbin, CB., and Pangrazi, RP. 1998. *Physical Activity for Children: A Statement of Guidelines,* National Association for Sport and Physical Education (NASPE). Reston, VA: NASPE Publications.
< HealthPartners, Center for Health Promotion.1996. *Adult Weight Management Philosophy and Recommended Approaches*. Minneapolis, Minnesota: Center for Health Promotion, HealthPartners, at (612) 883-7453.
< National Heart, Lung and Blood Institute (NHLBI) and National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK). 1998. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults.* http://www.nih.gov.
< National Institutes of Health Technology Assessment Conference. 1993. Methods for voluntary weight loss and control. Supplement to *Annals of Internal Medicine* 119 (7 Part 2).
< Thomas, PR. (Ed.). 1995. *Weighing the Options, Criteria for Evaluating Weight-Management Programs.* Committee to Develop Criteria for Evaluating the Outcomes of Approaches to Prevent and Treat Obesity. Washington, D.C.: Institute of Medicine, National Academy Press, Washington, D.C.
< World Cancer Research Fund/American Institute for Cancer Research. 1997. *Food, Nutrition and the Prevention of Cancer: a Global Perspective.*

Organizational resources:

< The National Osteoporosis Foundation, c/o AMA 515 North State Street, Chicago, IL 60610, www.nof.org.
< The National Resource Center for Osteoporosis and Related Bone Disorders, 1150 17th Street, NW, Suite

500, Washington, D.C. 20036-4603, www.osteo.org.

< *Osteoporosis Tool Kit*. Association of State and Territorial Chronic Disease Program Directors. Contact Fran Doring, Nutrition and Physical Activity Unit, MDH, at (651) 281-9843, fran.doring@health.state.mn.us.

Evidence for strategy:
Numerous studies have shown that physicians and other health care providers consider preventive health services to be important and believe they have a central role in providing preventive services. Consumers also consistently identify physicians and nurses as primary sources of health information and consider their advice on health promotion activities to be a primary motivator for behavior change. Although recommendations given by health care providers have been shown to increase physical activity among adults, a similar effect of counseling for children and adolescents has not been examined. This important resource is currently underutilized. Decreasing time provided for health care visits, the lack of reimbursement for preventive care services, and patient education are significant barriers to providing education and referral.

Has this strategy been implemented in Minnesota?
Yes, some health care organizations have developed programs to promote healthy lifestyles (e.g., phone lines staffed by health professionals to counsel patients, magazines, TV spots, newsletters) and include clinical preventive services, as well as partnering with other organizations in community health promotion activities to promote physical activity. Successful models for lifestyle change have been implemented with patients with diabetes and can be transferred more broadly.

Indicators for this strategy:
< Number of people reached with counseling or information activities.
< Number and content of articles published, as well as the circulation of these publications.
< Recognition, understanding, or implementation of messages as measured in surveys or interviews.
< Number of people reporting some implementation of recommendations.
< Number of people referred to appropriate behavioral change programs.
< Number of people completing behavioral change programs.
< Number of people with improved health status measures resulting from behavioral change.

For more information contact:
< Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
< Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us, MDH Health Education Unit.
< Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Implement HealthPartners 10,000 Steps® program.

	Systems	Community	Individual
Primary		U	U
Secondary			
Tertiary			

Background:
Physical activity has a critical impact in preventing and controlling numerous chronic diseases, including heart disease, stroke, cancer, diabetes, and osteoporosis. Walking is the most popular form of physical activity. It can be safely performed and easily incorporated into the daily lives of most people. Research supports the value of walking and moderate activity. In fact, a recent study found a 30-40 percent reduction in the risk of coronary events for women who walked briskly at least three hours a week or who were vigorously active 1.5 hours a week. Promoting walking is one of the best population-based approaches for promoting physical activity.

Additional resources:
Bibliographic resources:
< Centers for Disease Control and Prevention. 2001. Increasing physical activity: A report on recommendations of the Task Force on Community Preventive Services. *Morbidity and Mortality Weekly Report*, 50(No. RR-18):1-18. www.cdc.gov/mmwr/.
< Centers for Disease Control and Prevention. 1996. *Physical Activity and Health: A Report of the Surgeon General* www.cdc.gov/nccdphp/sgr/sgr.htm.
< Corbin, CB., and Pangrazi, RP. 1998. *Physical Activity for Children: A Statement of Guidelines*, National Association for Sport and Physical Education (NASPE). Reston, VA: NASPE Publications.

Organizational resources:
< Be Active Minnesota, non-profit foundation with a mission to improve the well being of Minnesotans through the support and promotion of physical activity, at (877) 483-4333 or www.beactiveminnesota.org.
< *HealthPartners 10,000 Steps® Program*. Contact: HealthPartners, Center for Health Promotion, at (952) 967-6713 or visit www.healthpartners.com.

Evidence for strategy:
A number of evaluations of the 10,000 Steps® program have been conducted. In all evaluations, a significant increase in the number of steps taken by participants occurred over the course of the 8-week program. “Feeling better” and “having more energy” were the benefits participants reported most often as a result of joining the program. The program also assessed the participant’s readiness for change and no participants experienced backward movement in their stage of change. An eight-month follow-up survey found 94 percent of participants said the program was somewhat to very motivating for increasing their physical activity and 90 percent said the program was moderate to excellent in helping them maintain their new level of physical activity. Participants also reported high satisfaction with the program overall, as 100 percent said they would recommend it to a friend.

A number of aspects of this strategy are strongly recommended by the Centers for Disease Control and Prevention’s Task Force on Community Preventive Services because it may be tailored to a person’s readiness for change and lends itself well to being part of a community-wide campaign.

Has this strategy been implemented in Minnesota?
Yes, over 15,000 Minnesotans have participated in the 10,000 Steps Program either individually, through worksite

promotions, or through promotions in the community (i.e. parks and recreation facilities and programs).

Indicators for this strategy:

- Number of people participating in the program.
- Number of people reporting increase in number of steps during the program.
- Number of people reporting sustained steps after program.
- Number of media articles exposing more people to program.

For more information contact:

Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us, MDH Health Education Unit.

CATEGORY: Chronic/Noninfectious Disease

TOPIC: WEIGHT MANAGEMENT

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct health communications and behavior change campaigns for adults providing information and education to promote healthy weight management.	✔	✔	✔	✔	✔	✔	
Conduct health communications and behavior change campaigns for youth providing information and education to promote healthy weight management.	✔	✔	✔	✔	✔		

The prevalence of overweight and obesity in adults and children has increased substantially in the United States over the past 20 years and is a symptom of the changes in nutrition and physical activity that adversely affect health status. The increases in obesity and overweight are seen across gender, age and all racial and ethnic groups. While overweight and obesity are major public health problems, their causes - poor nutrition and physical inactivity - put even normal weight people at risk for adverse health outcomes.

Healthy People 2010 acknowledges that obesity is the result of a complex array of social, behavioral, cultural, environmental, physiological, and genetic factors. Over the past 20 years dramatic changes have occurred in the social and physical environment, while genetics and physiology have remained largely unchanged. The social and physical environment in which people live exerts a powerful influence on individual behaviors - promoting some behaviors and constraining others. Advertisements and media messages, "super-sized" portions and promotional pricing encourage consumption of foods that are high in calories, sugar, or fat and low in nutrients, while plentiful fast food restaurants, vending machines and convenience stores make these foods readily available and easily accessible. At the same time, opportunities to expend excess calories are constrained by automatic doors and drive through services, lack of sidewalks and safe recreational areas.

The average child sees 10,000 food commercials each year, 95 percent of which are for candy, fast food, soft drinks, and sugared cereals.

Effective prevention and management strategies must address aspects of the social and physical environments that promote poor health habits and inhibit healthful behaviors. Modifiable risk factors for overweight and obesity include increased calorie intake, poor nutrition, and physical inactivity. See "Nutrition" and "Physical Activity/Inactivity" strategies in this category for additional information.

The prevention and treatment of overweight and obesity involves complex questions that have no clear solutions. Current research still demonstrates that 95 to 97 percent of persons who lose weight through caloric restriction and increased physical activity regain the weight within five years. Focus needs to shift to "weight management," a lifelong process of combining balanced eating and regular physical activity to achieve or maintain a more healthy body weight, improved health, and decreased risk of disease. Weight loss to achieve "ideal" body weight is unrealistic for many people. A more realistic goal for many is to improve health through changes in eating and physical activity patterns and prevent further weight gain or achieve modest weight reduction (five to ten percent of current body weight). This approach recognizes that the success of a weight management program should be measured by weight maintenance or reasonable weight loss and maintenance, positive lifestyle changes, reductions in disease risk factors, and improvements in quality of life and self-esteem, not by reaching an "ideal" body weight.

Weight management programs should not promote body dissatisfaction, low self-esteem, restrained eating, eating disorders, or the achievement of an idealized body size and shape. Self-esteem and body image are

strongly linked. Helping people feel good about who they are can help them achieve and maintain healthy behaviors that will decrease their risk of chronic disease and the complications of obesity whether or not they achieve weight loss.

Strategy: Conduct health communications and behavior change campaigns for adults providing information and education to promote healthy weight management.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
Activities to promote healthy weight management for adults may include:

- Education and skill building strategies to promote healthy eating and regular physical activity (see "Nutrition" and the "Physical Activity/Inactivity" strategies in this category).
- Work with families to promote healthy eating patterns and regular physical activity including an appreciation of the important role that care givers have as models for healthy behavior for children.
- Work with families to seek professional guidance and financial assistance for managing eating disorders.
- Work with local health professionals to help identify at risk people with disordered eating and refer appropriately.
- Encourage realistic expectations for weight management outcomes.

Additional resources:
Bibliographic resources:

- *A First Step Toward Healthy Eating: The 1% or Less Handbook*. CSPI, at (202) 332-9110, 1875 Connecticut Ave., N W, Suite 300, Washington, D.C. 20009-5728.
- Committee to Develop Criteria for Evaluating the Outcomes of Approaches to Prevent and Treat Obesity. 1995. *Weighing the Options, Criteria for Evaluating Weight-management Programs*. Institute of Medicine, National Academy Press, Washington, DC. Paul R. Thomas, Editor.
- *Dying to Be Thin*, A NOVA documentary 2000. A videotape and teachers' guide. Available from the MDH library, at (612) 676-5090, library@health.state.mn.us.
- HealthPartners, Center for Health Promotion. (unpublished internal report, 1996). *Adult Weight Management Philosophy and Recommended Approaches*. Minneapolis, Minnesota: Center for Health Promotion, HealthPartners, at (612) 883-7453.
- *Healthy Weight Journal* and other information, at www.healthyweight.org.
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide*. NIH Publication No. 89-1493.
- National Institutes of Health, National Heart, Lung, and Blood Institute. (1994 September). *Strategy Development Workshop for Public Education on Weight and Obesity, Summary Report*, www.nhlbi.nih.
- National Heart, Lung and Blood Institute (NHLBI) and National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK). (1998, June). *Clinical Guidelines on the Identification,*

Evaluation, and Treatment of Overweight and Obesity in Adults, at http://www.nih.gov.

- National Institutes of Health Technology Assessment Conference. 1993. Methods for voluntary weight loss and control. Supplement to *Annals of Internal Medicine* 119 (7 Part 2).
- U.S. Department of Health and Human Services. 1993. *Promoting Healthy Diets and Active Lifestyles to Lower-SES Adults, Market Research for Public Education.*
- U.S. Department of Health and Human Services 2001. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity.* Public Health Service, Office of the Surgeon General.

Organizational resources:

- American Association of Retired Persons (AARP), at (202) 434-2277, www.aarp.org.601 E Street, NW, Washington, DC 20049.
- American Cancer Society, at (800) ACS-2345, www.cancer.org.
- American Heart Association, at www.heart.org.
- Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, at www.cdc.gov/nccdphp/dnpa.
- Dairy Council of the Upper Midwest, at (651) 488-0261, www.whymilk.com. 2015 Rice St, St. Paul, MN 55113-6891.
- Eating Disorders Awareness and Prevention, at www.edap.org.
- Federal Trade Commission, Consumer Protection, Diet, Health and Fitness, provides consumer information on weight loss programs and products, at www.ftc.gov/bcp.
- National Institutes of Health, National Heart, Lung and Blood Institute, NHLBI Obesity Education Initiative, at www.nhlbi.nih.
- Sisters Together Move More Eat Better, a project targeted toward African American women, at www.hsph.harvard.edu/sisterstogether.

Evidence for strategy:
Data demonstrating successful long term resolution of overweight status to standard body weight recommendations is limited. Most research demonstrates success in a small number of subjects in achieving modest weight loss of five percent to 10 percent of initial body weight. Research demonstrates that such modest weight loss has positive heath benefits on chronic disease risk factors including blood glucose control, blood pressure, and total serum cholesterol.

Has this strategy been implemented in Minnesota?
Yes, a variety of organizations in Minnesota have implemented weight management strategies. In addition, academic institutions in Minnesota have conducted research related to weight management strategies.

For more information contact:

- Fran Doring, at (651) 281-9843 fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Conduct health communications and behavior change campaigns for youth providing information and education to promote healthy weight management.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
Defining overweight in adolescents is difficult because the definition is not based on disease risk as it is for adults. The Centers for Disease Control and Prevention sets the 95th percentile of the U.S. National Health and Nutrition Examination Survey (NNHANES III) population as overweight. Unhealthy weight management practices such as fasting, diuretics, laxatives and purging are widespread among adolescents, especially young women. These practices are risk factors for developing eating disorders such as anorexia nervosa, bulimia, and binge eating.

Activities to promote healthy weight management for children and youth may include:

- Education about realistic expectations for normal growth and development including normal changes in body size and shape and an understanding that there is no ideal body size, shape, or weight that every individual should achieve.
- Education about social pressure for excessive slenderness and weight discrimination.
- Education about unsafe weight loss practices.
- Work with families to promote healthy eating patterns and regular physical activity including an appreciation of the important role that care givers have as models for healthy behavior for children.
- Work with families to promote development of healthy feeding relationships between parents and children.
- Work with families to seek professional guidance and financial assistance for managing eating disorders.
- Work with local health professionals to help identify at-risk people with disordered eating and refer appropriately.
- Work with school nurses, counselors, and coaches regarding signs and symptoms of eating disorders and eating recommendations that may exacerbate them.
- Work with school, camp, scouting groups, etc. on promotion of healthy body image by young women and men.

Additional resources:
Bibliographic resources:

- The causes and health consequences of obesity in children and adolescents. 1998. Supplement to *Pediatrics* 101 (3 suppl.).
- *Children and Weight: What Health Professionals Can Do: A Training Kit for Presenting Workshops for Health Professionals.* University of Calif Cooperative Extension, at (800) 994-8849, http://anrcatalog.ucdavis.edu. 6701 San Pable Ave, Oakland, CA 94608-1239.
- *A First Step Toward Healthy Eating: The 1% or Less Handbook.* CSPI, at (202) 332-9110. 1875 Connecticut Ave., N W, Suite 300, Washington, D.C. 20009-5728.

- Committee to Develop Criteria for Evaluating the Outcomes of Approaches to Prevent and Treat Obesity. 1995. *Weighing the Options, Criteria for Evaluating Weight-management Programs*, Institute of Medicine, National Academy Press, Washington, DC. Paul R. Thomas, Editor.
- *Dying to Be Thin*, A NOVA documentary 2000. A videotape and teachers' guide. Available from the MDH library, at (612) 676-5090, library@health.state.mn.us.
- HealthPartners, Center for Health Promotion. (unpublished internal report, 1996). *Adult Weight Management Philosophy and Recommended Approaches*. Contact: (612) 883-7453.
- *Healthy Weight Journal* and other information, at www.healthyweight.org.
- National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide*. NIH Publication No. 89-1493.
- National Institutes of Health, National Heart, Lung, and Blood Institute. 1994. *Strategy Development Workshop for Public Education on Weight and Obesity, Summary Report.*
- National Heart, Lung and Blood Institute (NHLBI) and National Institute of Diabetes, Digestive and Kidney Diseases (NIDDK). 1998. *Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults*, at http://www.nih.gov.
- National Institutes of Health Technology Assessment Conference. 1993. Methods for voluntary weight loss and control. Supplement to *Annals of Internal Medicine* 119 (7 Part 2).
- *The Role of Michigan Schools in Promoting Healthy Weight, A Consensus Paper*, Michigan Department of Education, Michigan Department of Community Health, and the Michigan Governor's Council on Physical Fitness, Health and Sports. Available at: www.mde.state.mi.us, www.michiganfitness.org, or www.emc.cmich.edu.
- U.S. Department of Health and Human Services. 1993. *Promoting Healthy Diets and Active Lifestyles to Lower-SES Adults, Market Research for Public Education.*
- U.S. Department of Health and Human Services. 2001. *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity.* Public Health Service, Office of the Surgeon General.

Organizational resources:

- American Cancer Society, at (800) ACS-2345, www.cancer.org.
- American Heart Association, at www.heart.org.
- Centers for Disease Control and Prevention, Division of Nutrition and Physical Activity, at www.cdc.gov/nccdphp/dnpa.
- Dairy Council of the Upper Midwest, at (651) 488-0261, www.whymilk.com, 2015 Rice St, St. Paul, MN 55113-6891.
- Eating Disorders Awareness and Prevention, at www.edap.org.
- Federal Trade Commission, Consumer Protection, Diet, Health and Fitness, at www.ftc.gov/bcp. This organization provides consumer information on weight loss programs and products.
- National Institutes of Health, National Heart, Lung and Blood Institute, NHLBI Obesity Education Initiative, at www.nhlbi.nih.

Evidence for strategy:
Data demonstrating successful long-term resolution of overweight status to standard body weight recommendations is limited. Most research demonstrates success in a small number of subjects in achieving modest weight loss of five percent to ten percent of initial body weight. Research demonstrates that such modest weight loss has positive heath benefits on chronic disease risk factors including blood glucose control, blood pressure, and total serum cholesterol.

Has this strategy been implemented in Minnesota?
Yes, a variety of organizations in Minnesota have implemented weight management strategies for youth. In addition, academic institutions in Minnesota have conducted research related to weight management strategies for youth.

For more information contact:
- Fran Doring, at (651) 281-9843, or fran.doring@health.state.mn.us, MDH Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, or pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Category:

DISABILITY/DECREASED INDEPENDENCE

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 10: Promote the well-being of the elderly, those with disability, disease and/or chronic illness.

CATEGORY: DISABILITY/DECREASED INDEPENDENCE

Promoting healthful aging and supporting the well-being of the elderly has emerged as an important public health issue in this century. The issue will become more important in coming years as the relative proportion of the elderly increases. Minnesota's population of people aged 65 and older will almost double in size between the years 2000 and 2030. By the year 2030, when the first of the baby boomers turn 85 years old, older people will constitute 23 percent of the total state population, up from 12.7 percent of the population in 2000 (Department of Human Services, 1998).

It is fair to assume Minnesota's continuum of long term care services and social and housing systems will be significantly affected although the exact dimensions are hard to predict. We know that older populations have relatively greater needs for support services and that the availability and affordability of services determine an older person's ability to live independently in the community. We also know that Minnesota, as a society, is continually growing older. According to the state demographer's office, by the year 2020, most counties in Minnesota will have decreasing populations where deaths exceed births.

The sheer size of this cohort makes this an important issue for the state. The need that accompanies reduction in functioning, increased disability, and chronic conditions is likely to be enormous and overwhelm the traditional response of family, the private sector, and government. Matching appropriate services to the needs of older people will require careful planning by federal and state government, the private sector and individuals.

Some of the things that can be done now to promote healthful aging and to support the well being of the elderly in Minnesota include:

- Fostering healthful behaviors such as good nutrition, physical exercise, medications management, obtaining flu shots, efforts to reduce isolation, and promote mental health.
- Assisting the elderly in obtaining full benefits entitlement to combat the effects of low income that many elderly face, such as malnutrition, poor housing, and social isolation.
- Designing a continuum of long-term care options that are conducive to preserving independence and dignity.
- Preventing falls that are major contributors to injury and death among the elderly.
- Supporting active participation in one's community through meaningful activity.
- Providing a full continuum of care to an aging population by increasing community capacity to support people as they age. This can be accomplished through devising service strategies that focus on the whole person, expanding the availability of the informal and quasi-formal support networks, and promoting meaningful integration of the aging population into all aspects of community life.

While a recent study shows that disability among older Americans is declining rapidly and at an accelerating pace[1], the sheer number of those aged 65 and older living with disabilities is significant.[1] Between 1982 and 1994, the number of Americans with chronic disabilities increased by about

[1] Mauton, KG, Gu, XL. (2001). Proceedings of the National Academy of Sciences; May 8.

600,000 to 7 million.[2] However, chronic problems, such as arthritis, osteoporosis, incontinence, visual and hearing impairments, and dementia are of concern because of their significant impact on day-to-day living. Chronic conditions are most frequently cited as the main cause of need for assistance with activities of daily living (ADL) skills. Therefore, primary prevention of diseases and chronic conditions triggering assistance with ADL will be critical to reducing the number of those dependent on help with ADLs. To accommodate the changing needs of an increasingly older society, we must prevent the ill from being disabled and help people with disabilities preserve function and prevent further disability. The strategies presented here support local efforts to do just that.

For related strategies see, "Arthritis", "Health Disease, Heart Attack and Stroke", "Nutrition", "Osteoporosis", and "Physical Activity/Inactivity" in the *Chronic/Noninfectious Disease* category; "Mental Health" in the *Mental Health* category; "Promote Access to Health Care" in the *Service Delivery System* category; and "Fires, Falls and Other Home Hazards" in the *Unintentional Injury* category.

[2] Federal Interagency Forum on Age-Related Statistics. (August 2000). *Older Americans 2000: Key indicators of well-being*. Available at: http://agingstats.gov.

CATEGORY: Disability/Decreased Independence

TOPIC: PROMOTE HEALTHFUL AGING AND SUPPORT THE WELL-BEING OF THE ELDERLY

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Create a community consortium for the development of services for seniors.	Local Government	✔	✔		Social Services, RSVP	✔	Pharmacies, Extension Services
Promote service coordination.	✔	✔	✔		✔		
Implement eldercare assessment and health promotion clinics.	✔	✔	✔		✔		
Support family caregivers.	✔	✔	✔	✔	✔	✔	Parish Nurses
Establish a health promotion program for older adults.	✔	✔	✔	✔	✔	✔	
Conduct peer counseling for the elderly.	✔	✔	✔		✔		Parish Nurses
Promote the prevention of falls in the home.	✔	✔	✔		✔		
Promote medication management.	✔	✔	✔			✔	Pharmacies
Promote the use of residential smoke alarms.	✔	✔	✔		✔	✔	Extension Services

Strategy: Create a community consortium for the development of services for seniors.

	Systems	Community	Individual
Primary			
Secondary		✔	
Tertiary	✔		

Background:
Minnesotans aged 65 and older comprise 12 percent of the population. Between 1990 and 2000, the 65 plus population grew 9 percent, lower than the rate for the younger population. This overall number reflects very low growth among younger elderly, ages 65 to 74, combined with more rapid growth for those over age 75. There was a 24 percent increase in the extremely old population – 85 and older. The low growth for the younger elderly is attributable in large part to low birth rates during the Great Depression of the 1930s.

The related predictable aging-associated decline in health and function demands a realistic balancing of seniors' levels of medical need, functional status, individual health preferences, and cost in order for them to remain living independently. To provide for and coordinate these needed compensatory services, communities require two factors:

- A mechanism to assure the availability of a community-based, long-term-care continuum of needed services.
- A mechanism to access those services, assuring the right services are available at the right time at a right price (see the promotion of service coordination strategy for additional information).

This strategy creates within communities a consortium of service providers, consumers, advocates for seniors, and payers of services to assess and plan for a network of needed services, ensure consumers link with those services, and evaluate for effectiveness and efficiency on an ongoing basis. It could also build on efforts already existing, such as programs through the Area Agencies on Aging and/or seniors' advocacy groups.

In 2001, all Minnesota counties' social service agencies completed a "gaps analysis" regarding needs of their elderly population. The results are to be used to support a variety of strategies including service development through the Community Service and Services Development Grant Program. The purpose of the grants is to "help communities rebalance the services for persons age 65 years and older by reducing facility care and increasing the supply of home- and community services including housing and service options." Grant development is to occur biennially in accordance with the CSSA planning process. Gaps analysis results may be retrieved from: http://www.dhs.state.mn.us/agingint/ltctaskforce/gapsdefault.htm.

Additional resources:
Bibliographic resources:

- Aday, L. 1997. Vulnerable populations: A community-oriented perspective. *Family and Community Health* 19(4): 1-18.
- Bailey, D., and Koney, KM. 1992. *Developing Community-based Consortia: An Integrative Framework.* Cleveland, OH: Case Western Reserve Univ., Mandel School of Applied Social Sciences.

- Krothe, J. 1997. Giving voice to elderly people: Community-based long-term care. *Public Health Nursing* 14(4): 217-226.

Organizational resources:

- Minnesota Board on Aging and its various Area Agencies on Aging, at (651) 296-2770 or (800) 333-2433 for general information and/or the Senior LINKAGE LINE.
- Minnesota Department of Health, Division of Facility and Provider Compliance, at (651) 215-8700.
- Minnesota Department of Human Services. Two relevant resources are: Seniors Agenda for Independent Living (SAIL), at (651) 251-1946; and Project 2030, at (651) 296-2062, www.dhs.state.mn.us/aging/aboutaging/default.htm.
- U.S. Department of Health and Human Services Agency on Aging, www.aoa.gov.

Evidence for strategy:

In order for such a consortium to succeed, each member has to identify and value a positive return on their "investment" in the consortium. If the intent of the consortium is to assess for gaps in the current long-term-care continuum, develop and implement the needed services, and assure a "seamless" referral and access system, each consortium member must see a personal or organizational gain in the work of the consortium. Differing perspectives among consortium members must, therefore, be addressed early in the consortium's development, so the organization can focus on the mutual benefit of all its members (Aday, 1997).

Several consortia-development phases need to occur for members to develop "buy in" to the process (Bailey and Koney, 1992). These phases include:

- A convening person or local organization must step up and take leadership in convincing potential consortium members that participation is to their benefit for reasons that closely fit their individual missions (e.g. economic, political, or social action). This *assembling* phase is characterized by high levels of intense face-to-face communication among stakeholders and focuses largely on selling the consortium's purpose.
- After the members are in place, the leader must begin to provide guidance in establishing a consortium *culture* that encourages and rewards free exchange of facts and opinions with the identification of mutual gain and community betterment.
- The dialog then moves into the *ordering* phase, in which operational issues of role differentiation, systems integration, and structure are addressed. This phase is characterized by conflict and a high degree of intensity. A turnover in membership may occur at this point, as the reality becomes clearer, and some determine it is no longer in keeping with their missions. Alternatively, new members may seek to join. The leader must demonstrate skills in active listening, empathy, negotiation, and feedback in recognizing and appreciating the many differences that will arise within the group.
- Having grappled with the issues of differentiating and integrating the many systems, roles, and structures, the consortium makes the transition from

ordering into *performing.* At this point, members must understand the costs and benefits of their involvement, their own roles, and the ways they fit into the larger context, and they must move to placing higher value on the "good of the consortium" than on the "benefit" to their own organizations. Compromise, collaboration, and creativity are required. Each member participates in subgroups developed to operationalize the various systems, which have been established to accomplish the consortium's goals. The leader's role is to continue communicating a sense of how things will be better when the purpose is met and to provide informal collective evaluation of the completed tasks to the whole group.

- In the final phase, *ending,* consortium members come together to measure the extent to which its purpose has been met. The members may determine the work is of continuing value and design a permanent structure. They may also change the original purpose and return to the ordering phase, or they may splinter, with some choosing a radically different course and returning to assembling.

Has this strategy been implemented in Minnesota?
Yes, in counties participating in DHS's Seniors Agenda for Independent Living (SAIL) program. In addition, several consortia focusing on needs of the elderly are hosted by regional Area Agencies on Aging around the state.

Indicators for this strategy:
- Existence of a continuum of services reflective of the elderly population's needs.
- Percentage of home- and community-based services expenditure as part of long-term-care total expenditures.
- Minutes from meetings or other documentation of the coalition's proceedings.
- Reduction in number of "case mix A" clients occupying nursing home beds.

For more information contact:
- Candy Hanson, Adult Services Supervisor, Chisago County Elderly Services Committee, at (651) 213-0301, cjhanson@co.chisago.mn.us.
- Dawn Simonson, Aging Initiative, Minnesota Department of Human Services, at (651) 215-1824, dawn.c.simonson@state.mn.us.
- Minnesota Association of Area Agencies on Aging, at: (507) 288-6944, FAX: (507) 288-4823, 421 First Avenue SW, Suite 201, Rochester, MN 55902.

Strategy: Promote service coordination.

	Systems	Community	Individual
Primary	✔		
Secondary			
Tertiary			✔

Background:
A full continuum of services in the community is required to maintain frail elderly within the least restrictive residential environment for as long as possible. Mechanisms also need to be in place within communities to assure that those in need of services can access them. Elders and their families may be assisted through the services of a service coordinator (i.e. a professional individual who is not employed by a health

care provider, but who is knowledgeable about the area's community-based resources for the elderly). Basic service coordination consists of:

- Provision of outreach to those potentially in need of the services.
- Screening, intake, and eligibility determination.
- Assessment.
- Service arrangement.
- Monitoring and follow-up.
- Reassessment.
- Care planning.
- Assistance of client's negotiations with a complex, fragmented health care system.
- Assurance of continuity of care.
- Provision of comprehensive coordination along a continuum of care.

Although it is not required, a professional providing service coordination is often certified as a certified case manager (CCM). He or she may provide services as an independent operator, or may be employed by a payer or service provider, or perhaps by an elderly consortium.

A critical component of the effectiveness of service coordination is the availability of data from a thorough assessment of the senior's physical, functional, mental, and social capacities. A plan of care tailored to meet the senior's specific needs will depend on this (see the strategy on implementation of eldercare assessment and health promotion clinics for additional information).

Additional resources:

Bibliographic resources:

- Jamieson, MK. 1989. Nursing our neighbors. *Am J Nurses* 89(10): 1290-01.
- Krothe, J. 1997. Giving voice to elderly people: Community-based long-term care, *Public Health Nursing* 14(14): 217-226.
- Kersbergen, A. 1996. Case management: A rich history of coordinating care to control costs. *Nursing Outlook* 44: 169-72.
- Lyon, JC. 1993. Models of nursing delivery and case management: Clarification of terms. *Nursing Economics* 11(3): 163-169.

Organizational resource:

- Area Agency on Aging. Commission on Case Manager Certification. Minnesota Board on Aging, at (651) 296-2770.

Evidence for strategy:

For an elderly individual with even minimally diminished capacity, accessing services can be problematic. Being an informed consumer may be impossible, even with supportive family, friends, or both to assist. Such external factors as complex referral systems, eligibility mazes, forms, transportation to appointments, and automated phone answering requiring the caller to select from a menu can become barriers to access. Equally significant, however, can be personal barriers, such as, diminished hearing and vision, fear of loss of independence, grief over loss of function, or depression. Even for the able and the competent, access is compromised by lack of knowledge of options; most elderly believe nursing home placement is their only available alternative. Information about other options is most frequently discovered by word-of-mouth from peers (Krothe, 1997).

Has this strategy been implemented in Minnesota?
Yes, long-term care consultation (formally called "preadmission screening") is available through most local public health departments in Minnesota and is required for individuals interested in support services through county programs. In addition, some private case management firms operate in the metro area. One example is Living at Home/Block Nurse, Inc., which also has branches in Greater Minnesota.

Indicators for this strategy:
- Number of persons with "case mix level A" currently in nursing homes.
- Service coordinator client satisfaction.
- Level of client functional measures over time.

For more information contact:
- County public health departments' long-term care consultant.
- Malcolm Mitchell, Living at Home/Block Nurse Program, at (651) 649-0315.

Strategy: Implement eldercare assessment and health promotion clinics.

	Systems	Community	Individual
Primary	✔		
Secondary	✔		✔
Tertiary			✔

Background:
With rapid growth of the older population expected in the next century, the prevention or postponement of disabilities is a major public health concern. Although preventing disability from a disease by preventing the disease is preferred, this strategy is not realistic in the old and very old sub-populations. Tertiary interventions aimed at preventing adverse outcomes of disease emerge as reasonable goals, especially when linked with primary interventions to prevent impairments or functional declines associated with the aging process itself (Guralnik, Fried, and Salive, 1996). A service to provide the mix of screening and assessment resources associated with these interventions can also provide the functional and physical assessment necessary for selection of appropriate in-home services described in the service coordination strategy.

While the most familiar setting in which this can occur is that of a clinic, such screening and assessment services can also be offered via mobile van or in the home. Similarly, while the most familiar provider of such services is a physician, most screening and assessment procedures are well within the license of advanced practice nurses or mid-level medical practitioners. A physician can be involved if diagnosis and treatment are also part of the services provided.

Assessment and health promotion services can be operated as a freestanding enterprise, associated with a medical or health system practice, a nursing home, or a public health nursing clinic, or under the auspices of a consortium (see the strategy on creating a community consortium for the development of services for seniors for more information). The measure of its success is appropriate and effective referral and follow-up within the community served (not including internal referrals).

Within such a service, elders and their families can expect, at a minimum, the following (Public Health Foundation, 1993; Institute of Medicine, 1990):

- Assessment of functional capacity, applying standardized instruments (see special notes).
- Review of health history and current management regimen (including medications).
- Assessment of cognitive capacity, applying standardized instruments.
- Nutrition screening.
- Provision of age-appropriate screening procedures as recommended by the United States Task Force on Preventive Services (e.g., smoking, blood pressure, breast cancer up to age 75, hearing, and vision).
- Provision of immunizations.
- Referral to other providers, when necessary.
- Tenacious follow-up.

Additional resources:

Regarding functional assessment for the elderly, the literature is large. Most sources include some version of the activities of daily living (using the Activities of Daily Living [ADL] scale or the Instrumental Activities of Daily Living [IADL] scale). However, recent innovations to be considered include:

- Breslow, L., Beck, JC., et al. 1997. Development of a health risk appraisal for the elderly (HRAE). *American Journal of Health Promotion* 11(5): 337-343.
- Padula, C. 1997. Development of the health promotion activities of older adults measure. *Public Health Nursing* 14(2): 123-8.
- Song, M., and Lee, EO. 1996. Development of a functional capacity model for the elderly. *Research in Nursing and Health* 19: 173-181.

Regarding health promotion for the elderly:

- Association of State and Territorial Health Officers (ASTHO). 1993. *Wearing Well: Public Health Eldercare Challenges and Resources*, Pub. #131, Washington, DC: Public Health Foundation.
- Dychtwald, K. 1985. *Wellness and Health Promotion for the Elderly.* Aspen.
- Hawranki, P. 1991. Preventing health problems after the age of 65. *Journal of Gerontological Nursing* 17(11): 20-25.
- Institute of Medicine. 1990. *The Second Fifty Years: Promoting Health and Preventing Disability*. RL. Berg and JS. Cassells, Eds. Washington, DC: National Academy Press.

Other:

- Collins, CE., Butler, RT., et al. 1997. Models for community-based long-term care for the elderly in a changing health system. *Nursing Outlook* 45(2): 59-63.
- Guralnik, JM., Fried, LP., and Salive, ME. 1996. Disability as a public health outcome in the aging population. *Annual Review of Public Health* 17: 25-46.

Evidence for strategy:

Recent studies have suggested that falls, confusion, and depression are leading contributors to disability among the elderly, in addition to the changes related to the natural course of their chronic diseases (Guralnik et al., 1996; Hawranik, 1991; Arnold, Kane, and Kane in Dychtwald, 1985). In many instances, falls and confusion are, in turn, related to mismanagement of prescribed medications,

oftentimes compounded by self-medication with over-the-counter drugs. For this reason, they should be emphasized as part of the clinical encounter. (See also strategy, "Promote Medication Management" in this section.). Conducting timely health assessments and offering health promotional opportunities can help to prevent and decrease disability from falls and chronic diseases among the elderly. For additional related strategies see the strategies on "Mental Health" in the *Mental Health* category and the strategies on "Fires, Falls and Other Home Hazards" in the *Unintentional Injury* category.

Has this strategy been implemented in Minnesota?
Yes, to a limited extent. Geriatric outpatient clinics and specialists, mostly concentrated in urban areas, offer comprehensive clinical assessment. Public health nursing clinics, including elderly health promotion activities, are sponsored by some local public health agencies. See the related strategy, "Establish a health promotion program for older adults" in this section.)

Indicators for this strategy:
- Number of assessments completed.
- Number and results of timely and appropriate follow-ups.
- Number of clinics in the community or region.
- Emergency Room (ER) and hospital admissions for fall-related injuries.
- ER and hospital admissions for medication toxicity.
- Number of seniors successfully completing smoking cessation programs.
- Clinic referral and follow-up rates.

For more information contact:
- Contact your local public health or social services agency.

Special notes:
Elderly assessment instrumentation is a large literature, too large to summarize adequately in this compendium. Interested readers may wish to check out Assessing the Elderly: A Practical Guide to Measurement by Rosalie Kane and Robert Kane (Lexington, Mass: Lexington Books, 1981). It provides a review of four widely used tools: the Sickness Impact Profile (SIP), the OARS instrument (from Duke's Older Americans Resources and Services Group), CARE (Comprehensive Assessment and Referral Evaluation), and PACE (Patient Appraisal and Care Evaluation).

Strategy: Support family caregivers.

	Systems	Community	Individual
Primary			
Secondary			
Tertiary			✔

Background:
Older adults first turn to their families and friends when they need help. An estimated 7,000,000 households now contain an individual who is helping an older adult with personal care, household management, or both. The most important coping resources are the combination of family helpers who join forces and the co-residence of an elderly person with a helper (Boaz and Hu, 1997). Interventions and other kinds of support that help families to build needed internal or external resources (i.e., developing their capacity for problem solving, sense of

mastery, and perception that changes can be managed, as well as stabilizing their own support network) are critical to families' capacities to fulfill their roles as elder caregivers. Community efforts to develop and maintain a continuum of services for community-based eldercare cannot ignore the development and maintenance of family caregivers. Examples include:

- Support groups for caregivers, a frequently employed strategy at the local level.
- Specific training for caregivers in aspects of care provision for which few are ordinarily prepared. A curriculum recently developed for this purpose focused on monitoring vital signs, managing elimination problems, managing confusion, using medications wisely, lifting and moving individuals, maintaining hygiene, and exploring nutritional issues (Mahoney and Shippee-Rice, 1994).

Additional resources:

Bibliographic resources:

- Barer, B., and Johnson, C. 1990. A critique of the care giving literature. *The Gerontologist*: 20: 26-29.
- Boaz, RF., and Hu, J. 1997. Determining the amount of help used by disabled elderly persons at home: The role of coping resources. *Journal of Gerontology: Social Sciences* 52B(6): S317-S324.
- Fink, S. 1995. The influence of family resources and family demands on the strains and well-being of care giving families. *Nursing Research* 44(3): 139-146.
- Mahoney, DF., and Shippee-Rice, R. 1994. Training family caregivers of older adults: A program model for community nurses. *Journal of Community Health Nursing* 11(2):71-78.
- Miller, LL., Hornbrook, PG., et al. 1996. Development of use and cost measures in a nursing intervention for family caregivers and frail elderly patients. *Research in Nursing and Health* 19: 273-285.
- Penrod, JD. et al 1995. Who cares: The size, scope and composition of the caregiver support system. *The Gerontologist* 35(4):489-497.

Organizational resource:

- Vocational-Technical Colleges and other providers of Home Health Aide training.

Evidence for strategy:

A recent study supported by the federal Agency for Health Care Policy and Review (AHCPR), found that, after controlling for disabilities in physical and cognitive functioning, the most important coping resources are the combination of family helpers who join forces and the co-residence of an elderly person with a helper (Boaz and Hu, 1997). Other research has shown that a family's capacity to provide needed services to a frail elder member is dependent on a balance between the family's ability to maintain its well-being (i.e. members' satisfaction with the functioning of the family unit, their perception of their own health and emotional well-being, and their perception of the family's health) and the strain and demands on the family related to caring for the senior. Family well-being, in turn, was found to be related to the family's own internal resources (in terms of problem solving, sense of mastery, and perception that changes can be managed) and the extent to which their own family support network functioned. Other research has demonstrated that when family caregivers felt better about

their situation, had more confidence in their ability to care for the care receiver, and felt reassured that they were doing the right things, making the right decisions, and giving the right care, overall costs to the long-term-care system were reduced, with improved outcomes (Miller et al., 1996).

Has this strategy been implemented in Minnesota?
Yes, many organizations provide support groups for caregivers. Often this is a collaborative effort among community groups providing resources for those with decreased independence and disability. Typically this would include such organizations as hospitals, local public health departments, voluntary health associations (e.g., local chapters of the American Cancer Society) hospices, faith communities, etc.

Indicators for this strategy:
- Well-being of families providing care for elders.
- Percentage of total long-term-care expenditures represented by home- and community-based-services expenditures.
- Number of support and respite groups for caregivers.
- Number of organizations, providers, etc., that offer support and services for caregivers.

For more information contact:
Local community and information referral services.

Strategy: Establish a health promotion program for older adults.

	Systems	Community	Individual
Primary		✔	✔
Secondary			
Tertiary			

Background:
This strategy describes the Anoka County Health Promotion Program for Older Adults. However, any health promotion program for older adults can be modeled after this one. The Anoka County Health Promotion Program for Older Adults encourages and supports older citizens to assume responsibility for their health, experience healthy aging, and live well. The program emphasizes three types of change: awareness, lifestyle, and supportive environment. It is available to all senior residents and it involves extensive collaboration with organizations and programs already reaching out to older adults, including churches, community education, city recreation, public health nursing, community agencies, and senior centers.

Potential areas of content of any health promotion program for older adults include:
- Nutrition.
- Lifestyle changes.
- Health problems and appropriate care.
- Access to care.
- Clinical services.

Group classes, each lasting two hours in length, are held once a week for six weeks. Topics covered in the series include:
Week 1: Eating Healthy for Your Heart
Hypertension

Week 2:	Fitness
	Foot Care
Week 3:	Fiber and Water in Your Diet
	Food Guide Pyramid
	Shopping on a Budget
Week 4:	Safety for Seniors
	Hearing Through Older Ears
Week 5:	Using Medications Wisely
	Brown Bag Medication Check
Week 6:	Loss, Grief, and Depression
	Know Your Community Resources

Classes are presented by a variety of representatives from the community, including public health nurses, nutrition staff, pharmacists, law enforcement officers, a hearing loss educator, a hospital EMS coordinator, etc. Class participation can be enhanced through special incentives, such as water bottles, safety lights, food, therabands, etc., provided to support lifestyle-change activities. Incentives for the program can be sought through donations from businesses in the local geographic areas where the classes are held.

Additional resources:

Bibliographic resources:

- Hawaranik, P. 1991. Preventing health problems after the age of 65. *Journal of Gerontological Nursing* 17(11).
- Resnick, B. 2001.Geriatric health promotion. *Medscape Nursing* 1(1).
- Wallace, S. and Levin, J. 2000. Patterns of health promotion programs for older adults in local health departments. *American Journal of Health Promotion* 15(2):130-133.
- Williams, SJ. et al 1998. Health promotion workshops for seniors: Predictors of attendance and behavioral outcomes. *Journal of Health Education* 29(3):166-173.

Organizational resource:

- National Eldercare Institute on Health Promotion. American Association of Retired Persons, 601 E. St. NW, 5th Floor-B, Washington, DC 20049. [Extensive publications and curricula.]

Evidence for strategy:

Many of the illnesses or problems experienced by seniors have the potential to be prevented, postponed, or reversed - even after the age of 65. This fact has tremendous implications, given rising health care costs and the growing senior population (Hawranik, 1991).

In evaluating the Anoka Health Promotion Program for Older Adults via pre- and post-test (at three and six months) surveys, the behavior of the participants showed statistically significant change in eight of the ten indicators the project was tracking. Indicators that changed at the .01 level of significance include the following: reading nutritional labels; increasing exercise; never opening the door to anyone without knowing that person's identity; increasing awareness of drug side effects; observing foot conditions; wearing seat belts; drinking water; and choosing foods with lower caloric content. In addition, four of these areas (those relating to exercise, drug side effects, nutritional labels, and status of feet) were statistically significant at the .001 level.

Focus groups with participants indicated satisfaction with the classes. Participants described the program as a thorough, complete, interesting, positive, and fun experience. The classes stimulated curiosity,

increased awareness and knowledge, and challenged older adults to modify some behaviors.

Has this strategy been implemented in Minnesota?
Yes, the Anoka County Community Health and Environmental Services Department implemented a Health Promotion Program for Older Adults through a grant they received from the Medtronic Foundation.

Indicators for this strategy:
- Reduction of salt intake.
- Frequency of reading nutritional labels when choosing foods to purchase.
- Choice of foods with fewer calories.
- Reduction of fat intake.
- Increase in aerobic exercise.
- Maintenance of water intake (i.e., drinking eight-ounce glasses of water four to seven times per day).
- Failure to open the door to anyone without knowing that person's identity.
- Awareness of purpose, action, and potential side effects of medications.
- Number of people who observe the status of their feet for common foot conditions.
- Frequency of car safety belt use.
- Participation rates.
- Participant satisfaction.

For more information contact:
- Anoka County Community Health and Environmental Services Department, at (763) 422-7048.

Strategy: Conduct peer counseling for the elderly.

	Systems	Community	Individual
Primary			
Secondary			
Tertiary	✔		✔

Background:
Keeping seniors socially connected to their community is key to promoting mental health and quality of life of the frail elderly. One strategy to support this connection is peer counseling. Activities supporting this strategy include:
- Develop a network of healthy seniors and volunteers with disabilities from the community who can provide peer counseling and support.
- Recruit and select a representative sample of individuals who can effectively relate to their peers in the home and community setting. Consider ongoing recruitment to maintain an adequate number of volunteers.
- Work with other provider organizations in the community to develop and deliver an orientation and in-depth training program which covers a range of topics from senior growth and development, communication and interpersonal relations, community resources and ways to make referrals, and cultural diversity, to some cognitive behavioral therapy skills.
- Identify incentives to keep volunteers engaged over time. These incentives might include in-services, coffee meetings, reimbursement for some expenses, recognition events, etc.
- Arrange for regular individual or group supervision and consultation. Be

available by phone (on a scheduled basis) to provide help and consultation as needed.
- Provide regular in-service trainings, which include skill-building presentations. Use other local provider groups and senior organizations as resources for in-service training.
- Identify vulnerable or at-risk seniors.
- Promote the program in the local community through bulletin inserts for worship services, presentations to service clubs and other organizations, gatherings at high rises and assisted living facilities, and meetings with other health and human service providers.
- Engage referring organizations and individuals by providing summary feedback about the referrals they are making, keeping in mind data privacy, overall objectives of the program, and the training and skills of the peer volunteers.
- Select from referrals those individuals who could benefit from a peer counselor. Examples include those who are healthy, live alone, and have limited transportation readily available; formerly active individuals who are suddenly absent from community activities; new retirees who are at a loss about what to do next; individuals who have recently relocated from a familiar community or neighborhood and from a private home to a group-living setting (e.g. condo or apartment) or from a rural to a more urban setting; those who have recovered from illness episodes and are reluctant to re-engage in the community; and caregivers who need outside support and encouragement.
- Assess referred individuals and match them with volunteer counselors. The peer counselor and the professional can then discuss appropriate steps to take based on individual need.
- Monitor the necessity of professional involvement, especially if peer counselors become extensions of professional services. A volunteer activity can become quite labor intensive.

Additional resources:
- Beck, AT. *Cognitive Therapy*. This is an audiotape of lecture presented at Western Psychiatric Institute and Clinic, Pittsburgh, P.A, on April 24, 1987.
- Gallagher, EM. 1985. Capitalize on elder strengths. *Journal of Gerontological Nursing* 11(6): 13-17.
- Hargrave, T., and Hanna, S. (Eds). 1997. *The Aging Family: New Visions in Theory, Practice, and Reality*. New York: Brunner/Mazel.
- Penning et al. 1992. Homebound learning opportunities: Reaching out to older shut-ins and their caregivers. *Gerontologist* 32(5):704-707.
- Seniors helping seniors through trying times. (1994, October/November). *Secure Retirement,* 72-75.

Evidence for strategy:
The Elder Network in Southeastern Minnesota provides peer counseling for seniors. Satisfaction surveys of clients indicate a 90 percent rate of satisfaction with the service. Clients indicate that their needs were clarified and met, not through others doing for them, but through the peer counselor's asking the kinds of questions that helped them to do for themselves.

Has this strategy been implemented in Minnesota?
Yes, many residents of Southeast Minnesota have access to elder peer counselors through volunteer programs in their communities. These programs are expanding into other areas of the state.

Indicators for this strategy:
- Engagement or re-engagement of participants in the community.
- Appropriate use of community resources.
- Numbers of volunteers in the community.
- Reports of change in affect and social behavior by significant others.
- Active interaction with others.
- Successful management of living alone, living in a new living environment, or both.
- Reduced hospitalizations.
- Decreased suicide attempts and completions.
- Increased volunteer life satisfaction and personal growth.
- Customer satisfaction, e.g., individuals' needs are being met.
- Number of peer counselors.
- Number of organizations involved in peer counseling programs.

For more information contact:
- Central Minnesota Elder Network (serving Douglas County), at (302) 763-9084, www.rea-alp.com/~cmen.
- The Elder Network, at (507) 285-5272, www.elder-network.org.

Strategy: Promote the prevention of falls in the home.

	Systems	Community	Individual
Primary			✔
Secondary			✔
Tertiary			

Background:
Each year, one-fourth of all persons aged 65-74 years and one third or more of those aged 75 or older, report a fall. While falls occur at every age, the greater severity of injuries experienced in old age, combined with the longer recovery periods they require, make falls particularly serious threats to the health and functioning of older persons. In fact, falls are the leading cause of death from injury for people aged 65 and older and are particularly common among those who are over age 85. While most falls do not result in serious physical injuries or death, falls are often associated with loss of confidence in the ability to function independently, restriction of physical and social activities, increased dependence, and increased need for long-term care. Among persons aged 65 and older, less than 50 percent of those hospitalized after a fall return home.

Characteristics of those seniors at highest risk for falls include physical inactivity, alcohol or prescription drug misuse, home safety hazards, sensory impairments (e.g., uncorrected hearing or visual impairment), and medication mismanagement.

For more specific information about falls in the home, see the section on "Fires, Falls and Other Home Hazards" in the *Unintentional Injury* category.

For other related strategies, see the sections on "Nutrition" and "Physical Activity/ Inactivity" in the *Chronic/Noninfectious Disease* category; the section on "Alcohol and Other Drugs" in the *Alcohol, Tobacco, and Other Drugs* category. Strategies to modify these risk factors include:

- Physical inactivity:
  - Exercise programs to improve gait, balance, and muscle mass.
  - Instruction in and encouragement of exercise programs (i.e. walking, physical balance, Tai Chi). factors include:
- Alcohol misuse:
  - Screening for alcohol and prescription drug misuse.
  - Education on pharmacologic effects of alcohol in older adults and behavioral strategies for limiting use.
  - Referral to alcohol or drug treatment programs for those abusing alcohol or prescription drugs.
- Home safety hazards (with attention to floor surfaces, lighting, bathrooms, stairs, traffic patterns, and accessibility):
  - Home safety assessments and reduction, elimination, or both of hazards, so, for example, homes have clear and well-lit pathways and stairs (i.e., pathways clear of throw rugs, cords, etc.), seniors wear appropriate footwear, and bathrooms are equipped with grab bars, non-skid mats.
- Sensory impairments:
  - Screening for unknown or untreated hearing and vision impairments.
  - Appropriate referral for formal audiological and hearing aid evaluation.
  - Referral to resources in the community designed to assist those with uncorrectable vision impairments in maintaining activity and function.
- Medication mismanagement:
  - Careful assessment and monitoring of older people's medication use (particularly drug-drug interactions, including drug-alcohol interactions).
  - Health teaching pertaining to adequate nutritional and fluid intake to avoid electrolyte imbalances and dehydration (certain medications, such as, antihypertensives, antidepressants, diuretics, and anti-anxiety agents can directly or indirectly be causative factors in falls).
  - Medication management to assure proper use of medication (see medication management strategy).

Additional resources:

- American Geriatrics Society, et al. 2001. Guideline for prevention of falls in older persons. *Journal of the American Geriatric Society* 49:664-672.
- Rawsky, E. 1998. Review of the literature on falls in the elderly. *Image: Journal of Nursing Scholarship* 30(1): 47-52.
- Wagner, E., LaCroix, A., Grothaus, L., Leveille, S., Hecht, J., Artz, K., Odle, K. and Buchner, D. 1994. Preventing disability and falls in older adults: A population-based randomized trial. *American Journal of Public Health* 84(11):1800-1806.

Evidence for strategy:

Monitoring medication among elderly patients and promoting exercise for agility and strength among seniors are known to reduce the incidence or severity of falls. A modest, one-time prevention program

appeared to confer short-term health benefits on HMO senior enrollees, although benefits diminished by the second year of follow-up (Wagner et al., 1994).

Has this strategy been implemented in Minnesota?
Yes, various parts of this strategy (i.e., home inspection and hazard correction, as well as medication management) are integral components of almost all public health nursing programs that serve frail and elderly persons.

Indicators for this strategy:
- Percentage of persons aged over 65 who engage in light-to-moderate activity at least 30 minutes per day.
- Percentage of elderly persons compliant with their medication regimens.
- Number of home hazards identified that were eliminated or corrected.
- Number of persons with unknown or untreated sensory impairments whose visual or hearing impairments are corrected to the degree possible.
- Number of hospitalizations for hip fractures related to falls.
- Number of emergency room visits for falls that occurred in the home.
- Number of persons aged 65 and older who return home after being hospitalized for fall-related injuries.
- Number of fall-related deaths.

For more information contact:
- Mark Kinde, (651) 281-9832, mark.kinde@health.state.mn.us; MDH Injury and Violence Prevention Unit.
- Pam York, (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Special notes:
To be effective, fall-prevention programs must avoid negative consequences. For example, encouraging physical activity without proper supervision or attention to risk factors in the environment may actually cause injuries. In addition, programs designed to reduce injuries should measure a broad range of outcomes. For example, effects on older persons' quality of life (e.g. their autonomy and independence) are important outcomes.

Strategy: Promote medication management.

	Systems	Community	Individual
Primary		✔	✔
Secondary		✔	✔
Tertiary			

Background:
With increasing age, elderly persons tend to take more prescription medications. In the U.S., 75 percent of noninstitutionalized persons over age 65 had at least one medication prescribed, with a mean number of prescribed medications of 10.7 (Kaspar, 1982). In addition to prescribed medications, it is estimated that 75 percent of individuals aged 65 years and older use nonprescription drugs. One study found that seniors used over-the-counter drugs at a rate seven times greater than that of younger adults (Kofoed, 1985). While medication regimens are beneficial for treating disease processes, the problems for the patient, family, and health care provider associated with maintaining an adequate medication program are complex and varied.

Seniors have a variety of problems related to the management of their drug regimens, including forgetting to take medications, as well as their overuse, under use, and incorrect use (not taking medication as labeled). Factors that contribute to these problems include:

- Functional impairments such as decreased mobility (has difficulty getting to the pharmacy, measuring liquid doses, or breaking pills), visual impairment (cannot read labels or differentiate colors), hearing impairment (cannot hear instruction), and poor memory (cannot remember to take medications).
- Perceptual factors such as low perception of the seriousness of a condition, susceptibility to a condition, or efficacy of treatment; absence of symptoms, although medication does not relieve symptoms; and fear of addiction to medications.
- Educational factors such as lack of knowledge or understanding of a medication regimen or inability to speak English.
- Provider-client interaction factors such as ineffective communication; lack of confidence in a provider; inadequate explanations of medication regimens; absence of written materials; and infrequent monitoring and feedback.
- Treatment factors such as complexity, number, and side effects of medications; interactions between medications; number of changes required in habits, lifestyles, or both; physician error; and more than one provider or pharmacy.
- Access factors such as lack of economic resources; containers that are difficult to open; long distance to a pharmacy; labels that are difficult to read; and unclear directions.
- Social support factors such as living alone and unsupportive attitudes of family members.

The multiplicity and complexity of the factors influencing medication management demands a multifaceted intervention approach that includes:

- A community assessment of seniors' needs regarding medication to determine the reasons for noncompliance with their medical regiments.
- Home visiting programs for the elderly that include:
  - Assessments to determine a client's ability to comply with prescribed medications (e.g., the number and types of prescription medications taken and the degree to which they are taken as prescribed, the number and types of over-the-counter medications taken and the degree to which they are taken as directed, the number of physicians prescribing medications, the number of pharmacies involved in preparing prescriptions, the determination of drug interactions, and the use of alcohol).
  - Negotiation of a "medication reminder system" with the client.
  - Ongoing communication with the client's primary physician regarding medications.
  - Ongoing monitoring of the vulnerable client's health status and well-being.
  - The coordination of community organizations and groups (i.e., pharmacists, senior citizen groups, and clinics) that provide education to seniors regarding medication management.

    - The establishment of support group sessions with caregivers regarding medication compliance.
- The provision of client health education including:
    - Reinforcement and increase in clients' knowledge of their risk factors and disease management.
    - Written information, combined with individual verbal counseling, about specific client medications.
    - Written materials in large print, translated into other languages, and using educational approaches that incorporate memory aids (e.g., calendars, pill boxes).
    - Slow-paced instruction.
    - Small amounts of specific information, combining a "reminder aid" with verbal reinforcement.
    - Persistent follow-up reinforcement over time.
- The modification of the medication regimen as needed, which includes:
    - Medication instruction tailored to individual lifestyle and daily activities.
    - Simplifying the medication regimen (systematically reviewing the need for each medication and eliminating all those of questionable value).

Additional resources:

- Haynes, R., Taylor, D., and Sackett, D. (Eds.). 1979. *Compliance in Health Care.* Baltimore, MD: Johns Hopkins University.
- Haynes, R., Taylor, D., and Sackett, D. 1980. How to detect and manage low patient compliance in chronic illness. *Geriatrics* 91-97.
- Hulka, B., Cassell, J., Kupper, L., and Burdette, J. 1976. Communication and concordance between physicians and patients with prescribed medications. *American Journal of Public Health* 66(9):847-853.
- Janz, N., Becker, M., and Hartman, P. 1984. Contingency contracting to enhance patient compliance: A review. *Patient Education and Counseling.* 5(4): 165-178.
- Kasl, T. 1975. Issues in patient adherence to health care regimens. *Journal of Human Stress.* 5-17:48.
- King, N., and Peck, C. 1981. Enhancing patient compliance with medical regimens. *Australian Family Physical* 10(12):954-959.
- Pesznecker, B., Patsdaughter, C., Moody, K., and Albert, M. 1990. Medication regimens and the home care client: A challenge for health care Providers, in *Facilitating Self-Care Practices in the Elderly* (pp. 9-65). Haworth Press Inc.
- Richardson, J. 1986. Perspective on compliance with drug regimens among the elderly. *The Journal of Compliance in Health Care* 1(1):33-45.
- Sands, D., and Holman, E. 1985. Does knowledge enhance compliance? *Journal of Gerontological Nursing*, 11(4), 464-468.

Evidence for strategy:

The evidence is clear that knowledge alone is not sufficient to ensure medication compliance (Haynes, Taylor, and Sackett, 1979; Richardson, 1986; Sands and Holman, 1985). Health education programs that employ a variety of methods, such as, written information, slow-paced instruction, special counseling approaches, memory aids, and periodic reinforcement of behavioral change have been found to be more effective

in promoting medication compliance than knowledge alone. Other interventions effective at modifying noncompliant behaviors include focusing on improving the communication and relationship between patient and physician (Hulka, Cassell, Kupper, and Burdette, 1976; Kasl, 1975); contingency contracting or a specifically negotiated agreement that provides for the delivery of positive consequences contingent on desirable behavior (Janz, Becker, and Hartman, 1984); tailoring or assisting seniors to integrate the taking of medications into activities of daily living (King and Peck, 1981); and modification, simplification, or both of the medication regimen by the physician (King and Peck, 1981; Haynes, Sackett, and Taylor, 1980).

Has this strategy been implemented in Minnesota?
Yes, medication management has been a key component of public health nursing services to elderly and vulnerable clients for many years.

Indicators for this strategy:
- Percentage of seniors compliant with their medication regimens.
- Number of hospitalizations for complications due to medication mismanagement.
- Number of falls related to medication mismanagement.
- Number of clinic visits due to complications resulting from medication mismanagement.
- Number of deaths due to medication mismanagement.

For more information contact:
Jay Jaffee, at (651) 281-9872, jay.jaffee@health.state.mn.us, MDH Chemical Health Promotion Coordinator.

Strategy: Promote use of residential smoke alarms.

	Systems	Community	Individual
Primary		✔	✔
Secondary			
Tertiary			

Background:
Despite the widespread adoption of smoke alarms, fires and their concomitant burn injuries remain a formidable cause of death. Elderly persons are at particular risk for fire-related deaths. Although the risk of dying in homes without smoke alarms is approximately twice that of dying in homes with smoke alarms, an MDH study of Minnesota homes in 1994-1997 revealed that only 55 percent of residences had a working smoke alarm on every level of the home (MDH and CDC, 1997). (See the section on "Fires, Falls and Other Home Hazards" in the *Unintentional Injury* category for additional related strategies.)

One strategy to reduce the risk of fire-related burns among seniors is to increase the presence of functional smoke alarms to at least one on each habitable floor of all inhabited residential dwellings. This strategy includes the following activities:
- Make home visits to assess presence or absence of smoke alarms on each habitable floor of the home and to determine the working condition of smoke alarms.

- Organize businesses and community organizations to purchase and install smoke alarms for frail and elderly persons who do not have the resources, ability, or both to access smoke alarms.
- Increase the awareness of all persons in the community (i.e., clergy, "befrienders", social workers, etc.) who work with frail and elderly populations of the importance of checking for working smoke alarms.
- Increase the number of referrals of elderly and frail persons in the community who do not have working smoke alarms in their homes to agencies, which can provide them.

Additional resources:

- Hall, JR. 1985. A decade of detectors: Measuring the effect. *Fire Journal* 79: 37-43.
- Minnesota Department of Health and CDC. 1997. *The Minnesota Collaborative Fire-related Burn Prevention Program* [Unpublished Study]. St. Paul, MN: Author.
- Shults, R., Sacks, J., Briske, L., Dicey, P., Kinde, M., Mallonee, S., and Reddish, DM. 1998. Evaluation of three smoke detector promotion programs. *American Journal of Preventive Medicine* 15(3):165-171.

Evidence for strategy:

Smoke alarms are known to be a reliable, inexpensive means of providing an early warning of house fires. Those who are less likely to possess smoke alarms (e.g., the elderly and the poor) are also at higher risk of fire death. Even though alarms are extremely reliable, most alarms are powered by batteries that must be replaced periodically. One study of alarms and fatal fires found that dead batteries were to blame in about two-thirds of the instances of detector failure (Hall, 1985).

Has this strategy been implemented in Minnesota?

Yes, many communities throughout Minnesota have organized smoke alarm projects. Various groups and organizations (i.e., fire departments, public health, local insurance companies, Kiwanis, etc.) with an interest in preventing residential fire-related injury and death work together to install smoke alarms in homes that had been identified as not having functional smoke alarms.

Indicators that could be used to evaluate this strategy:

- Number of homes with functional smoke alarms on all habitable floors.
- Percentage of functional smoke alarms.
- Number of hospitalizations due to fire.
- Number of deaths due to fire.
- Economic costs due to fire loss in homes without smoke alarms.

For more information contact:

- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Category:

ENVIRONMENTAL CONDITIONS

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 11: Reduce exposure to environmental health hazards.

CATEGORY: ENVIRONMENTAL CONDITIONS

Environmental health programs work to protect the public's health by assuring that risks from exposure to environmental hazards are minimized and controlled. Environmental health hazards include biologic, physical, chemical, and radiologic agents and substances, both those that are human made and those that are naturally occurring. Exposures to these hazards may occur in the workplace, home, the natural environment, or in a public facility.

Environmental health programs protect Minnesotans from environmental hazards by ensuring that they have clean drinking water, safe food, sanitary lodgings, and protection from hazardous materials and public health nuisances in their environment. These programs also protect Minnesotans from the hazards resulting from floods, landfill fires, chemical spills, contaminated wells, and other environmental disasters.

Those who benefit from environmental health programs include the general public, regulated entities, and federal, state, and local agencies. These services are delivered through a variety of regulatory, consultative, informational, and educational programs.

Environmental health risks are identified through collection and assessment of environmental health data. Improved scientific information and technology have increased the understanding of the effects of environmental contaminants and fueled the public's demand for increasing protection. The development of appropriate interventions based on health risk is made possible by good environmental health data.

Environmental health risks are mitigated primarily through the enforcement of state and federal standards. This enforcement occurs through partnerships with local public health agencies to enforce the standards; effective working relationships with regulated communities and other state agencies; and evaluation of potentially health-threatening environmental conditions. An equally important and complementary method of delivering environmental health programs is the provision of health education aimed at the general public, health professionals, and other partners. Providing health education involves many community sectors, increases awareness of the importance of environmental conditions to the public's health, and complements and supports the regulatory responsibilities and functions of environmental health services.

The number of requests from state and local agencies for assistance or support on health risk assessment and protection issues is growing. There is also increasing demand from the public for more information about hazardous environmental agents and inclusion in the risk-management decision-making process. Environmental health programs continue to work hard to meet these demands.

Nuisance control, which routinely affects all communities, is the responsibility of the community health board (M.S. 145A) in each county. A community health board's ability to respond to public health nuisances can be increased by adoption of a formal policy and determination of a designated agent responsible for the identification and abatement of public health nuisances. Clear policy and guidelines will enable staff to act confidently and swiftly to alleviate public

health concerns. A board that acts consistently within well-grounded public health principles also gains the credibility and trust of the public.

The strategies presented throughout this category address many of these environmental health issues, as well as those that complement and support the regulatory and enforcement responsibilities and functions of both state and local public health agencies. The topics addressed in this category are asbestos, clean indoor air/radon/carbon monoxide poisoning, food safety/protection, and safe water. Strategies that address additional environmental health issues are found elsewhere in this document: childhood lead poisoning (please see the category on *Child and Adolescent Growth and Development*), and fish consumption (please see the category on *Pregnancy and Birth*; fish consumption is included in the sections on Birth Outcomes and Prenatal Care, and on Women's Health).

CATEGORY: Environmental Conditions

TOPIC: ASBESTOS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Provide the public and the regulated community with education on asbestos issues and exposure.	✔	✔	✔	✔	✔		Pollution Control Agency (PCA), Occupational Safety and Health Association (OSHA), Professional Associations, Media
Monitor and provide assistance with residential and non-residential asbestos-related work procedures.	State						PCA, Professional Associations
Monitor training course providers who conduct approved asbestos training courses.	State						PCA

Exposure to asbestos has been linked to a variety of lung diseases, including lung cancer, asbestosis, and mesothelioma. As part of its regulatory function to prevent asbestos exposure, the MDH Asbestos Unit adopted asbestos abatement rules in 1988, with revisions in July 1996 and August 2001. One of the important provisions of these rules focuses on homeowners and nonresidential building or facility owners as important decision-makers regarding asbestos issues.

Protecting the public from asbestos exposure requires maintaining reasonable and comprehensive regulations that include ensuring the quality of training for individuals and the regulated community, inspecting asbestos-abatement projects, providing audits of trainers, and continuing to take consistent enforcement action against violators. In addition, working with partners to provide health education, outreach, and technical assistance to both the public and the regulated community enables these groups to make educated decisions regarding asbestos issues, as well as supports the regulatory functions of the MDH.

Strategy: Provide the public and the regulated community with education on asbestos issues and exposure.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
The purpose of this strategy is to inform the public and the regulated community about exposure to asbestos, about what to do if an asbestos exposure event occurs either at home or at a work site, and of the availability of resources, lists, guidelines, and regulatory information. This information is provided through presentations, newsletters, and fact sheets. The kinds of information available include:

- Resources, including numerous studies of asbestos exposure and methods used in the industry to remove or isolate potential asbestos hazards.
- Lists, including asbestos contractors, training providers, consulting groups, labs, professional associations, and program contacts, as they relate to asbestos.
- Guidelines, including fact sheets, brochures, and educational articles (local and national).
- Regulatory information, including state and federal rules and regulations, as they relate to asbestos-related activity.

Additional resources:

- Environmental Protection Agency documents: 1) *Asbestos in the Home* (MDH IC# 141-0455); 2) *EPA Asbestos in the Home - Homeowners* Guide (1998, June).
- *Focus on Asbestos* fact sheets. (651) 215-0900 from the MDH Asbestos Unit.
- National Institutes of Health, National Cancer Institute. *Cancer Facts*. (MDH IC# 141-0447).

Evidence for strategy:
General principles of adult education and behavioral change theory have contributed to this strategy. The materials mentioned above have not been evaluated.

Has this strategy been implemented in Minnesota?
Yes, the Asbestos Unit has developed and distributed *Focus on Asbestos* documents to the general public at health fairs, events, and by request. They have been distributed to the regulated community at various professional associations in Minnesota, and as part of the training of individuals for the various disciplines certified within the asbestos program. On an annual basis, the MDH Asbestos/Lead Compliance Unit publishes the *Asbestos/Lead Link* newsletter, which is distributed locally to licensed contractors and businesses and public health staff. In addition, the Asbestos Unit has made presentations to a variety of professional organizations and associations throughout Minnesota.

Indicators for this strategy:
- Numbers of materials distributed.
- Number of telephone inquiries to the MDH Asbestos Unit.
- Circulation of the newsletter.
- Number of presentations conducted.
- Number of different associations, organizations, and businesses that receive presentations.

For more information contact:
MDH Asbestos Unit, at (651) 215-0900.

Strategy: Monitor and provide assistance with residential and nonresidential asbestos-related work procedures.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Compliance with asbestos-related work procedures has a direct relationship with minimizing the exposure of workers and the public to asbestos. Regular field surveillance of asbestos abatement projects continues for residential, commercial, and facility projects. Currently, approximately 15 percent of all asbestos-abatement projects in the state are inspected to ensure that they are properly permitted and licensed, and that they follow safe asbestos-related work procedures. Field surveillance of asbestos abatement projects is necessary to ensure that workers and the public are protected from exposure to asbestos.

Compliance with the asbestos-abatement rules means abatement projects meet all requirements of rules, including a review of asbestos fiber air monitoring and other records. The MDH Asbestos Unit records all inspections, the number of violations, and the number of inspected projects in compliance with the asbestos abatement rules and statutes.

In 1997 and 1998, the compliance rates were 72 and 79 percent, respectively. In the 1999 fiscal year, 68 percent of inspected sites were in compliance with the rules and in the 2000 fiscal year, 71 percent of sites were in

compliance. The percentage of sites with serious violations has remained relatively unchanged for all four years averaging seven percent. In August 2001, minor revisions to the certification portion of the asbestos rules were implemented. In an effort to increase the compliance percentages, workers and site supervisors are now included in enforcement actions.

Additional resources:
N/A

Evidence for strategy:
Past data indicate that continuous compliance monitoring of residential and nonresidential asbestos-related work procedures affects the behavior of contractors and workers.

Has this strategy been implemented in Minnesota?
Yes, the MDH Asbestos Unit receives notifications from licensed asbestos contractors for asbestos-related projects. Staff inspect approximately 15 percent of all asbestos work sites. Sites found to be in compliance are entered into a database. In some instances, the Asbestos Unit receives complaints regarding non-permitted asbestos removal activities.

When violations are observed during an inspection, the inspector informs the responsible individual or company, and in some cases may recommend a cease and desist of all work activity, especially if immediate danger to public health is known. If violations have been cited, the inspector makes a recommendation for enforcement action using the MDH administrative penalty order. Once the violations have been corrected and finalized, the inspector enters the information into a database for tracking purposes.

Indicators for this strategy:
- Number of notifications for asbestos-related projects.
- Number of inspections conducted.
- Number of complaints received of non-permitted asbestos-removal activities.
- Number of violations cited and kinds of action taken.
- Amount of assessed penalties collected.
- Number of inspected projects in compliance with the asbestos abatement rules and statutes.

For more information contact:
MDH Asbestos Unit, at (651) 215-0900.

Strategy: Monitor training course providers who conduct approved asbestos training courses.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Regulatory agencies recognize that a crucial part of maintaining a competent workforce is having effective trainers and training providers. The programs that regulate trainers have the task of performing audits of those who offer state or federal training programs in order to ensure consistency, course content, and overall quality of those courses.

Asbestos abatement rules require that five disciplines (worker, site supervisor,

inspector, management planner, and project designer) be trained and certified. There are 12 training providers in Minnesota that offer initial and refresher training courses. Asbestos-related training courses are permitted, which ensures that individuals involved in asbestos-related work receive appropriate instruction to perform their jobs safely and according to the asbestos law and rules.

Additional resources:
Bibliographic resources:
- Environmental Protection Agency. (1995). *Train-the-Trainer Guidance*. Available through the MDH Asbestos Unit. (651) 215-0900.
- Minnesota Rules, parts 4620.3702 to 4620.3720 (Training Provisions).

Organizational resource:
- Laurel & Associates, Ltd. (1993). Train the-Trainer seminar. 917 Vilas Avenue, Madison, WI 53715; (608) 255-2010.

Evidence for strategy:
Past data indicate that continuous compliance monitoring of trainers and training providers contributes to the compliance of training providers. Audits ensure that the information presented in training courses is consistent with the Minnesota asbestos rules.

Has this strategy been implemented in Minnesota?
Yes, the MDH Asbestos Unit performs audits of permitted training courses on a regular basis. If problems or issues with the training provider are observed, the MDH will make recommendations for the training course content or instructor to improve prior to their next training session. The MDH also can use enforcement procedures to correct the deficiencies or violations of the training provisions outlined in the Minnesota Asbestos Rules.

Indicators for this strategy:
- Number of initial and renewal training courses.
- Number of training audits performed.
- Number of enforcement actions taken.
- Knowledge of course participants of asbestos abatement procedures, laws, and rules.
  Practices of course participants that are safe and fall within the law and rules.

For more information contact:
MDH Asbestos Unit, at (651) 215-0900.

CATEGORY: Environmental Conditions

TOPIC: CLEAN INDOOR AIR/RADON/ CARBON MONOXIDE POISONING

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Reduce exposure to environmental tobacco smoke.	State and Local	✔	✔	✔	✔	✔	
Provide homeowner education about radon-resistant new construction.	Local						Home Owners, Builders, Building Code Officials, Housing Nonprofit Organizations, Media, Real Estate Professionals
Conduct a public awareness campaign on carbon monoxide poisoning.	State						Homeowners, Faith Communities, Public Libraries, Housing Nonprofit Organizations, Media

Indoor air is becoming more of a concern to Minnesotans. Studies have shown that people spend approximately 90 percent of their time indoors; about 60 percent of their time is spent inside the home. And 20 percent of the U.S. population spends a significant amount of time in school buildings. The U.S. Environmental Protection Agency (EPA) has estimated that indoor air is two-to five-times more polluted than outdoor air even in our most industrialized cities. Because people spend most of their time indoors, the risks to health may be greater from indoor air than from outdoor air pollution.

Three pollutants of particular importance to Minnesotans are environmental tobacco smoke (ETS), radon, and carbon monoxide. Both ETS and radon have been classified by the EPA as known human carcinogens; both cause lung cancer. Approximately 3,000 lung cancer deaths each year are associated with ETS.

Populations that may be more susceptible to the health effects from indoor air include children, elderly people, and individuals with pre-existing respiratory or cardiovascular diseases (for related strategies, see the section on Heart Disease/Heart Attack/Stroke in the *Chronic/Noninfectious Disease* category). Exposure to ETS increases the risk of lower respiratory tract infections in children and the frequency of episodes and severity of symptoms in asthmatic children (for related strategies, see the section on Asthma in the *Child and Adolescent Growth and Development* category). One way to reduce exposure to ETS is to avoid smoking around nonsmokers, especially children (for additional prevention strategies related to tobacco use, see the *Alcohol, Tobacco, and Other Drugs* category).

The National Academy of Sciences released a report in 1999 that attributes about one-tenth of all lung cancer deaths to radon, a naturally occurring, radioactive gas. Carbon monoxide is a gas produced by burning any fuel such as gasoline, natural gas, or wood. The most common symptoms are nausea, tiredness, headaches, and dizziness. At very high levels, carbon monoxide can cause death.

Strategy: Reduce exposure to environmental tobacco smoke.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary	✔	✔	

Background:
Smoke-free environments reduce exposure to environmental tobacco smoke (ETS) and reinforce a community norm that smoking is unacceptable. Public policies aimed at work sites, schools, child-care settings, hospitals, public places and other settings can be implemented at the state, local or institutional levels. Family policies and other voluntary approaches can also be considered for more private settings. Legal strategies have also been successfully used to reduce ETS exposure (e.g., the Americans with Disability Act, Federal Fair Housing, Worker's Compensation and Unemployment Compensation). A comprehensive approach will involve regulations, policies, enforcement, incentives, education and training.

Mounting evidence suggests that exposure to ETS is a significant threat to health, particularly for pregnant women, children and persons with allergies and other chronic diseases. Exposure in utero and during infancy is a leading cause of low birth weight, Sudden Infant Death Syndrome (SIDS) and otitis media. Of the estimated 480,000 smoking-related deaths that occur every year in the U.S., 53,000 have been attributed to ETS.

ETS exposure is widespread in many settings, including workplaces and homes. ETS levels in restaurants are approximately two times higher than in offices; whereas levels in bars have been measured at four to six times office levels.

Children are exposed to more ETS in the home than in any other single environment. Two out of five children in the U.S. are exposed to smoking by household members, and these children miss one-third more school days annually than their peers from nonsmoking households.

Additional resources:

- Centers for Disease Control and Prevention. 1994. *Preventing Tobacco Use Among Young People: A Report of the Surgeon General*. Washington, D.C.: USDHHS.
- *Clearing the Air*. 1996. Americans for Nonsmokers' Rights. Berkeley, California.
- Environmental tobacco smoke: A hazard to children, a report of the American Academy of Pediatrics, Environmental Health Committee. 1977. *Pediatrics*, 99(4), 639-642.
- *Final Report of the Advisory Committee on Tobacco Policy and Public Health* (Co-Chairs: C. Everett Koop, M.D., Sc.D. and David A Kessler, M.D.). 1997.
- Jones et al. 2000. Where there's smoke, there's disease: The dangers of environmental tobacco smoke. *Minnesota Medicine*, 83 (3).
- Lynch, BS. and Bonnie, RJ., editors. 1994. *Growing Up Tobacco Free: Preventing Nicotine Addiction in Children and Youths*. Washington, D.C.: Institute of Health: National Academy Press.
- Mannino et al. 1996. ETS exposure and health effects in children: Results from the 1991 National Health Interview Survey. *Tobacco Control*, 5, 13-18.
- Pirkle et al. 1996. Exposure of the U.S. population to ETS. *JAMA*, 275(16).
- *Reducing Tobacco Use Among Youth: Community-based Approaches*. 1997. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration.
- Siegel, M. Involuntary smoking in the restaurant workplace: A review of employee exposure and health. *JAMA*, 270(4), 490-493.

Internet resources:

- Environmental Protection Agency, http://www.epa.gov/iaq
- Montana State University Extension Service. *Healthy Indoor Air for America's Homes*, http://www.montana.edu/www.cxair/

Evidence for strategy:

Studies show that a smoke-free environment protects nonsmokers from ETS and encourages smokers to reduce or quit smoking. As the number of smoke-free environments increase, children and adolescents will be exposed more to nonsmoking role models.

Has this strategy been implemented in Minnesota?
Yes, the Minnesota Clean Indoor Air Act (MCIAA) restricts smoking in public places including restaurants, bars, day care premises, health care facilities and clinics, public schools, hotels, retail stores, and office buildings. Outside of Minnesota, some municipalities have passed ordinances requiring restaurants and other work sites to be smoke-free.

Indicators for this strategy:
- The number and percentage of environments that restrict smoking or are smoke-free.
- Extent of compliance and level of enforcement of existing ordinances**.**

For more information contact:
- MDH Tobacco Prevention and Control Section, at (651) 215-8952.
- Laura Oatman, at (651) 215-0911, laura.oatman@health.state.mn.us, MDH Indoor Air Program.

Strategy: Provide homeowner education about radon-resistant new construction.

	Systems	Community	Individual
Primary	✔		
Secondary			
Tertiary			

Background:
One-third of Minnesota homes have levels of radon gas above four picocuries per liter, which is the federal guideline. Nationally, the estimates are that one of 15 homes has radon levels above the guideline. Radon is colorless, odorless, and tasteless. The only way to determine if a home has a high radon level is to test the home.

When homes with elevated radon concentrations are identified through testing, corrective measures can be taken to lower the levels of radon, which decreases the occupants' risk of developing lung cancer. This strategy is used to educate Minnesotans who are interested in building new homes about construction techniques that reduce the amount of soil gases, including radon, that enter the home. Radon, a natural radioactive gas that collects in some homes, is linked to about 21,800 lung cancer deaths a year in the U.S. One of the most frequently used radon-reduction techniques in existing homes is a sub-slab depressurization system. Typical installation costs for a system in existing homes range from $1,000 to $1,500. If the same system is installed during new construction, the cost is much lower ranging from $350 to $500.

Minnesota's builders are not required to incorporate new radon-resistant construction techniques (RRNC) in building new homes. Therefore, it is especially important to educate homeowners about these techniques. In turn, as homeowners begin to request this type of construction, builders will become more aware of its health benefits and its importance in building Minnesotans' new homes.

The approach to this strategy is to educate individual homeowners and homebuyers to include RRNC techniques during the building-planning phase. The benefits from incorporating RRNC techniques in new home construction are many:
- It reduces the health risk of developing lung cancer.

- It increases energy savings.
- It can be readily implemented by builders.
- It is cost-effective.
- It controls other soil gases, including moisture (i.e., it keeps basements drier).

The scientific community has documented the connection between exposure to elevated levels of radon gas and the increased risk of developing lung cancer. Radon is the second leading cause of lung cancer deaths in the U.S. The U.S. Environmental Protection Agency (EPA) recommends that if your home has annual radon concentrations at or above the guideline of 4 picocuries per liter (pCi/L), steps should be taken to reduce the radon level to below 4 pCi/L. About one out of three Minnesota homes has radon levels above 4 pCi/L.

The EPA has developed technical guidance (see additional resources) for homeowners and builders on incorporating RRNC techniques during the building phase. The guidance manual is designed to provide homeowners and builders with an understanding of operating principles and installation details of RRNC.

Minnesota is at high risk for elevated radon levels in homes. The soil in our state contains widespread low-grade uranium and radium, which decay to radon gas. Minnesota is ranked fourth highest in percentage of homes with elevated radon levels. Minnesota has 68 counties (out of 87) that are included in the high radon-potential area. Minnesota has only high and medium radon-potential zones; there is no low radon-potential zone in Minnesota.

Additional resources:

- Environmental Protection Agency. 1994. Model standards and techniques for control of radon in new residential buildings. *Federal Register*.
- Environmental protection agency. 1991. *Radon-resistant Construction Techniques for New Residential Construction*. EPA/625/2-91/032.
- *The Health Effects of Exposure to Indoor Radon: National Research Council's Report of the Sixth Committee on Biological Effects of Ionizing Radiations (BEIR VI)*. 1998. This report addresses the risk of lung cancer associated with exposure to radon.
- *Minnesota-Map of Radon*. MDH Indoor Air Program. 1993. IC# 141-0228.
- *Minnesota Radon Testing and Use of Test Results*. 2001. MDH Indoor Air Program. IC#141-1137.
- National Association of Home Builders' Research Center. 1994. *The New Home Evaluation Program: Final Report*. EPA Grant #x819586.

Internet resources:

- Environmental Protection Agency, http://www.epa.gov/iaq
- Montana State University Extension Service. *Healthy Indoor Air for America's Homes*, http://www.montana.edu/www.cxair/

Evidence for strategy:

In July 1994, the National Association of Home Builders' Research Center completed a study of the passive sub-slab or sub-membrane depressurization system's effectiveness in resisting radon.

Builders were contacted to install passive systems into the homes they were building.

The radon levels in the houses were then measured with these systems working and not working (a cap was put on top of the stack over the roof). The results of the passive system study were impressive, of the 20 homes with levels measured at or above 4pCi/L, the levels of 19 homes were reduced by the passive system.

Radon is one of the most extensively investigated human carcinogens. The carcinogenicity of radon is convincingly documented through epidemiologic studies of underground miners, all showing a markedly increased risk of lung cancer. Based on the epidemiologic evidence from miners, exposure to radon in homes is expected to be a cause of lung cancer in the general population.

Has this strategy been implemented in Minnesota?
Yes, although RRNC is not currently included in the Department of Administration's state building code, many Minnesota builders are including RRNC in their building projects. The MDH's Indoor Air Program regularly receives requests from the general public and builders for information on RRNC.

The Minnesota Indoor Air Quality Coalition offered a RRNC Workshop in February 1997 to educate builders and building code officials on RRNC techniques. The workshop was attended by over 50 builders, building code officials, and other public health professionals. All builders who attended the workshop were eligible to receive one of 45 new home RRNC kits free. The University of Minnesota received State Indoor Radon Grant monies from the MDH Indoor Air Program to conduct field research to demonstrate RRNC techniques to builders and to monitor the effectiveness of them.

Indicators for this strategy:
- Number of homes built with radon-resistant new construction.
- Changes in knowledge and attitudes of homeowners, builders, and building code officials regarding the importance of incorporating RRNC.
- Number of builders using RRNC techniques.

For more information contact:
- Laura Oatman, at (651) 215-0911, laura.oatman@health.state.mn.us, MDH Indoor Air Program.
- David Jones, at (651) 215-0886, david.bw.jones@health.state.mn.us, MDH Indoor Air Program.

Special notes:
The MDH's Indoor Air Program continues efforts to educate Minnesota builders and the general public regarding the importance of RRNC. Please contact the MDH staff listed above for a copy of the guidance document from the EPA.

Strategy: Conduct a public awareness campaign on carbon monoxide poisoning.

	Systems	Community	Individual
Primary		✔	
Secondary			
Tertiary			

Background:
Most homes in Minnesota use fuel-burning appliances such as furnaces, boilers, cooking stoves, water heaters, clothes dryers, and

fireplaces. All of these appliances have the potential to produce carbon monoxide. Every year, Minnesotans die from accidental exposure to carbon monoxide. Annual inspections of fuel-burning appliances reduce the likelihood of a carbon monoxide problem. The use of carbon monoxide alarms in homes will also provide protection against carbon monoxide poisonings.

This strategy is used to educate Minnesotans about the health hazards of carbon monoxide (CO) exposure in the home. Indoor air quality is becoming more and more of a concern to the people of Minnesota. Most people spend over 90 percent of their time in the home, workplace, or school. Because people spend most of their time indoors, the risks to health are usually greater from indoor pollutants than outdoor pollution. Fortunately, most of the indoor pollutants commonly found in homes are not life threatening. However, CO can cause serious health problems and even cause death.

The desired outcomes of this strategy include:

- Increased homeowner knowledge of the dangers of CO poisoning and the steps that can be taken to prevent it.
- At least one CO alarm in every new and existing home in Minnesota.
- A decreased number of deaths related to accidental CO poisoning.

Many Minnesotans use fuel-burning appliances to heat their homes and attached garages. This creates an increased potential for exposure to CO. Infants and children, the elderly, and individuals with upper respiratory problems are at greater risk. It is difficult in Minnesota to identify the number of CO deaths, because deaths from CO poisoning are not required to be reported to the MDH.

It is of great importance to increase the knowledge of the general public about the health hazards of CO. In October 1996, the MDH's Indoor Air Program conducted focus-group research with homeowners across the state that revealed significant gaps in what people know about CO. Many of the participants lacked information on how to select a CO alarm, or how to properly maintain fuel-burning appliances. The information obtained from the focus groups helped prioritize the importance of various themes that could be used in a CO public awareness campaign, and to test consumer reaction to preliminary messages and designs.

Additional resources:

- Minnesota Department of Health. 1998. *Facts About Carbon Monoxide (CO) Poisoning*. Indoor Air Program, at (651) 215-0909.
- 2001 Winter Hazard Awareness Week Media Packet. (This media packet was sent to all local public health agencies from 1996 to 2001 for Winter Hazard Awareness Week.)

Internet resources:

- Environmental Protection Agency, http://www.epa.gov/iaq
- Montana State University Extension Service. *Healthy Indoor Air for America's Homes*, http://www.montana.edu/www.cxair/
- University of Minnesota Extension Service. *Carbon Monoxide: Your Safe Home*. This fact sheet is available in English, Southeast Asian languages, and Spanish, http://www.extension.umn.edu/housing/

Evidence for strategy:
Focus groups produce qualitative data that provide insights into the attitudes, perceptions, and opinions of participants. Focus groups are useful because they assist in determining the strength of attitudes and beliefs. Group "brainstorming" is valuable, as it brings issues to the front that quantitative research tools might miss.

The MDH sponsored three focus groups located in St. Paul and St. Cloud in September 1996 to test public reaction to a proposed public service campaign about CO poisoning and:

- To determine participants' attitudes toward CO poisoning.
- To prioritize the importance of various themes that could be used in such a campaign.
- To test consumer reaction to preliminary messages and designs.
- To gather consumer suggestions for future directions of the campaign.

Has this strategy been implemented in Minnesota?
Yes, during the initial MDH campaign, the CO public service announcement (PSA) was printed on 1.9 million grocery bags and distributed during Minnesota's Winter Hazard Awareness Week (November 11-15, 1996) to Cub Foods stores throughout the state. Additional PSAs appeared in weekend editions of newspapers in six Minnesota cities (Fargo/Moorhead, Duluth, Rochester, St. Cloud, Mankato, and Worthington) during November, reaching a total of 276,600 readers.

Indicators for this strategy:

- Adoption of a statewide code for CO alarms in residential new construction.
- Changes in knowledge and attitudes of homeowners regarding the prevention of CO poisoning.
- Number of homes with CO alarms.
- Number of CO poisoning cases in Minnesota.

For more information contact:

- MDH Indoor Air Program, at (651) 215-0909 or (800) 798-9050. The indoor air program has health education materials including several fact sheets and brochures to assist CHS agencies in implementing this strategy at the local level.
- Laura Oatman, at (651) 215-0911, laura.oatman@health.state.mn.us, MDH Indoor Air Program.

CATEGORY: Environmental Conditions

TOPIC: FOOD SAFETY/PROTECTION

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct K-12 food safety education.	State and Local			K-12			Minnesota Department of Agriculture (MDA), Department of Children, Families and Learning, University of Minnesota
Conduct food manager education.	State and Local			University, Vocational, and Technical Institutions; Private Educational Vendors			MDA
Provide food safety education during inspections.	State and Local						MDA, FDA
Develop and maintain working partnerships with the food industry to promote active managerial control of food borne disease risk factors.	State and Local			Private Educational Vendors			MDA, FDA

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct surveillance of food borne disease risk factors and their antecedents.	State and local						MDA, FDA
Conduct consumer education on food safety risks and safe food handling, storage, and preparation in households.	✔	✔	✔	✔	✔	✔	
Develop and implement consumer education to promote consumer acceptance and use of irradiated foods.	✔	✔	✔	✔	✔	✔	
Respond to consumer questions about food biotechnology and genetically modified organisms (GMOs).	✔	✔	✔	✔	✔	✔	

Food borne illness is a major cause of personal distress, preventable death, and avoidable economic burden in Minnesota and throughout the country. For many victims, food borne illness results only in minor discomfort or time lost from their jobs. For some, especially children, senior citizens, and those with compromised immune systems, food borne illness may be life threatening. According to the Centers for Disease Control and Prevention (CDC), mishandling of food is a leading cause of food borne outbreaks. Food mishandling can occur in retail food establishments or in homes.

Since the adoption of the Minnesota Food Code, inspections have focused on personal hygiene, food temperatures, and elimination of cross contamination between raw and ready-to-eat foods. The Food Code emphasizes the need for food establishment managers to be knowledgeable about food safety and to train their staff in food safety.

Strategy: Conduct K-12 food safety education.

	Systems	Community	Individual
Primary		U	
Secondary		U	
Tertiary			

Background:
The simple act of washing your hands before preparing a meal for your family can greatly reduce the possibility of food borne illness transmission. It is our belief that few kids receive this important lesson, either at home or in school. Schools offer an excellent opportunity to involve kids in their own health protection. Lessons about the importance of hand washing, refrigerating prepared foods, the need for temperature controls, and avoiding cross contamination will serve students throughout their lives.

Additional resources:
Many of the resources listed here are further described below under the heading, "Has this strategy been implemented in Minnesota?"

- The Austin High School Food Technology program. For more information, contact the Austin High School, at (507) 433-0400.
- Hennepin County Environmental Health Department has done extensive teaching and food hygiene training in the K-12 school systems. For more information, contact Debra Anderson, at (952) 351-5209.
- Minnesota Department of Health in collaboration with Ramsey County has produced a videotape developed for children on hand washing. The title is *Why, How and When to Wash Hands*. For more information, contact Sharon Lynch, at (651) 266-2505.
- United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA) maintain a website which contains a list of books, reference guides, videotapes, brochures, slide shows, and teaching materials. The list includes the names and addresses of the producers, phone numbers, a detailed description of the materials available, and any associated costs. The list may be viewed at: www.nal.usda.gov/fnic/foodborne/.

Evidence for strategy:
High school students who have been exposed to food safety appear to be easier to work with when health department personnel meet them in the course of

regulatory inspections. Hennepin County staff believe that food service workers who received food safety education in elementary schools are much easier to work with.

Has this strategy been implemented in Minnesota?
Yes, the Austin High School food technology program has been in existence for several years. The enrollment varies from year to year, but has been as many as 65 students. The one-year program emphasizes an understanding of nutrition, food biochemistry, technology-based processing, food safety, and food preparation.

The Hennepin County Environmental Health Department has done extensive teaching and food hygiene training in the K-12 school systems of Hopkins, Eden Prairie, Osseo, Robbinsdale, Plymouth, and Wayzata.

The Minnesota Department of Children Families and Learning (DCFL) has developed a course aimed specifically at school and childcare providers with a chapter on food safety targeted at children.

Indicators for this strategy:
- < Pre- and post-testing of knowledge and skills.
- < The increase in the number of students taught each year.
- < Observation of skill use during food service inspections.
- < The number of schools requesting food protection training.

For more information contact:
- < Carol Schreiber, at (651) 215-0846, carol.schreiber@health.state.mn.us, MDH Metro Environmental Health Office.

Strategy: Conduct food manager education.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
The Minnesota Food Code requires the person in charge of most food establishments to have a significant amount of food safety knowledge. Such individuals must have in-depth understanding of personal hygiene and food borne disease transmission by ill workers. The requirements of the food code and the companion food manager certification rule make it inevitable that formalized classroom education be made available to the food industry. Classes are currently available through the University of Minnesota, vocational institutions, private industry, and local public health agencies.

Additional resources:
One of the longest-running training courses offered in the U.S. is available through the Education Foundation of the National Restaurant Association. Their training course, SERVSAFE, and the Applied Foodservice Sanitation course book have been in use around the country since 1974. This book is updated every seven years, and includes an exam. Following successful completion, a nationally recognized certificate is provided. Current course providers include a variety of public and private organizations around the state.

The following organizations offer their own training materials and coursework:

< Mak-Bea Laboratories, of Blue Earth, Minnesota.
< The Brown-Nicollet Health Department provides food service training in Brown, Nicollet, Watonwan, Cottonwood, and Redwood Counties, at (507) 233-6820.

Evidence for strategy:
The State of Illinois has required food handler training and certification since the mid-1970s. Several states, including New York, Florida, and Wisconsin require the person in charge of food-service operations to be certified. Internationally, Australia and several European countries also require food establishment manager training and certification. There is empirical evidence from scientific studies that clearly indicate that fewer critical violations are observed in establishments that have certified food managers.

Has this strategy been implemented in Minnesota?
Yes, this is an ongoing situation. The State's food manager certification became effective in 1999.

Indicators for this strategy:
< Fewer critical violations.
< Better rapport between the establishment operator and the health inspector.
< Fewer food borne illness outbreaks in establishments with certified operators.
< Food establishment staff are more knowledgeable about food safety.
< Fewer critical violations occur in establishments.

For more information contact:
< Sue Hibberd, at (651) 215-0866, sue.hibberd@health.state.mn.us, MDH Environmental Health Metro Office.
< Tracie Zerwas, at (651) 215-0843, tracie.zerwas@health.state.mn.us, MDH Environmental Health Metro Office.

Strategy: Provide food safety education during inspections.

	Systems	Community	Individual
Primary	U		U
Secondary			
Tertiary			

Background:
Inspections provide a unique opportunity to provide education to food service workers. Every observation of food handling in an establishment provides the inspector a teachable moment in which correct food handling procedures can be taught to the employee who committed the error. It is standard practice for inspectors to take extensive time to explain appropriate food safety measures and share information about illness-prevention.

Additional resources:
< The Minnesota Food Code and fact sheets. For more information see the website for strategies resources at: www.health.mn.us/strategies/. Click on "Food Code". A hard copy of the Minnesota Food Code can be purchased from the Minnesota Book Store at 117 University Avenue, St. Paul. A summary handout can be obtained, from the MDH by contacting the section for Environmental Health Services, at (651) 215-0871 or from the Minnesota Department of Agriculture (MDA) by contacting the Diary and Foods Division, at (651) 296-1592.

< Food safety information sheets are also available from local food protection agencies.

Evidence for strategy:
Since this is a state rule, no research has been conducted.

Has this strategy been implemented in Minnesota?
Yes, the implementation of this strategy (including food-safety instructions during inspections) has been in place throughout Minnesota for many years.

Indicators for this strategy:
< More time spent per inspection.
< Better rapport with food industry.
< Better communications between the food industry and health departments.
< More trust.
< More invitations by food industry to health inspectors to train in-house staff.
< Fewer food borne illness outbreaks.
< More knowledgeable managers.

For more information contact:
< Randall Deckert, at (320) 650-1067, randall.deckert@health.state.mn.us, MDH St. Cloud District Office.
< Glenn Donnay, at (218) 739-1376, glenn.donnay@health.state.mn.us, MDH Fergus Falls District Office.
< Mark Peloquin, at (218) 725-7767, mark.peloquin@health.state.mn.us, MDH Duluth District Office.
< David Reimann, at (507) 389-2203, david.reimann@health.state.mn.us, MDH Mankato District Office.
< Thomas Sobolik, at (218) 755-4153, thomas.sobolik@health.state.mn.us, MDH Bemidji District Office.
< Pamela Steinbach, at (651) 623-5147, pamela.steinback@health.state.mn.us, MDH Metro District Office.

Strategy: Develop and maintain working partnerships with the food industry to promote active managerial control of food borne disease risk factors.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
If the food industry and consumers are to benefit from regulation, a partnership must exist between the regulated industries and the regulating agencies. Better working relationships will help to improve communication and reduce tensions that can result in adversarial relationships. Partnerships will be established by inviting the industry to provide input on proposed policies that would affect the industry. MDH will also institute announced inspections so that industry representation is available at the time of inspections for in depth discussions of the findings.

Additional resources:
< Center for Food Safety and Applied Nutrition, FDA, at http://www.cfsan.fda.gov/.
< Pete Gieson, Olmsted County Public Health Services, at (507) 285-1492.
< Geri Maki, at (507) 280-3551, geri.maki@health.state.mn.us, MDH, Rochester District Office.

Evidence for strategy:
Increasingly there is the recognition that the responsibility for safe food lies with the establishment operator and not the regulatory agencies. In light of this, a great deal of emphasis is being placed on providing operators with the tools necessary for them to exercise active control of the factors that lead to food borne disease. This new approach to food regulation will require inspectors to avoid doing the traditional autocratic "gotcha" inspections and instead to perform audits which involves positive interaction with operators. This type of non-confrontational interaction will allow inspectors to learn more about the nature of the operation, including processing procedures that are performed when inspectors cannot be present, such as very late at night.

For the active managerial control strategy to work, there must by a trusting relationship between the industry and the regulatory agencies. Operators must be willing to share intimate details about their operations in order for the regulator to assist them. In the present environment there is little trust between industry and the regulatory community; thus, open information sharing is rare.

Has this strategy been implemented in Minnesota?
Yes, beginning in the late 1990's, MDH established an Inter-Agency Review Council to help resolve issues that were of mutual concern to regulators and the food industry. The council is comprised of state and local regulators, food industry personnel, and various technical experts who serve on the council on a pro-tem basis. The council deals with a variety of issues related to food establishment operations and develops policies that help clarify and streamline the interpretation and application of the Minnesota Food Code.

In addition, Olmsted County Public Health has been emphasizing active managerial control as a part of their regulatory tool kit for the past two years. The work done by this agency in creating and maintaining effective working relationships between the county's regulators and its establishment operators, helped the county win the national Crombine award in 2001.

Indicators for this strategy:
< Fewer confrontational inspections.
< Better working relationships.
< The food industry seeking agency input before new processes are put in place.
< Better inspections and cleaner establishments.
< Reduction of risk factors for food borne diseases.

For more information contact:
< James Feddema, at (320) 650-1055, james.feddema@health.state.mn.us, MDH EHS Supervisor, St. Cloud and Fergus Falls District Office.
< Colleen Paulus, at (651) 215-0861, colleen.paulus@health.state.mn.us, MDH Environmental Health Services Director (EHS), Metro District Office.
< Gerald Wambach, at (218) 755-4152, gerald.wambach@health.state.mn.us, MDH EHS Supervisor, Bemidji and Duluth District Office.

Strategy: Conduct surveillance of food borne disease risk factors and their antecedents.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
It has been known for some time that certain conditions in food establishments are strongly associated with food borne disease outbreaks. For example, according to the CDC, the majority of food borne disease outbreaks are associated with the following five risk factors: improper cooling, poor personal hygiene, food from unsafe sources, time/temperature abuses, and cross contamination. While there is basic understanding of the above risk factors, their antecedent causes are not well understood and so our efforts to prevent food borne diseases are hampered. This strategy will allow the systematic collection, analysis, interpretation, and dissemination of data related to key risk factors for food borne disease in licensed facilities.

Additional Resources:
- < Centers for Disease Control and Prevention, at www.cdc.gov.
- < Center for Food Safety and Applied Nutrition, FDA, at http://www.cfsan.fda.gov/.
- < Minnesota Department of Health, Acute Disease Investigation and Control, at (612) 676-5414.

Evidence for Strategy:
Surveillance is one of corner stones of public health. There are various surveillance programs in existence at the federal, state, and local levels across the country.

Surveillance will improve our understanding of how, when, and why food borne disease risk factors occur, and provide clues about steps that can be taken to prevent them. In addition, systematic collection and analysis of data on food borne illness risk factors will help us determine effectiveness of existing food safety tools such as the Minnesota Food Code.

Has this strategy been implemented in Minnesota?
No, the MDH Acute Disease Investigation and Control section conducts surveillance of food borne disease symptoms and syndromes. Currently, surveillance of food borne disease risk factors is not being done.

Indicators for this strategy:
- < Food borne disease risk factors are monitored.
- < Food safety policy is guided by risk factor data.

For more information contact:
Paul Allwood, at (651) 215-0871, paul.allwood@health.state.mn.us, Environmental Health Services section, MDH, 121 E 7th Place, St. Paul, Minnesota 55101.

Strategy: Conduct consumer education on food safety risks and safe food handling, storage, and preparation in households.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
Most people do not give thought to food safety until a food-related illness prompts concern. But threats are real, numerous, and varied. The U.S. food supply is among the worlds safest, but as many as 9,000 Americans, mostly the very young, the elderly, and those with weakened immune systems, die each year, and many more are sickened as the result of a food-related illness. The impact of food borne infections can be substantial. Some pathogens give rise to diseases far more serious than the uncomfortable vomiting or diarrhea that accompanies what most people call "food poisoning." Food borne infections can cause spontaneous abortions, reactive arthritis, Guillain-Barre syndrome, Hepatitis A, and hemolytic uremic syndrome (HUS), which can lead to kidney failure and death.

Lack of consumer awareness is a critical food safety gap that we need to close. While food-related illness may occur outside of the home, such as at a restaurant or cafeteria, many cases are the result of improper food handling at home. Consumers, as the last stop in the farm-to-table continuum, have an important role to play in protecting themselves. In the past 20 years, the rules of safe food handling have changed significantly. Eating foods made with raw egg or a rare hamburger is no longer safe. These changes have resulted from advances in our understanding of food borne illness, changes in the nature of food borne illness, changes in our food supply, and changes in the way we eat.

Consumer education to promote safe food handling, preparation, and storage in the home can be conducted by state and local public health agencies, hospitals and clinics, community organizations, and other relevant state and federal agencies. The content of the consumer education should include information about:

- Washing hands, utensils, and surfaces with hot soapy water before, during, and after food preparation.
- Washing fresh fruits and vegetables before eating in safe, fresh, running water without soap or detergent.
- Avoiding cross-contamination.
- Purchasing safe food in intact packaging from clean and reputable sources and transporting it home in a safe manner.
- Cooking food to the proper internal temperature and checking for doneness with a food thermometer.
- Holding prepared foods at appropriate temperatures for safe periods of time.
- Ensuring proper refrigeration and/or freezing of perishables, prepared foods, and leftovers.
- Safe use and preparation of irradiated foods.
- Selecting and using a food thermometer.
- Chilling prepared foods thoroughly and quickly.
- Provision of factual materials in the language and/or format most suitable to the consumer.
- Special considerations for seniors about safe food handling, special vulnerability issues, and attitudes.

Additional resources:

- The American Dietetic Association, at (312) 899-0040, 216 W. Jackson Boulevard, Chicago, IL 60606-6995. This organization provides food safety education materials for professionals and consumers, at www.eatright.org.
- Food and Drug Administration (FDA) Center for Food Safety and Applied Nutrition (CFSAN), at http://vm.cfsan.fda.gov/list.html.
- FDA, at (612) 334-4100 (ext.129), Fax: (612) 334-4134; 240 Hennepin Avenue, Minneapolis, MN 55401.
- Hospitality Institute of Technology and Management, at http://www.hi-tm.com/.
- Minnesota Department of Health, Nutrition and Physical Activity Unit for consumer food safety materials in four languages. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "5 A Day" and "food safety".
- Partnership for Food Safety Education, at (202) 452-8444, Fax: (202) 429-4549, 800 Connecticut Ave, N.W., Suite 500, Washington, D.C. 20006-2701, http://www.fightbac.org. Includes downloadable consumer education kit.
- United States Department of Agriculture (USDA) Food Safety and Inspection Services (FSIS), at (202) 720-7943; Fax: (202) 720-1843, http://www.fsis.usda.gov, Room 1175-S, 1400 Independence Ave. S.W., Washington, D.C. 20250-3700. For consumer food safety publications in downloadable format, contact: http://www.fsis.usda.gov/OA/consedu.htm.
- USDA/FDA Foodborne Illness Education Information Center, National Agricultural Library/USDA, at (301) 504-6365; Fax: (301) 504-6409, croberts@nal.usda.gov, http://www.nal.usda.gov/foodborne/index.html, Beltsville, MD, 20705-2351.

Evidence for strategy:
Research strongly supports the efficacy of adequate hand washing, control of cross-contamination, and temperature control in preventing food-related illness. The data indicate that consumers have major misconceptions about food borne illness that pose challenges for education programs. There is limited evidence that carefully targeted social marketing strategies are effective in decreasing incidence of food borne illness. Additional research is needed to identify key determinants of effective campaigns.

Has this strategy been implemented in Minnesota?
Yes, a variety of community agencies and organizations have conducted consumer education programs about food safety.

Indicators for this strategy:

- Number of consumer education programs about food safety.
- Numbers and kinds of organizations involved in food safety programs.
- Numbers of ways that information about safe food handling is disseminated.
- Numbers of people reached with this information.
- Increase in knowledge about safe food handling techniques.

For more information contact:

- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.
- Linda Feltes, at (651) 281-9853, linda.feltes@health.state.mn.us, MDH

Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.

Strategy: Develop and implement consumer education to promote consumer acceptance and use of irradiated foods.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
Many Minnesota consumers can now find irradiated foods for sale. Minnesota had been a leader in introducing frozen ground beef patties in grocery stores, first in the Twin Cities, and now across the country. This represents an important opportunity to decrease the risk of food borne illness. The irradiation technology to kill food pathogens was developed - and approved - years ago, but controversy and public fear so far have largely kept irradiated food out of the grocery store. In recent years, however, food borne illness had become an increasingly serious and widely publicized health problem, one that this technology can help solve.

Food irradiation, which is the process of exposing food to specific doses of high-energy electrons, can help prevent food borne illnesses by drastically reducing the presence of the pathogens *E. coli, Salmonella, Campylobacter, Cryptosporidium, Listeria, Toxoplasma*, and *Trichinella*.

The primary reason irradiated food has not been readily available to consumers until now is the public's fear of the word "radiation." However, more than 40 years of scientific research and testing support the safety of food irradiation. Some researchers have found that, with education, consumers prefer irradiated food. (ADA, 2000; Henkel, 1998.)

The content of the consumer education should include the following information:

- Food irradiation is but one step in the safe food handling process, which begins with safe and clean food production processes and ends with safe food preparation and storage in the home.
- Food irradiation kills most pathogens in meats and poultry that can cause illness.
- There is insignificant nutritional loss in irradiated foods, less than canning, cooking, or storing.
- Food irradiation is safe and widely excepted by the international health and scientific communities.

Additional resources:
Bibliographic resources:

- American Dietetic Association. 2000. Food irradiation. Position statement of the American Dietetic Association. *Journal of the American Dietetic Association*, 100:246.
- Henkel, J. May/June 1998. Irradiation: A safe measure for a safer food. *FDA Consumer*. Publication No. (FDA) 98-2320.

Organizational resources:

- Centers for Disease Control, at: www.cdc.gov/ncidod/dbmd/diseaseinfo/foodirradiation.htm.
- Iowa State University, at http://www.extension.iastate.edu/foodsafety/rad/irradhome.html.
- Kansas State University, at www.oznet.ksu.edu/foodsafety/.

- Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Irradiation".
- National Food Safety Information Network, at www.foodsafety.gov/~fsg/irradiat.html.

Evidence for strategy:
There is a wealth of scientific research on the safety of irradiated food and it's effectiveness in killing most harmful pathogens on meats and poultry, reducing spoilage and increasing the exportability of foods. Research also indicates that consumers who are educated about the risks of food borne illness and the effectiveness of food irradiation prefer irradiated food. The MDH Nutrition and Physical Activity Unit recently surveyed several targeted groups about food safety and food irradiation. Data indicate that consumers think they are knowledgeable about food safety, but less so about irradiation. National research indicates that consumers do not practice safe food handling procedures in the home.

Has this strategy been implemented in Minnesota?
Yes, the MDH has conducted communications campaigns promoting the use of irradiated beef as has the Minnesota Beef Council. SureBeam and SuperValu have been industry leaders in education and advocating for irradiated food products.

Indicators for this strategy:
- Number of consumer education programs about food irradiation.
- Numbers and kinds of organizations involved in educating consumers about food irradiation.
- Numbers of ways that information about safe food handling is disseminated.
- Numbers of people reached with this information.
- Increase in knowledge about food irradiation.
- Decrease in the public's level of fear of irradiated food.
- Increase in public acceptance of irradiated food.

For more information, contact:
- Fran Doring, at (651) 281-9843, fran.doring@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.
- Linda Feltes, at (651) 281-9853, linda.feltes@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.

Strategy: Respond to consumer questions about food biotechnology and genetically modified organisms (GMOs).

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Advances in biotechnology allow gene technologists to select and introduce specific DNA into organisms. The most astounding advance may be the ability to "cut and paste" genes across species. According to the Institute of Food Science and

Technology, there are great advantages and potential benefits to genetic modification. A wider variety of beneficial traits can be selected for, with more precision, speed and cost savings. This allows for higher and/or more nutritious yields, reduced use of pesticides, improved processing characteristics, and the ability to grow crops in previously inhospitable environments. Aside from the advantages and potential benefits of GMOs, consumers in Minnesota and worldwide are expressing concern and turning to scientists and public health for answers regarding the safety and regulation of food containing GMOs. Some of the concerns that are imperative to address include: food safety, labeling and other government oversite and regulation, and the impact on the environment and poorer nations of introducing genetically modified seeds and foods.

The content of the consumer education should include the following information:

< An outline of the benefits and concerns of consumers about GMOs.
< A list of reliable resources for more information about food biotechnology and GMOs.

Additional resources:

< FoodFirst: Institute for Food and Development Policy, at www.foodfirst.org.
< Institute of Food Science and Technology, at www.ifst.org.
< Institute of Food Science and Technology (UK): Genetic Modification and Food, at www.ifst.org/hottop10 (12/13/01).

Evidence for strategy:

This strategy promotes opening conversation in communities about the issues related to food biotechnology to promote science-based information and clarification of community values.

Has this strategy been implemented in Minnesota?

Yes, we have begun to respond to professionals and consumers requests to information, but much more discussion is needed to enable and encourage communities and community members to provide input to their policy-makers on the development and use of these new technologies.

Indicators for this strategy:

< Development of science-based curricula and programs for the public on food biotechnology and genetically modified organisms.
< Numbers of key community leaders, professionals and lay personnel trained to respond to consumer questions.
< Number of consumer education programs about food biotechnology and genetically modified organisms.
< Numbers and kinds of organizations involved in educating consumers about food biotechnology and genetically modified organisms.
< Numbers of ways that information is disseminated.
< Numbers of people reached with this information.
< Increase in knowledge about and understanding of food biotechnology and genetically modified organisms
< Decrease in the public's level of fear about food biotechnology and genetically modified organisms.
< Increase in public acceptance of food biotechnology and genetically modified organisms.

For more information, contact:

< Fran Doring, at (651) 281-9853, fran.doring@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.
< Linda Feltes, at (651) 281-9853, linda.feltes@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.
< Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Consumer Food Safety Education Program, Nutrition and Physical Activity Unit.

CATEGORY: Environmental Conditions

TOPIC: SAFE WATER

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Inform citizens about water concerns and the ways in which their actions affect the environment.	State and Local			✔	✔	Well Contractors	Media, Public Utilities
Educate private well owners about well protection and maintenance, as well as regular water quality testing.	State and Local			K-12, Conferences for Professionals, Vocational-Technical Schools, U of M Extension		Real Estate Professionals, Well Contractors	State Education Associations, Media, Public Utilities
Develop and implement a wellhead protection plan for public wells.	State					Well Contractors	Public Utilities
Conduct education, training, technical assistance and certification for water operators.	State			Universities, Vocational and Technical Institutions			Public Utilities, MN Section of the Am. Water Works Assoc., MN Rural Water Assoc., MN Training Coalition
Develop education, technical assistance and enforcement options to assist local governments, businesses and individuals in preventing nonpoint sources of pollution.	State and Local			K-12, University of Minnesota	✔	✔	U.S. Environmental Protection Agency, MN Pollution Control Agency, MN Dept. of Natural Resources, Office of Environmental Assistance, MN Technical Assistance Program

Minnesotans are fortunate in that the state has one of the nation's highest rates of compliance with drinking water standards and construction codes. A great deal of emphasis has been placed on inspecting well construction and training water operators throughout the state, including those working with community water systems. Community water systems include municipalities as well as facilities like manufactured housing developments, nursing homes and housing subdivisions.

Achieving high rates of compliance with the federal Safe Drinking Water Act and the Minnesota Groundwater Protection Act contributes significantly to the quality of life here in Minnesota. The Safe Drinking Water Act sets compliance standards for contaminants, and provides mechanisms for replacing aging infrastructures including water treatment plants, storage facilities, wells and components of the distribution system. The Groundwater Protection Act authorizes the inspection of new wells for sanitary protection, and requires the proper sealing of old, abandoned wells, which can spread groundwater contamination.

Education is a key part of the process, both for the majority of Minnesotans who get water in their homes from public water systems and for those who have private well systems. Private well-system users must understand why it is important to test their water supplies regularly for nitrate and bacterial contamination and also be aware of nearby contamination sources that could affect their supplies. In addition, knowledge of the risks that abandoned wells pose to health and the environment will help to assure compliance with these regulations.

The Safe Drinking Water Act also addresses public notification. Users are alerted sooner to violations that may pose immediate and serious risks. The most significant portion of the landmark amendments to the Safe Drinking Water Act in 1996, in terms of public participation, is the requirement that community water systems publish an annual water quality report. The report contains basic information on each water system, including where it gets its water and the results of the preceding year's monitoring. This has a great impact on consumer awareness of drinking water issues.

Even where water sources are more plentiful, the need to protect or treat water exists. Safe drinking water results from work done by trained and dedicated water professionals. Proper construction and protection of supplies, licensing and oversight of well contractors, maintenance of a trained force of water supply operators, replacement or upgrade of aging drinking water treatment plants and facilities, and awareness of drinking water issues on the part of consumers are keys to maintaining an adequate supply of safe drinking water.

Strategy: Inform citizens about water concerns and the ways in which their actions affect the environment.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
This strategy acknowledges that, while certified operators are responsible for

ensuring the safety of drinking water provided to consumers of public water systems, citizens play a key role in the process. Educated and informed citizens can do several things to protect drinking water supplies from contamination. Citizens are involved directly or indirectly in legislation that affects public water systems. They make decisions related to financial investments necessary for maintenance and upgrade of their local public water systems. With some contaminants - particularly lead and copper, which usually enter water after it has left treatment plants - citizens can take steps to protect themselves and their families.

Lead is a contaminant for which education is key. All community water systems have tested homes for lead during the 1990s. Those that exceeded a federally set action level have had to perform corrective actions, including an ongoing program of public education. This education informs citizens about the health effects of lead exposure, the way it enters drinking water, and simple steps they can take to reduce their exposure to lead in drinking water. The MDH has assisted all water supplies that have been required to provide this education and has monitored their compliance with the regulations. In addition, the MDH has performed an aggressive public education campaign on its own that is directed to all citizens of the state, not just those served by water systems that exceeded the federal action level. The MDH education occurs in many ways: fact sheets (written in Hmong and Spanish in addition to English), posters, refrigerator magnets, articles in publications such as *Minnesota Parent*, and appearances on radio and television shows. In addition, the lead message has been printed on the shopping bags of two major grocery store chains (Cub and Rainbow) and one major discount chain (Target Stores) throughout Minnesota. Please refer to the Childhood Lead Poisoning section of the *Child and Adolescent Growth and Development* category for additional strategies to prevent childhood lead poisoning.

The Minnesota Department of Health (MDH) also produces a great deal of educational literature aimed at the general public. This literature may focus on specific issues, such as particular contaminants, or on general information about drinking water and how the program is administered at the state level to ensure that Minnesotans receive safe drinking water.

Since 1999, as mandated by the federal Safe Drinking Water Act, all community water supplies have been required to issue an annual water quality report to their customers. The MDH works with public water systems to assist them in developing and distributing reports, in addition to tracking compliance with the regulation. The MDH has issued its own Annual Drinking Water Report since 1995 and will continue to issue this report on a statewide basis.

Additional resources:
The MDH Section of Drinking Water Protection offers many fact sheets and brochures on a wide variety of topics (e.g., bacterial contamination, copper in drinking water, cryptospordium, drinking water disinfection, the Drinking Water Revolving Fund, home water treatment units, lead poisoning, the responsibilities under the Safe Drinking Water Act of noncommunity public water systems, and the roles of water utilities and the Minnesota Department of Health in protecting drinking water). See the

information section below for ordering information.

Evidence for strategy:
Making information available to the public about health issues is a traditional and basic public health activity. It is known to change attitudes and increase awareness among the public about health issues.

Has this strategy been implemented in Minnesota?
Yes, the Community Water Supplies in Minnesota have a 100 percent compliance rate for conducting semi-annual public education activities regarding lead in drinking water, which is mandated for systems that have exceeded the federal action level. In addition, the federal Safe Drinking Water Act is implemented throughout Minnesota through the MDH Section of Drinking Water Protection.

Indicators for this strategy:
- Compliance rates for general regulations of the federal Safe Drinking Water Act.
- Specific public information activities carried out as a result of the regulations dealing with lead in drinking water.
- The issuance of annual water quality reports.

For more information contact:
MDH Environmental Health Division, at (651) 215-0700, Section of Drinking Water Protection.

Strategy: Educate private well owners about well protection and maintenance, as well as regular water quality testing.

	Systems	Community	Individual
Primary			✔
Secondary			
Tertiary			

Background:
Approximately 400,000 residences in Minnesota rely on a private well as their primary source of drinking water. Although new wells are required to be tested for bacteria and nitrate before they are placed into service, maintenance of the well and water testing thereafter is the responsibility of the well owner. The purpose of this strategy is to assure that owners of private wells understand the importance of proper well maintenance, well protection, and regular water testing.

It is equally important for well owners to understand the importance of sealing old, abandoned wells. Abandoned wells threaten groundwater by acting as channels for surface contaminants. The number of abandoned wells in Minnesota, estimated in 1989 at 750,000 to one million, is now being reduced at the rate of 13,000 per year.

The MDH Well Program provides every new well owner with information about testing and maintenance of wells, and is available for direct consultation on specific well problems. Program staff also participate in dozens of local water quality clinics each year. Additional ways to accomplish this strategy may include presentations to school classes or civic groups. In addition, MDH staff are available upon request to provide

local governments and others with education, training, and technical assistance in initiating local well sealing programs.

Additional resources:
None, presently.

Evidence for strategy:
Though this particular program has not been evaluated, it is well known that providing information to individuals can increase knowledge and change attitudes. Conventional wisdom and experience indicate that most participants in this program become more knowledgeable about their wells and well water. In addition, many people express their appreciation for the consultation they receive at the water clinics, and through other direct contacts with MDH staff. The brochures are clearly useful as many thousands are requested and distributed each year.

Has this strategy been implemented in Minnesota?
Yes, the current strategy of the MDH Well Program includes providing: a fact sheet and general brochure to new well owners which covers basic information and provides instructions on how to obtain an MDH *Well Owner's Handbook;* a variety of brochures on well protection, water quality, sealing unused wells, etc.; or direct consultation with an MDH well specialist on specific well problems. Many of the same publications and brochures are also available on the MDH web site, and from many local environmental health agencies, offices of the University of Minnesota Extension Service, and licensed well contractors. In addition, the Well Program, in partnership with the Minnesota Department of Agriculture and various local agencies, annually co-sponsors dozens of water quality ("nitrate") clinics around the state, which present the opportunity for MDH professional staff to talk one-on-one with thousands of Minnesotans about private well protection and water quality issues. Staff of the MDH Well Program also provide direct training and education to well contractors, real estate brokers, staff of local governments, and others.

Indicators for this strategy:
- Number of requests for informational materials.
- Number of visits to web site pages.
- Number of requests for individual assistance.
- Number of persons attending nitrate clinics.
- Number of well problems addressed as a result of the outreach.

For more information contact:
MDH Environmental Health Division, at (651) 215-0811, Well Management Section.

Strategy: Develop and implement a wellhead protection plan for public wells.

	Systems	Community	Individual
Primary	✔		
Secondary			
Tertiary			

Background:
The purpose of this strategy is to prevent contaminants, which may have adverse effects on human health, from entering public water supply wells. The strategy is to develop and implement a plan that addresses the potential sources of contamination

within a delineated wellhead area. This planning is a requirement of Minnesota rules and statutes. A key part of the strategy is education and outreach. Target audiences for this education are public water supply officials; government officials having responsibilities related to the protection of drinking water, groundwater resources, and public health; and the general public, with special emphasis on reaching owners of potential contaminant sources as well as those who drink water from public sources.

Additional resources:
The MDH Source Water Protection Unit has hydrologists and planners on staff to assist public water suppliers in developing their plans.

Evidence for strategy:
Research consists of approximately four dozen communities that worked with MDH on a volunteer basis to pilot test the preparation and implementation of wellhead protection plans. The MDH has used the lessons learned through these pilot efforts to: (1) formulate the state wellhead protection rule, and (2) develop a full-scale implementation plan that will address all 960 community and 700 nontransient noncommunity water supply systems that will be brought into the wellhead protection program.

Has this strategy been implemented in Minnesota?
Yes, actual wellhead protection plans have been completed with 20 cities. Another 90 are now in the planning process.

Indicators for this strategy:
- Number of plans completed.
- Number of plans implemented.
- Updated list of communities with plans that are completed, or implemented, or both.

For more information contact:
MDH Environmental Health Division, at (651) 215-0700, Section of Drinking Water Protection.

Strategy: Conduct education, training, technical assistance and certification for water operators.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Minnesota has nearly 8,000 public water systems. The operators and people responsible for these systems must have the skills and knowledge necessary to provide safe drinking water to Minnesotans in their homes, schools, workplaces, and other venues such as restaurants and lodging establishments. The operators of many of these public water systems, those classified as Community Water Supplies or Noncommunity Nontransient Water Supplies, must be certified.

It is the responsibility of the MDH in conjunction with other agencies, councils, and associations to make sure those responsible for public water systems have the necessary skills and knowledge to operate the systems and protect public health. The MDH is involved in coordinating water operator training throughout the state. The training comes in

the form of one- and three-day operator schools, teleconferences, and special seminars. The MDH works with other groups in administering the training. These groups include the Minnesota Section of the American Water Works Association, Minnesota Rural Water Association, and the Minnesota Training Coalition. The MDH also communicates these training opportunities to all certified operators and city administrators in Minnesota as well as other interested parties.

Technical assistance is provided by on-site visits to all public water systems in Minnesota by MDH field engineers and public health sanitarians.

Certification of operators of Community Water Supplies and Noncommunity Nontransient Water Supplies is mandated by Minnesota Statute. The MDH certification officer administers the statewide certification program. To be certified, a water operator must fulfill specific education and experience requirements and pass an examination and must attend ongoing training to maintain the certification. The MDH certification officer oversees all aspects of this program.

Additional resources:
Bibliographic resources:
- Minnesota Department of Health. *Annual Drinking Water Report*. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "MDH Annual Drinking Water Report".
- *MDH Water Works Operators' Study Guide*. IC 141-0133. Contact: MDH Drinking Water Protection Section, at (651) 215-0770.
- *Minnesota Water Works Operations Manual*. Contact: Minnesota Rural Water Association, at (218) 685-5197, http://www.mrwa.com/

Organizational resources:
- American Water Works Association at (303) 347-6170, http://www.awwa.org
- American Water Works Association, Minnesota Section, http://www.winternet.com/~breeze/
- Minnesota Rural Water Association, at (218) 685-5197, http://www.mrwa.com/
- Minnesota Training Coalition, at (651) 215-0771.
- U. S. Environmental Protection Agency, http://www.epa.gov

Evidence for strategy:
There are high rates of compliance of Minnesota public water systems with regulations of the federal Safe Drinking Water Act. This information is documented in the Drinking Water Annual Report, which has been issued by the MDH every year since 1995.

Has this strategy been implemented in Minnesota?
Yes, the strategy has been implemented through the MDH and the state Operator Certification Council and backed up by Minnesota rules and statutes.

Indicators for this strategy:
- Compliance of public water systems with standards and regulations of the federal Safe Drinking Water Act.
- Maintenance of pass/fail rates on certification examinations.

For more information contact:
MDH Environmental Health Division, at (651) 215-0700, Section of Drinking Water Protection.

Strategy: Develop education, technical assistance, and enforcement options to assist local governments, businesses, and individuals in preventing nonpoint sources of pollution.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	
Tertiary	✔		

Background:
This strategy broadly covers the myriad impacts that individuals, local governments, and businesses have on nonpoint source pollution. Nonpoint sources, which are widely distributed small sources rather than large-volume permitted or regulated point sources, include the following:

- Animal feedlots, which can contribute to nitrate and bacteria contamination of ground water used for drinking, surface water contamination affecting water (such as rivers or lakes) used for drinking water, and air quality, through release of hydrogen sulfide and ammonia.
- Storm-water run-off, which includes motor vehicle fluids, herbicides, pesticides, fertilizers, improperly disposed-of household hazardous wastes, and compostable yard waste, all of which can adversely affect ground or surface water sources used for drinking.
- Individual sewage treatment systems, which, when improperly located, used, or maintained, can contaminate private residential wells with nitrate and bacteria.
- Motor vehicle emissions and fluid releases, which have a major impact on water and air quality, including elevating carbon monoxide levels, increasing ozone, elevating air toxics, contributing to global climate change, and contaminating ground and surface water.
- Asbestos, which was once widely used as an insulator and construction material, including in hospitals and schools, and which, when released into the air during demolition and removal, can cause lung disease.
- Leaking underground storage tanks, which are commonly found associated with gas stations, small businesses, farms, and residences with fuel oil heat, and which can release a variety of chemicals to the ground and surface water.
- Improper disposal of solid waste, including backyard farm dumps, old municipal unpermitted dumps, open burning of yard waste, waste tire abandonment, and illegal dumping, which can contribute to contamination of air, water, and land and possible mosquito-borne illness.
- Ozone-depleting chemicals, such as chlorofluorocarbons (CFCs), resulting in damage to protective layers of the atmosphere.
- Mercury, a priority pollutant, which is released into the environment and accumulates in fish tissue as the result of improper disposal of mercury switches, thermostats, thermometers, medical equipment, and other sources.

While regulation and enforcement are important components of reducing nonpoint sources of pollution, education and technical assistance can be more effective in reducing such widely distributed small sources and achieving major reductions in environmental pollutants. This process must, of necessity, involve all sectors of society, from the individual to government to private industry.

Additional resources:
Bibliographic resources:
- Minnesota Pollution Control Agency (MPCA) offers hundreds of general and industry specific fact sheets on best management of wastes, http://www.pca.state.mn.us.
- U.S. Environmental Protection Agency, has publications, http://www.epa.gov.
- Waste Education Clearinghouse, Office of Environmental Assistance, at (651) 215-0232 or (800) 877-6300. It has a wealth of resources on waste reduction, pollution prevention, recycling, and other topics.

Organizational resources:
- County household hazardous waste programs, solid waste officers, and water planners have substantial local expertise and resources.
- Local watershed districts, soil and water conservation districts, and lake associations.
- Association of State and Territorial Solid Waste Management Officials, at (202) 624-5828.
- Board of Water and Soil Resources, at (651) 296-3767 or (888) 234-1133.
- Minnesota Department of Natural Resources, at (651) 296-6157.
- Minnesota Technical Assistance Program, at (612) 627-4646.
- Recycling Association of Minnesota, at (651) 486-0455.
- University of Minnesota Extension Service, at (612) 625-1915, or Info-U, a 24-hour consumer information line, (612) 624-2200.

Evidence for strategy:
In each area of nonpoint source pollution, research has demonstrated the effects of educational strategies in reducing emissions to the environment.

Has this strategy been implemented in Minnesota?
Yes, this strategy has been implemented throughout the state and nation, but with particular success in given areas. Among the examples of education and technical assistance approaches in Minnesota:
- Educational efforts directed toward the agricultural community about nonpoint sources and best farming practices, including a manual of best practices for the environment.
- Minnesota River project, a multi-year, multi-million-dollar effort to work with local communities along the river to minimize nonpoint source impacts.
- Lake Superior project, an education and assistance campaign to reduce improper disposal of hazardous wastes to protect the lake.
- Feedlot education efforts, including articles, a videotape, fact sheets, and public meetings.
- A best management practices guide for cities to reduce nonpoint source pollution and run-off in urban areas.
- Programs to collect household hazardous wastes, educate the public about such waste and their proper disposal, encourage waste reduction and recycling,

and provide streamlined mechanisms for very small quantity generators of hazardous waste to use public facilities.
- Educational efforts such as "AutoFocus" newsletter, the Motor Vehicle Salvage Yard initiative, used oil and antifreeze collection systems, and a best practices.
- A baseline five-year report detailing the current status of Minnesota ground water as regards major contaminants, as well as a study of the impacts of land use on ground water, as elements to increase awareness among citizens and aid local government in identifying problems and planning for the future.
- Brochures for the general public on common air quality problems associated with motor vehicles, as well as major reports on air quality and status.
- Training for construction and demolition contractors to instruct them on how to remove harmful substances before building renovation or destruction.
- Storage tank educational efforts, such as newsletters and fact sheets.
- A mercury task force, working with partners at all levels of government and industries, to reduce mercury releases to the environment.
- Abandoned Waste Pilot Project, working with communities to prevent illegal dumping and manage abandoned wastes.

Indicators for this strategy:
- Air, water, and soil monitoring, including both problem specific testing and ambient data collection.
- Computer modeling using data collected to predict or identify problems or trends.

For more information contact:
Depending upon the topic, a number of Minnesota Pollution Control Agency staff can provide advice and assistance in implementing this strategy. To locate the appropriate resource, call (651) 296-6300 (Metro area) or toll-free/TDD (800) 657-3864.

Special notes:
The MPCA also implements point source, cleanup, and emergency response efforts to prevent contamination of water supplies.

Category:
INFECTIOUS DISEASE

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 9: Reduce infectious disease.

CATEGORY: INFECTIOUS DISEASE

The prevention and control of infectious diseases are essential to achieving a healthy population. One of the principal public health activities of this century has been a significant reduction in the incidence of selected infectious diseases. This success is graphically illustrated by the global eradication of smallpox and the virtual elimination of diphtheria and poliomyelitis in the U.S. Much of the progress has been a result of improvements in living standards, basic hygiene, pasteurization, and water treatment. The development and widespread use of childhood vaccines have also had a significant impact on the reduction of infectious diseases. Furthermore, the development and use of antimicrobial drugs have reduced the morbidity and mortality associated with a number of infectious diseases.

Despite these successes, infectious diseases continue to pose an important public health problem. Today, the issue of emerging and re-emerging infectious diseases is at the forefront of public health concern. A number of newly recognized diseases, including Legionnaires' disease, toxic shock syndrome, Lyme disease, human immunodeficiency virus (HIV) infection, hantavirus, and new food borne infections have been well documented, as has the emergence of antimicrobial resistance. The very young, older adults, and hospitalized and institutionalized patients are at increased risk for many infectious diseases. Changes in demographics, lifestyle, technology, land-use practices, food production and distribution methods, and childcare practices, as well as increasing poverty, have each played a role in emerging infections. Finally, for some infectious diseases, there is evidence of recent genetic changes in the infectious agent that result in substantially increased risks of serious disease.

Many infectious diseases which threaten the health of the general population are preventable and are controllable. Prevention and control of infectious diseases involve collection of accurate assessment data (such as surveillance data for specific conditions), outbreak detection and investigation, and development of appropriate control strategies (both short and long term) based on specific epidemiologic data. These activities require close collaboration between clinical providers (especially infection-control practitioners within hospitals and physicians), clinical laboratories, state and local health departments, and federal agencies. See the appendix of this category for the MDH Disease Prevention and Control Common Activities Framework. Furthermore, a need exists for continued education of the public industry (particularly food producers and food-service industries), health-care students and providers, along with research to improve immunizations, diagnostic methods, and therapeutic modalities. Thus, the prevention of infectious diseases requires multidisciplinary interventions involving public health professionals, medical practitioners, researchers, community-based organizations, volunteer and private groups, industrial representatives, and educational systems.

CATEGORY: Infectious Disease

TOPIC: STD/HIV/AIDS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Develop and implement standardized protocols for sexual health risk assessment, partner notification, testing and referral, and standards of care for infected individuals.	✔	✔	✔				
Provide STD/HIV testing, counseling, and treatment in multiple settings.	✔	✔	✔	School Clinics	✔		Jails
Conduct STD/HIV data surveillance, community assessments, and community planning.	✔	✔	✔				
Identify and advocate for the use of effective STD/HIV prevention curricula in schools.	✔			✔	✔		Concerned individuals and parents
Provide one-to-one, group and community STD/HIV prevention education, including in institutional settings.	✔	✔	✔	✔	✔	✔	Jails, chemical dependency treatment programs
Build community capacity through community organizing, agency development, agency collaborations, and	✔	✔	✔	✔	✔	✔	Concerned individuals

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
social support.							
Establish street outreach services.	✔				✔		
Reduce environmental and other risk factors that increase the risk of STD/HIV transmission.	✔	✔	✔	✔	✔	✔	Concerned individuals
Provide public information via mass media, hotlines, and clearinghouses.	✔	✔	✔		✔		
Improve the skills and knowledge among health care providers of adolescent sexuality issues, including STDs.	✔	✔	✔	✔			

Sexually transmitted diseases (STDs) are the most commonly reported infectious diseases in Minnesota. There are a number of significant issues and problems associated with STDs that go beyond the acute phase of infection. If undetected, untreated, or both, STDs can lead to long-term health consequences, including pelvic inflammatory disease, infertility, and cervical cancer. STDs occurring during pregnancy can result in fetal death or physical and developmental disabilities. The risk of transmitting and acquiring HIV is greater among people with an STD.

HIV is a life-threatening infectious disease for which there is no vaccine and no cure. It is most commonly transmitted through unprotected sex and shared injecting-drug-use equipment. HIV infection has a devastating impact on infected people, and places significant demands on Minnesota's health care system. While major treatment advances have been made in the recent past, the treatment is expensive, and there is still no cure for the infection. At the same time, HIV is a preventable disease. Although effective prevention strategies are available, the resources required to implement prevention efforts remain scarce. Early detection along with early medical intervention are also important elements of a comprehensive HIV/AIDS prevention and control strategy.

Adolescents and young adults are at greatest risk of acquiring STDs, and women, who are biologically more susceptible to STDs, are more likely to develop more serious long-term consequences than men. Populations of color are disproportionately affected by STDs.

A new social norm of healthy sexual behavior is a basis for long-term prevention of STDs among adolescents. Sexually active adolescents who engage in healthy sexual behaviors (including, but not limited to, abstinence) have lower risks of STDs than those who do not. Ways to promote healthy sexual norms, especially for adolescents, include: providing sexuality information and skill-building opportunities on healthy sexual behaviors; providing training for parents and caregivers so that they can comfortably provide guidance and education to their children; making condoms easily accessible to sexually active youth; and promoting the Minnesota Family Planning and STD Hotline program, a toll-free hotline which teens and adults can call for information about STDs and find STD health care services. See the category on *Unintended Pregnancy* for related prevention strategies. The use of drugs and alcohol is strongly associated with the occurrence of STDs. Please refer to the *Alcohol, Tobacco, and Other Drugs* category for related strategies to reduce the use of alcohol and other drugs among adolescents.

The majority of HIV/AIDS cases are still among men who have sex with men, though injecting drug users are at high risk for acquiring HIV. While the majority of people currently living with HIV/AIDS in Minnesota are white, populations of color are disproportionately affected by HIV and AIDS, and incidence rates are increasing, especially among African Americans. The majority of HIV and AIDS cases are males, although the proportion of female cases has been increasing slowly.

While promoting community-wide healthy sexual norms is an important strategy for the long term prevention of STD and HIV, it is also important to develop culturally specific programming that targets individuals and groups most at risk for HIV/AIDS - namely those adult men who have sex with men, young men who have sex with men, and injecting drug users who engage in HIV transmission risk behaviors.

The primary role of public health in addressing STD/HIV/AIDS is, therefore, to promote primary prevention to educate communities and individuals about behaviors that may put them at risk for acquiring STD/HIV and to provide them with resources to help them prevent or change such behaviors. A secondary role of public health is to provide screening and referral services for individuals who may have been exposed to STD/HIV, and to assure access to treatment and care. Please refer to the section on Parenting and Youth Development in the *Child and Adolescent Growth and Development* category for related strategies addressing the prevention of high-risk behaviors among adolescents.

Strategy: Develop and implement standardized protocols for sexual health risk assessment, partner notification, testing and referral, and standards of care for infected individuals.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
The purpose of this strategy is to encourage public and private health care providers to develop and implement protocols for the system wide implementation of sexual health risk assessments, partner notification, testing and referral, and standards of care for persons infected with STDs or HIV. This strategy refers specifically to the development and implementation of these protocols, not to the specific content of the protocols. The content of the above-mentioned procedures are known, but the system (clinic, hospital, community-based organization, etc.) may have no protocol in place for their implementation. In some cases, protocols exist but need to be adopted or customized for particular settings or health care delivery systems; in other cases, protocols do not exist and need to be developed.

Sexual health risk assessments should be performed routinely by public and private health care providers as part of annual physicals, annual ob/gyn visits, and other occasions (e.g., when a chemical health problem is diagnosed, when a pregnancy is confirmed, when STD testing is requested, etc.). It should be the responsibility of the provider, rather than the client, to initiate this discussion.

A sexual health risk assessment would assess the number and gender of the client's sexual partners, the frequency of sex, whether there is consistent use of contraception and condoms, and the ability of the client to negotiate for safer sex in sexual situations. It would determine whether sexual abuse is occurring and provide education and referrals around safer sex activities. If STD testing is requested, referrals for an HIV test should also be

made. If an HIV test is requested, referrals to STD testing should also be made. If a pregnancy test is indicated, referrals for both HIV and STD testing should be made.

It is key that such assessments be institutionalized as standards of care by providers at the systems level. Currently, many providers do not have time to perform such assessments, and are not reimbursed for such assessments, even if they wish to provide them. Providers should be trained in delivery of sexual health risk assessments, appropriate educational materials should be available, and providers should be aware of appropriate community referrals sites.

If not already in place in the community, public and private primary health care providers should develop, implement, and monitor standardized protocols for the screening of STDs at clinic visits, particularly preventive ob/gyn health care visits, and at annual physicals. The protocol should include a sexual health risk assessment, tests for STDs and the offer of an HIV test, if appropriate. If an STD is diagnosed, a referral for an HIV test should become the standard of care (likewise, if HIV is diagnosed, STD testing should become the standard of care). HIV testing should be offered to pregnant women.

Public and private health care providers should be encouraged to develop protocols that ensure that partner notification takes place for individuals who have been treated for an STD. Many public and private health care providers take on the role of testing and treating for STDs and for HIV. All HIV-positive cases, and cases of reportable STDs (chlamydia, gonorrhea, and syphilis), are reported to the Minnesota Department of Health (MDH). MDH disease intervention specialists contact all cases of HIV, and discuss with them the notification of their sexual and drug-using partners. However, MDH disease intervention specialists only perform follow-up and partner notification for individuals diagnosed with an STD when that individual has not followed through with treatment. That means that for individuals treated for an STD through a public or private health care provider, it remains the responsibility of the client, the provider, or both to ensure that sexual partners have been informed of their exposure to the disease.

All health care providers serving clients who are STD- or HIV-infected should have protocols in place to provide information, education, and support around prevention of transmission of STD/HIV to sexual and drug-using partners. Protocols should include referrals, as appropriate, to a range of services, including ongoing one-on-one counseling, prevention case management, drug treatment, and psychological treatment regarding sexually compulsive behaviors.

Additional resources:

Bibliographic resources:

< Centers for Disease Control and Prevention. 2001, Fall. Revised guidelines for HIV counseling, testing and referral, *Morbidity and Mortality Weekly Report.*

< Landis, SE., Schoenback, VJ., Weber, DJ., Mittal, M., Krishan, B., Lewis, K., and Koch, GG. Results of a randomized trial of partner notification in cases of HIV infection in North Carolina. *New England Journal of Medicine* 236(2):101-106.

< Minnesota Department of Health. *Minnesota Comprehensive HIV/STD Prevention Plan, 2000-2002*.

< Persistence led partner notification program into vast network of contacts. 1995, June. *AIDS Alert.*

Organizational resources:

< National Association of State and Territorial AIDS Directors (NASTAD). 1997, September. Focus on partner notification and prevention case management. Call (202) 434-8090.
< University of Minnesota Program in Human Sexuality, at (612) 625-1500.

Evidence for strategy:

Focus groups held across the state indicate that partner notification is occurring inconsistently, particularly in Greater Minnesota. In addition, there are some clinics and organizations in Minnesota that have implemented some of these procedures in their systems, but there has been no coordinated effort to document this activity.

There is research to support the provision of these services, but the research does not specifically examine the impact of developing and implementing such protocols or policies.

Has this strategy been implemented in Minnesota?

Yes, several community-based organizations and clinics implement sexual health risk assessments as part of specially funded STD/HIV prevention programs. An example is the Health Interventions Model (HIM) Program at the Red Door Clinic, of the Hennepin County Community Health Department in Minneapolis.

STD screening and testing, and HIV testing are available through most primary health care providers. The extent to which they have been incorporated into preventive care protocols by different providers appears to be piecemeal. In community focus groups, women complain that STD and HIV testing is not automatically offered and many believe that HIV testing is performed as part of testing for other STDs. If the strategy is being implemented by the health care provider, many consumers are unaware of it, or confused by it.

Disease intervention and partner notification takes place in Minnesota through the MDH STD and HIV Section. The strategy of developing protocols in private and public health care institutions has not been examined.

Education and counseling services are offered by providers in a wide range of settings to STD/HIV positive clients. The extent to which health care providers have standardized these services into their health care protocols has not been examined.

Indicators for this strategy:

< Number of health care systems, clinics, hospitals, community organizations, etc., that have protocols developed.
< Number of health care systems, clinics, hospitals, community organizations, etc., that are implementing their protocols.

For more information contact:

< Julia Ashley, at (612) 676-5665, julia.ashley@health.state.mn.us, MDH STD and HIV Section (STD Screening and Testing).
< Maria Rubin, at (612) 676-5342, maria.rubin@health.state.mn.us, MDH STD and HIV Section, HIV Testing and Sexual Health Risk Assessment.
< Steve Schletty, at (612) 676-5644, stephen.schletty@health.state.mn.us,

MDH STD and HIV Section, Partner Notification.

Strategy: Provide STD/HIV testing, counseling and treatment in multiple settings.

	Systems	Community	Individual
Primary			
Secondary	U	U	
Tertiary	U	U	

Background:
Testing and treatment services allow for early identification of STDs, earlier treatment, treatment of sexual partners (thus stopping the transmission to others), and support for healthier behaviors. The availability of new testing technologies, including urine tests for certain STDs, and non-venal puncture technology for HIV tests (e.g., oral swabs) allows STD and HIV counseling, testing, and treatment to occur in a private or public clinic setting, or within a community-based agency, workplace, or school setting.

STD and HIV counseling and testing should include all or some of the following elements: referral of pregnant women to primary physician care to manage their pregnancies; alternative methods of testing (e.g., oral swabs or urine testing); alternative methods of pre- and post-test counseling (e.g., videotape); referral (including staff-assisted referrals, referral for drug treatment, mental health counseling, and referral to community-based STD/HIV prevention programs); a referral verification system (e.g., a system for staff follow-up on referrals to ensure that clients have acted on the referral); referral of STD and HIV infected clients to early intervention and treatment; referral of STD-infected persons for HIV testing, and HIV-infected persons for STD testing; and counseling and assistance to ensure sexual and drug using partners access testing and treatment.

Agencies or organizations planning to provide STD testing, HIV antibody testing, or both should be aware of the following requirements:
< Physician supervision, including standing orders.
< Confidentiality of medical information, including security.
< Accurate identification of the client at post-test.
< Procedures for reporting positive results of reportable diseases (including syphilis, gonorrhea, chlamydia and HIV) to MDH.
< Notification of test results to the client who does not return for results.
< Prevention education and counseling, or referral to counseling.
< Referral resources and mechanisms for referring and for determining if the client has utilized these resources.
< Mechanisms to guarantee the client who tests positive has seen a physician.

Sexually active adolescents are at particular risk for STDs, and STD rates are highest among adolescents of color. They often have limited access to affordable, confidential, and comfortable STD testing and treatment services. Ways to make these services more accessible to adolescents include:
< Increasing the ability of family planning clinics to screen all adolescents (including males) for STDs.
< Increasing the number of school-based or school-linked clinics that provide STD testing and treatment services.

- Incorporating STD testing and treatment into Child and Teen Check-up services.
- Bringing health care services into settings where high-risk youth are found (e.g., juvenile corrections settings, homeless shelters, etc.) and including routine STD testing and treatment as part of services.
- Providing sexuality risk assessment (with corresponding health counseling and education) to all adolescents (including young teens) at routine health care visits.
- Ensuring that clinic services are provided in developmentally appropriate and culturally competent ways.
- Treating adolescents who exhibit signs of treatable STDs presumptively whenever clinically reasonable (it is often very difficult to get adolescents back for treatment if they have to wait for a test result).
- Providing antibiotics in the clinic setting to adolescents diagnosed with (or presumptively diagnosed with) a treatable STD (such as chlamydia and gonorrhea). This can reduce the number of teens who do not comply with antibiotic treatment because they do not get the prescription filled.
- Making STD treatment easily available to sexual partners of adolescents diagnosed with a treatable STD (for example, when treating a teen for chlamydia, also give that teen a second prescription for their sexual partner; it is not as risky as some clinicians believe).
- Providing Hepatitis B vaccines to all adolescents who have not been previously vaccinated.

Another way to reach adolescents is the development of systems and protocols within school districts to provide STD and HIV counseling and testing within school-based clinics. The provision of STD and HIV counseling and testing within schools is a recommendation of the MDH Commissioner's Task Force on HIV/STD Prevention, and has been identified by youth in youth focus groups as a potentially helpful strategy.

Additional resources:

Bibliographic resources:

- Academy for Educational Development. May 1996. *What Intervention Studies Say About Effectiveness: A Resource for HIV Prevention Community Planning Groups.* (202) 884-8862. Provides a good overview of relevant research, key review articles, and selected books.
- Centers for Disease Control and Prevention. 2001. Revised guidelines for HIV counseling, testing and referral, *Morbidity and Mortality Weekly Report*.
- Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide,* available at: http://www.thecommunityguide.org).
- Higgins et. al. 1991. Evidence for the effects of HIV antibody counseling and testing on risk behaviors, *JAMA*, 266(17).
- Holtgrave, D., et. al. 1995. HIV counseling, testing, referral and partner notification: A cost-benefit analysis. *Archives of Internal Medicine,* 153(10), 1225-1230.
- Institute of Medicine, 1997. *The Hidden Epidemic: Confronting STDs*. Institute of Medicine, National Academy Press.
- Technical guidance on HIV counseling, *Morbidity and Mortality Weekly Review*, 42(RR-2).

Organizational resources:
- < Centers for Disease Control and Prevention (CDC), at (404) 639-0965.
- < Minnesota Department of Children, Families, and Learning. Contact: Kathy Brothen, at (651) 582-8842.

Evidence for strategy:
The primary goal of a public counseling and testing program is to identify individuals who are infected with STD/HIV, in order to make referrals to treatment and to develop more effective behavior change programming. A secondary goal is to provide access to STD/HIV testing to disenfranchised individuals. Behavior change is not a primary goal of providing counseling and testing in Minnesota.

Testing and treatment of STD is a prevention intervention, in that it halts the chain of transmission, and reduces the pool of STD infection within a community. While existing treatment for HIV cannot cure the individual, research shows that individuals who are aware of their HIV status are much less likely to engage in behaviors that will transmit HIV.

Studies vary widely in their attempt to measure the impact of HIV counseling and testing on behavioral change. Different research designs, behavioral measures and types of analyses reflect the fact that data are rarely collected for the purpose of evaluating programs as well as reflecting the variety of settings in which counseling and testing is administered. It becomes difficult to assess whether positive behavioral change was a result of counseling and testing over some other intervention in the communities studied.

Overall, there is little consistent evidence that counseling and testing is effective in promoting positive behavioral change for persons who are at high risk for HIV infection but are HIV negative. Counseling and testing does appear to have substantial benefit given its cost, as averting even one HIV infection yields a net savings to society. It is not known if, relative to other HIV prevention programs, counseling and testing is cost-effective.

STD risk reduction counseling is recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, most physicians and providers will provide an STD or HIV test to a client on request. In addition, the MDH funds several clinics to provide free confidential HIV testing for community members. In addition, the Red Door Clinic in Hennepin County, Room 111 in Ramsey County, and many school-based and family planning clinics around the state provide sliding scale or free STD and HIV tests.

Indicators for this strategy:
- < The kinds of organizations, agencies, etc., that offer these services.
- < The numbers of private or public clinics, community-based agencies, workplaces, or schools that offer these services.
- < Which services are offered at which settings?

For more information contact:

< Julia Ashley, at (612) 676-5665 julia.ashley@health.state.mn.us, MDH STD and HIV Section, STD Testing.
< Maria Rubin, at (612) 676-5342, maria.rubin@health.state.mn.us, MDH STD and HIV Section, HIV Testing.

Strategy: Conduct STD/HIV data surveillance, community assessments, and community planning.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:

The process of gathering data, conducting an assessment of the problem, and engaging in a community planning process is a basic public health approach to an important public health problem. Because of the nature of STD/HIV, the ways in which these activities are conducted merit particular attention.

Surveillance of STDs and HIV currently occurs in Minnesota. Cases of syphilis, gonorrhea, chlamydia, HIV and AIDS are all reportable to the MDH. Additional demographic information on race or ethnicity, age, gender, and geographic location of the test is also collected. Information regarding route of transmission (e.g., male-to-male sex, injecting-drug use, heterosexual contact, and perinatal transmission) is also collected for HIV and AIDS cases, but not for STD cases.

This strategy is not an STD/HIV prevention strategy in and of itself, but it provides crucial data for the targeting of STD/HIV prevention programming, and distribution of prevention resources. It is most appropriately initiated and implemented by the MDH. However, it does depend on the cooperation of public and private health care providers, and STD/HIV testing sites for the collection and reporting of the required data. A community assessment is a process whereby a community or target population already engaging in high-risk behaviors is studied in order to learn how best to change high-risk behaviors and prevent transmission of STDs and HIV. The assessment can be performed in a number of ways, including through the development and distribution of needs assessment surveys, holding focus groups, holding key informant interviews, or holding community or town meetings. Assessment activities are most successful when the majority of people surveyed are actually members of the target population, rather than individuals serving the target population. Methods to improve the likelihood of reaching members of the target population include identifying and training members of the target population to administer surveys, or to recruit individuals to community or focus group meetings; holding meetings at times and in locations most convenient to the target population, and providing resources to improve the accessibility of such meetings (e.g., transportation, child care, incentives, and food); ensuring that needs assessment questions are understandable and relevant; and developing a process to inform the target population of the results of the needs assessment activities.

Questions that should be addressed in a needs assessment process include the following:

- Who is at risk? What is their age, gender, race, sexual orientation, geographic location, socio-economic status (income, education, etc.), and drug-use (populations) history?
- Why are they at risk? What sex and drug-using behaviors are being engaged in; how often do they occur; and how often are they unprotected (i.e., the number of unprotected acts in which they have engaged)? In addition, how many unprotected partners (i.e., the number of different people with whom unprotected acts have been engaged in) have they had, and where and when have these behaviors taken place? What other behaviors (e.g., alcohol, drug use, and parties) were also happening, and what psychosocial relationships to high-risk behavior can be determined (e.g., what is the relationship of self-esteem and internalized homophobia or racism)? Finally, what cultural relationships to high-risk behavior can be determined?
- What skills and assets do individuals possess that might help them affect high-risk behaviors?
- What socio-economic factors affect the risk behaviors of the individual and the group? How can the environment, policy, or both be changed to support the effectiveness of HIV prevention programming?
- What can reduce risk? How can the population be motivated to participate in STD/HIV prevention programming? What messages do they want to hear? Where, when, from whom, in what format (e.g., one-on-one, group, media, community-level, ongoing, or short-term) do they want to hear them?
- What is already being provided in the community? Is it working? What resources, skills, assets does the community possess that might help them impact high-risk behaviors?

Community planning is a process in which the identification of high-priority STD/HIV prevention needs in a jurisdiction is shared between the agency administering funds, and representatives of the communities for whom the services are intended. In addition, community planning embraces the notion that behavioral and social sciences must play a critical role in the development, implementation, and evaluation of STD/HIV prevention programs within a community.

As a strategy, community planning conducted successfully improves the allocation of scarce resources, and increases buy-in, participation, and accountability of community members in HIV prevention activities, ultimately improving the quality and scope of those activities.

Additional resources:

Bibliographic resources:

- Centers for Disease Control and Prevention (CDC). *A Tool Kit for HIV Prevention Community Planning*. (404) 639-5211.
- NASTAD (National Association of State and Territorial AIDS Directors) HIV Prevention Community Planning Bulletin. 1997. *Focus on Surveillance*. (202) 434-8090.
- National Council of La Raza. *Using Data, Assessing Needs: A Guide for Community Members of HIV Prevention Community Planning Groups*. National Council of La Rasa; 810 First Street, NE, #300, Washington DC 20002, (202) 289-1380; FAX (202) 289-8173.
- U.S. Conference of Mayors AIDS/HIV Program. 1994. *Knowledge, Attitudes,*

Beliefs and Behaviors (KABB) Surveys 11(5).

Organizational resources:

< Academy of Educational Development, at (202) 884-8862.
< National Association of State and Territorial AIDS Directors (NASTAD), at (202) 434-8090.
< National Minority AIDS Council, at (202) 483-NMAC.
< U.S. Conference of Mayors, at (202) 293-7330.

Evidence for strategy:
Surveillance supports targeted research into issues related to STD and HIV by providing baseline information on the incidence and prevalence of disease within a specific geographical area. Conducting a community assessment is a form of research, designed to assist in the targeting and design of effective STD and HIV prevention interventions. Research on the efficacy of community planning as an STD/HIV prevention strategy is still being conducted.

Has this strategy been implemented in Minnesota?
Yes, surveillance of syphilis, gonorrhea, chlamydia, HIV and AIDS is required by law in Minnesota. Many needs assessment activities around STD/HIV prevention have taken place in Minnesota, including surveys of Hispanics, African Americans, men who have sex with men, men of color who have sex with men, and HIV-positive individuals; focus groups with many different community groups; and ongoing needs assessment activities in Greater Minnesota. In addition, all states and territories are required to conduct STD/HIV prevention community planning in order to be eligible for federal HIV prevention funding. Statewide HIV community planning has been occurring in Minnesota since 1994.

Indicators for this strategy:
Properly performed, a needs assessment will improve the targeting and efficacy of STD/HIV prevention programming. It is hard to measure this - perhaps one way is to compare the numbers or proportions of individuals in a specific target population reached before and after needs assessment activities are performed.

For more information contact:

< Peter Carr at (612) 676-5642, peter.carr@health.state.mn.us, MDH STD and HIV Section, Evaluation and Surveillance.
< Lucy Slater, at (612) 676-5662, lucy.slater@health.state.mn.us, MDH STD and HIV Section, Planning and Evaluation.

Strategy: Identify and advocate for the use of effective STD/HIV prevention curricula in schools.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
At present, in Minnesota, STD/HIV prevention education is required to be provided in schools. However, there is no state legislation that describes the content or scope of this education, and there is no penalty if STD/HIV prevention education is not provided. Curriculum selection and implementation is up to local school districts.

A number of school-based curricula have been evaluated nationwide, and shown to be effective in reducing STD/HIV-transmission risk behaviors among the youth who have participated in them. This strategy, recommended by the MDH Commissioner's Task Force on HIV/STD Prevention, is to promote the use of effective curricula in schools, as well as to lobby for legislation that mandates their use in high schools in Minnesota.

Additional resources:
Bibliographic resources:

- Becoming A Responsible Teen. Contact: Phyllis Scattergood, EDC, at (617) 969-7100.
- Centers for Disease Control and Prevention, Division of Adolescent and School Health (DASH). Be Proud, Be Responsible, (770) 488-3111.
- Evaluation. St. Lawrence, JS., Brasfield, TL., Jefferson, KW., Alleyne, E., O'Bannon, RE., Shirley, A. 1995. Cognitive-behavioral intervention to reduce African American adolescents' risk for HIV infection. *Journal of Consulting and Clinical Psychology* 63(2):221-237.
- Kirby, D., Barth, RP., Leland, N., Fetro, JV. 1991. Reducing the risk: Impact of a new curriculum on sexual risk-taking. *Family Planning Perspectives*, 23(6):253-263.
- Main DS., Iverson, DC., McGloin, J., Banspach, SW., et. al. 1994. Get Real About AIDS. Preventing HIV infection among adolescents: Evaluation of a school-based education program. *Preventive Medicine* (23):409-417.
- Reducing the Risk. Barth, RP., Middleton, K., Wagman, E. A skill building approach to preventing teenage pregnancy. *Theory into Practice* 28(3): 183-190.

Organizational resource:

- Minnesota Department of Children, Families and Learning, Coordinated School Health, Kathy Brothen, (651) 582-8842.

Evidence for strategy:
Curricula cited in the section above, (see "Additional resources:") have been evaluated by the CDC and shown to be effective in delaying the onset of sexual activity, increasing the use of condoms during sexual activity, decreasing the rate of unprotected sex, or all three.

Has this strategy been implemented in Minnesota?
Yes, a number of school districts have implemented the research-based curricula described above. The Minnesota Department of Children, Families and Learning (MDCFL) provides training and technical assistance to school districts around implementation of the described curricula.

Indicators for this strategy:

- Availability of scientifically proven, effective curricula mandated for use in Minnesota school districts.
- Number of schools using any of the above curricula.
- Curricula being used in Minnesota schools.
- Number of youth who report a delay in the onset of sexual activity.
- An increase in the use of condoms during sexual activity among youth.
- A decrease in the rate of unprotected sex among youth.

For more information contact:

< Kirsten Gerber, at (612) 676-5705, kirsten.gerber@health.state.mn.us, MDH STD and HIV Section.
< Kathy Brothen, at (651) 582-8842, MCDFL Comprehensive School Health.

Strategy: Provide one-to-one, group, and community STD/HIV prevention education, including in institutional settings.

	Systems	Community	Individual
Primary	U	U	U
Secondary		U	U
Tertiary			

Background:

Community-level interventions are based on diffusion of innovation and social influence theories, are designed to change community norms, and target everyone within a specific community, not necessarily those individuals at highest risk for STD/HIV transmissions. Community-level interventions often focus on the dissemination of educational materials, condoms, bleach, clean needle distribution or exchange, and encouragement of STD and HIV testing, or on conducting outreach in the community. Examples of community level interventions include booths at community events such as health fairs, county fairs, pow-wows, Juneteenth celebrations, World AIDS Day events, etc.

Community education is the provision of education through group or one-on-one educational sessions. It targets individuals and groups who may not necessarily be at high risk themselves for STD/HIV transmission, but who may be influential with community members who are at high risk. Through group or one-on-one sessions, community education attempts to provide more focused and time-intensive education than the distribution of materials or outreach at a community event might allow. It is based on diffusion of innovation and social-influence theories and includes such activities as parent education classes that address sexuality issues among youth or faith-based discussion groups or programs. One highly successful method of delivering community education has been through the development of dramatic productions containing healthy sexuality messages, particularly if followed by discussion or presentations by opinion leaders living with STDs or HIV.

Group counseling and education need to occur for those at risk of contracting STD/HIV, as well as those who are diagnosed with STD/HIV. The group counseling and education can be led by a peer counselor or a non-peer counselor and often includes sexual health and STD/HIV prevention education; skills training, including condom-use training; negotiation of safer-sex behaviors; risk-reduction strategies for injecting-drug users; and addressing, as appropriate, or making referrals for other psycho-social issues.

Another form of group counseling and education is the provision of social support. This occurs through drop-in centers of social groups that provide support for individuals diagnosed with STD/HIV that may not be directly related to STD/HIV prevention, but that influences the determinants of high-risk behaviors such as self-esteem and social norms.

One-on-one or individual counseling and education also need to occur for those at risk of contracting STD/HIV, as well as those who are diagnosed with STD/HIV. Like group counseling and education, individual counseling and education can be led by a peer counselor or a non-peer counselor and often includes sexual health and STD/HIV prevention education; skills training, including condom-use training, negotiation of safer-sex behaviors, risk-reduction strategies for injecting-drug users; and addressing, as appropriate, or making referrals for other psycho-social issues. Non-peer, individual interventions can also include ongoing multiple sessions with an individual client assessed to be at high risk for STD/HIV transmission.

An important one-on-one strategy is that of prevention case management. This is a client-centered HIV prevention activity with the fundamental goal of promoting the adoption of healthy sexual behaviors by clients with multiple and complex risk-reduction needs. Prevention case management is a hybrid of sexual risk behavior reduction counseling, and traditional case management that provides intensive, ongoing, individualized prevention counseling, support, and service brokerage. The CDC has very precisely defined and described prevention case management and recommends that this activity occur in very specific locations or organizations where services are readily available or for which referrals are smooth and efficient. Therefore, in Minnesota, prevention case management could only be delivered in specific organizations such as public STD/HIV clinics and comprehensive STD/HIV-prevention programs.

In many communities STD/HIV-prevention education is provided to clients housed within institutions as part of a comprehensive health education program. STD/HIV-prevention education includes:

- Basic facts about STD and HIV transmission.
- Discussion of STD and HIV risk-reduction methods (e.g., the harm-reduction continuum for sexual activity: abstinence, reduction in the number of sexual partners, monogamy, and the use of condoms or dental dams; and the harm-reduction continuum for injecting-drug use: abstinence, cleaning needles with bleach and water, and not sharing needles).
- Development of STD and HIV risk-reduction skills (teaching decision-making and negotiation skills, including role playing).
- Addressing psycho-social issues (i.e., confidence, self-esteem, internalized homophobia or racism, and sexual compulsivity) when necessary and appropriate.
- Distribution of materials and safer-sex and drug-using supplies.
- Providing referrals to STD and HIV testing and treatment.

To be most effective, a comprehensive health education program must be ongoing and repetitive, with a variety of educational opportunities offered to clients in a number of different ways. Institutions in which comprehensive STD/HIV prevention programming should be considered include:

- Worksites (e.g., multimedia workshops and multiple presentations).
- Schools (e.g., incorporation into many different parts of the curriculum, school-support services, and school nurses and clinics).

- Residential chemical dependency treatment (e.g., incorporation into group and one-on-one counseling formats, special presentations, and workshops, etc.).
- Correctional facilities (e.g., addressed at intake, pre-release, one-on-one counseling sessions, special workshops, peer education opportunities, etc.).

Additional resources:

Bibliographic resources:

- Academy of Educational Development. 1996. *What Intervention Studies Say About Effectiveness. A Resource for HIV Prevention Community Planning Groups*. This provides a good overview of relevant research, key review articles, and selected books, including prevention programs institutionalized in correctional facilities, chemical dependency treatment centers, homeless shelters, and schools. Contact: (202) 884-8862.
- Evaluation St. Lawrence, JS., Brasfield, TL., Jefferson, KW., Alleyne, E., O'Bannon, RE., Shirley, A. 1995. Cognitive-behavioral intervention to reduce African American adolescents' risk for HIV infection. *Journal of Consulting and Clinical Psychology* 63(2):221-237.
- Main DS., Iverson, DC., McGloin, J., Banspach, SW., et. al. 1994. Get Real About AIDS. Preventing HIV infection among adolescents: Evaluation of a school-based education program. *Preventive Medicine* (23):409-417.
- National Institutes of Health. 1997. *Interventions to Prevent HIV Risk Behaviors. Programs and Abstracts.* Consensus Development Conference.

The following curricula have been evaluated by the CDC and shown to be effective in delaying the onset of sexual activity, increasing the use of condoms during sexual activity, or decreasing the rate of unprotected sex:

- Becoming A Responsible Teen. Contact: Phyllis Scattergood, EDC, at (617) 969-7100.
- Be Proud, Be Responsible. Contact DASH at CDC for more information on these curricula, and others like them; (770) 488-3111.
- Reducing the Risk. Barth, RP., Middleton, K., Wagman, E. A skill building approach to preventing teenage pregnancy. *Theory into Practice* 28(3): 183-190.
- Impact of a new curriculum on sexual risk-taking. Kirby, D., Barth, RP., Leland, N., Fetro, JV. (1991). *Family Planning Perspectives* 23(6):253-263.

Organizational resources:

- Centers for Disease Control and Prevention (CDC), at (404) 639-0965.
- CDC Division of Adolescent and School Health (DASH) (770) 488-3111.
- CDC National AIDS Clearinghouse. Workplace Educational Materials Database. Contact: Business and Labor Resource Service, at (800) 458-5231, P.O. Box 6003, Rockville, MD 20849-6003.
- Minnesota Department of Children, Families and Learning, Kathy Brothen, at (651) 582-8842.
- Minnesota Department of Human Services Chemical Dependency Program Division, at (651) 296-6117, for guidelines on providing HIV/STD-prevention education within chemical dependency treatment centers.

Evidence for strategy:
Numerous studies show that community level, group level, and individual level educational interventions are effective in reducing risk behaviors among individuals in different high risk groups. For example: studies have found that improvements in condom use and safer sex knowledge can be obtained for women from a variety of backgrounds through group education sessions that address assertiveness, negotiation skills, planning skills, and skill training in condom use through use of videotapes, role-playing, cognitive rehearsal, and aversive-conditioning.

The AIDS Community Demonstration Projects targeted high risk, hard to reach populations in five large cities. Interventions were developed for intervenous drug users (IDUs) recruited off the streets, female sex partners of male IDUs, women who trade sex for money or drugs, men who have sex with men (MSM) who do not identify as gay, street youths, and residents of areas with high rates of STDs and injection drug use. Each intervention site distributed brochures, condoms, and bleach kits. Preliminary findings indicated positive changes in consistent condom use for vaginal intercourse and anal intercourse, and consistent use of bleach to clean injection equipment.

A series of programs funded by the CDC used an intervention where outreach workers indigenous to the community act as credible messengers, provide risk-reduction materials and education, and arrange for free HIV testing and counseling. Counselors distribute bleach and condoms and teach their proper use. Each site developed interventions to promote the harm reduction. Twenty studies from these programs show: decreased frequency of injection, ranging from 10 to 30 fewer injection events per month (measured in 14 studies); decreased sharing of injection equipment ranging from 6.7 to 42.9 percent fewer (measured in 10 studies); decreased use of shooting galleries (measured in six studies); decreased number of sex partners (measured in three studies); decreased risky sex, (measured in seven studies); increased needle disinfection (measured in seven studies); increased entry into drug treatment (measured in four studies); increased use of condoms (measured in five studies); declines in prevalence of risk behavior and in HIV incidence (measured in one study).

Has this strategy been implemented in Minnesota?
Yes, the MDH funds many community agencies to perform community education (including several youth drama programs, one-on-one and group counseling, and education with target populations at high risk for STD/HIV) and to provide services for individuals diagnosed with STD/HIV.

The Department of Corrections is funded to perform STD/HIV prevention programming within state correctional facilities in which a number of elements are present, including education at intake and pre-release. Likewise, school districts are required to implement an STD/HIV prevention curriculum. However, not all curricula are comprehensive, and there is no penalty if the requirement is not followed. Guidelines have been developed by DHS regarding education in chemical dependency treatment centers; however, funding is not available for implementation, and not all treatment centers provide comprehensive programming.

Indicators for this strategy:

< Changes in knowledge, attitudes, and behaviors among community education participants.
< Changes in knowledge, attitudes, and behaviors among those they are intended to influence.
< Changes in community norms.
< Degree to which comprehensive programming is in place in schools, chemical dependency treatment centers, and correctional facilities.
< Changes in knowledge, attitudes, and behaviors of clients of institutions around STD/HIV.

For more information contact:

< Julia Ashley, at (612) 676-5665, julia.ashley@health.state.mn.us, MDH STD and HIV Section, STD Screening.
< Kirsten Gerber, at (612) 676-5705, kirsten.gerber@health.state.mn.us, MDH STD and HIV Section, Schools.
< Roy Nelson, at (612) 676-5760, roy.nelson@health.state.mn.us, MDH STD and HIV Section, Social Marketing and Media.
< Gary Novotny, at (612) 676-5729, gary.novony@health.state.mn.us, MDH STD and HIV Section, Health Education and Risk Reduction.
< Steve Moore, at (651) 603-0012, Minnesota Department of Corrections.

Strategy: Build community capacity through community organizing, agency development, agency collaborations, and social support.

	Systems	Community	Individual
Primary	U	U	
Secondary	U	U	
Tertiary	U	U	

Background:

Capacity building may be defined as efforts designed to enhance the ability of communities to address STD and HIV. It includes:

< Community organizing to create infrastructures (e.g., community task forces, nonprofit organizations, and ongoing and stable networking opportunities) to improve the awareness, willingness, and ability of a community to address STD and HIV.
< Community planning to develop short- and long-term goals, objectives, and strategies by which to implement STD and HIV programming. Community planning is a process by which the identification of high-priority STD and HIV needs in a jurisdiction is shared between the agency administering funds and representatives of the communities for whom the services are intended. In addition, community planning embraces the notion that behavioral and social sciences must play a critical role in the development, implementation, and evaluation of STD/HIV prevention programs within a community. Successful community planning improves the allocation of scarce resources and increases the buy-in, participation, and accountability of

community members in HIV prevention activities.

< Agency development to improve the capacity of community-based agencies to address STD/HIV prevention. This includes funding for strategic and program planning, assistance with fund-raising, board development, financial management and planning, staff training around STD/HIV prevention education, behavioral change, co-factors to STD/HIV transmission (e.g., homophobia, racism, and substance abuse), outreach and recruitment, evaluation, and quality assurance, treatment and care.

< Collaboration among community, public and private agencies serving the target population. Collaboration around STD and HIV interventions avoids duplication of services, improves quality and consistency of care, and conserves resources. Collaboration can occur in many forms.

< Social support through the provision of drop-in centers of social groups that provide support for members of the target population that may not be directly related to STD/HIV prevention, but which may influence the determinants of high-risk behaviors such as self-esteem and social norms.

Additional resources:

Bibliographic resources:

< National Association of State and Territorial AIDS Directors (NASTAD) Community Planning Bulletin. 1997, November.

< Support Center for Nonprofit Management, National Minority AIDS Council. 1996. *The Collaboration Continuum*. 1931 13th Street NW, Washington DC 20009; (202) 483-NMAC; FAX (202) 483-1135.

Organizational resources:

< Academy of Educational Development, at (202) 884-8862.

< Centers for Disease Control Prevention Programs, at (404) 639-5211.

< Minnesota Department of Health Community Engagement Website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Community Engagement".

< National Association of State and Territorial AIDS Directors (NASTAD), at (202) 434-8090.

< U.S. Conference of Mayors, at (202) 293-7330.

Evidence for strategy:

Youth focus groups held in the Twin Cities metropolitan area identified social support, particularly for gay/bisexual youth, as an important intervention.

Has this strategy been implemented in Minnesota?

Yes, the MDH provides technical assistance and training to STD and HIV community-based grantees in the form of community training, and one-on-one assistance in program management. Other efforts to build capacity include:

< District 202 provides training to youth-serving agencies, and other community agencies around serving gay/lesbian/ bisexual/transgender youth.

< The University of Minnesota Youth and AIDS Project works with rural communities to improve capacity to serve gay/lesbian/bisexual/transgender youth through community organizing

All states and territories are required to conduct STD/HIV prevention community planning in order to be eligible for federal HIV prevention funding. Community planning has been occurring in Minnesota since 1994.

"Streetworks" is a collaborative of youth-serving agencies. The collaborative receives funding from HUD to pay for a full-time organizer. The collaborative works to coordinate street outreach activities performed by member agencies, so that outreach workers may always work in pairs, and so that areas frequented by homeless youth receive consistent and ongoing attention from outreach workers. Contact Karen Trondsen, at (612) 209-8811.

Indicators for this strategy:

< Increase in number of community entities serving previously underserved groups.
< Increase in number of requests for STD and HIV funding to target underserved groups.
< Process indicators (e.g., dollar savings, increased numbers of clients reached, better satisfaction of clients with services, more hours spent in services, etc.).
< Positive changes in STD/HIV-prevention knowledge, attitudes, and behaviors among target populations receiving social support.

For more information contact:

< Gary Novotny, at (612) 676-5729, gary.novotny@health.state.mn.us, MDH STD and HIV Section, Health Education and Risk Reduction.
< Lucy Slater, at (612) 676-5662, lucy.slater@health.state.mn.us, MDH STD and HIV Section, Planning and Evaluation.

Special notes:

In general, collaborations are more successful if:

< *The scope of the collaborative project is clearly defined.*
< *Each partner knows how the collaboration will advance the interests of its organization and clients.*
< *Roles and responsibilities have been defined; mechanisms for communication and joint accountability are in place.*
< *The relationship "work" trust and respect among the key players are sufficient to support the level of risk and interdependence involved in the project.*

Strategy: Establish street outreach services.

	Systems	Community	Individual
Primary		U	U
Secondary			
Tertiary			

Background:

Outreach is usually conducted on a one-to-one basis and occurs at non-agency sites where at-risk persons gather (e.g., parks, recreational centers, the street, bars, beaches, buses, laundromats, drop-in centers, homeless shelters, etc.). This type of outreach does not include classroom instruction or group instruction at institutions or agencies. It is usually conducted by peers or non-peers of the at-risk population. Activities include condom distribution and promotion; bleach distribution; brief risk-reduction education

and counseling; and referrals to STD and HIV testing.

Additional resources:
Bibliographic resource:
< Academy of Educational Development. 1996. *What Intervention Studies Say About Effectiveness. A Resource for HIV Prevention Community Planning Groups*. This provides a good overview of relevant research, key review articles, and selected books, including prevention programs institutionalized in correctional facilities, chemical dependency treatment centers, homeless shelters, and schools. Contact: (202) 884-8862.

Organizational resource:
< Centers for Disease Control, at (404) 639-0965.

Evidence for strategy:
A 1997 community focus group of HIV-positive individuals identified street/environmental outreach as an important strategy to identify HIV-positive individuals and to provide them with education and referrals.

Has this strategy been implemented in Minnesota?
Yes, community agencies have been funded by MDH to perform street/environmental outreach to communities at risk for STD and HIV transmission.

Indicators for this strategy:
< Changes in STD/HIV-related knowledge, attitudes, and behaviors.
< Increases in STD and HIV tests.

For more information contact:
< Ronn Easton, at (612) 676-5388, ronn.easton@health.state.mn.us, MDH STD and HIV Section, Outreach and STD.
< Gary Novotny, at (612) 676-5279, gary.novotny@health.state.mn.us, MDH STD and HIV Section, Outreach and HIV.

Strategy: Reduce environmental and other risk factors that increase the risk of STD/HIV transmission.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
The Commissioner's Task Force on HIV Prevention Planning identified two different kinds of strategies around HIV prevention. The first are interventions that fill programmatic gaps, which improve education, outreach, or targeting of programs. They address content. In an analogy to a disease model, they are attempts at treating symptoms. The second kind of strategy is societal or contextual. Unless certain social problems are addressed, the effects of sexual health programming will be short-term and minimal. In an analogy to a disease model, these strategies are attempts to address causes.

Addressing homelessness, racism, or sexism does not only mean building more shelters for street youth or funding more social service programs. It also means addressing the root causes: sexual and physical abuse within families; homophobia; extreme poverty within families, particularly among families of color; a social system that sees

health care and employment as privileges and not rights; and a culture that supports selfishness and violence.

These strategies must be implemented at a systems level. They require:

- Changes in community awareness and attitudes (e.g., media campaigns designed to promote cultural diversity, involvement of the community in social action, etc.).
- Legislative and policy changes (e.g., lobbying for universal health insurance, continued funding for low-income housing, etc.).
- Support of community organization efforts (e.g., promoting collaborative efforts between agencies, perhaps through funding of collaboratives or providing them with staff support).

Institutions and agencies can:

- Collaborate with drug treatment services and prevention (e.g., make drug treatment more user-friendly for women with children, and for pregnant women).
- Be aware of, and fight against, policies that directly or indirectly promote racism, sexism, poverty, and homelessness.
- Develop policies within their own agencies to address racism, poverty, and homophobia.
- Make pro-active referrals to drug treatment, social services, job training, etc.

Additional resource:

- Minnesota Health Improvement Partnership. 2001. *A Call to Action: Advancing Health for all through Social and Economic Change.* Call the Minnesota Department of Health, at 651-296-9661 for copies. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Social Determinants".

Evidence for strategy:
These particular strategies with regard to STDs and HIV have not been empirically tested. Nevertheless, it has long been recognized that addressing environmental and other co-factors are necessary components of all effective approaches to the prevention and treatment of STDs and HIV.

Has this strategy been implemented in Minnesota?
Yes, state legislation in 2001 allocating funds to address racial and ethnic disparities in health status is an example of this strategy.

Indicators for this strategy:

- Number of agencies and institutions that have policies that indicate pro-active work to address racism, poverty, homophobia, and other co-factors to STD/HIV transmission, both within their organizations, and among the clients that they serve.
- Kinds of activities conducted by agencies and institutions that address racism, poverty, homophobia, and other co-factors to STD/HIV transmission, both within their organizations, and among the clients that they serve.

For more information contact:
Lucy Slater, at (612) 676-5662, lucy.slater@health.state.mn.us, MDH STD and HIV Section, Evaluation and Planning.

Special notes:
In November1997, the Commissioner's Task Force on HIV/STD Prevention planning drafted a paper defining "co-factors" that increase the risk of STD/HIV transmission. Here are some pertinent excerpts from that paper:

RISK FACTORS - Among the factors that increase the risk of HIV transmission are the following:

- *Susceptibility of the uninfected individual (e.g., the presence of an STD, age, gender, type of sexual act will all impact on the susceptibility of the uninfected individual)*
- *Infectiousness of the infected individual (e.g., the presence of STDs, or stage of disease can increase the infectiousness of the infected individual)*
- *Sex behaviors (e.g., the number of partners engaging in activities that could transmit the virus, type and frequency of sex act, frequency of partner exchange, partner choice, age of sexual debut are all sex behaviors that will impact on the probability of HIV transmission)*
- *Drug behaviors (e.g., the number of injecting partners engaging in activities that could transmit the virus, types of injecting behaviors (sharing used needles and drug paraphernalia, booting), frequency of partner exchange, use of shooting galleries)*
- *Health care behaviors (e.g., use of condoms, late consultation for diagnosis and treatment, compliance with treatment - these last two behaviors primarily affect the duration of STD infectiousness)*
- *Prevalence (e.g., the prevalence of the infection among drug/sex networks, dynamics of drug/sex networks, including recruitment of new members, length of stay of old members, geographic isolation, etc.)*

CO-FACTORS - Co-factors may be defined as "factors that can influence risk of HIV/STD risk transmission." Examples include:

- *Non-injecting substance use/abuse:*
  - *Culture that surrounds drug use may promote risky drug/sex behavior; situational characteristics resulting from drug use may prompt risky behaviors (alienation from family/friends/societal conventions, loss of job, low self-esteem, depression)*
  - *Pharmacological features of drugs may promote risky behaviors through inducing feelings of disinhibition, invincibility, apathy, and increase/decrease in sexual arousal*
  - *Women drug users may be at particular risk since 1) there are fewer drug treatment options open to them; 2) their reliance on drug-using sex partners for financial/emotional support may reinforce their own drug use; 3) they are likely to exchange sex for drugs to support drug addiction rather than, or in addition to engaging in other criminal activities*
- *Socio-economic factors (e.g., poverty, homelessness, joblessness, low education):*
  - *Low SES level may induce feelings of lack of control and self-determination, despair, hopelessness which may prompt risky behaviors*
  - *Low SES level may directly promote risky behaviors related to survival*

(sex for money, drug use to escape despair)
  - *Low SES is directly related to individual ability to access health care including HIV and STD tests, treatment, and prevention messages.*
- *Racism:*
  - *Internalized racism may induce feelings of hopelessness, despair, self-destruction, which may prompt risky behaviors*
  - *Externalized racism may promote low socio-economic status (see above)*
- *Homophobia/Heterosexism:*
  - *Internalized homophobia may induce feelings of hopelessness, despair, self-destruction, which may prompt risky behaviors*
  - *Externalized homophobia may create environmental and legal barriers to engaging in safe behaviors (e.g. criminalization of sodomy, lack of access to condoms in prisons, lack of safe environments for sex, lack of information and support for gay/bisexual youth etc)*
- *Physical, sexual, mental abuse:*
  - *Sexual abuse may directly affect transmission of STDs and HIV*
  - *Abuse may induce feelings of hopelessness, despair, self-destruction, apathy, and denial which may prompt risky behaviors*
- *Sexism:*
  - *Male privilege bestowed by society may increase feelings of invincibility, a need to procreate, or promote a view of promiscuity as masculine*
  - *Female oppression decreases ability of women to be assertive in sexual relationships, particularly regarding initiation of safer sexual practices and discussion with their partners of their sexual behaviors*
- *Policy:*
  - *Social policies may increase community risk behaviors (e.g., welfare reform may increase low SES among certain communities, leading to risky behaviors related to survival)*
  - *Social policies may increase racism, homophobia, sexism, and other co-factors in society*
  - *Social policy may decrease availability of information about safer behaviors (e.g., discussion of sexuality in schools)*
- *Societal, cultural, and peer norms:*
  - *Societal norms promoted through entertainment and media may increase risky behaviors (e.g. norms related to violence, sexual promiscuity, and taboos regarding discussion of sexuality)*
- *Psychological/Mental Health:*
  - *Individual ability to communicate, negotiate, and to access resources*
  - *Self-esteem*

METHODS TO ADDRESS CO-FACTORS.
- *Policy-level interventions for health departments and task forces:*
  - *Addressing sodomy laws that have disproportionately affected, lesbian, bisexual, homosexual and transgender communities*
  - *Health department promoting change in syringe access laws (eliminating barriers); funding prevention programs, and counseling and testing to increase access for a variety of at-risk populations*
  - *Collaboration with drug treatment services and prevention (e.g., make*

drug treatment more user-friendly for women with children, and for pregnant women)
  - < *Be aware of, and fight against policies that directly or indirectly promote racism, sexism, poverty, and homelessness*
- < *Interventions for community agencies:*
  - < *Develop policies within their own agencies to address racism, poverty, and homophobia*
  - < *Active referrals to drug treatment, social services, job training, etc.*

Strategy: Provide public information via mass media, hotlines, and clearinghouses.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
To most effectively prevent STDs and HIV, we must get the word out about the issue and keep its importance in the minds of the public. Providing information to the public is an important and effective way to do this. Social marketing is not a public information strategy in and of itself, but refers to a methodology of planning and implementing public information strategies that applies private-sector marketing techniques to the development of public health messages. Health communication or public information can be conducted in a variety of different ways, and is most effective when all of them are used together on an ongoing basis:

- < Mass media: includes print media (e.g., newspaper and magazine articles and advertisements, as well as billboards) and electronic mass media (e.g., TV and radio public service announcements and advertising spots).
- < Small media: includes brochures, fliers, condom key chains, matchbooks, etc.
- < Endorsements and testimonials can be given by opinion leaders. These are particularly effective when provided by individuals who are living with STD/HIV and who are peers of the audience being addressed.
- < Hotlines and clearinghouses providing and publicizing the availability of a central information resource (e.g., clearinghouses for small media materials and resource guides; and central hotlines answering informational questions and providing referrals).

Additional resources:

- < Centers for Disease Control (CDC) National Prevention Information Network, at (800) 458-5231, http://www.cdcnpin.org/.
- < CDC Social Marketing Project, (202) 434 8090, Seanbugg@aol.com.

Evidence for strategy:
An example of a successful media campaign is one undertaken in 1986 by the Swiss government. It provided HIV education of the general population, targeted HIV-prevention messages to high-risk youth, drug users, and men having sex with men (MSM), and individual counseling with providers. Over 10 years, knowledge of HIV has increased without development of fear or stigmatization, and condom use has increased with casual partners, those with multiple partners, and new steady partners by about 20 percent across age groups. The rate of sexual activities did not change. Similar support for behavioral change can be found in data from France, Germany, the

Netherlands, Scotland, Sweden, the U.K., and the U.S., but with generally lower rates of behavioral change. (Dubois-Arberet et al., in press).

Has this strategy been implemented in Minnesota?
Yes, print, indoor, outdoor, and broadcast media channels are used by the MDH as a supplemental prevention strategy. Large, targeted mass-media campaigns are implemented once each year. Campaign messages and target groups are selected based on results of available survey research efforts and epidemiological patterns.

Indicators for this strategy:
MDH measures the efficacy of media campaigns by counting an increase in calls for information about STD/HIV to the Minnesota AIDS Line from the general public following a campaign.

For more information contact:
Roy Nelson, at (612) 676-5760, roy.nelson@health.state.mn.us, MDH STD and HIV Section.

Strategy: Improve the skills and knowledge among health care providers of adolescent sexuality issues, including STDs.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary			

Background:
Many health providers (physicians, nurse practitioners, nurses, social workers, health educators, etc.) lack the knowledge, skills, and comfort level to provide sexual health services to adolescents. This includes not only clinical services but also health education and counseling around sexuality issues. This strategy focuses on increasing and improving training for health providers on:

- < General information about STDs (including clinical diagnostic and treatment guidelines).
- < Ways to address sexuality issues with teens in health care settings (including schools).

Activities that support this strategy could include:

- < Working with organizations that provide continuing education to health professionals (professional organizations, vocational/ technical/community colleges, public health agencies, etc.) to improve their curricula and training offerings on adolescent sexuality.
- < Providing outreach to clinical providers (physicians, nurse practitioners, etc.) about adolescent STD testing and treatment guidelines.

Additional resource:

- < Institute of Medicine. 1997. *The hidden epidemic: Confronting STDs*. National Academy Press.

Evidence for strategy:
Research shows that teaching health care providers about effective methods of addressing adolescent health issues leads to increased provider confidence in skills, increased outreach to adolescents and provision of services that more effectively address adolescent health needs. An increased confidence in skills and knowledge among health providers has also been the outcome of adolescent health

trainings (that include a sexuality component) by MDH staff and University of Minnesota Adolescent Health Training program staff. It is presumed that health care providers who feel confident in their knowledge and skills in addressing adolescent sexuality issues will be more likely to provide adolescent-appropriate sexuality services.

Has this strategy been implemented in Minnesota?
Yes, the Adolescent Health Training Program at the University of Minnesota has a program in which they use adolescents as actors when training health care providers (usually residents and medical students) in health assessment techniques. One area that is specifically focused on is sexual health issues. This might be a good model to use when training health providers on teen sexuality issues.

Indicators for this strategy:
- < Number of health care providers trained.
- < Increased knowledge among health care providers of adolescent sexuality issues.
- < Changes in attitudes among health care providers of adolescent sexuality issues.
- < Changes in practices and in the ways that providers address adolescent sexuality issues.

For more information contact:
- < Sarah Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.
- < MDH STD and HIV Section, at (612) 676-5414.

CATEGORY: Infectious Disease

TOPIC: TUBERCULOSIS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Education-al Systems	Community-based Organizations	Businesses/ Work Sites	Other
Establish protocols for cooperation between health care systems and public health agencies for tuberculosis (TB) screening, treatment, and follow-up services.	U	U	U				Jails, Shelters
Develop the capacity of health care systems to provide culturally competent care for TB patients, including the use of interpreter services.	U	U	U	U	U		
Develop and disseminate patient educational materials regarding screening, evaluation, treatment and transmission of TB for use by health care providers, community based organizations, voluntary agencies and others working with populations at high risk for TB.	U	U	U	U	U	U	Jails, Shelters
Provide ongoing professional education on standard national guidelines for TB screening, diagnosis, treatment, monitoring and follow-up to ensure appropriate patient care.	U	U	U	U			

Decreasing the incidence of tuberculosis (TB) disease in Minnesota will minimize the burden of TB disease and infection, reduce the risk of TB transmission by infectious cases, and decrease costs incurred by TB infection and disease statewide. Clinical and public health activities such as diagnosis and treatment (including directly observed therapy) of TB disease, contact investigations surrounding infectious cases, and screening and treatment for latent TB infection for persons at risk for TB require significant amounts of time and resources. In particular, the growing incidence of TB disease among foreign-born persons in Minnesota has created a significant resource burden, as public health professionals and clinicians are called upon to work with increasingly diverse populations. The challenges of TB prevention and control in such culturally diverse populations have heightened the need for outreach services, incentives, translation services, and culturally and linguistically diverse educational materials. Reducing the incidence of TB in Minnesota will minimize the need for such resources and services.

Strategy: Establish protocols for cooperation between health-care systems and public health agencies for tuberculosis (TB) screening, treatment, and follow-up services.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
Management of TB cases includes both clinical responsibilities, e.g., diagnosis and treatment, and activities that traditionally have been performed by public health, e.g., contact investigations, directly observed therapy (DOT), and home visits. The coordination of these activities requires careful planning and coordination between health-care systems and public health agencies. In addition, the increasing number of patients receiving health-care within a managed care system makes such coordination increasingly complex.

Health-care systems and public health agencies should work together to develop protocols addressing authorization for provision of the following services:

- Contact investigations surrounding patients with infectious TB disease.
- DOT (or other supervision of therapy) for patients who are at high risk for or demonstrate non-adherence with prescribed therapy for TB disease.
- Home visits to TB patients for follow-up services, such as ongoing collection of sputum specimens (if needed) and monitoring for adverse reactions from TB medications.
- Other TB case management issues, including locating patients, etc.

Additional resources:

- American Thoracic Society, Centers for Disease Control and Prevention, Infectious Disease Society of America. 1992. Control of tuberculosis in the United States. *American Review of Respiratory Diseases*.146:1623-1633.
- American Thoracic Society, Centers for Disease Control and Prevention. 1994. Treatment of tuberculosis and tuberculosis infection in adults and

children. *American Journal of Respiratory & Critical Care Medicine*.149:1359-1374.
< Centers for Disease Control and Prevention. 2000. Targeted tuberculin testing and treatment of latent tuberculosis infection. *MMWR; 49(No. RR-6)*.
< Centers for Disease Control and Prevention. 2000. *Core Curriculum On Tuberculosis: What the Clinician Should Know*. U.S. Department of Health and Human Services, 4th ed..

Evidence for strategy:
To maximize the quality of services for TB prevention, treatment, and control, it is essential to coordinate the activities of health-care systems and public health agencies. Inadequate coordination leads to the omission and/or duplication of essential TB prevention and control activities and sub-optimal patient care. The collaborative development of specific protocols addressing these issues is necessary to facilitate proper coordination.

Has this strategy been implemented in Minnesota?
This strategy has not yet been fully implemented to achieve the desired coordination of public health and health systems activities, but much progress has been made recently, including the incorporation of TB services within certain PMAP plans. Representatives of health-care systems and public health agencies continue to collaborate to develop PMAP (Prepaid Medical Assistance Plans) contracts and other agreements that incorporate these collaborative concepts regarding TB services.

Indicators for this strategy:
< Number of health systems with protocols addressing issues related to provision of TB outreach services.
< Number of health systems that authorize reimbursement for TB outreach services provided by public health and/or health systems.

For more information contact:
MDH TB Prevention and Control Program, at (612) 676-5414.

Strategy: Develop the capacity of health care systems to provide culturally competent care for TB patients, including the use of interpreter services.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
Persons born outside the U.S. are at high risk for developing TB disease. During 2001, 239 new TB cases were reported in Minnesota. Of these cases, 194 (81 percent) occurred in persons born outside the U.S. During the past five years (1997-2000), 77 percent of the 940 cases reported in Minnesota occurred in this high-risk population. In order to reduce the disproportionate number of TB cases in this population, culturally appropriate prevention and control strategies need to be identified. The following strategies are intended to provide specific actions for various groups working with persons born outside the U.S. to improve screening, diagnosis, and treatment of TB infection and disease in this high-risk population:

- Health-care providers should develop the culturally specific knowledge needed to express key concepts about TB screening, diagnosis and treatment in the cultural context of their patients. This context includes an awareness and understanding of cultural concepts such as traditional TB therapies, beliefs about TB, and concerns about taking TB medications.
- Health-care systems should utilize medically trained interpreters, when needed, for patients with limited English proficiency. Health-care systems should collaborate with public health agencies, community based organizations, and other resources to identify interpreter services available for use with the populations they serve.
- The availability and training of interpreters available for health-related interactions should be improved and expanded throughout the state.
- When appropriate, health-care systems should utilize bilingual/bicultural peer educators in clinics or managed care organizations to improve TB education and to work with the community.

Additional resources:

- Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide*; available at: http://www.thecommunityguide.org.
- *Enhancing Tuberculosis Prevention and Control in Persons Born Outside the United States and Their Families: Recommendations of the Work Group for Tuberculosis in Persons Born Outside the United States*, available from the Minnesota Department of Health TB Prevention and Control Program, at (612) 676-5414.
- *Six Steps Toward Cultural Competence: How to Meet the Health Care Needs of Immigrants and Refugees*, available from the Center for Cross-Cultural Health, at (612) 624-4668.
- Rubel and Garro. 1992. Social and cultural factors in the successful control of tuberculosis. *Public Health Reports*, vol. 107, No. 6 p. 626-636.

Evidence for strategy:
The literature (see citations above) documents the effect that lack of cultural awareness on the part of health care providers providing TB services has on patients' abilities to adhere to treatment regimens. The literature also states that understanding the "health culture" of TB patients is necessary if TB clinics and services are going to be successful.

In response to a report published in January 1994 by the MDH Commissioner's Task Force on TB, a work group was convened to address TB in persons born outside the U.S. Participants of the work group included statewide representatives from public health agencies, voluntary agencies, clinics and other service providers. This group developed numerous strategies and objectives for health-care providers, public health professionals, health-care consumers and consumer advocates. Some of the strategies included here are among those proposed by the work group.

According to the Centers for Disease Control and Prevention's Task Force on Community Preventive Services, there is insufficient evidence to recommend or strongly recommend the use of interpreters or bilingual providers. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A

recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Has this strategy been implemented in Minnesota?
Yes, the MDH TB Prevention and Control Program and Refugee Health Program jointly are implementing several public health strategies identified by the Work Group for Tuberculosis in Persons Born Outside the U.S.

Indicators for this strategy:
- < Number of health-care services with access to interpreters trained for health-care interactions, including those related to TB.
- < Number of languages available through interpreter services for each health-care system.
- < Number of health systems providing educational materials or resources to educate providers about the culturally specific health-related practices and beliefs of the populations they serve.

For more information contact:
- < Center for Cross-Cultural Health, at (612) 624-4668 (resources for cultural competency).
- < MDH Refugee Health Program, at (612) 676-5684.
- < MDH TB Prevention and Control Program, at (612) 676-5684.

Strategy: Develop and disseminate patient educational materials regarding screening, evaluation, treatment and transmission of TB for use by health-care providers, community based organizations, voluntary agencies, and others working with populations at high risk for TB.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
Due to the complexity of issues surrounding the transmission, diagnosis, and treatment of TB disease, patients frequently have many misconceptions that limit their compliance with public health and clinical recommendations regarding TB. Few patient education materials are available to clarify these issues.

The development and dissemination of such education materials will enhance the capacity for TB prevention and control statewide. These materials may include brochures, posters, videotapes, or audiotapes. Such materials should be developed with consultation from patients, health-care providers, public health agencies, and community-based organizations, as appropriate. Educational materials should be translated into the appropriate languages for the populations being served.

TB educational materials in various formats should be distributed for use by health-care systems and providers, public health agencies, community-based organizations serving populations at high risk for TB,

voluntary organizations working with newly arrived refugees and immigrants, and media and promoters of cultural events whose audiences include persons born outside the U.S.

Utilize health system newsletters to communicate educational information that was developed regarding TB to health plan members and health-care consumers, with particular focus on persons at high risk for TB.

Additional resources:
Bibliographic resources:
< Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide*; available at: http://www.thecommunityguide.org).
< Educational pamphlets for patients developed by the MDH, including "Tuberculosis Disease," "Medicine for Tuberculosis Disease," "Mantoux Skin Test for Tuberculosis," and "Medicine for Tuberculosis Infection." These pamphlets are available in English and nine other languages, including Cambodian, Hmong, Lao, Russian, Serbo-Croatian, Somali, Spanish, Tibetan, and Vietnamese. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Tuberculosis".
< "TB and One Man's Story." ("NIN TB QABA IYO NOLSHIISA"). TB Patient education videotape in Somali, produced by Mission Films and MDH, 2002.

Organizational resources:
< American Lung Association of Minnesota, (612) 227-8014.
< Centers for Disease Control and Prevention (888) 232-3228, Division of TB Elimination, for education and training materials.

Evidence for strategy:
Patient adherence to prescribed TB therapy and infection control recommendations is critical to successful TB prevention and control. Frequently, patients' compliance is limited by a lack of understanding of instructions received from health-care providers and/or concepts regarding transmission and treatment of disease. The development and dissemination of patient education materials regarding TB could facilitate improved patient knowledge and compliance in such situations.

According to the Centers for Disease Control and Prevention's Task Force on Community Preventive Services, multicomponent interventions that include education are strongly recommended (see Community Guide at http://www.thecommunityguide.org). Implementing this strategy in combination with others will strengthen its impact in the community.

Has this strategy been implemented in Minnesota?
Yes, the MDH TB Prevention and Control Program has developed four brochures regarding TB infection and disease. These brochures were developed in English and translated into nine languages by a professional translation service. These brochures are available from the MDH TB Prevention and Control Program.

Indicators for this strategy:
< Number of patient education materials developed regarding TB.
< Number of TB educational materials distributed for use.

- < Number of languages in which specific TB educational materials for patients are available.
- < Number of different types of organizations utilizing TB educational materials for patients.

For more information contact:

- < American Lung Association of Minnesota, at (651) 227-8014.
- < Centers for Disease Control and Prevention, Division of TB Elimination, at (888) 232-3228 for educational and training materials.
- < MDH TB Prevention and Control Program, at (612) 676-5414.

Strategy: Provide ongoing professional education on standard national guidelines for TB screening, diagnosis, treatment, monitoring and follow-up to ensure appropriate patient care.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary			

Background:

Most health-care providers in Minnesota rarely treat patients for latent TB infection or (less commonly) TB disease; therefore, physicians and nurses may lack awareness regarding standard guidelines for the screening, diagnosis, and treatment of TB. Since prompt, rapid, and appropriate treatment of TB disease and infection is among the most critical components of TB control, continuing education regarding TB for health-care providers is essential to ensure optimal patient care. Related activities include:

- < Health-care systems should develop standard guidelines and protocols regarding TB screening, referral (as needed), diagnosis, treatment, and follow-up. These materials should be distributed to all health-care providers who may provide care for persons with TB infection or disease. These policies should be reviewed periodically to ensure that they reflect current standard treatment and practice guidelines.
- < Health systems and public health agencies should work with the Health Maintenance Organization (HMO) Council to disseminate TB screening and treatment guidelines to providers in managed care organizations.
- < Health care systems should promote the inclusion of educational activities regarding TB screening, diagnosis and treatment in continuing education sessions and in-services for providers. In particular, TB education should be promoted as an option for fulfilling the Infection Control requirement for nurse or physician licensure renewal.
- < Educational efforts should be targeted at health-care providers such as physicians, nurses, nurse practitioners, and health-care staff at nursing homes and other long-term care facilities.
- < Medical residency programs should educate residents regarding standard guidelines for screening, diagnosis, and treatment of TB infection and disease and the epidemiology of TB.

Additional resources:

- < American Thoracic Society, Centers for Disease Control and Prevention. 1994.Treatment of tuberculosis and tuberculosis infection in adults and children. *American Journal of Respiratory & Critical Care Medicine*.

149:1359-1374.
< American Thoracic Society, Centers for Disease Control and Prevention. Infectious Disease Society of America. 1992. Control of tuberculosis in the United States. *American Review of Respiratory Diseases*. 146:1623-1633.
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< Cheng TL., Miller EB., Ottolini M., et al. 1996. Tuberculosis testing: Physician attitudes and practice. *Archives of Pediatric and Adolescent Medicine*. 150:682-685.
< Hong YP., Kwon DW., Kim SJ., et al. 1995. Survey of knowledge, attitudes and practices for tuberculosis among general practitioners. *Tubercle and Lung Disease*. 76:431-435.
< Miller B., Snider D. E. 1987. Physician noncompliance with tuberculosis preventive measures. *American Review of Respiratory Diseases*. 135:1-2.

Evidence for strategy:
Several articles have reported health-care providers' lack of awareness of or adherence to standard guidelines for the screening, diagnosis, and treatment of TB infection and disease.

Has this strategy been implemented in Minnesota?
Yes, the MDH TB Prevention and Control Program staff and the MDH district epidemiologists routinely provide educational presentations for clinical and public health audiences throughout the state. In addition, in 2001 the MDH and the Center for Cross-Cultural Health sponsored and conducted workshops regarding culturally competent TB prevention and control activities among persons born outside the U.S.

Indicators for this strategy:
< Number of educational opportunities regarding TB provided by health systems for their health-care providers.
< Number of TB presentations for health-care providers provided by staff of the MDH.
< Completeness of TB educational materials provided in medical residency programs in Minnesota.

For more information contact:
< Centers for Disease Control and Prevention, Division of TB Elimination, at (404) 639-8117.
< Francis J. Curry National Tuberculosis Center, at (415) 502-4600.
< MDH TB Prevention and Control Program, at (612) 676-5414.
< National Jewish Medical and Research Center, at (303) 398-1700.

CATEGORY: Infectious Disease

TOPIC: VACCINE-PREVENTABLE DISEASES

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Plan and implement school-based programs to vaccinate adolescents against hepatitis B.	✔	✔	✔	Middle, junior and high schools			
Implement strategies to increase rates of immunization against influenza among high-risk adults and others wishing to obtain immunity.	✔	✔	✔		✔	✔	
Implement and maintain a quality control system to assure that vaccines are viable.	✔	✔	✔				
Assure that patients receive all needed vaccines at every visit.	✔	✔	✔				
Encourage full participation in the statewide immunization registry system.	✔	✔	✔				
Assure that all newly arrived refugees receive a domestic refugee health assessment.	✔	✔	✔		✔	✔	

Immunization is among the most cost-effective disease prevention strategies available to public health and preventive medicine. In terms of its impact on human health, immunization is comparable to such basic measures as safeguarding the quality of our drinking water. The widespread use of vaccines as part of routine preventive health care has led to dramatic reductions in morbidity and mortality from vaccine-preventable diseases such as measles, mumps, rubella, diphtheria, tetanus, pertussis, *Haemophilus influenzae* type b (Hib disease), hepatitis B, pneumococcal disease, varicella, and polio.

Approximately 65,000 births occur each year in Minnesota. These children are currently recommended to receive 20 separate doses of vaccine between birth and age two, often requiring five or more clinic visits. The vaccines are delivered by approximately 800 private and public clinics across the state. According to a 1997 survey, the majority (65 percent) of children in Minnesota aged 19 to 35 months are vaccinated in private physician offices, four percent are vaccinated solely in public sector clinics (e.g., health departments, community/ migrant health centers), 31 percent received their vaccinations in both sectors. Parents, private health care providers, health plans, schools, and local and state public health agencies are all important parts of the immunization delivery system in Minnesota.

Strategy: Plan and implement school-based programs to vaccinate adolescents against hepatitis B.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Hepatitis B infects one out of every 20 Americans at some time during their lives. It is caused by a virus, which attacks the liver and can lead to cancer and death. A safe and effective vaccine to prevent hepatitis B infection has been available since the 1980s. In late 1991 a national recommendation was issued for all infants to be vaccinated. While this recommendation was slow to be accepted throughout the state, recent data for Minnesota two-year-olds surveyed in 2000 found 93 percent of children had received three doses of hepatitis B vaccine. As a result, it will be 2005 before a well-vaccinated infant cohort reaches adolescence; consequently, those who might have missed earlier vaccination are recommended to initiate and/or complete the 3-dose series at about 11-12 years of age.

Clinic-based approaches to vaccination of adolescents are not always successful due to many factors, including limited access to adolescents, lack of routine visits by adolescents, and compliance with completing a 3-dose series. School-based approaches to reaching adolescents can be more effective because students are a "captive" audience, peer influence increases acceptance, completion rates are higher, and it is less costly. Key components of a school-based approach include:

- Identify key participants in the project to be part of the planning effort.
- Secure buy-in from key stakeholders, including schools, medical clinics, health plans, public health.
- Obtain resources including staff, vaccine, printed materials, student incentives, and clinic supplies.
- Conduct information/education sessions with school personnel, parents, and students.
- Develop/acquire informational brochures and communiqués for parents/students.
- Identify needs and resources for non-English speaking families.
- Determine process for providing key information on vaccination to school records, clinic records, personal records, and, if applicable, community registries.
- Secure staffing for clinic.
- Conduct program.
- Evaluate program.

Additional Resources:
Bibliographic resources:

- "Immunization Plus" is a curriculum for schools that stresses the importance of vaccines with special emphasis on hepatitis B vaccine. A video is included with the curriculum. It is available from the Immunization Action Coalition, at (651) 647-9009, mail@immunize.org
- "Roll Up Both Sleeves," a guide for in-school immunization clinics, is available from the American School Health Association at (330) 678-1601, asha@ashaweb.org.
- Unti, L., Coyle, K., and Woodruff BA. 1995. Adolescent school-based hepatitis B vaccination programs: A comprehensive review of 13 demonstration projects. A report prepared for Hepatitis Branch of CDC.

Evidence for strategies:
In 1996-1997, a Center for Population Health project was undertaken in Hennepin and Scott counties. Key collaborators in the project included managed care organizations, hospitals, the MDH, local public health, and vaccine manufacturers. Various strategies were employed at the six schools that participated in the project with participation rates of 21 percent to 63 percent. Similar projects have been undertaken in other Minnesota counties (e.g., Chisago) as well as in other U.S. cities (e.g., San Francisco, Seattle, Baton Rouge). Completion rates were significantly higher than those found in private clinics.

According to the Centers for Disease Control and Prevention's Task Force on Community Preventive Services, there is insufficient evidence to recommend or strongly recommend vaccination programs in schools. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Indicators for this strategy:

- Percent of students initiating the series.
- Percent of students completing the series.
- Number of schools involved.
- Number and kinds of community sectors involved.
- Cost per child to complete series in school as compared to a medical home.
- Ability of system to communicate

vaccination information to student's medical home.
< Ability of project to recover costs from health plans.
< Ability of project to obtain funding for uninsured students.
< Success or failure of collaborators to view project as positive.

For more information, contact:
MDH Immunization, Tuberculosis and International Health Section, at (612) 676-5100 or (800) 657-3970.

Strategy: Implement strategies to increase rates of immunization against influenza among high-risk adults and others wishing to obtain immunity.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Influenza is an upper respiratory illness that affects an estimated 30 million Americans each year, with a mortality rate of 40,000. The disease is most dangerous to persons whose health is compromised due to underlying illness (e.g., chronic heart and lung disease, diabetes) or advancing age.

The first widely successful influenza vaccines became available to civilians after World War II. It has generally been recommended for high-risk persons along with those who provide them with care (e.g., health care workers, household members), pregnant women and essential community workers (e.g., fire fighters, police). In more recent years, flu shot recommendations have been broadened to include any person wishing to avoid infection with flu. Presented here are strategies that can be implemented in a variety of settings.

Strategies for clinics include:
< Encourage all medical and ancillary personnel to get annual flu shots.
< Remind high-risk patients via phone or mail messages to get vaccinated. Flag charts of high-risk patients and patients age 65 or older and have staff check for prior vaccination when patients check-in for appointments.
< Develop and institute standing orders for nurses to administer vaccine to patients without a signed physician's order.
< Accept walk-ins for vaccination without arranging an office visit, unless needed.
< Place informational materials in waiting rooms.
< Provide in-services to office staff.
< Encourage all primary care providers to personally advocate annual flu shots for their patients.

Strategies for health care systems include:
< Encourage health-care benefit programs and other third-party payers to provide coverage for flu shots for adults not covered by Medicare Part B.
< Search member records for codes signifying diagnoses in high-risk categories, as well as patients aged 65 and over. Send lists to primary care physicians for targeting of vaccine.
< Send direct mailing to high-risk members that explains illness, benefits of vaccination, and coverage of service.
< Establish immunization goals for member clinics.
< Facilitate payment to non-system community vendors (e.g., public health)

for vaccinations given to members at community or worksite clinics.
< Set up walk-in influenza immunization beyond traditional business hours.

Strategies for hospitals and long-term care facilities include:
< Provide educational programs to staff.
< Develop and implement standing orders for nursing staff to administer flu vaccine to patients/residents without an individual signed physician's order.
< Encourage health care worker vaccination.
< Provide influenza vaccine on site to staff.

Strategies for public health agencies include:
< Provide educational programs to encourage vaccination.
< Ensure public health staff are vaccinated.
< Conduct annual clinics in community settings.
< Collect and submit claim information for Medicare reimbursement.
< Provide record of immunization to individual.
< If practical, notify home clinic of vaccine given to patient.

Strategies for work sites include:
< Establish agreements with employee's health plans to pay for work site based vaccination of members.
< Offer educational programs for employees.
< Include messages advocating vaccination in employee newsletters, paychecks, etc.
< Provide on-site vaccination clinics for employees and, if possible, family members.
< Provide/update personal record of vaccination services.

Additional Resources:
Bibliographic resource:
< Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide*; available at: http://www.thecommunityguide.org.

Organizational resources:
< American Lung Association of Minnesota, at (651) 223-9564.
< Minnesota Coalition for Adult Immunization, at (651) 725-2085.
< National Coalition for Adult Immunization, at (301) 656-0003, ncai@nfid.org, http://www.nfid.org/ncai/.

Evidence for strategies:
Numerous studies have shown that rates of immunization increase when primary care providers personally advocate shots for their patients, when standing orders allow nurses to administer vaccine, when recall and reminder systems are in place, and when policies permit routine vaccination of hospitalized patients or residents of long term care facilities.

A 1995 Minnesota study of healthy adults demonstrated that employers can realize a significant savings in dollars and productivity when employees receive flu shots. The study found that vaccinated employees experienced 25 percent less upper respiratory illness (URI), 43 percent fewer sick days due to URI, and 44 percent fewer doctor visits for URI. As a result, employers experienced an estimated cost savings of $47 per employee.

The following strategies are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services: client reminder/recall systems, standing orders – adults, expanding access in medical offices or public health clinics, reducing out-of-pocket costs, and multi-component interventions that include education. The Task Force on Community Preventive Services, found insufficient evidence to recommend or strongly recommend the following strategies: client-based education only, provider education only and client held medical records. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Have these strategies been implemented in Minnesota?
Yes, flu shot clinics, including those that target high-risk adults, have been held in the fall throughout Minnesota for years. Traditionally they have been conducted by county public health agencies but more recently are being conducted by other kinds of health care providers and organizations. In addition, the clinics are becoming increasingly creative in their approaches, including "drive-up" flu shot clinics.

Indicators for these strategies:
< The proportion of each clinic's high-risk patient population that receives flu vaccine as compared to the previous year's rates.
< The proportion of public health departments that bill for flu vaccine as compared to the previous year.
< The percent of older persons that receive flu vaccine as compared to the previous year's rates, as determined by telephone surveys of the general population (i.e. BRFSS).
< The number of employer groups that conduct worksite programs.
< The ability of providers to successfully recover payment from Medicare resources.
< The ability of home clinics to obtain documentation for patients vaccinated in community clinics.

For more information, contact:
MDH Immunization, Tuberculosis and International Health Section, at (612) 676-5100 or (800) 657-3970.

Strategy: Implement and maintain a quality control system to assure that vaccines are viable.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
What is the most important way to protect Minnesotans from vaccine preventable diseases? Though it may sound mundane, one important answer is to make sure that the vaccines we administer to thousands of children and adults each year are viable. Improper storage and handling can make vaccines lose potency and only viable vaccine will protect patients.

Minnesota's strategy for implementing a quality control program to ensure safe storage and handling of vaccines is outlined in a manual by the MDH entitled *Got Your Shots? A Provider's Guide to Immunizations in Minnesota*. All clinic personnel responsible for handling vaccines in public and private clinics alike must practice established procedures to ensure that vaccines are viable and can protect children and adults from disease. These procedures include techniques to make sure that:

< Vaccines are not damaged during shipping.
< Vaccines are kept cold or frozen, as appropriate.
< Mishaps are reported and handled appropriately.

Key strategies to make sure that proper vaccine storage and handling procedures are carefully followed include:

< Designating one staff person as the vaccine coordinator with responsibility for ensuring that vaccines are carefully handled in a documented safe manner.
< Posting details of proper vaccine storage conditions on or near the refrigerator or freezer.
< Posting "Warning Do Not Unplug" stickers on the refrigerator or freezer, on the cord, and on the central electrical circuit box.
< Examining each vaccine shipment on arrival and following the instructions noted on the invoice included with the vaccine.
< Storing vaccines at the appropriate temperatures.
< Monitoring vaccine storage temperatures daily.
< Ensuring that staff receive vaccine storage and handling in-services annually and that new staff view the vaccine handling video, *Ice, Champagne and Roses*.
< Reporting vaccine storage or handling mishaps to the MDH hotline or the manufacturer to receive guidance on viability.
< Reviewing annually the clinic's vaccine storage and handling protocol.

Additional resources:

Non-organizational resources:

< *Got Your Shots? A Provider's Guide to Immunizations in Minnesota*, available through the MDH (see contact information below). The following pieces of the Guide are especially relevant to this strategy:
  < Clinic Checklist
  < Vaccine Storage Daily Temperature Log/Instructions for Receiving Vaccine
  < Vaccine Storage, and
  < Vaccine Handling Tips
< *Ice, Champagne and Roses*, a storage and handling video can be obtained from the CDC, at (404) 639-8226.

Organizational resources:

< Centers for Disease Control website http://www.cdc.gov/.
< MDH vaccine information website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Immunize".

Evidence for strategy:

Vaccines that have become non-viable due to improper storage or handling do not exhibit changes that would indicate that the vaccine will no longer provide protection. Therefore it is extremely important to follow the guidelines for proper storage and handling and to report vaccine storage or

handling mishaps in order to receive guidance on viability.

It is clear that not following these protocols may leave our communities vulnerable to some very serious, even deadly diseases. If non-viable vaccines are administered, it not only results in the patient being unprotected from disease, but also leaves them with a false sense of protection.

Site visits have shown that even when clinics think they are storing and handling vaccines properly, they may not be doing all that they can to insure vaccine viability.

Has this strategy been implemented in Minnesota?
Yes, we cannot let down our guard. The foundation of all immunization efforts is the provision of viable vaccine. Ensuring vaccine potency requires an extended, pervasive vigilance. All individuals who are involved with vaccine administration must be instructed regarding the importance of proper vaccine storage and handling. The materials mentioned in this strategy have been disseminated and efforts to encourage their use in all clinics in Minnesota are ongoing.

Indicators for this strategy:
- < Number of clinics and providers with storage and handling protocol in place.
- < Number of vaccine storage and handling self-assessments conducted by clinics and providers.
- < Number and results of site visits to examine the clinics' and providers' vaccine storage and handling protocol.
- < Number of providers calls to the MDH hotline for guidance in assessing proper vaccine storage and handling and assistance in determining viability of vaccine that may have been exposed to non-optimal conditions.

For more information:
MDH Immunization, Tuberculosis and International Health:
- < Immunization hotline, at (612) 676-5100 or (800) 657-3970.
- < MN Vaccines for Children program, at (612) 676-5237.

Strategy: Assure that patients receive all needed vaccines at every visit.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Opportunities for simultaneous vaccine administration may be missed during clinic visits due to invalid contraindications, aversion to multiple injections, and simple oversight. The importance of giving all doses that are due when a child presents for care must be reinforced. For instance, the current Minnesota Recommended Childhood Immunization schedule requires that as many as five immunizations be given at the same visit even if the child has not fallen behind. If every opportunity for age-appropriate vaccination is not taken, then children remain at risk for vaccine preventable diseases.

Parental and provider reluctance for multiple injections affects the implementation of this practice. In fact, research indicates that physicians actually have more concerns about administering multiple injections at

one time than do parents. Regardless, administering multiple injections at the same visit has been shown to be both safe and effective. Continuing education of both providers and consumers is needed to address concerns about multiple injections. Actions that can be taken to accomplish this strategy include:

< Implement standard eight of the Standards for Pediatric Immunization Practices: Providers administer simultaneously all vaccine doses for which a child is eligible at the time of each visit.
< Clinic staff should check every patient's immunization status at every visit.
< Clinic practice protocols should include avoiding missed opportunities for vaccination by practicing only true contraindications.
< Clinics should implement the Standards for Pediatric Immunization Practice.
< Clinics should be handing out personal record cards, such as Minnesota's Gold Card. To request free Gold Cards call Minnesota's Immunization Hotline: (800) 657-3970.
< Clinics should practice only true contraindications.
< Clinic staff should check immunization status of siblings who accompany patients at every visit.
< Parents should always carry their child's Gold Card.
< Public health should incorporate this common message into all clinic in-services and provider education.

Additional Resources:

< Ad Hoc Working Group for the Development of Standards for Pediatric Immunization Practices. 1993. Immunization practices. Immunization standards. *JAMA* 269:1817-1845.
< Advisory Committee on Immunization Practices (ACIP) statements. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Immunize", or http://www.cdc.gov/nip/publications/ACIP-list.htm.
< *Got Your Shots? A Provider's Guide to Immunizations in Minnesota*, published by the MDH (see contact information below).
< *Got Your Shots? News*, published by the MDH (see contact information below).
< Guide to Contraindications and Precautions (MDH, 5/96, IC#141-0649; see contact information below).
< *Red Book*. 2000. This is a report of the Committee on Infectious Diseases, American Academy of Pediatrics (AAP). It can be obtained from the American Academy of Pediatrics, PO Box 927, 141 Northwest Point Blvd., Elk Grove Village, IL 60009-0927 or by calling (888) 227-1770.
< Vaccine Information Materials (VIMs), published by the Centers for Disease Control and Prevention (CDC). For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Immunize", or http://www.cdc.gov/nip/publications/VIS/default.htm.
< Woodin KA., et al. 1995. Physician and parent opinions: Are children becoming pincushions from immunizations? *Archives of Pediatric and Adolescent Medicine* 149(8):845-849.

Evidence for strategies:

Based on the results of the 1996-97 Minnesota Retrospective Kindergarten Immunization Survey, immunization levels

could have been improved in all county and city areas if health care providers took every opportunity to administer all the recommended age-appropriate shots at each clinic visit.

Data from this comprehensive retrospective survey of all children (n=69,722) in kindergarten during the 1996-97 school year were analyzed to determine the extent of missed opportunities for simultaneous administration of DTP4, Polio3, and MMR1. The immunization dates for these particular doses of the primary series were compared to determine which were given together and in what combination. At 20 months of age, children who had received their vaccinations simultaneously (at the same visit) were more likely to be up-to-date than children who had not received their vaccinations simultaneously, when compared to children who were behind. Further, of the 31,629 children who were behind, most (21,908; 69 percent) had received at least one dose before 20 months old; and most (14,977; 68 percent) of these children were eligible to receive all three vaccines in the same visit. These missed opportunities accounted for an 18 percent decrease in immunization levels on an average statewide.

Has this strategy been implemented in Minnesota?
Yes, multiple injections of all needed vaccines is accepted practice among some Minnesota providers. However, this practice is not consistently followed, as indicated by the Retrospective Kindergarten Immunization Survey (above).

Indicators for this strategy:
< Proportion of children who would have been adequately immunized if missed opportunities for simultaneous administration had been avoided.
< Potential improvement in every city and county area surveyed statewide.

For more information contact:
< MDH Immunization, Tuberculosis and International Health, at (612) 676-5100, immunize@health.state.mn.us. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on “Immunize”.
< MN Immunization Hotline: (800) 657-3970.
< National Immunization Program website: http://www.cdc.gov/nip/ (published and maintained by CDC).

Strategy: Encourage full participation in the statewide immunization registry system.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Immunization registries are powerful tools to increase age-appropriate immunizations in an entire geographic area, no matter where children go for their shots.
An immunization registry combines immunization data from all immunization providers in a defined area and allows efficient sharing of that data on a need-to-know-basis. A registry can also send provider and/or parent reminder notices (for immunizations coming due) and recall notices (for immunizations past due), and

conduct both population- and practice-specific assessments of immunization levels among current two-year olds.

Registries are needed because:

< Almost 20 percent of Minnesota's two year olds are still not fully protected against vaccine preventable diseases and pockets of more severe under-immunization exist in every county. Conversely, an estimated twenty percent of children were over-immunized receiving more vaccines than needed in part because of the absence of complete immunization records.

< The complexity of the immunization schedule has increased. By the time they reach 18 months of age, children should have received over twenty doses of vaccine to protect them against eleven different diseases. And new vaccine products and combinations require better record keeping and more careful assessment to determine which shot and vaccine product a child should receive next.

< Parents need accurate and complete shot records for their children for day care, camp, and school. Every year, children's records are checked by schools, day care programs, camps, hospitals, and clinics, an estimated 2.2 million record checks.

< Families move or change clinics and physicians. Immunization records can easily be left behind. Approximately 20 percent of all families change their place of residence every year, and up to 25 percent of families change health plans and health care providers every year.

< Vaccine-preventable diseases continue to occur in Minnesota. Although most cases occur in adults, it is an important reminder to us that these diseases are still among us, and we cannot relax in our vigilance to vaccinate against them.

Immunization registries will help overcome these obstacles and provide many benefits to communities, children, parents, and health care providers.

An essential activity for registries is recruiting and training medical clinic staff and others for full participation in a registry. Below are incremental steps a clinic can take to go from improved management of their current immunization data to full participation in a registry. (The strategies are primarily aimed at medical clinics, integrated care systems, and local public health agencies, although encouraging these activities are certainly appropriate for health plans.) Strategies for participating in a registry include:

< Examine current immunization documentation. Are immunizations recorded in one place to facilitate assessment of immunization status? Are all the federally required elements recorded (see "Additional resources" section below)?

< Assess immunization status at every clinic visit. Is every well-child and ill-child visit used to assess whether shots are due or coming due shortly? (Also see the previous strategy called, "Ensure that patients receive all needed vaccines at every visit.").

< Assess current well-child visit policies. Because registries can increase routine well-child visits through reminder/recall, discuss how the clinic can accommodate that increase. Are immunizations available during extended clinic hours? Are there long delays before a parent can get in for a well-child visit (which can affect the age-appropriateness of the immunizations)?

- Examine current billing data. How many of the 21 core data set fields does the billing system currently capture? What percent of immunizations/ immunization visits are not billed for due to clinical or clerical error? Incorporating the core data set into the billing system may simplify reporting data to the registry at a later date.
- Conduct a baseline chart audit on a sample of pediatric patients (no matter what health plan coverage). Using the *Standard Protocol for Conducting Clinic Immunization Assessments* (see "Additional resources") will provide a realistic baseline from which cost-benefit evaluation of participating in a registry can be conducted.
- Meet with registry staff to discuss the benefits of participating in a registry and some of the possible costs and cost-savings. Is the clinic ready to commit to long-term participation in a registry? Does this consensus include medical staff, nursing staff, clinic management, medical records staff, and any other key individuals within the clinic?
- Discuss with registry staff the most efficient and feasible means to report immunization data to the registry. Will it be web-based reporting or using billing data? If the latter, arrange for an audit to ensure the completeness and accuracy of the billing data.
- Train clinic staff to accurately describe the purpose of the registry to patients and to answer common questions. All clinical staff need to be able to respond preliminarily to parent questions or concerns about the registry, especially data privacy issues such as how the data is used, who has access to it, and what options a parent has in terms of participating in the registry.
- Install a PC in the clinical work area, preferably with a robust internet connection. Training clinical staff in its use and developing policies and procedures around data privacy and registry access would also be needed.

Additional Resources:
Bibliographic resources:
- Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide,* available at: http://www.thecommunityguide.org.
- Immunization Data Sharing Law, Minnesota Statutes 144.3351.
- *Standard Protocol for Conducting Clinic Immunization Assessment*, MDH Acute Disease Prevention Services Section (see contact information below).

Organizational resource:
- MDH immunization registry website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Immunization registry".

Evidence for strategies:
Numerous research studies nationally have concluded reminder/recall can increase immunization levels by 15 to20 percent. Additionally, the 1996-1997 statewide Retrospective Kindergarten Immunization Study conducted by the MDH and all local public health agencies revealed that most counties could increase their immunization levels by 15 percent by reducing missed opportunities for simultaneous administration.

This strategy is strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide

at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, registries are operating around the state, connected by a statewide web-based application known as the Minnesota Immunization Information Connection. The lessons learned from those registries are much of the basis for these proposed clinic readiness strategies.

Indicators of strategy:
- < Current medical record documentation includes immunizations in one chart location.
- < All federally required elements for recording immunizations are included in the medical record.
- < All the immunization data necessary for participating in a registry are included in the medical record.
- < Immunization status is assessed at every clinic visit.
- < Clinic policies and hours can accommodate possible increased well-child visits.
- < Current billing data is examined for compatibility with the 21 core data set fields required for registries and its completeness and accuracy has been verified.
- < A baseline chart audit on all pediatric patients is conducted using the standard protocol for conducting clinic immunization assessments.
- < Clinic commitment exists for long-term participation in a registry.
- < A process for reminder and recall notices is established and periodically evaluated.
- < Clinic staff are able to accurately describe the purpose of the registry, answer common questions about the registry, and know when to refer questions to registry staff.
- < A PC is installed in the clinical work area and staff are trained in how to use it for access and reporting to the registry.

For more information contact:
- < CDC National Immunization Program's website for immunization registries: http://www.cdc.gov/nip/registry (published and maintained by CDC).
- < MDH, Immunization, Tuberculosis, and International Health Section:
  - Bill Brand, at (612) 676-5144,
  - Linda Stevens, at (612) 676-5673,
  immunize@health.state.mn.us. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Immunize".

Strategy: Assure that all newly arrived refugees receive a domestic refugee health assessment.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U		U

Background:
The federal Office of Refugee Resettlement (ORR) recommends that refugees receive a domestic health assessment within 90 days of arriving in their resettlement states. ORR charges the MDH Refugee Health Program (RHP) to oversee this process. The purpose of the assessment is to reduce health-related barriers to successful resettlement of refugees, while protecting the health of the U.S. population.

The costs of the health assessment are covered by public or private insurance plans or for qualifying uninsured refugees; a flat fee reimbursement is available from MDH.

The MDH RHP is the single point of notification for the pending arrival of new refugees into Minnesota. MDH's RHP receives notification in the form of refugee arrival forms (which include basic biographical information on each refugee) from the CDC's Division of Global Migration and Quarantine at the refugee's port of entry.

MDH RHP sends these forms, along with the Minnesota Refugee Health Assessment Form and personal immunization record card, to the local public health agency in the county where the refugee plans to resettle. Upon receipt of this packet, the local public health agency contacts the refugee to assist in scheduling a health assessment with a medical provider. This facilitation includes identifying the refugee's assigned health plan, clinic or both, and making an appointment for screening. After the exam, the provider completes the health assessment form and returns it to the local public health agency, which in turn returns the completed form to the RHP. The RHP reviews the forms for completeness, enters the results into a database, and reports a summary of the screening results to ORR semi annually. Steps that local health care providers and other organizations can take to support this process include:

< Local public health contacts new arrivals and helps make screening appointments.
< Community agencies such as Catholic Charities or Lutheran Social Services ensure that each refugee has health care coverage and facilitates enrollment in state economic assistance and health insurance plans as needed.
< Local public health assesses the new arrival needs for the appointment (e.g., information regarding clinic location, transportation arrangements or interpreter services).
< Local public health encourages health care providers to conduct a refugee health assessment when patients describe themselves as newly arrived refugees.
< Local public health or the health care provider conducts the refugee health assessment and provides related health education and follow-up as indicated.
< The health care provider completes and returns the MDH Minnesota Refugee Health Assessment Form.
< Local public health or the health care provider ensures that refugees have access to interpreters and basic translated health materials as appropriate.
< Businesses and work sites refer newly arrived refugees to local public health if they have not had a refugee health assessment.

Additional Resources:

< Ackerman, LK. 1997. Health problems of refugees. *Journal American Board of Family Practice*:337-48.
< Health Assessment Screening for Minnesota Refugees. *MDH Disease Control Newsletter*, 12/99.
< Walker, PF., and Jaranson, J.1999. Refugee and immigrant health care. *Medical Clinics of North America*: 1103-1120.

Evidence for strategies:

In 2001, the MDH received notification of 2,792 refugee arrivals. Of these, 341 were lost to follow-up through death, out-migration, missed appointments or refusal of service. Of the remaining 2,451 eligible for

screening, RHP received completed screening forms from providers on 2,185 (86.3 percent). The screening results provide ample evidence for the need to screen all newly arrived refugees (including those who have moved here from another state). For example, of those refugees screened in 2001:

- < 54 percent tested positive on the Mantoux skin test for tuberculosis.
- < 7 percent were chronic hepatitis B carriers.
- < 29 percent had at least one intestinal parasite.
- < 15 percent of those who received a hemoglobin test had anemia.
- < 98 percent were not up-to-date with their immunizations.
- < Other reported health problems or conditions included dental caries, vision and hearing deficiencies, mental health issues, nutritional deficits, sexually transmitted infections, hypertension, and cancer.

Have these strategies been implemented in Minnesota?
Yes, see the "Background" section of this strategy description.

Indicators for these strategies:

- < Percentage of refugee health assessment forms returned to the MDH.
- < Percentage of refugees started on tuberculosis preventive treatment.
- < Percentage of refugees with chronic hepatitis referred for ongoing medical follow-up and counseling.
- < Percentage of refugees who began or completed recommended immunizations.
- < Ability of system to ensure that domestic refugee health assessments occurred.
- < Ability of system to conduct related health education as appropriate.
- < Percentage of refugees referred for other health care services.

For more information, contact:
Ann O'Fallon, at (612) 676-5237, ann.ofallon@health.state.mn.us, MDH Refugee Health Program.

APPENDIX:

Communicable Disease Prevention and Control Common Activities Framework

2/28/03

State and Local Public Health
Communicable Disease Prevention and Control
Common Activities Framework
PREAMBLE

This Framework lays out a minimum set of disease prevention and control activities that are to be carried out by all local public health agencies and the Minnesota Department of Health.

Background: Infectious disease prevention and control (DP&C) includes activities of detecting acute and communicable diseases, developing and implementing prevention of disease transmission, and implementing control measures during outbreaks. Controlling communicable diseases is perhaps the oldest and most fundamental public health responsibility. For decades, it was the primary responsibility of local Boards of Health and, in fact, the main reason for their creation. Yet, the Local Public Health Act (Chapter 145A) and the Department of Health Act (Chapter 144) are ambiguous about respective state and local authorities for conducting disease prevention and control activities.

Subdivision 6 of the Local Public Health Act states, A board of health shall make investigations and reports and obey instructions on the control of communicable diseases as the commissioner may direct under section 144.12, 145A.06, subdivision 2, or 145A.07. Boards of health must cooperate so far as practicable to act together to prevent and control epidemics. *Note that this is a requirement of local boards of health whether or not they form a Community Health Board and receive the CHS subsidy.*

While intended to allow for flexibility and varied capacity to address communicable disease problems, such broad direction leaves ambiguity and uncertainty about the respective roles of state and local public health. Clearly, both the Minnesota Department of Health (MDH) and local Boards of Health have assumed a shared responsibility for conducting public health activities.

In 1989, the MDH DP&C Division and the State Community Health Services Advisory Committee (SCHSAC) formed a workgroup to review roles and responsibilities for conducting DP&C activities at the state and local level. The outcome was a DP&C A cooperative agreement that formalized some of MDH relationships with local public health.

Communicable DP&C Common Activities Framework: In 1996, another SCHSAC workgroup was formed, which abolished the old agreement and redefined expected roles and responsibilities for DP&C. The final report of the workgroup was released in 1998. This report, which was approved by SCHSAC, set standards for DP&C activities to be carried out at the state and local level as contained in the initial version of the Communicable DP&C Framework of Common Activities.

This Framework lays out a minimum set of DP&C activities that are to be carried out by all local public health agencies and MDH. These activities are to be reflected in state and local community health service (CHS) planning efforts. Those agencies that are currently unable to carry out these activities are expected to strive to reach this level. MDH activities listed in the Framework are to be implemented by MDH Infectious Disease Epidemiology Prevention and Control (IDEPC) Division staff in support of local public health agency DP&C activities. This Framework also lists DP&C activities that are conducted jointly by MDH and local public health agencies.

The 1998 version of the Framework also listed suggested activities for private health care providers and health plans in support of DP&C public health efforts. The Framework as revised (May 2001) focuses on local public health agency and MDH DP&C activities. Additional discussion with health care providers and health plans is being planned by the DP&C Leadership Team to determine ways they can support DP&C activities. These activities will then be included in the Framework.

The Framework may be used as the foundation for a DP&C work plan for both MDH and local public health agencies. Yet to be determined is how local public health and MDH can measure their progress in maintaining and improving DP&C activities as contained in the Framework.

DP&C Leadership Team: Another recommendation to enhance the partnership between state and local public health for disease prevention and control that was made by the SCHSAC workgroup in the 1998 report was to create a DP&C Leadership Team.

This Team is made of members representing regional and job specific categories from local public health agencies, a representative from each of the sections within the IDEPC Division, as well as a representative from the MDH Community Health Services Division. The DP&C Leadership Team meetings are intended to provide an ongoing forum for the review and discussion of how DP&C activities are implemented at the state and local level. The Team meets about five times a year. One co-chair represents local public health; the other co-chair represents MDH.

The DP&C Leadership Team will review the Communicable DP&C Framework of Common Activities at least every two years (in conjunction with the CHS planning cycle) for any needed revisions. The next review will need to be completed by January 2003, in preparation for the development of local public health 2004-2007 CHS Plans.

Recommendations and updates are brought back to the Commissioner of Health and to the SCHSAC as necessary.

MDH and local health departments have worked together to carry out the DP&C activities contained in the Framework, initially through pilot projects. To ensure the success of the Framework, training sessions are being held statewide to review the Framework with all local public health and MDH DP&C staff. In these sessions participants share ways to enhance the collaborative relationship between MDH and local agencies.

Minnesota Department of Health (MDH) and Local Public Health (LPH)/Community Health Services (CHS) Agency

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Disease Prevention and Control Leadership Team

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Surveillance/Data Collection

LPH/CHS Agency Activities	MDH & LPH/CHS Agency Collaborative Activities	MDH Activities	Clinics/Health Systems*
1. Promote provider compliance of **infectious disease reporting**,** pursuant to Minnesota Reporting Rules Chapter 4605. a. identify local staff responsible for disease reporting; b. maintain current lists of all providers within jurisdiction; c. assure reporting rules, report cards and MDH toll free reporting phone number (1-877-676-5414) are available to all medical clinics and laboratories, and hospitals; and	1. Promote provider compliance of infectious disease reporting,** pursuant to Minnesota Reporting Rules Chapter 4605. a. Jointly conduct training programs and provide consultation for reporting sources regarding issues related to reporting and surveillance systems.	1. Provide and maintain a centralized statewide communicable disease surveillance system that monitors incidence, demographics, and other appropriate characteristics. Maintain both active and passive surveillance: a develop and distribute reporting materials (*i.e.*, rules, report cards, toll-free phone numbers); and b. provide and maintain current information and resources on surveillance.	1. **Assure infectious diseases are reported to MDH** as identified in MN Reporting Rules Chapter 4605. a. designate who within the provider facility will be responsible for reporting diseases.

* Clinics/Health Systems includes: public and private practitioners, clinics, hospitals, health plans, HMO's and other insurance providers.

** Reporting sources include: a) primary reporting sources: clinics and hospitals; b) secondary reporting sources: schools, day care centers, and nursing homes; and c) community-based reporting sources: agencies, businesses, correctional institutions, restaurants, etc.

Developed Nov. 1999; Rev. Nov. 2001; Feb. 2003

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Surveillance/Data Collection			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
d. respond to inquiries from reporting sources and forward any reports of cases or suspect cases to MDH.		c. Provide leadership and resources for the design and development of electronic reporting capacity.	
2. Review **surveillance data** with staff and non-reporting providers at least twice per year. May also review data with other interested parties (*e.g.*, CHS board, health advisory board, local legislators), as needed: a. review any local barriers to the reporting process; and b. use these data to assess LPH/CHS program effectiveness.	2. Jointly review data to determine if additional strategies are needed to stimulate improved reporting.	2. Surveillance data are sent quarterly: a. where applicable, Epidemiology Field Services (EFS) staff will evaluate data for their districts and send each LPH/CHS agency summaries semi-annually; b. where applicable, EFS staff will evaluate regional surveillance data and present to regional directors via local public health association (LPHA) or other regional meetings; and c. data will be evaluated for any or all of the metro area counties, as requested.	2. Review surveillance data with LPH/CHS agency and with providers in system. a. identify gaps and barriers to reporting b. work with LPH/CHS agency and MDH to improve reporting c. monitor reporting compliance in provider system

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Surveillance/Data Collection			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
3. Assess **immunization levels**: a. assess immunization levels in public health clinics, if appropriate, and encourage/support private clinic assessment using tools such as Clinic Assessment Software Application (CASA) and registries; and b. review and distribute state and local immunization reports to schools, policy makers, providers, and others.	3. Work together to interpret and disseminate immunization data for providers; Women, Infants, and Children program providers; schools; and other child health programs.	3. Maintain a statewide system to determine immunization rates that can identify pockets of need. Disseminate data to the LPH/CHS agency and providers; and also provide consultation and training on interpretation and use of data to meet statewide immunization goals.	3. Review statewide and local immunization rates a. assess client immunization status with each clinic encounter b. review and act on local and clinic specific immunization coverage reports.
4. Assess adherence to **immunization practice standards** and provide consultation, as needed: a. assess parental and other barriers to age-appropriate immunizations as warranted by local immunization coverage data	4. Jointly develop standards and protocols to evaluate and improve immunization practices in private and public clinics, and to assess and address barriers to age-appropriate immunizations.	4. Develop, maintain, and promote standards and protocols for clinic immunization assessment. Also provide appropriate information to guide providers in meeting the standards of immunization practice, including developing and updating standards regarding vaccine delivery and storage.	4. Annually assess immunization practices within the community and provider system using registries or the Minnesota Immunization Clinic Protocol a. collaborate with LPH/CHS to assess practice or parental barriers in community and provider systems

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COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Surveillance/Data Collection			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
5. Assess **health needs of at-risk (*e.g.*, foreign-born) populations** living in the LPH/CHS jurisdiction: a. assess at the local level the need to provide targeted tuberculosis (TB) screening for people at high risk (*e.g.*, refugees) of developing active TB disease; b. maintain a record of all persons with TB disease in jurisdiction. Notify MDH and refer directly observed therapy (DOT) to another state or county if patient leaves jurisdiction before treatment is completed; c. assess for other communicable diseases as warranted by local epidemiological data; and d. assure immunizations are current.	5. Work together to identify health issues and health care access barriers of at-risk (*e.g.*, foreign-born) populations. Provide information and tools to private providers for infectious disease screening.	5. Assess health needs and access to health care of at-risk populations (*e.g.*, refugees, individuals in correctional facilities, foreign-born populations); disseminate information to LPH/CHS agencies.	5. Collect and provide data to local public health and MDH relating to at-risk populations accessing care a. work with LPH/CHS agencies to assess specific health issues and barriers of at-risk populations utilizing providers in community

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Surveillance/Data Collection			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
6. Review **infectious disease epidemiological studies** related to incidence of disease, barriers to health care and other needs of the public and disenfranchised from the health care delivery system.	6. Conduct special studies, as warranted, to better understand epidemiology of infectious diseases. Assess effectiveness of prevention programs and provide results to others, as needed.	6. Conduct special studies to better understand epidemiology of infectious diseases. Assess effectiveness of prevention programs and provide results to others, as needed. Provide information about these studies to LPH/CHS agencies and provide technical assistance to enhance their ability to interpret the data. These studies could relate to barriers, needs, and outcomes of local populations, such as: a. studies to ascertain behavior of populations at-risk for HIV/STDs, service needs for HIV-infected people, availability of community resources, and prevention programs; b studies that help define needs of specific populations related to health improvement (*e.g.*, immunization barrier studies); and any additional studies as supported by community assessment.	6. Participate in special infectious disease studies as requested.

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Surveillance/Data Collection			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
7. Review the environmental health program activities related to food- and waterborne diseases and other infectious diseases with environmental etiology. Communicate surveillance data to the MDH.	7. Share information about infectious diseases with environmental etiology with appropriate environmental health program.	7. Provide epidemiology support when needed. Communicate surveillance data to appropriate MDH sections. Provide training to environmental health program, as needed.	7. Assure providers are aware of disease etiology of water and foodborne disease a. report food or waterborne related disease identified in practice to MDH.

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COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Prevention			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
1. Maintain current MDH and CDC **communicable disease recommendation/guidelines.** a. develop and implement plans and policies using these guidelines to assure capacity to respond to cases of TB, vaccine-preventable diseases, food-and waterborne illness, and other diseases as warranted by local epidemiologic data; b. disseminate guidelines to local providers (*e.g.*, vaccine schedules and recommendations; STD/HIV prevention, testing, and treatment including perinatal; TB prevention, diagnosis, and treatment; food-and waterborne illness).	1. Jointly develop statewide guidelines and assure training is available to LPH/CHS agencies and providers.	1. Assure statewide guidelines are developed based on epidemiologic data for the prevention of specific diseases (*e.g.*, Lyme disease, TB, HIV/STDs, and vaccine-preventable diseases) and disseminate such guidelines to CHS agencies, private providers, MDH-funded grant programs, and others: a. review national guidelines on specific diseases and disseminate; b. maintain toll-free telephone numbers for reporting and consultation (immunization, foodborne disease, and acute disease epidemiology hotlines); and c. maintain current resources on Web site (www.health.state.mn.us) that are reproducible.	1. Adopt appropriate prevention guidelines received from LPH/CHS and/or MDH relating to infectious diseases. Such as: • Standards for Pediatric Immunization Practices • Childhood, Adolescent and Adult Immunization Schedules and Guidelines • Guidelines for prevention and control of TB, HIV and STD's

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Prevention			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
2. **Develop and implement screening and referral strategies for high-risk groups** when epidemiologically appropriate. LPH/CHS agencies will refer and follow-up on positive screening tests.	2. Jointly assure that at-risk populations (*e.g.*, refugees and other foreign-born populations) receive appropriate screening, diagnosis, and therapy for diseases (*e.g.*, TB), as needed.	2. Maintain statewide prevention programs that identify priorities and objectives for short- and long-term control of communicable diseases in Minnesota.	2.Screen high-risk patients for infectious diseases when epidemiologically appropriate; a. follow CDC recommended treatment guidelines b. provider reimbursement support for screening programs for infectious disease
3. Establish and manage public **immunization clinics**, as needed, based on population-based assessment data. Follow vaccine management standards.	3. Jointly assure all immunization providers use Vaccine Information Sheets (VIS) at the time of vaccination. Assure professional and consumer education materials are used by providers and meet the information needs of patients.	3. Maintain a statewide vaccine distribution system for MnVFC providers. Develop and distribute vaccine management standards, VISs in all relevant languages, and no-cost professional and consumer materials.	3. Establish and manage immunization activities and follow vaccine management standards
4. Maintain and provide **consumer education information** based on community needs to the public and: a. develop local community education programs;	4. Jointly identify local consumer education needs, and develop programs and materials for the public and media. Materials will be available in languages, as needed.	4. Develop and/or identify resource materials that can be used by LPH/CHS agencies in community education programs related to the prevention and control of disease.	4. Implement patient education programs in the clinic setting such as handwashing instructions, flu vaccinations. a. Use culturally and linguistically appropriate materials b. participate in local consumer disease education programs with LPH/CHS and the community c. Participate in local immunization information system activities

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Prevention			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
b. maintain current lists of local providers and resources for people infected with STD/HIV; and c. develop a policy for working with local media regarding infectious disease issues; and d. maintain Internet connection in order to receive and forward health alert information to local health care providers and others, as needed.			
5. **Designate staff** within the LPH/CHS agency to have **communicable disease responsibilities** for TB; STD/HIV; vaccine-preventable disease; refugee health; and surveillance activities.	5. Jointly assure training and current guidelines relating to communicable disease are available to staff who are assigned these responsibilities: a. maintain a current list of contact staff for communicable diseases.	5. Provide LPH/CHS agencies with a list of minimum expectations for the following LPH/CHS contact persons: a. TB control nurse (e.g., contact investigations, DOT, distribution of TB medications);	5. Identify and communicate to local LPH/CHS, a person in the clinic/system as liaison between clinic and LPH/CHS agency. Update the information when appropriate.

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Prevention			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
	b. notification of change in infectious disease contact staff to be provided to each other on a timely basis.	b. HIV/STD resource person (serves as liaison for providing information and referrals to residents and providers); c. vaccine-preventable disease person (*e.g.*, perinatal HBV contact, vaccine ordering); d. refugee health contact person; (coordinating refugee screening and follow-up); and e. surveillance contact person (see #1 of Disease Surveillance/Data Collection Table).	

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Prevention			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
6. **Collaborate regionally** on communicable disease efforts: a. assure regional representation on Disease Prevention and Control (DP&C) Leadership Team and provide that representative with comments and ideas from your CHS agency; b. identify staff that need training; c. LPH/CHS agencies in a region will exchange information on communicable disease prevention and control activities on a regular basis; and d. maintain contact with regional and state immunization information service.	6. Support regional planning activities.	6. Provide regional training and consultation on communicable disease issues. a. Assure representation on the DPC Leadership Team.	6. Collaborate with regional public health DP&C planning efforts and activities. Participate in public health training opportunities in DP&C issues as appropriate.

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Prevention			
NOTE: These activities may evolve as federal guidance changes.			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
7. Follow the HAN operational guidelines from MDH, including to: a. Receive and promptly acknowledge any Health Alert Network message sent by MDH. b. Review MDH HAN messages in a timely way, adding additional information of local relevance as appropriate, and forwarding the message to local HAN recipients. c. Serve as an information resource to local HAN recipients in response to HAN messages.	7. Continually evaluate and improve the effectiveness of the Health Alert Network. a. Maintain and coordinate distribution lists of appropriate local recipients of HAN messages. b. Continuously monitor the accuracy of the distribution list, response rate and time.	7. Maintain an effective Health Alert Network that meets federal requirements and local needs. a. Update and disseminate HAN operational guidelines for local agencies. b. Route all urgent and time sensitive messages to LPH through the Health Alert Network. c. Maintain HAN database. d. Maintain public and secure Web site of current health threat information. e. Review CDC health alerts and when appropriate add Minnesota specific information and forward on to local HAN contacts.	7. Develop internal communication systems to distribute information received via the Health Alert Network

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Control			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
1. Assist and/or **conduct investigations** on communicable diseases in collaboration with the MDH and/or refer information related to cases and suspect cases to the MDH.	1. Jointly identify the lead agency and conduct epidemiological investigations of cases and suspect case of infectious diseases including when there is a potential for an outbreak. This will be done in order to better understand the epidemiology of specific diseases and may include: • public education and outreach programs; • informing the public and providers about disease control recommendations; • special clinics for immunizing, treating, or screening people at-risk of disease; • procedures that limit access to sources of disease (*e.g.*, closing restaurants and/or day care facilities, recommending quarantine); and	1. Provide technical assistance in conducting disease case and outbreak investigations and special studies (*e.g.*, specify epidemiologic methods). Make recommendations for the control of infectious diseases that may include: • notifying LPH/CHS agencies, environmental health, and providers of outbreaks and potential outbreaks; • assuring providers understand and implement control procedures (such as screening for enteric pathogens/treating people at-risk); • providing training on outbreak investigations to environmental health programs, as needed; and • investigating and take action on cases of communicable disease (*e.g.*, TB, HIV) that pose an endangerment to the public.	1. Support local disease investigations by: a. collecting specimens b. providing medical diagnostic evaluation, as needed c. providing treatment and immunization of client populations at risk of or with disease d. assisting with education or control activities

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COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Control			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
	• co-coordinating investigations with environmental health staff. a. clarify roles of those involved in the investigation of an outbreak; and b. For infectious diseases with environmental etiology, coordinate the investigation with the appropriate environmental health agency and assure communication throughout the investigation.		

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Control			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
2. Assure 100% of persons with TB disease in LPH/CHS jurisdiction complete **TB treatment** by providing DOT or according to CDC/MDH standards.	2. Jointly assure that 100% of active TB cases complete therapy. This may require DOT.	2. Provide technical assistance to assure TB case treatment: a. collect data on treatment and clinical status of all patients with TB disease from CHS agencies and private providers, and maintain a database containing this current information; b. monitor location and treatment status of persons with TB disease statewide and notify CHS agencies of patients in their jurisdiction; c. assure medication is available, without cost, to all TB patients statewide; and d. pursue and implement actions pursuant to the TB Health Threat Act, as needed, in order to ensure completion of adequate treatment for potentially infectious TB case patients who refuse to adhere to prescribed therapy through less restrictive means.	2. Report TB disease per MN statute. a. cooperate with local public health and MDH to assure appropriate treatment is initiated and completed for all TB cases and suspect cases until lab confirmation is available following current CDC guidelines b. notify MDH or LPH/CHS agency of patients who are non-adherent to TB treatment

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Control			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
3. Assure **contacts of infectious TB patients** in the LPH/CHS jurisdiction are identified, located, evaluated, and followed appropriately. Notify other jurisdictions of contacts residing in those jurisdictions (i.e., MN counties).	3. Develop and implement policies and protocols to respond to TB outbreaks.	3. Provide technical assistance to LPH/CHS agencies to assure a thorough contact investigation is conducted for each infectious TB case. a. Collect data on contact follow-up investigations from LPH/CHS agencies and maintain a database on these investigations; make recommendations for improvement of contact follow-up, as needed, based on data generated. Make interstate referrals, as needed, for contacts residing outside of Minnesota.	3. Cooperate with local public health to assure contacts of infectious cases are identified, located and evaluated. Assist to assure contacts with latent tuberculosis infections are treated with an adequate course of therapy.

COMMUNICABLE DISEASE PREVENTION AND CONTROL COMMON ACTIVITIES FRAMEWORK

Disease Control			
LPH/CHS Agency Activities	**MDH & LPH/CHS Agency Collaborative Activities**	**MDH Activities**	**Clinics/Health Systems**
4. In outbreak situations conduct mass or targeted immunization clinics, arranging for staffing, training, emergency supplies, and other logistical needs.	4. Jointly assure staffing, supplies, training, etc. are in place for a targeted or mass immunization clinic.	4. Assure overall coordination exists for outbreak management and control in vaccine-preventable disease outbreak situations, including mass or targeted immunization clinics. Provide adequate vaccines, antibiotics, and prophylaxis, as needed. Advocate for state funding, if needed.	4. Work closely with local and state public health in understanding and managing an outbreak. Assist with public information efforts
5. Proactively implement **local disease control programs**, as indicated, from local surveillance data and trends. These programs should then be part of the Framework and included as part of the LPH/CHS Plan.	5. Work together to provide accurate and timely public communications so that community members understand the risks and preventive actions to be taken. Local providers will be involved.	5. Develop statewide guidelines based on statewide epidemiologic data for the control of disease and disseminate such guidelines to LPH/CHS agencies, private providers, MDH-funded grant programs, and others.	5. Collaborate with MDH and LPH/CHS in implementation of disease control programs a. screen clients according to appropriate guidelines
6. LPH/CHS agencies will work with the local emergency management agency and others to develop and maintain a local **Emergency Management Plan**.	6. As identified through surveillance, with input from local providers, jointly develop programs to control disease and other health conditions at the local level. Develop and implement policies and protocols for public health outbreak response activities, including media responses.	6. Implement statewide public health outbreak response protocols (such as pandemic flu and foodborne disease) as a part of the statewide Emergency Management Plan and train county agencies in coordination with the Department of Emergency Management.	6. Participate with LPH/CHS and MDH in developing and implementing of public health emergency response plans a. Identify internal emergency plan for responding to public health emergencies

Category:
MENTAL HEALTH

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 5: Promote, protect and improve mental health.

CATEGORY: MENTAL HEALTH

Mental health is a core condition for overall health. It is necessary to lead a happy and productive life, to form healthy relationships, and to successfully adjust to change and overcome difficulties. In recent years, the U.S. Surgeon General has issued no less than five reports addressing mental health and suicide prevention, heightening the importance of mental health as a major public health issue. Mental health and well-being are connected to physical health, genetics, behaviors, environments, and other social conditions. For instance, lack of social support, material and financial poverty, and stress can exacerbate many mental health illnesses and disorders. Therefore policies that work to address these root causes and contributing factors can play a powerful role in alleviating the larger financial and social costs of mental illness.

Mental health can be compromised in varying degrees, from "having a bad day" to living with a mental disorder or feeling suicidal. About one in five Americans experiences a mental disorder in the course of a year (USHHS, *Mental Health: A Report of the Surgeon General*, 1999). Mental health can also vary across the lifespan and among populations. One in ten American children have mental illnesses serious enough to cause some degree of impairment and yet only an estimated one in five receive mental health services (USPHS, *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*, 2000). In Minnesota, suicide is the second leading cause of death for 15- to 34-year olds; the third leading cause of death for 10- to 14-year-olds; and the fourth leading cause of death for 35-to 54-year-olds. The suicide rate for American Indians males is approximately two times higher than that of any other racial or ethnic group. In 2000, persons aged 35-44 years in Minnesota had the highest suicide rate of all age groups, at 13.1 per 100,000 people, with the exception of people aged 85 years and older (rate of 14.0 per 100,000).

Mental disorders include depression, schizophrenia, autism, attention deficit hyperactivity disorder, conduct disorder, bipolar disorder, substance addictions, and Alzheimer's disease, to name a few. These illnesses place an extraordinary burden on the financial and social resources of the state. It was estimated that for 1990 the total national costs related to mental illnesses (not including alcohol and drug abuse) were $147 billion (Rice, Kelman, Miller and Dunmeyer, *Economic Costs of Alcohol and Drug Abuse and Mental Illness Report*, 1990).

There is perhaps no illness or disability that is as shrouded in myth and marked by stigma as mental illness. According to the U.S. Surgeon General's Report on Mental Health, "… nearly two-thirds of all people with diagnosable mental disorders do not seek treatment" (USHHS, *Mental Health: A Report of the Surgeon General*, 1999). Much can be done to improve Minnesotans' access to effective mental health interventions, which include mental health promotion efforts as well as treatment for mental disorders and timely crisis response.

A range of strategies is needed to promote, protect, and improve mental health in Minnesota. These include promoting infant mental health through nurturing parent-child interactions; early identification of mental health problems in all ages; intervention and referral to appropriate services and treatment; and preventing violence, substance abuse, and addictions. In addition, Minnesotans can implement strategies to

address eating disorders, maternal depression, suicide, the importance of healthy growth and development among children and adolescents, and the mental health needs of children with disabilities, populations of color, American Indians, and people with chronic illnesses. Through public education and broad-based interventions with individuals, families, communities, and systems, Minnesotans can promote the mental health and well-being of its citizens.

For related strategies, see the following categories: *Alcohol, Tobacco and Other Drug Use; Children and Adolescents Growth and Development; Chronic/Noninfectious Disease; Disability/Decreased Independence; Infectious Disease; Pregnancy and Birth; Service Delivery Systems; Unintended Pregnancy; and Violence.*

CATEGORY: Mental Health

TOPIC: INFANT MENTAL HEALTH

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Develop a provider awareness campaign that provides information on the importance of responsive, nurturing interactions between parents and their infants, available assessment and teaching tools, and available community resources.	✔	✔	✔	✔	Mental health providers		
Provide public health nurse home visits to promote caregiver-infant interactions and relationships using recognized, research based tools.	✔	✔	✔	✔	✔		

The infant comes into the world totally dependent on her or his caregivers. It is through the relationship with the primary caregiver that a baby experiences the world. This relationship plays a vital role in the infant's emotional well-being. When this relationship is nurturing and responsive, a baby develops the skills to learn, to regulate emotions and to interact socially. According to the Advisory Committee on Services for Families with Infant and Toddlers, "The child-caregiver relationships with the mother, father, grandparent and other caregivers are critical for providing infants and toddlers support, engagement, continuity and emotional nourishment necessary for healthy development, and the development of healthy attachments. Within the context of care giving relationships, the infant builds a sense of what is expected, what feels right in the world, as well as skills and incentives for social turn-taking, reciprocity and cooperation" (Advisory Committee, 1994, p.7).

In the early months of an infant's life the primary focus of care giving is to establish routines, patterns of interaction, and patterns of communication. Through these routines and patterns of communication, caregivers and children mutually influence and provide feedback to one another. It is within these thousands of repeated interactions between caregiver and young child that children's emotional, intellectual, and physical needs are met – or not.

Infant caregiver relationships are the primary focus of infant mental health promotion, prevention and intervention activities. Strategies to promote infant mental health build the capacities of health, early education, mental health and human services providers to recognize healthy parent-infant relationships; increase provider skills to promote positive parent-infant relationships; and use public health nurse home visiting to promote positive, caregiver-infant interactions.

For related strategies, see the sections on Maternal Depression and Mental Health in this (*Mental Health*) category.

Strategy: Develop a provider awareness campaign that provides information on the importance of responsive, nurturing interactions between parents and their infants, available assessment and teaching tools, and available community resources.

	Systems	Community	Individual
Primary		✔	
Secondary		✔	
Tertiary			

Background:
The purpose of this strategy is to increase the knowledge of infant mental health issues among the professionals who work in health care, mental health, early childhood programs and human services agencies. Public health and community partners provide information on the importance of responsive, nurturing interactions between parents and babies at agency/clinic/program staff meetings, hospital medical staff meetings, and conferences. Public health and community partners establish and implement a process for disseminating infant mental health information to new and existing staff. Public health can meet with local professional organizations and determine ways to share information on infant mental health, available assessment and teaching tools, and community resources with their members.

Additional Resources:
- Heffron, M. 2000. Clarifying concepts of infant mental health-promotion, relationship-based preventive intervention, and treatment. *Infants and Young Children*, 12(4), 14-21.
- The Florida State University Center for Prevention and Early Intervention Policy for the Florida Developmental Disabilities Council. (2000). *Florida's Strategic Plan for Infant Mental Health.* Tallahassee, Florida. pp. 40-42.

Evidence for strategy:
Studies of the impact of professional education show a relationship between improvements in provider performance and patient health outcomes where a variety of educational strategies were involved. A direct relationship with positive health outcomes is most apparent when reinforcing educational elements (such as case discussion and interactive learning opportunities) are used.

Has this strategy been implemented in Minnesota?
No, it is currently being implemented in the State of Florida.

Indicators for this strategy:
- Number of agency/clinic/staff meetings where infant mental health is a focus.
- Number of agencies that include information on infant mental health in staff in-service training.
- Number and type of professional organizations that disseminate infant mental health information to membership.
- Number of brochures, materials, and videotapes disseminated to agency providers and members of professional organizations.
- Number and type of providers completing a recognized, research-based training curriculum such as NCAST.

For more information contact:
MDH Maternal and Child Health Section, Family Home Visiting Team, at (651) 215-8960.

Strategy: Provide public health nurse home visits to promote caregiver-infant interactions and relationships using recognized, research based tools.

	Systems	Community	Individual
Primary		✔	✔
Secondary			✔
Tertiary			

Background:
The purpose of this strategy is to promote positive caregiver-infant interactions and relationships. Public health nursing home visiting services provide parents of infants with information, support, and connections to community resources. Using research based methods and tools, public health nurses promote positive caregiver-infant interactions and relationships. Public health nurses also identify families who are experiencing stress, lack family support and friendships, or have health conditions that affect the parent's ability to meet baby's needs. Research based tools and methods that promote caregiver-infant interactions and assess needs include:
- NCAST Parent/Child Interaction Feeding and Teaching Assessment Scales – These are the most widely used scales for measuring parent-child interaction today. Each scale contains a well-developed set of observable behaviors that describe the caregiver-

child communication and interaction during either a feeding situation, birth to 12 months of life, or a teaching situation, birth to 36 months of age.
- NCAST Keys to Care Giving – The Keys to Care Giving program is designed to teach those who work with families about the competencies and capabilities of the newborn infant, their effect on caregiver-infant interaction, and ways to effectively translate this knowledge to parents.
- NCAST Promoting Maternal Mental Health During Pregnancy – This program addresses a woman's psychological and emotional health during pregnancy. It covers issues critical to the development of the early mother-child relationship including bonding of parent to child, attachment of child to parent, the importance of early brain development, and the role that emotionally available and attentive care giving play in the child's emotional and cognitive development.

Additional Resources:
Bibliographic resources:
- Advisory Committee on Services for Families with Infants and Toddlers. September, 1994. *The Statement of the Advisory Committee on Services for Families with Infants and Toddlers.* Washington, DC: Department of Health and Human Services.
- Solchany, JE., and Barnard, K. 2001. Is mom's mind on her baby? Infant mental health in early Head Start. *Zero to Three*, (22)1, pp.39-47.

Organizational resource:
- NCAST Program, University Of Washington, www.ncast.org (206) 543-8528.

Evidence for strategy:
The NCAST scales have been shown to have predictive validity of caregiver total scores with later child cognitive tests supporting the use of the tools to promote early infant brain development. The Juvenile Justice/Court System often requests NCAST scales as a reliable and valid means of observing and rating the caregiver and child for the purpose of assessing interaction or communication problems.

Has this strategy been tested in Minnesota?
Yes, this strategy has been used in Minnesota. A 1998 survey of Maternal and Child Health County Coordinators was conducted on the practice of using the NCAST tools. Of the 48 counties reporting, 127 of 241 Maternal and Child Health/Family Health Public Health Nurses (53 percent) have been trained in the use of NCAST tools.

Indicators for this strategy:
- Number of Public Health Nurses completing NCAST training.
- Number of family records with NCAST scales.

For more information contact:
MDH Maternal and Child Health Section, Family Home Visiting Team, at (651) 215-8960.

CATEGORY: Mental Health

TOPIC: MATERNAL DEPRESSION

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Increase provider awareness about the signs, symptoms and treatment of depression during pregnancy and following birth.	✔	✔	✔		Mental Health Providers		
Conduct public health nurse home visits to provide routine education and screening for depression during pregnancy and following birth.	✔	✔	✔		✔		

Maternal depression is a term used to describe a whole spectrum of conditions that have varying consequences for a mother's health, her functioning as a mother, her children's development, and her family's overall functioning. Depression in mothers of babies and young children is not uncommon. It is a major public health problem. Programs serving expectant parents and families with infants and young children need to identify and help mothers who are experiencing depression.

Year 2000 data from Minnesota Healthy Beginnings programs show that 19 percent of women with newborns needed follow-up for emotions and depression. Many of these women would not have been identified by health providers as needing follow-up services because of their older age (49 percent were ages 25 to 35 years); their marital status (57 percent were married); high educational level (47.5 percent had more than 12 years of education); and race (80 percent were white).

Maternal depression is important in the context of child rearing. The fact that a mother is depressed does not tell you how she is caring for the baby. Some mothers with depression are able to provide sensitive, responsive care to their babies and others are not. Depressed moms may respond to babies with irritable voice tones or sad or flat facial expressions. Many babies respond to this reaction by turning away. When a child is exposed to the mother's depression for a prolonged period of time, the child is more likely to experience problems with development.

The strategies presented here are intended to support the care of women in Minnesota. To have the greatest impact, they should be implemented in conjunction with the other strategies in this category. For related strategies, see the sections on Mental Health and Infant Mental Health in this category.

Strategy: Increase provider awareness about the signs, symptoms and treatment of depression during pregnancy and following birth.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
The purpose of this strategy is to increase provider awareness about the signs, symptoms and treatment of depression during pregnancy and following birth. The audience for this strategy includes family physicians, public health nurses, mental health professionals, and nurse midwives. Regional workshops for physicians, public health nurses, mental health professionals, and other health providers are held to increase provider knowledge about the signs, symptoms, use of screening tools, and treatment options for depression during pregnancy and following birth. Providers would receive copies of two depression-screening tools to use in their clinic settings and would receive a list of resources for mental health evaluation and treatment.

Additional resources:

- *Postpartum Depression Screening Scale* (PDSS), by Cheryl Beck, D.N.Sc. and Robert K. Gable, Ed. D., University of Connecticut. This tool can be ordered through Western Psychological Services

800-648-8857, custsvc@wpspublish.com.
- *Edinburgh Postnatal Depression Scale* (EPDS). This tool has been field tested by numerous researchers and can be accessed by contacting the American Psychiatric Press.

Evidence for strategy:
Studies of the impact of professional education show a relationship between improvements in provider performance and patient health outcomes where a variety of educational strategies were involved. A direct relationship with positive health outcomes is most apparent when reinforcing educational elements (such as case discussion and interactive learning opportunities) are used. The combination of patient and provider diabetes education efforts has been shown to result in the greatest improvement in health outcomes.

Has this strategy been implemented in Minnesota?
Yes, an educational program on screening for maternal depression was provided for the first time by the Minnesota Department of Health, Family Health Division, Maternal and Child Health Section in March, 2002. Training was provided to over 130 public health nurses in the use of the NCAST Curriculum: *Promoting Maternal Mental Health During Pregnancy.*

The Minnesota Department of Health, Family Health Division, has funded two home visiting programs that both utilize a screening tool to assess for potential maternal depression. In the Targeted Home Visiting Program to Prevent Child Abuse and Neglect, a *Depression Screening Tool*, developed by the Wilder Research Center, was used by public health nurses to screen for potential depression. In the Universal Minnesota Healthy Beginnings Program, screening questions regarding depression, mental illness, and emotional health are part of the public health nursing assessment.

Indicators for this strategy:
- Establishment of clinical guidelines regarding identification and appropriate treatment of women with depression during pregnancy and following birth.
- Numbers and kind of educational opportunities e.g., forums, articles, rounds, case discussions for health professionals focusing on maternal depression.
- Provider survey or chart audit documenting health teaching about the signs and symptoms of depression; routine use of depression screening tools; and referral to mental health professionals for assessment of women with symptoms of depression lasting two weeks or longer.
- Client survey detailing information provided by health providers about signs, symptoms and available treatments for depression during pregnancy and following birth.

For more information contact:
MDH Maternal and Child Health Section, Family Home Visiting Team, at (651) 215-8960.

Strategy: Conduct public health nurse home visits to provide routine education and screening for depression during pregnancy and following birth.

	Systems	Community	Individual
Primary		✔	✔
Secondary			✔
Tertiary			

Background:
This strategy serves two purposes. The first purpose is to minimize the stigma associated with mental health by increasing consumer awareness of the signs/symptoms and treatment resources for depression during pregnancy and following birth. The second purpose is early identification of women who need further assessment and treatment. Public health nurses provide pregnant and newly delivered women with written information and education regarding the signs and symptoms of depression and the importance of treatment. Public health nurses routinely screen pregnant and newly delivered women for depression during home visits, and link women needing further mental health evaluation to available resources.

Additional resource:
- Solchany, J. 2001. *Promoting Maternal Mental Health During Pregnancy.* NCAST Publications, University of Washington, Seattle.

Evidence for strategy:
Public health nurses providing home visiting services to pregnant and parenting women use screening tools to assess for signs and symptoms of maternal depression. This strategy is an effective way to identify women who need referral for further assessment and treatment.

Has this strategy been implemented in Minnesota?
Yes, public health nurses conducting home visits in over 20 Minnesota counties (with Prevention of Child Abuse and Neglect Programs) used screening tool for maternal depression. Additionally, in six counties (with Minnesota Healthy Beginnings Programs) public health nurses screen for potential signs and symptoms of depression and mental health problems as part of the initial public health nursing assessment.

Indicators for this strategy:
- Number of pregnant and postpartum women receiving information and education on the signs/symptoms and treatment options for depression.
- Number of pregnant and postpartum women that need public health nursing follow-up for emotions and depression.
- Number of pregnant and postpartum women that are referred to mental health resources for evaluation.

For more information, contact:
MDH Maternal and Child Health Section, Family Home Visiting Team, at (651) 215-8960.

CATEGORY: Mental Health

TOPIC: MENTAL HEALTH

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Address the stigma associated with child and adult mental disorders and seeking mental health, substance abuse and suicide prevention services by educating the general public.	✔	✔	✔	✔	✔	✔	
Screen adults for depression in primary care settings.	✔	✔	✔		✔	✔	
Ensure supply and access to effective and appropriate child and adult mental health and suicide prevention services and providers.	✔	✔	✔	✔	✔	✔	
Reduce financial barriers to child and adult mental health treatment.	✔	✔	✔	✔	✔	✔	
Train frontline providers to identify and respond to mental health issues among both children and adults with proven prevention and treatment services.	✔	✔	✔	✔	✔	✔	
Promote physical activity to improve and maintain mental health.	✔	✔	✔	✔	✔	✔	

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Educate professionals and the community to recognize suicide warning signs, to respond appropriately, and make referrals to treatment and necessary supports.	✔	✔	✔	✔	✔	✔	
Improve reporting and portrayals of suicidal behavior, mental illness and substance abuse in the entertainment and news media.	✔						Media
Promote and enforce suicide means and methods restrictions, including limiting access to firearms, promoting safe storage of firearms, and encouraging use of trigger locks.	✔	✔	✔	✔	✔		
Increase awareness of the mental health disparities between children with special health needs and their typical peers.	✔	✔	✔	✔	✔	✔	

Mental health can be compromised in varying degrees, from "having a bad day" to living with a mental disorder or feeling suicidal. About one in five Americans experiences a mental disorder in the course of a year (USHHS, *Mental Health: A Report of the Surgeon General*, 1999). Mental health can also vary across the lifespan and among populations. One in ten American children have mental illnesses serious enough to cause some degree of impairment and yet only an estimated one in five receive mental health services (USPHS, *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*, 2000). In Minnesota, suicide is the second leading cause of death for 15- to 34-year olds; the third leading cause of death for 10- to 14-year-olds; and the fourth leading cause of death for 35-to 54-year-olds. The suicide rate for American Indians males is approximately two times higher than that of any other racial or ethnic group. In 2000, persons aged 35-44 years in Minnesota had the highest suicide rate of all age groups, at 13.1 per 100,000 people, with the exception of people aged 85 years and older (rate of 14.0 per 100,000).

There is perhaps no illness or disability that is as shrouded in myth and marked by stigma as mental illness. According to the U.S. Surgeon General's Report on Mental Health, "… nearly two-thirds of all people with diagnosable mental disorders do not seek treatment" (USHHS, *Mental Health: A Report of the Surgeon General*, 1999). Much can be done to improve Minnesotans' access to effective mental health interventions, which include mental health promotion efforts as well as treatment for mental disorders and timely crisis response. The strategies offered here provide some guidance in addressing these issues. For related strategies see "Infant Mental Health" and "Maternal Depression" in this category, and also strategies on "Alcohol and Other Drug Use" in the *Alcohol, Tobacco and Other Drug Use* category; "Child Maltreatment, Including Children with Special Health Needs" and "Youth Violence" in the *Violence* category; "Parenting and Youth" in the *Child and Adolescent Growth and Development* category; and "Physical Activity" in the *Chronic Disease* category.

Strategy: Address the stigma associated with child and adult mental disorders and seeking mental health, substance abuse and suicide prevention services by educating the general public.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
The stigma of child and adult mental disorders and seeking mental health, substance abuse and suicide prevention services continues to hinder access to effective treatment. The adequate recognition and treatment of child and adult mental disorders are inhibited by negative public attitudes and ignorance. Providing accurate information and portrayals of people with mental disorders can help to reduce this stigma. Many people with mental health problems fail to recognize symptoms of mental disorders and suicide warning signs, are reluctant to acknowledge them, or do not seek help. Ideas for public

information and education campaigns (also called health communication campaigns) can be drawn from successful campaigns addressing AIDS, substance abuse, and seat belt awareness. Public information and education activities might include production and distribution of printed leaflets, fact sheets, audio and videocassettes, books, newspaper and magazine articles, and television and radio advertisements, as well as holding interviews, press conferences, and "action weeks."

The purpose of a public education campaign is to stimulate awareness of, and attitudinal and behavioral change about, mental disorders and the risks for suicide, thereby de-stigmatizing the issues through familiarity. The focus of these educational activities is to ensure people understand that mental disorders are common health concerns in men, women, and children of all ages, that they are a highly treatable medical conditions (like other medical conditions such as diabetes or hypertension), that they are not related to personality weakness, and that suicide is preventable.

Health communication activities typically have interpersonal (training or counseling) and community (neighborhood group or advocacy) components. In some educational campaigns, these elements are carefully interwoven through an overall strategic design. There may be reports of personal accounts by a number of ordinary, public and media figures; an increase in media coverage of mental health issues; "action weeks" consisting of media briefings and activities, conferences, and action days with specific themes; leaflets or fact sheets distributed (e.g., on topics such as children's mental health, depression in the elderly, mental disorders in the workplace, postpartum depression, or eating disorders) in appropriate formats for a community; books published for the general public; and video and audio cassettes.

Additional Resources:

Bibliographic resources:

- Backer, TE., Rogers, EM. Sopory, P. 1992. *Designing Health Communication Campaigns: What Works?* Newbury Park: SAGE Publications, Inc.
- U.S. Department of Health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, at http://www.surgeongeneral.gov/library/mentalhealth/.
- U.S. Department of Health and Human Services. 2001. *National Strategy for Suicide Prevention: Goals and Objectives for Action.* Rockville, MD. Available at: http://www.mentalhealth.org/suicideprevention/strategy.asp.
- U.S. Public Health Service. 2000. *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services, at http://www.surgeongeneral.gov/topics/cmh/childreport.htm.

Organizational resources:

- American Association of Suicidology, at http://www.suicidology.org.
- Light for Life Foundation/Yellow Ribbon, Mankato, MN, at (507) 387-5020.

- Mental Health Association of Minnesota, at (612) 331-6840, 2021 Hennepin Avenue E., Minneapolis, MN.
- Mental Health Consumer/Survivor Network, at (651) 637-2800.
- National Institute of Mental Health, at http://www.nimh.nih.gov.
- National Mental Health Association, at (703) 684-7722 or (800) 969-6942, http://www.nmha.org/.1021 Prince Street, Alexandria, VA, 22314-2971.
- Suicide Awareness Voices of Education, at http://www.save.org.

Evidence for the Strategy:
Much has been written about health communication campaigns in both the social sciences and mass communication fields. Increasingly, the study of their effects has involved not only university-based scholars, but also professionals based in independent research settings, health care institutions, federal health agencies, and community nonprofit organizations. Empirical evidence has shown mass communication campaigns to be effective in initiating or changing important behaviors related to health. Progress is being made in efforts to compare campaigns addressing different topics or diseases and to look for common principles and the most effective intervention strategies. The generalizations listed above are among those identified in a comparative synthesis (Backer, Rogers, & Sopory, 1992) through an extensive review of the literature and interviews with prominent campaign designers.

Has this strategy been implemented in Minnesota?
Yes, national media campaigns such as Just Say No, Mothers Against Drunk Drivers (MADD), and the Entertainment Industry Council's AIDS and IV Drug Abuse Campaign for the National Institute on Drug Abuse have been active in Minnesota. During the 1980's, the Minnesota Heart Health Project implemented community wide heart health communications campaigns in Mankato, Bloomington, and Fargo-Moorhead. Many individual organizations have conducted one or more pieces of a total campaign. For example, during the winter of 1997, HealthPartners produced a newsletter, *Depression Can Affect Anyone*. Among other information, the newsletter described the warning signs of depression, offered classes to help people learn more about depression and provided information on other resource materials, such as a pamphlets and books. The MDH has conducted media campaigns on tobacco use, AIDS prevention, teen pregnancy, immunization, and breast cancer.

Indicators for this strategy:
- Number of people in the target audience exposed to the message(s). This can be measured by TV or radio ratings.
- Number of people in the target audience aware of the message(s). This can be measured by an audience survey.
- Number of people in the target audience reporting knowledge change. This can be measured by an audience survey.
- Number of people in the target audience reporting an intention to change behavior. This can be measured by an audience survey.
- Actual change in the audience's behavior. This can be measured by point-of-referral monitoring for health sources.
- Number of people in the target audience seeking a mental health provider, minister, or other source of help, as measured by a provider survey.
- Maintenance of the audience's

behavioral change. This can be measured by point-of-referral monitoring for health sources.
< Rates of hospital admissions for treatment of depression.
< Prescribing patterns (monitored before, during, and after the educational campaign).
< Suicide rates (monitored before, during, and after the educational campaign).

For more information contact:
Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.

Strategy: Screen adults for depression in primary care settings.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Depression is common and costly, causing more disability than ischemic heart disease or cerebrovascular disease. In primary care settings, up to 50 percent of depressed patients are not recognized.

In primary care settings that have systems in place for accurate diagnosis, effective treatment, and follow-up, the U.S. Preventive Services Task Force (USPSTF) recommends screening adults for depression:
< Many formal screening tools are available (e.g., the Zung Self-Assessment Depression Scale, Beck Depression Inventory, General Health Questionnaire [GHQ], Center for Epidemiologic Study Depression Scale [CES-D]). Asking two simple questions about mood and anhedonia ("Over the past two weeks, have you felt down, depressed, or hopeless?" and "Over the past two weeks, have you felt little interest or pleasure in doing things?") may be as effective as using longer instruments. There is little evidence to recommend one screening method over another, so clinicians can choose the method that best fits their personal preference, the patient population served, and the practice setting.
< All positive screening tests should trigger full diagnostic interviews that use standard diagnostic criteria (i.e., those from the fourth edition of *Diagnostic and Statistical Manual of Mental Disorders* [DSM-IV]) to determine the presence or absence of specific depressive disorders, such as major depression and/or dysthymia. The severity of depression and co morbid psychological problems (e.g., anxiety, panic attacks, or substance abuse) should be addressed. (USPSTF, 2002; see web site under "Organizational resources:" below for U.S. Preventive Services Task Force).

Additional resources:
Bibliographic resources:
< American Psychiatric Association. 2000. *DSM-IV-TR 2000: Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition, Text Revision. American Psychiatric Publishing, Incorporated.
< *Screening for Depression: Recommendations and Rationale*. 2002. Agency for Healthcare Research and Quality, Rockville, MD, at

http://www.ahrq.gov/clinic/3rduspstf/depression/depressrr.htm.

Organizational resources:

< Screening for Mental Health, Inc., at http://www.mentalhealthscreening.org/.
< U.S. Preventive Services Task Force, at http://www.ahrq.gov/clinic/uspstfix.htm.

Evidence for strategy:
This strategy is recommended by the U.S. Preventive Services Task Force (USPSTF), whose review identified 14 randomized, controlled trials that have examined the effectiveness of screening for depression in primary care settings.

Has this strategy been implemented in Minnesota?
The extent to which this strategy is implemented in Minnesota is unknown.

Indicators for this strategy:
< Number of primary care settings that screen for depression among adults.
< Number of adults identified and referred for depression treatment.

For more information contact:
Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.

Strategy: Ensure supply and access to effective and appropriate child and adult mental health and suicide prevention services and providers.

	Systems	Community	Individual
Primary			
Secondary	U	U	U
Tertiary	U	U	U

Background:
Mental health services and providers who employ scientifically-proven interventions are in short supply for all ages, genders, races, cultures and disabilities. Interventions include community-based prevention and early identification programs, outreach to isolated populations, wraparound services for children and adolescents, combined services for co-occurring mental health and substance abuse disorders and addictions, and transition, management and community-based treatment programs.

Shortages are particularly critical in rural areas and among professionals serving children, adolescents, older adults, populations of color and American Indians. In Minnesota, every rural region has received the federal designation of Mental Health Professional Shortage Area. Furthermore, lack of coordination, organization, and integration of current service delivery systems further hinder access to those services that are available.

Communities, systems, and policymakers must work together to identify and address the multiple and complex obstacles to improving the infrastructure and ensuring the supply of effective, appropriate and evidence-based services in Minnesota. Community members must be engaged in community and systems assessments, identifying funding streams, and clarifying stakeholder roles.

Additional Resources:
Bibliographic resources:

< U.S. Department of Health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental

Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, at http://www.surgeongeneral.gov/library/mentalhealth/.

< U.S. Department of Health and Human Services. 2001. *National Strategy for Suicide Prevention: Goals and Objectives for Action.* Rockville, MD: U.S. Department of Health and Human Services, Public health Service, at http://www.mentalhealth.org/suicideprevention/strategy.asp.

< U.S. Public Health Service. 2000. *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services, at http://www.surgeongeneral.gov/topics/cmh/childreport.htm.

Evidence for the Strategy:
The strategy described above is recommended in the U.S. Surgeon General's reports on mental health and children's mental health.

Has this strategy been implemented in Minnesota?
This strategy is being implemented by a number of state and community-based initiatives, health plans and providers but the extent to which it has been advanced is unknown.

Indicators for this strategy:
< Number of state and community-based initiatives and workgroups addressing the supply of child and adult mental health services.
< Number of consumers who are required to wait long periods to access appropriate mental health services and providers.
< Number of child and adult mental health services and providers per capita.
< Number of mental health Professional Shortage Areas.

For more information contact:
< Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.
< Minnesota Association of Community Mental Health Programs, Inc., at (651) 642-1903, 1821 University Ave. W., Suite 350-S, St. Paul, MN 55104-2875.
< Minnesota Department of Human Services, Mental Health Division, at (651) 297-3933; Children's Mental Health, (651) 297-5242. 444 Lafayette Road North, Saint Paul, MN 55155.

Strategy: Reduce financial barriers to child and adult mental health treatment.

	Systems	Community	Individual
Primary			
Secondary	U	U	U
Tertiary	U	U	U

Background:
Costs of care are often cited as obstacles to accessing child and adult mental health services and treatment and disparity remains in insurance coverage. Support for mental health parity is growing, however, it falls short in addressing the needs of the uninsured or many of those covered by self-insured plans. Data indicate that use of

mental health services increases as mental health benefits increase.

Consumers, communities, systems, and policymakers must work together to identify and address the financial barriers that discourage people from seeking and continuing treatment. Community members must be engaged in community and systems assessments and identifying funding streams and distribution of resources.

Additional resources:
Bibliographic resources:

- U.S. Department of Health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*. Rockville, MD. Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, at http://www.surgeongeneral.gov/library/mentalhealth/
- U.S. Public Health Service. 2000. *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services, at http://www.surgeongeneral.gov/topics/cmh/childreport.htm.

Evidence for strategy:
The strategy described above is recommended in the U.S. Surgeon General's reports on mental health and children's mental health.

Has this strategy been implemented in Minnesota?
It is unknown to what extent this strategy has been implemented in Minnesota. However, a number of state and local initiatives, programs, clinics and providers provide low or no cost access to child and adult mental health treatment.

Indicators for this strategy:

- Number of state and community-based initiatives and workgroups addressing financial barriers to child and adult mental health treatment.
- Number of children and adults who can afford adequate, effective and appropriate mental health treatment.
- Number of insurance plans that include parity for mental health treatment.

For more information contact:

- Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.
- Minnesota Department of Human Services, Mental Health Division, at (651) 297-3933; Children's Mental Health, (651) 297-5242, 444 Lafayette Road North, Saint Paul, MN 55155.

Strategy: Train frontline providers to identify and respond to mental health issues among both children and adults with proven prevention and treatment services.

	Systems	Community	Individual
Primary			
Secondary	U	U	U
Tertiary	U	U	U

Background:
Various child and adult serving systems and settings provide for opportunities to identify and respond to mental health issues with

effective interventions. Frontline providers can improve their skills through multi-disciplinary training and education. Training content includes culture- and gender-specific infant, child and adolescent development to accurately recognize early symptoms of emotional or behavioral problems and mental disorders. Additionally, content should focus on populations with unique risks, including children with special health needs; gay, lesbian, bisexual and transgendered youth; populations of color and American Indians; and older adults.

Additional resources:
Bibliographic resources:

- U.S. Department of Health and Human Services. 1999. *Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health, at http://www.surgeongeneral.gov/library/mentalhealth/.
- U.S. Department of Health and Human Services. 2001. *National Strategy for Suicide Prevention: Goals and Objectives for Action.* Rockville, MD: U.S. Department of Health and Human Services, Public health Service, at http://www.mentalhealth.org/suicideprevention/strategy.asp.
- U.S. Public Health Service. 2000. *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services, at http://www.surgeongeneral.gov/topics/cmh/childreport.htm.

Organizational resources:

- Light for Life Foundation/Yellow Ribbon, Mankato, MN, at (507) 387-5020.
- Minnesota Department of Heath, at (651) 215-5800, 400 Golden Rule Building, 85 East 7th Place, St. Paul, MN 55101.
- Minnesota Department of Human Services, Mental Health Division, at (651) 297-3933; Children's Mental Health, (651) 297-5242, 444 Lafayette Road North, Saint Paul, MN 55155.
- Suicide Awareness Voices of Education, at http://www.save.org.

Evidence for strategy:
The strategy is recommended in *Mental Health: A Report of the Surgeon General, Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda,* and *National Strategy for Suicide Prevention: Goals and Objectives for Action.* See "Additional resources:" above for citations.

Has this strategy been implemented in Minnesota?
Yes, multi-disciplinary training of providers occurs throughout the state but the extent to which it is occurring is unknown.

Indicators for this strategy:

- Number of training and education events.
- Number of providers receiving training.
- Number of people identified and referred for services.

For more information contact:
Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.

Strategy: Promote physical activity to improve and maintain mental health.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
There is a growing amount of evidence supporting the idea that exercise can improve not only physical, but mental health. Exercise can help depressed people feel better. While it is *not* a cure for depression, it can help to reduce its symptoms. Many people report that they feel good for several hours after an exercise session. They feel less anxious, tense, and depressed.

Mental health benefits may be obtained from frequent, low-to-moderate amounts of physical activity. Most studies have primarily evaluated the effects of aerobic physical activities, such as brisk walking and running, on mental health. The available evidence indicates that increases in cardiorespiratory fitness are not necessary for psychological benefits to occur (USDHHS, 1996). In general, inactive persons are twice as likely to have symptoms of depression, as are more active persons.

A wide range of physical activity interventions can be considered. They include community wide programs; worksite programs; interventions in populations comprising individuals who have low incomes, are ethnic minorities, or have disabilities; interventions using mass media, print media, and information technology; interventions for youth; interventions for older adults; interventions in health care settings; and environmental and policy interventions.

Physicians are increasingly recommending regular exercise as part of the treatment of depression. Medication and counseling are the usual elements of an overall treatment for depression, but physical activity is a helpful addition to this prescription. Several studies have shown that aerobic activity plus counseling are more effective in treating mildly to moderately depressed people than counseling alone.

An important conclusion of the 1997 President's Council on Physical Fitness and Sports Report, *Physical Activity and Sport in the Lives of Girls*, stated, "Regular participation in exercise and physical activity can allay many of the symptoms of hopelessness and worthlessness, feelings typically associated with anxiety and depression. Involvement in physical activity not only counteracts these negative affective responses, but can instead create expectations of success. It is particularly important to facilitate regular participation in physical activity given that anxiety and depression are prevalent among adolescent females."

Physical activity or exercise should be considered as one possible strategy in community programs to prevent depression. Community wide programs and community recreational resources, including both built facilities and natural spaces, can be of interest in efforts to reduce the impact of depression.

Additional Resources:
Bibliographic resources:
< Blair, SN., and Morrow, JR., Jr. (Eds.).

1998. Theme issue: Physical activity interventions. *American Journal of Preventive Medicine* 15(4).

< Centers for Disease Control and Prevention, and the Associations of State and Territorial Directors of Chronic Disease Programs, Health Promotion and Public Health Education, and Public Health Nutrition. 1997. *How to Promote Physical Activity in Your Community.* Atlanta, GA: Centers for Disease Control and Prevention. [Contact: Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us MDH Health Education Unit.]

< Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. *Ready. Set. It's Everywhere You Go.* Atlanta, GA. [This physical activity promotion kit includes video and audio public service announcements (PSAs), camera-ready art, and a guidebook with information about marketing strategies, working with the media, and developing programs and events. Contact: Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us. MDH Health Education Unit.]

< Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion. 1997. *Unrealized Prevention Opportunities: Reducing the Health and Economic Burden of Chronic.* Atlanta, GA: Centers for Disease Control and Prevention, at www.cdc.gov.

< National Cancer Institute, Office of Cancer Communications. 1989. *Making Health Communication Programs Work, A Planner's Guide* (NIH Publication No. 89-1493). Bethesda, MD: National Institutes of Health.

< President's Council on Physical Fitness and Sports. 1997. *Physical Activity and Sport in the Lives of Girls.*

< U.S. Department of Health and Human Services. 1996. *Physical Activity and Health: A Report of the Surgeon General.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion.

< U.S. Department of Health and Human Services. 1993. *Promoting Healthy Diets and Active Lifestyles to Lower-SES Adults, Market Research for Public Education.*

Organizational resources:

< American Association of Retired Persons (AARP), at (202) 434-2277, http://www.aarp.org, 601 E Street, NW, Washington, DC 20049.

< Fitness Fever Website, at http://www.fitnessfever.com.

Evidence for strategy:

Physical activity appears to have therapeutic benefits and may be able to reduce the risk of depression (USDHHS, 1996). The literature reviewed in the latest report of the Surgeon General on physical activity and health (1996) supports the concept that physical activity has a beneficial effect in relieving symptoms of depression and anxiety and improving moods. There is some evidence that physical activity may protect against the development of depression, although further research is needed to confirm these findings. Worldwide research and demonstration projects designed to test community wide health promotion and disease prevention strategies to promote regular physical activity have shown that public information is a critical component of changing a

community's behavior and improving community health status. These projects include such research programs as the Minnesota Heart Health Program. Measurement of physical activity has varied across studies, making comparisons difficult. The presence of public information campaigns used in conjunction with active community coalitions, widespread community involvement, and well-organized community efforts appear to be important in increasing physical activity levels.

Has this strategy been implemented in Minnesota?
The extent to which this strategy has been implemented in Minnesota is unknown. However, a number of local public health agencies and other community organizations conduct physical activity promotion events or informational opportunities for a variety of target audiences. They work with local media to provide information for, and to gain coverage of, local health promotion events related to physical activity programs, including Fitness Fever.

Indicators for this strategy:
- < Availability of public recreational facilities in the community.
- < Annual number of visits to public or private recreational facilities.
- < Number of people who report engaging in regular low-to-moderate physical activity.
- < Number of people who report feeling sad, blue, or depressed 14 or more days in a month and who engage in regular low-to-moderate physical activity.
- < Number of physical activity programs, events, or informational opportunities conducted.
- < Number of people reached with programs, events, or informational activities.
- < Number of people participating in event activities.
- < Number and content of articles published, as well as the circulation of those publications.
- < Number of times PSAs are played, as well as their estimated reach.
- < Recognition, understanding, or implementation of messages, as measured in surveys or interviews.

For more information contact:
- < Chris Kimber, at (651) 281-9875, chris.kimber@health.state.mn.us. MDH Health Education Unit.
- < MDH Nutrition and Physical Activity Unit, (651) 281-9875.

Strategy: Educate professionals and the community to recognize suicide-warning signs, to respond appropriately, and make referrals to treatment and necessary supports.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Through school, community, worksite and professional education, many individuals can be supported and receive assistance in remaining safe and preventing risk for suicidal behaviors. Health and social services professionals and community members can learn about the indicators for suicidal behaviors and play a critical role in encouraging individuals to seek assistance, support and treatment.

This includes becoming knowledgeable about community resources and learning what one can do to respond appropriately to someone exhibiting suicidal behaviors. Professionals in a variety of settings can be alert to key behavioral indicators and learn to respond quickly, be supportive and available, and monitor individuals' well-being over time. These include educators, public and private health care providers (especially emergency departments), social service providers, youth workers, and ministers in faith communities.

Additional resources:
Bibliographic resources:

- O'Carroll, PW., et al. 1992. *Youth Suicide Prevention Programs: A Resource Guide.* Atlanta, GA: U.S. Department of Health & Human services, Public Health Service, Centers for Disease Control.
- Richman, J. 1993. *Preventing Elderly Suicide.* New York: Springer.
- U.S. Department of Health and Human Services. 2001. *National Strategy for Suicide Prevention: Goals and Objectives for Action.* Rockville, MD: U.S. Department of Health and Human Services, Public health Service, at http://www.mentalhealth.org/suicideprevention/strategy.asp.

Organizational resources:

- American Association of Suicidology, at http://www.suicidology.org.
- Light for Life Foundation/Yellow Ribbon, Mankato, MN, at (507) 387-5020.
- Mental Health Association of Minnesota, Phone: (612) 331-6840, 2021 Hennepin Ave. E., Minneapolis, MN.
- Suicide Awareness Voices of Education, at http://www.save.org.

Evidence for strategy:
Multiple studies have shown that public and professional education can achieve several objectives, all of which are necessary for taking action. These objectives include: increasing knowledge of a topic or issue, which is accomplished by providing objective and pertinent information to the public; increasing the awareness and importance of taking action; skill-building to take action appropriately; and influencing community attitudes about the issue or problem.

Has this strategy been implemented in Minnesota?
Yes, many professional and community groups, social services and public health agencies, schools, businesses, and faith communities in Minnesota conduct ongoing education and training for professionals and community members.

Indicators for this strategy:

- Number and type of community educational programs and events.
- Number and type of professional educational programs and events.
- Number of community residents participating in these programs and events.
- Number of professionals participating in these programs and events.
- Change in knowledge and attitudes among participants.
- Change in practices of professionals as a result of educational programs and events.

For more information contact:
Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.

Strategy: Improve reporting and portrayals of suicidal behavior, mental illness and substance abuse in the entertainment and news media.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
The entertainment and news media heavily influence public perceptions and behaviors. Research indicates that media portrayals of suicide, both news accounts and fictional, may increase rates of suicide, particularly among adolescents. Modifying the representation of suicide and issues related to mental health and substance abuse may not only decrease the suicide rate but also combat stigma and reluctance to seek mental health treatment.

Additionally, communities and organizations can monitor local media coverage, develop and disseminate "press information kits" and curriculum resources for schools of journalism. A number of organizations have published media and entertainment recommendations and guidelines (see below for references).

Additional resources:
Bibliographic resources:

- American Foundation for Suicide Prevention, American Association of Suicidology, Annenberg Public Policy Center. *Reporting on Suicide: Recommendations for the Media*, at http://www.asc.upenn.edu/test/suicide/web/3.html.
- *CDC-AAS (Centers for Disease Control-American Association of Suicidology) Media Guidelines*, at http://www.suicidology.org/displaycommon.cfm?an=1&subarticlenbr=22.
- *Media Coverage of Suicide: Examples of Appropriate and Problematic Reportage,* at http://www.mentalhealth.org/suicideprevention/newsroom.asp .
- U.S. Department of Health and Human Services. 2001. *National Strategy for Suicide Prevention: Goals and Objectives for Action.* Rockville, MD: U.S. Department of Health and Human Services, Public health Service, at http://www.mentalhealth.org/suicideprevention/strategy.asp.

Evidence for strategy:
The strategy is recommended in the *National Strategy for Suicide Prevention: Goals and Objectives for Action.* While there is no clear evidence that the above strategy will change the portrayal of suicides and suicidal behavior, there is evidence indicating a link between portrayals and suicide rates.

Has this strategy been implemented in Minnesota?
Yes, MDH and some community-based agencies have conducted studies and are monitoring media portrayals and responding to media vendors with media recommendations.

Indicators for this strategy:

- Numbers of media portrayals of suicide, suicidal behavior, mental disorders, and substance abuse that reflect national media recommendations.
- Numbers of partnerships with media vendors to increase positive and accurate messages regarding suicide, suicidal behavior, mental disorders, and substance abuse.

< Numbers of media associations and newspapers with reporting policies and practices addressing suicide, suicidal behavior, mental disorders, and substance abuse that reflect national recommendations

For more information contact:
Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.

Strategy: Promote and enforce suicide means and methods restrictions, including limiting access to firearms, promoting safe storage of firearms, and encouraging use of trigger locks.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Suicide means and methods restrictions refer to all common ways of committing suicide, including firearms and medications. Access to firearms is strongly associated with suicide. By decreasing access to more lethal means, a suicide attempt may be more likely to be delayed or benefit from medical intervention.

A strategy all families may employ is the *Home Safety Checklist*, developed and made available through the MDH (see below). Also, extensive educational and promotional efforts on the safe storage of medications (e.g., locked medicine cabinets), firearms, and ammunition (stored separately), and the distribution and use of trigger locks can be implemented through the media, schools, and health and social services.

Additional resources:
Bibliographic resources:
< O'Carroll, PW., et al. 1992. *Youth Suicide Prevention Programs: A Resource Guide.* Atlanta, GA: U.S. Department of Health & Human Services, Public Health Service, Centers for Disease Control.
< Sloan, JH., et al. 1990. Firearms regulations and rates of suicide. *New England Journal of Medicine* 322, 369-373.

Organizational resources:
< Minnesota Department of Health, Injury and Violence Prevention Unit. Copies of the *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults*, the *Home Safety Checklist Inspector's Guide*, and the *Home Safety Checklist Program Summary: 1989-1994* are available for a nominal fee. Contact: (651) 281-9858.

Evidence for strategy:
The *Home Safety Checklist for Young Children* includes questions on the safe storage of firearms and has been carefully evaluated. Originally pilot-tested in four counties in 1990, it was re-evaluated in 18 counties in 1994. The *Home Safety Checklist for Older Adults* includes questions on the safe storage of firearms and of medications. It was field-tested in 1998 in three counties as part of a pilot project. The checklists were found to be effective in identifying the inappropriate and risky storage of firearms and medications.

Has this strategy been implemented in Minnesota?
Yes, in 1997, there were over 100 agencies in Minnesota that used the *Home Safety Checklist for Young Children* including public health, Early Childhood Family Education (ECFE), Head Start, and other home visiting programs. It was used by 75 public health nursing agencies in the state, 35 of which used their MCHSP funding for the program. The *Home Safety Checklist for Older Adults* is used in the Living At Home Block Nurse Program in 13 neighborhoods in the Twin Cities. Additionally, firearms safety education programs are conducted throughout the state.

Indicators for this strategy:
- < Number of schools and health and social service agencies that offer education on the safe storage of firearms and ammunition.
- < Number and type of messages in the community about the use of trigger locks.
- < Ways that the safe storage of medications is promoted in the community.
- < Age of the person firing the weapon in firearm-related injuries (or incidents).
- < Estimates of firearms carried by children or youth on school or other public property.

For more information contact:
Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Program Coordinator.

Strategy: Increase awareness of the mental health disparities between children with special health needs and their typical peers.

	Systems	Community	Individual
Primary			
Secondary	U	U	U
Tertiary			

Background:
The Minnesota Student Survey is offered to students in the sixth, ninth and twelfth grades in Minnesota's public schools every three years. Participation is voluntary as well as anonymous. In 1998 there were 133,794 surveys returned.

In 1998, the Survey, for the first time, included the question "Do you have a mental or physical condition or other health problem that has lasted at least 12 months?" Students responding "Yes" represented 12% of the adolescent population. The disparities in responses between this group and their same-aged peers on items indicating social, emotional and behavioral health are striking.

Summarized below are the results of the 1998 Survey pertaining to children with special health needs:
- < 23 percent of the students with special health needs report feeling almost more stress or pressure than they could take. This compares to 11 percent of the students who do not identify themselves as having special health needs.
- < 22 percent to 32 percent, depending upon grade or gender, of the students with special health needs felt "quite a bit" to "extremely" discouraged or hopeless at some point in the 30 days preceding the survey. This compares to

findings of 9 percent to 16 percent for their same aged peers.
< 13 percent of the students with special health needs report having tried to kill themselves in the last year. 4 percent of the students without special health needs report having tried to kill themselves in the last year.
< 62 percent of 6th grade boys with special health needs have been physically assaulted on school property compared to 49 percent of their peers without special needs.
< Students with special health needs are at three times the risk of non-familial sexual abuse than their healthy peers.

This special population needs to be identified by teachers, social workers, school nurses, school counselors, physicians, and parents as being at high risk for having serious social and/or emotional concerns.

Service providers need to include health and disability status as a factor in existing efforts directed toward eliminating unfair or biased treatment based on ethnicity, gender, race and sexual orientation.

Positive developmental assets need to be fostered in children with special health needs. Frequently, school programming, as well as other interventions, are "deficit directed" and the child's positive attributes are overlooked or not capitalized upon. The result may well be that the child may not feel he or she has attributes that are "good." The child's family may be discouraged from emphasizing the positives in their family member's life by the constant focus on negatives.

Families of children with special health needs require information as well as encouragement to help their child and themselves plan for the future. Knowing what is possible, and receiving the tools to carry out thoughtful planning will direct activities towards a positive future for both the family and the child.

For related strategies, see "Early Identification" in the *Child and Adolescent Growth and Development* category.

Additional Resources:
< *The ASQ/SE User's Guide: A Parent Completed Child Monitoring System*, Brookes Publishing Company, First Edition, 2001.
< Minnesota Student Survey, 1998. Contact your local public health agency, or your local school district for more information.
< *Search Institute: 40 Developmental Assets*. 1997. Available at: http://www.search-institute.org/.
< Ohio State University Press Release *Study Finds Characteristics that Identify Bullies and Victims,* 5/19/97.

Evidence for the Strategy:
There are tools available for assessment of children's social and/or emotional strengths. One that is designed for infants and young children is the ASQ/SE (Ages and Stages Questionnaire), which is available through the Follow Along Program administered by County Public Health programs in 84 of Minnesota's 87 counties and two reservations.

Has this strategy been implemented in Minnesota?
Yes, the ASQ/SE is being utilized by several Follow Along programs in Minnesota. All Child and Teen Checkup programs review mental health issues as appropriate.

Indicators for this Strategy:
< Numbers Reduce the difference in responses between children with special health needs and their peers who have no special health concerns on the Minnesota Student Survey.

For more information contact:
MDH, Minnesota Children with Special Health Needs program, at (800) 728-5420 or (651) 215-8956 (metro).

Category:
PREGNANCY AND BIRTH

The strategies presented in this category can be used to help achieve the following public health improvement goals from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 2: Improve birth outcomes and early childhood development.

GOAL 11: Reduce exposure to environmental health hazards.

CATEGORY: PREGNANCY AND BIRTH

Improving the birth outcomes of Minnesota's infants is essential to the promotion of healthy family development, which, in turn, is essential for healthy communities. Efforts to reduce poor birth outcomes and infant mortality will accrue benefits in the reduction of health care costs, decreased use of human resources, and increased family well-being. Improving birth outcomes of Minnesota mothers and infants is essential to the promotion of healthy family development.

Improving comprehensive approaches to the entire spectrum of reproductive health is necessary to improve birth outcomes, prenatal care and women's health. Health care systems, primary care providers and parents working together can reduce the occurrence of poor birth outcomes and enhance early childhood development. More health care systems are needed that reflect the needs and makeup of the communities they serve. Primary care providers who offer universal, comprehensive and culturally acceptable preconception, prenatal and postpartum services will improve birth outcomes and women's health. Planning a pregnancy; enrolling in early prenatal care; eliminating alcohol, tobacco and other drug usage; and breastfeeding are all things parents can do to improve the health of their pregnancy and enhance the health of their infant.

The collaborative and combined efforts of health care systems, public health agencies, educational systems, community-based organizations, and businesses have improved birth outcomes in certain populations. Specific strategies are needed to better address the multiple and complex issues that contribute to poor birth outcomes in populations of color. At the same time, eliminating alcohol and tobacco use in pregnant women will positively affect the health of infants and women for the rest of their lives.

Women's access to health care throughout their childbearing years is an important issue affecting their own health as well as their infants. Low-income women often are not covered by health insurance until they are diagnosed with a pregnancy. Although this policy assures they will have access to prenatal care at some point in the pregnancy, 60 days after birth their eligibility drops to 67 percent of the federal poverty level. Women's primary health care needs, including dental health and interconceptual care are poorly served by this policy.

Healthy children will give evidence of reduced immunizable disease, less long-term disability, decreased incidence of acute and chronic illness, and reduced developmental delays. In addition, significant improvement in emotional and psychological health will be realized. Health care costs associated with acute and long-term illness will be reduced, and, ultimately, Minnesota's children will grow up to be healthy, productive, and contributing residents.

For strategies that are related to those in this category, see the categories on *Alcohol, Tobacco and Other Drugs; Mental Health; Chronic/Noninfectious Diseases; Infectious Disease;* and *Service Delivery Systems.*

CATEGORY: Pregnancy and Birth

TOPIC: BIRTH OUTCOMES AND PRENATAL CARE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Increase public awareness of healthy behaviors prior to, during and after pregnancy.	✔	✔	✔	✔	✔	✔	
Improve early and regular participation in prenatal care.	✔	✔	✔	✔	✔		
Promote use of the Minnesota Pregnancy Assessment Form with all pregnant women.	✔	✔	✔				
Assure the delivery of very low birth weight infants at facilities for high-risk deliveries and neonates.	✔	✔	✔				
Include fish consumption advisory information in prenatal care.	✔	✔	✔				
Modify health services to better meet the multiple and complex needs of pregnant and parenting teens.	✔	✔	✔	✔	✔		
Reduce the number of low (less that 2500 grams) and very low (less than 1500 grams) birth weight infants born annually in Minnesota.	✔	✔	✔				

Improving birth outcomes influences many areas of children's health and development, positively influences the health of women and reduces long-term medical costs to families and society. The health care women receive prior to pregnancy can influence their health prior to conception, the planning of pregnancy and initiation of prenatal care. First-trimester entry into prenatal care for an initial risk screening and assessment, as well as the initiation of health education, social services, and other appropriate referrals, is critical to preventing many problems in the developing fetus and promoting the health of the mother.

Although Minnesota ranks among the top 10 healthiest states in the U.S., we rank 23rd in the nation in providing adequate prenatal care to pregnant women. The highest-ranking states show 80 percent or more of pregnant women getting the care they need. Birth certificate data in Minnesota from 1993 to 1997 show an increase from 66.5 to 84 percent of women receiving adequate or better prenatal care. In 1999, 84.5 percent of women began prenatal care during their first three months of pregnancy. However, early prenatal enrollment is much lower among women of color.

1994-1998
Prenatal Care Initiation: MN
Trimester Prenatal Care Began

	First Trimester
Race/Ethnicity	**Percent Began Care**
African American	59 %
American Indian	57 %
Asian	56 %
Hispanic	60 %
White	86 %
Total Population	84 %

[source: CHS Vital Statistics, MDH]

Much effort in the state has been directed at getting women into prenatal care early (in the first trimester) and at continuing their regular visits with their primary providers. The data show that improvement has been made in both areas. The percentage of women beginning care early and continuing with regular-interval visits has increased from 66.5 in 1993 to 77 percent in 1996 and to 85 percent in 1999. However, the gap in the number of women of color and American Indian women is shocking.

Adequacy of Prenatal Care: Minnesota (Singleton Births Only) 1995 - 1999

Race/ Ethnicity	**Intensive/ Adequate Care**	**Inadequate or No Care**
African American	58 %	12 %
American Indian	48 %	18 %
Asian	54 %	11 %
Hispanic	55 %	12 %
White	80 %	3 %

[source: CHS, Vital Statistics, MDH]

Starting prenatal care early is associated with improved rates of low birth weight and infant mortality. Low birth weight means that the infants were born weighing less than 5.5 pounds. These babies are more likely to die in their first months of life than are heavier babies; more likely to be sick at birth and require highly specialized, technical, and expensive medical care; and at greater risk for long-term health and developmental problems. Minnesota's low birth weight rate has increased at the same time that the percentage of premature (born before 37 weeks of pregnancy) births has remained stable. The state's low birth weight rate has increased from approximately 5.0 percent of live births throughout the 1980s to 6.1 percent in 1999. African American infants have higher rates of low birth weight and very low birth

weight than all other racial groups. The percentage of African American infants born preterm was 11.0 percent in 1999 compared to 5.6 percent of White infants. [source: National Vital Statistics Report, Vol. 49, No. 5, July 24, 2001]

The strategies presented here are intended to support the work in progress in Minnesota. It is equally important to explore new strategies to improve birth outcomes for all infants and families in all racial and ethnic populations. For related strategies, see the category on *Alcohol, Tobacco, and Other Drugs*; the section on Childhood Lead Poisoning in the category of *Child and Adolescent Growth and Development*; the section on STD/HIV/AIDS in the *Infections Disease* category; the category on *Mental Health*; the sections on Eliminating Disparities and on Eliminating Barriers and Improving Access to Health Care in the *Service Delivery Systems* category, the other sections in this category.

Strategy: Increase public awareness of healthy behaviors prior to, during, and after pregnancy.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
A healthy child begins before conception. The health status of women and men prior to conception, the decision to become a parent, the planning and spacing of pregnancies, the quality of preventive health care, and the interventions provided before and during pregnancy all affect pregnancy outcomes and the potential for healthy children.

A woman is considered to be "at risk" if she lives in poverty; is in poor health prior to pregnancy; engages in adverse behaviors such as smoking or alcohol or drug misuse; does not have access to appropriate prenatal health care; has inadequate nutrition; or lives in an unsafe physical environment. The result is that her baby is more likely to be born at a low birth weight, the gestational period is likely to be shortened, or both. These infants are at a higher risk for disability, chronic morbidity, developmental problems, birth defects, and death.

Factors such as the parent's age, educational level, marital status, and socio-economic status also increase the risk for poor pregnancy outcomes. Affected individuals can benefit from pregnancy planning and earlier identification of pregnancy, streamlined access to appropriate and necessary health care, and referral to support services.

This strategy focuses on providing the public with information about the importance of healthy behaviors including, but not limited to, family planning, lifestyle, early and comprehensive prenatal care, nutrition (prior to, during, and after pregnancy), breastfeeding, intrapartum and postpartum care, parent education, psycho-social services, environmental risks, newborn care, and health care for all infants. There are multiple facets to such a media campaign. A suggested beginning point is to launch a media campaign at the state or local levels (or both) promoting healthy lifestyles before pregnancy. An important component of a media campaign is that the messages given by health care providers

(e.g., physicians and nurse-midwives) are consistent with those of the campaign itself. The campaign can include posters, print ads, radio and TV spots, brochures, billboards, etc., and focus on messages about, for example, *the six things to do before you get pregnant:*

- Eat nutritiously, get folic acid in your diet every day, and avoid toxins.
- Get help to stop smoking now.
- Limit your use of alcohol; stop drinking during pregnancy.
- Practice safer sex.
- Plan your pregnancy.
- See your physician or nurse-midwife for a checkup.

Additional resources:

Bibliographic resource:

- American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. 1997. *Guidelines for Perinatal Care* (4th Ed.).

Organizational resources:

- Great Start Quitline: (866) 66-START (tobacco).
- March of Dimes, regional office or (952) 835-3033. www.modimes.org
- Minnesota Department of Health, STD and HIV Section, at (612) 676-5414.
- Minnesota Organization on Fetal Alcohol Syndrome (MOFAS), at (651) 917-2370.
- Minnesota Partnership for Action Against Tobacco (MPAAT) Helpline (877) 270-STOP (tobacco).
- Women, Infants and Children (WIC), (800) WIC-4030.
- www.smokefreefamilies.org (tobacco).

Evidence for strategy:

The research and reported experience demonstrate change in knowledge and behavior of individuals and populations as a result of public education campaigns in other areas such as tobacco use. Such a campaign has not been field tested with regard to birth outcomes and prenatal care.

Has this strategy been implemented in Minnesota?

Yes, efforts to educate and increase public awareness of healthy behaviors prior to, during, and after pregnancy have been ongoing in many communities in Minnesota. Materials for parents-to-be are available from a number of sources: for example, the March of Dimes, American College of Obstetricians and Gynecologists, local Public Health agencies, and community based organizations. Targeted media campaigns, however, have not been systematically implemented in Minnesota, especially to populations of color, American Indians, and the foreign born.

Indicators for this strategy:

- Results of pre- and post-message-development focus groups.
- Number of printed materials distributed and locations of their distribution (including materials appearing in languages reflective of community needs).
- Amount of airtime given to health messages.
- Responses to these messages.
- Degree of message recognition in the community.
- Number of women and families receiving messages consistent with those of the media campaign during counseling visits (as measured at pregnancy confirmation encounters, departure from family planning clinics, parenting groups, community education classes, etc.).

< Changes in knowledge and attitude among community members about six things to do before getting pregnant.

For more information contact:
MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Improve early and regular participation in prenatal care.

	Systems	Community	Individual
Primary	U	U	U
Secondary			U
Tertiary			

Background:
The purpose of this strategy is to improve birth outcomes. The collective evidence since the formalization of prenatal care in 1901 suggests that early and regular participation in comprehensive prenatal care programs is associated with reduced rates of low birth weight and improved birth outcomes. For prenatal care to prevent low birth weight deliveries, women at risk of giving birth to preterm or growth-restricted infants need to be identified in an accurate and timely manner and to receive effective interventions to reduce preventable risks. The most likely targets for affecting low birth weight and poor birth outcomes include:

< Reducing or quitting smoking.
< Getting nutritional evaluation and counseling.
< Seeking medical care (aimed at reducing overall morbidity).

To implement this strategy, an assessment of current rates of early and regular participation in prenatal care should be made. This assessment should include data by age, race, marital status, geographic location, health care coverage, and type of provider. The data will direct the implementation of this strategy. For instance, if there are late and irregular prenatal care visits by young, unmarried adolescents, outreach efforts would focus on that population.

Identifying pregnancy early and referring for prenatal care is a sub-strategy to improving early and regular participation in prenatal care.

Additional resources:

< Agency for Health Care Policy and Research. *Patient Outcomes Research Team: Low Birth Weight in Minority and High-Risk Women, Final Report*. Report period: September 30,1992-April 21, 1998. Publication No. 98-N005. AHCPR Publications Clearinghouse.
< American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. 1997. *Guidelines for Perinatal Care* (4th Ed.).
< Center for the Future of Children, the David and Lucile Packard Foundation. 1995. *The Future of Children: Low Birth Weight* (Vol. 5, No. 1).

Evidence for strategy:
The evidence to date continues to document that those women who receive early and regular prenatal care have better maternal and neonatal outcomes than women receiving late or no prenatal care. Implementing coordinated social and medical programs around the health and social needs of women and families is necessary for the highest success.

Has this strategy been implemented in Minnesota?
Yes, Minnesota has a long history of emphasizing early and regular prenatal care for all pregnant women. Changing demographics and social and cultural needs, as well as the science of obstetrics, have, in combination, influenced programs and policies around prenatal care. Examples of strategies to improve early prenatal care include free pregnancy diagnosis with education and counseling regarding healthy pregnancy behaviors and referral for prenatal care.

Indicators for this strategy:
- < Identification of current rates and demographics of participation in early and regular prenatal care.
- < Identification of the rates and demographics of late and irregular prenatal care visits.
- < Development of a plan to address targeted outreach efforts.
- < Number and percentage of pregnant women receiving prenatal care in the first trimester.
- < Number and percentage of pregnant women receiving adequate or better prenatal care as measured by the GINDEX Index.
- < Availability of free pregnancy testing with referral system for prenatal care.
- < Number of pregnancy tests performed.
- < Number of prenatal care referrals made.

For more information contact:
MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Promote use of the Minnesota Pregnancy Assessment Form with all pregnant women.

	Systems	Community	Individual
Primary	U	U	U
Secondary			U
Tertiary			

Background:
The purpose of this strategy is to assure that appropriate screening for risk is done on all pregnant women. Once screening is initiated, interventions, referral and follow-up are necessary.

Statewide implementation of the Minnesota Pregnancy Assessment Form would assure screening for medical, social, and environmental risks during pregnancy. The assessment would be done early in each pregnancy and continuously thereafter. The assessment would screen for both maternal and infant medical conditions, such as previous poor birth outcomes, chronic and gestational diabetes, hypertension, preterm labor, preeclampsia, and congenital anomalies. It would also screen for individual, family, and community factors, such as mental health; alcohol, tobacco, and other drug use; family violence; and access to essential resources (like adequate food, finances, housing, medical insurance, transportation, telephone, and child care); as well as for the social and emotional supports available at home, within the extended family, in the community, and at work. Ideally, the assessment should trigger appropriate intervention and referral as necessary. Referrals include community-based programs to provide/enhance/facilitate culturally appropriate care.

Additional resources:

< Herron, MA., et al. 1982. Evaluation of preterm birth prevention program: Preliminary report. *Obstetrics & Gynecology, 2*(59), 295.
< Holbrook, H., et al. 1989. Evaluation of risk scoring system for prediction of preterm labor. *American Journal of Perinatology, 6*, 62-69.
< Knox, AJ., et al. 1993. An obstetric scoring system: Its development and application in obstetric management. *Obstetrics & Gynecology, 81,* 195-199.
< Mark, PM., et al. 1984. Group Health program to reduce the incidence of preterm deliveries. *Minnesota Medicine, 67,* 509-10.
< Papiernik, E., et al. 1985. Prevention of preterm births: The perinatal study of Hagnenau. *Pediatrics, 76,* 154.
< Weiss, P., and Mark, P. 1997. Routine screening during pregnancy: The new Minnesota pregnancy risk assessment form. *Minnesota Medicine, 80,* 48-49.
< Yawn, BP., and Yawn, RA. 1989. Preterm birth prevention in rural practice. *JAMA, 252,* 230-3.

Evidence for strategy:

The references cited above demonstrate the rationale for and the effectiveness of using screening tools to determine risk during pregnancy. The Minnesota Pregnancy Assessment Form was developed based on this evidence. It is used sporadically throughout Minnesota.

Has this strategy been implemented in Minnesota?

Yes, the form was introduced in February/March 1997 to all physicians and certified nurse-midwives in the state who practice obstetrics. Seven trainings were offered in Fall 1997 in five locations across the state. For the past three years, the Countryside Public Health CHS Agency (Big Stone, Chippewa, Lac Qui Parle, Swift and Yellow Medicine counties) has been involved in a pilot project with a local hospital and provider group to assure that all pregnant women receive standardized and adequate prenatal and postnatal care. A central component of the pilot project has been the use of the Minnesota Pregnancy Assessment Form. For more information about the pilot project, contact Mary Jungwirth, at (320) 843-4546.

Indicators for this strategy:

< Number of providers practicing obstetrics who know of the form.
< Identification of barriers to using the form.
< Development of a plan to address those barriers.
< Number of physicians and certified nurse-midwives who regularly use the Minnesota Pregnancy Assessment Form in their practice.
< Number of women identified as at risk as a result of using the form.
< Existence of appropriate referral mechanisms in place so that efficient and effective referrals based on the form can be made.

For more information contact:

MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Assure the delivery of very low birth weight infants at facilities for high-risk deliveries and neonates.

	Systems	Community	Individual
Primary	U		
Secondary			U
Tertiary			U

Background:
The purpose of this strategy is to improve the number of very low birth weight infants who are born at facilities for high-risk deliveries and neonates. Ways to accomplish this include:

- Screen every pregnant woman using the Minnesota Pregnancy Assessment Form and provide appropriate intervention, including referral to specialty care providers (see the previous strategy for more information on the use of the Minnesota Pregnancy Assessment Form).
- Build collaborative referral relationships between primary prenatal care providers and specialists in high-risk deliveries and neonatal care.
- Assure a transportation system that will safely transfer pregnant women, neonates, or both, when necessary, to facilities capable of providing needed services.

Accomplishing these tasks requires ongoing dialogue and joint planning between public health, hospitals, health plans, provider groups, and Emergency Medical Services in communities.

Additional resources:

- American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. 1997. *Guidelines for Perinatal Care* (4th Ed.).
- Congressional Budget Office. 1992. *Factors Contributing to the Infant Mortality Ranking of the United States.* Washington, DC: Congressional Budget Office.
- Makuc, DM., Haglund, B., Ingram, DD., Kleinman, JC., and Feldman, JJ. 1991. *Health Service Areas for the United States. Vital and Health Statistics. Series 2. Data Evaluation and Methods Research (Vol. 112).* Hyattsville, MD: National Center for Health Statistics.
- Public Health Service. 1989. *Caring for Our Future: The Content of Prenatal Care.* Washington, DC: Department of Health and Human Services.

Evidence for strategy:
Until we have more effective strategies to prevent both preterm and term low birth weight, it is critical that we continue to ensure that those low birth weight infants who are born survive free of major long-term disability to the greatest degree possible. This includes assuring that premature newborns are born in perinatal centers equipped to handle high-risk deliveries.

Has this strategy been implemented in Minnesota?
No, not all pieces of the strategy have been implemented. For instance, not every pregnant woman in the state is screened with the Minnesota Pregnancy Assessment Form, nor are there state recommendations of primary prenatal care providers to have referral relationships with specialists in high-risk deliveries and neonatal care. Nevertheless, this strategy exists in various forms in many communities throughout Minnesota.

Indicators for this strategy:

- < Development of a dialogue between public health, hospitals, health plans, provider groups, and Emergency Medical Services.
- < Development of a joint planning process to assure the delivery of very low birth weight infants at the appropriate facilities.
- < Development of collaborative referral relationships between primary care providers and specialists in high-risk deliveries and neonatal care.
- < Number of pregnant women screened using the Minnesota Pregnancy Assessment Form.
- < Number of very low birth weight infants born at facilities, which are not equipped for high-risk deliveries and neonates.
- < Existence of an ambulance or transportation system between facilities for high-risk deliveries and neonates and those facilities without such capabilities.

For more information contact:
MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Include fish consumption advisory information in prenatal care.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Women of childbearing age and pregnant women represent a high-risk group for methyl mercury exposure, an environmental contaminant found in fish. Several well-documented human exposure episodes have proven that mercury is a very effective neurotoxin. Mercury has dose related effects that range from an alteration in the ability of nerves to conduct impulses to changes the way nerve cells divide and differentiate. This makes mercury particularly dangerous to developing nervous systems of fetuses and young children.

Adding to the concerns regarding the safety of eating fish containing methyl mercury are the results from a recently released CDC-NHANES report that indicated that 10 percent of their sample of women between 16 and 49 years of age had been exposed to levels of methyl mercury that are close to those which have observable adverse effects. Using this information and the number of births registered in the U.S in 1998, the U.S. EPA has estimated that as many as 400,000 newborns per year are at risk of elevated methyl mercury exposure.

A report recently released by the American Academy of Pediatrics included the following statement: "the developing fetus and young children are thought to be disproportionately affected by mercury exposure, because many aspects of development, particularly brain maturation, can be disturbed by the presence of mercury. Minimizing mercury exposure is, therefore, essential to optimal child health". It is important to get the word out to pregnant women and women planning to become pregnant. This can best be done in two ways:

- < Work with health care systems to incorporate fish consumption advisory information into their standard protocol for prenatal and women's health care.
- < Form a partnership with providers to print and distribute fish consumption

advisory educational materials to pregnant women and women of childbearing ages.

Additional resources:
Bibliographic resources:
- American Academy of Pediatrics Technical Report. 2001. *Mercury in the Environment: Implications for Pediatricians*.
- Centers for Disease Control and Prevention. 2001. *National Report on Human Exposure to Environmental Chemicals*.
- Minnesota Department of Health. *An Expectant Mother's Guide to Eating Minnesota Fish. What You Should Know If You Are Pregnant, Planning to be Pregnant, or Nursing a Baby.* (MDH IC# 141-0709 English version, MDH IC# 141-0059 Spanish version).
- Minnesota Department of Health. *Eat Fish Often? A Minnesota Guide to Eating Fish.* (MDH IC# 141-0378)
- National Research Council. (2000). *Toxicological Effects of Methyl Mercury*, National Academy Press, Washington, D.C.

Organizational resources:
- Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Fish Consumption Advice".
- Minnesota Department of Health. World Wide Web Page at: http://www.health.state.mn.us/divs/eh/fish/index.html.

Evidence for strategy:
Research, as described above, has conclusively documented the dangers of exposure to methyl mercury by pregnant women. Furthermore, research on providing information to people about issues that affect their health has been shown to increase knowledge and change attitudes. The effectiveness of including fish consumption advisory information in prenatal care has, however, not been empirically studied or field-tested.

Has this strategy been implemented in Minnesota?
Yes, awareness and educational materials are distributed by the Minnesota Department of Health and by some clinics. Currently, in Minnesota, there is no coordinated effort or standard within the health care system for inclusion of fish consumption advisory information in prenatal care.

Indicators for this strategy:
- Increase in the number of expectant mother's guides distributed.
- Increase in the number of health care facilities in the MDH fish consumption advisory distributor database.
- Agreement by health care providers to incorporate fish advisory information into standard prenatal care procedures.
- Number of physicians and nurse midwives who incorporate fish advisory information into standard prenatal care procedures.

For more information contact:
Pat McCann, at (651) 215-0923, patricia.mccann@health.state.mn.us, MDH Health Risk Assessment Unit, Division of Environmental Health.

Strategy: Modify health services to better meet the multiple and complex needs of pregnant and parenting teens.

	Systems	Community	Individual
Primary	U	U	U
Secondary			U
Tertiary			U

Background:
The purpose of this strategy is to better meet the health needs of pregnant and parenting teens. Pregnant and parenting teens are at risk for dropping out of school, not completing high school or post-secondary schooling, not finding employment at a livable wage, having another pregnancy, getting divorced (if married), and losing family and community support. Several characteristics associated with teen parenting put the infant at highest risk for poor development and ill health; these include the mother's youth, lack of education, cognitive limitations, low socioeconomic level, or lack of family support. For related strategies, see the section on Eliminating Barriers and Improving Access to Care - Children and Adolescents in the *Service Delivery Systems* category.

Successful services for pregnant and parenting teens include the following components:

- Continuity of providers.
- Coordination between agencies and providers to enhance early diagnosis, treatment, counseling, and referral.
- Knowledge of normal infant growth and development.
- Staff comfort and knowledge about teens.
- Follow-up care, including plans for education, family planning, medical care, social services, etc.
- Easy access to service providers such as social services, health and medical services, support groups, individual counselors, etc.
- Involvement of parent(s), support persons as identified by the parent(s), or both.
- On-site childcare.

Additional resources:

- Fleming, BW., et al. 1993. Assessing and promoting positive parenting in adolescent mothers. *Maternal Child Nursing, 18,* 32-37.
- Green, M. (Ed.). 1995. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents.* Arlington, VA: National Center for Education in Maternal Child Health.
- Hill, S., Greenberg, M., and Levin-Epstein, J. 1991. *Babies on Buses Lessons From Initial Implementation of the JOBS Teen Parent Provisions.* Washington, DC: Center for Law and Social Policy.
- The Minnesota Organization on Adolescent Pregnancy, Prevention and Parenting (MOAPPP). *Community Empowerment Manual: Carrying the Message of Teen Pregnancy Prevention to the Community and Policy Makers*. [Contact: (800) 657-3697.]
- Roye, C., and Bolk, S. 1996. The relationship of partner support to outcomes for teenage mothers and their children: A review. *Journal of Adolescent Health, 19*(2), 86-93.
- Sipe, C., et al. 1995. *School-based Programs for Adolescent Parents and Their Young Children: Overcoming Barriers and Challenges to*

Implementing Comprehensive School-based Services in California and Across the Country. Center for Assessment and Policy Development. [Contact: (610) 664-4540.]

< Vera Institute of Justice, The Study Group on the Male Role in Teenage Pregnancy and Parenting. 1990. *The Male Role in Teenage Pregnancy and Parenting: New Directions for Public Policy.* New York: Vera Institute of Justice.

Evidence for strategy:
The strategy is based on theories from multiple disciplines, including medicine, nursing, social science, developmental psychology, and systems operations. The components necessary to maximize services for pregnant and parenting teens have been implemented in a number of states by a variety of means.

The Florida Teen and Adolescent Parenting Program is an example of the strategy described. Florida demonstrated that 83 percent of enrolled students were retained in school, 95 percent were not habitually truant, and 83 percent were promoted to the next grade level, while 58 percent of twelfth graders graduated. Ninety-five percent did not deliver low birth weight babies. This approach has been consistently shown to have successful results for both young parents and their children. (See specifics in the 1995 article by Sipe included in the reference list.)

Has this strategy been implemented in Minnesota?
Yes, legislation was enacted in 1997 to establish the Adolescent Parenting Grant Program. These funds will be used for school-based, community-linked programs to ensure the long-term self-sufficiency of adolescent families and the development and school-readiness of their children. This legislation provides $800,000 in grant funds to school districts to supplement programs, which provide early and comprehensive services and supports to adolescent parents and their children while they are finishing high school. The Minnesota Department of Children, Families and Learning is charged with managing these grant funds. For further information about the implementation of these programs, contact: Nancy Nelson, Minnesota Organization on Adolescent Pregnancy, Prevention and Parenting (MOAPPP), at (800) 657-3697.

Indicators for this strategy:
< Degree of continuity among providers.
< Degree of coordination between agencies and providers to enhance early diagnosis, treatment, counseling, and referral.
< Knowledge among teen parents about normal infant growth and development.
< Level of staff comfort and knowledge about teens.
< Number of new teen parents with follow-up plans for education, family planning, medical care, social services, etc.
< Accessibility of service providers such as social services, health and medical services, support groups, individual counselors, etc.
< Involvement of parent(s), support persons as identified by the parent(s), or both.
< Availability and accessibility of on-site child care.
< Number of pregnant and parenting teens completing high school or its equivalent.
< Number of pregnant and parenting teens enrolling in secondary education

programs (post-high school).
< Number of pregnant and parenting teens with primary health care providers.
< Number of infants and newborns receiving well-child care (up-to-date immunizations, etc.).

For more information contact:
Jill Briggs, at (651) 281-9781, jill.briggs@health.state.mn.us, MDH Teen Pregnancy Prevention Coordinator.

Strategy: Reduce the number of low (less than 2500 grams) and very low (less than 1500 grams) birth weight infants born annually in Minnesota.

	Systems	Community	Individual
Primary	U	U	
Secondary	U	U	U
Tertiary			U

Background:
The most effective ways to prevent low and very low birth weight infants are to promote healthy behaviors before and during pregnancy, and to identify pregnant women early in pregnancy who are at risk of preterm labor, low birth weight, or both. Health plans, public health, and primary care providers must work together to insure that the following are promoted and implemented:
< Family planning and women's health services include education and counseling regarding the need for folic acid in diets; exercise; healthy preconceptional and prenatal diets; alcohol, tobacco, and other drug use; the effects of birth control methods on conception and early fetal development; environmental and occupational hazards; maternal immunizations; early initiation of prenatal care; health plan coverage; and choice of providers.
< Pregnant women are identified early in their pregnancies and referred for prenatal care. This requires that systems work together to diagnose, counsel, educate, treat, and refer appropriately, including outreach and follow-up.
< Early identification of risk factors for preterm labor and low birth weight occurs, and referrals to the appropriate primary care provider are made. Utilizing the Minnesota Pregnancy Assessment Form for all pregnant women (not only for women on Minnesota Health Care Programs) will help to implement this strategy (see the previously described strategy on the Minnesota Pregnancy Assessment Form).

Additional resources:
< American Academy of Pediatrics and the American College of Obstetricians and Gynecologists. 1997. *Guidelines for Perinatal Care* (4th Ed.).
< Center for the Future of Children, the David and Lucile Packard Foundation. 1995. *The Future of Children: Low Birth Weight* (Vol. 5, No. 1).
< *Minnesota Pregnancy Assessment Form: Training Manual.* 1997. [Mailed to every primary provider of obstetrical care in the state (MDs and Certified Nurse Midwives) and District Public Health Nurse Consultants. For more information, contact: Katie Linde, Department of Human Services, (612) 296-2811.]

Evidence for strategy:
The key elements of this strategy are based on science, but have not been uniformly field tested in Minnesota. The questions on the Minnesota Pregnancy Assessment Form are based on evidence showing a causal relationship with poor birth outcome or associated with poor birth outcome (or both). The assessment form has not been tested for validity or reliability. The publication, *Guidelines for Perinatal Care*, is also based on current knowledge and theory but has not been field-tested.

Has this strategy been implemented in Minnesota?
Yes, the Prairie Regional Health Alliance in Willmar, MN is composed of individuals representing public health, managed care, and physician providers. Their mission is to develop a model in which all families will have access to comprehensive, quality, outcome-based prenatal services that are provided through a multidisciplinary, integrated, and efficient approach. The Alliance is implementing a population-based prenatal care delivery model using the Minnesota Pregnancy Assessment Form. For more information about the pilot project, contact Mary Jungwirth, at (320) 843-4546.

Indicators for this strategy:
- < Availability of education and counseling regarding healthy behaviors through family planning and women's health services.
- < Number or percentage of women identified early in their pregnancies and referred for prenatal care.
- < Number or percentage of women identified early in their pregnancies for risk factors for preterm labor, low birth weight, or both, and referred.
- < Number of referrals made.
- < Degree of coordination among systems that diagnose, counsel, educate, treat, and refer pregnant women.
- < Percentage of low and very low birth weight live births.
- < Number of providers using the Minnesota Pregnancy Assessment Form.
- < Number or percentage of Minnesota Pregnancy Assessment Forms completed annually.
- < Number or percentage of pregnant women receiving prenatal care in their first trimester.
- < Number or percentage of pregnant women receiving adequate or better prenatal care as measured by GINDEX Index.
- < Number of women smoking or using alcohol or other drugs prior to and during pregnancy.
- < Number of women receiving adequate amounts of folic acid prior to and during the first trimester of pregnancy.
- < Number of pregnant women who are fully immunized.
- < Degree to which costs for needed services were covered by the health plan, e.g. smoking cessation program, treatment for chemical dependency with follow-up, child care if needed, etc.
- < Identification of the primary prenatal care provider and its identified risk factor(s).
- < Number or percentage of pregnant women identified for their exposure to environmental and occupational hazards-foods, chemicals, fumes, tobacco smoke, hours working and standing, etc.

For more information contact:
MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

CATEGORY: Pregnancy and Birth

TOPIC: BREASTFEEDING

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Promote and support breastfeeding and the use of human milk for feeding infants and children.	State and Local	U	U	U	U	U	Family, Friends, Public
Promote and support breastfeeding and the use of human milk for all mothers and infants, with special attention to women and infants who are least likely to breastfeed.	State and Local	U	U	U	U	U	Family, Friends, Public
Support baby-friendly hospitals, clinics and other facilities.	State and Local	U	U	U	U	U	
Ensure training on breastfeeding for all who work with pregnant and postpartum women, infants and young children.	U	U	U	U			
Assess barriers to breastfeeding for the individual client, then address the barriers and discuss breastfeeding as the optimal infant feeding choice during prenatal care.	Local	U	U	U			
Offer breastfeeding counseling, information and support in hospitals, prenatal and pediatric clinics and offices; WIC and public health clinics; and during home visits.	U	U	U		U		
Provide early and ongoing post-hospital support for breastfeeding.	State and Local	U	U		U		

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Develop systems to support women who are breastfeeding and returning to work or school.	U	U	U	U	U	U	

Breastfeeding is primary prevention. Health promotion begins with breastfeeding promotion and support. Breastfeeding and human milk provide infants with the best start in life and should be the norm. Much work is needed to assure that all infants born and raised in Minnesota have the opportunity to be breastfed and all women giving birth and raising children in Minnesota have the opportunity to breastfeed their infants.

Extensive research documents diverse and compelling advantages for infants, mothers, families, and society from breastfeeding and the use of human milk for infant feeding. These advantages include health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits.

Research shows that human milk and breastfeeding of infants provide advantages in general health, growth, and development, while significantly decreasing risk of acute and chronic diseases. Research among predominantly middle-class populations in the U.S., Canada, and other developed countries provides strong evidence that feeding infants human milk decreases the incidence, severity, or both of many diseases, health risks, and infections including:

< diarrhea
< respiratory infections
< otitis media
< bacteremia
< bacterial meningitis
< botulism
< urinary tract infection
< sudden infant death syndrome
< necrotizing enterocolitis
< and others

A number of studies show a protective effect of human milk feeding against a number of chronic diseases, including:

< childhood leukemia
< obesity
< asthma
< insulin-dependent diabetes mellitus
< Crohn's disease
< ulcerative colitis
< lymphoma
< allergic diseases
< and other chronic diseases

In addition, breastfeeding has been related to the enhancement of several measures of cognitive development in infants and children. Recent studies have demonstrated positive associations between duration of breastfeeding and later performance on IQ tests in young adults.

Health benefits for the breastfeeding mother include improved bone remineralization postpartum, with reduction in hip fractures in the postmenopausal period, and reduced risk of ovarian cancer and premenopausal breast cancer. Significant social and economic benefits include reduced health care costs and reduced employee absenteeism for care attributable to child illness. Breastfeeding reduces parental absence from work and lost income. Breastfeeding can also save time

Despite these compelling reasons for breastfeeding, many societal barriers keep women from breastfeeding or result in its early cessation. These barriers exist to some extent for all Minnesota women, however some populations face more barriers and/or less support to overcome the barriers, reflected in lower breastfeeding initiation and duration rates. Breastfeeding rates are lowest among low income families, younger

mothers, refugees including recent Somali refugees and Southeast Asians who came to Minnesota as refugees and who are now long term state residents. Some African American and American Indian populations in Minnesota also have breastfeeding rates lower than the general population. Often infants and children in these populations have the most to gain from being breastfed as they face the greatest disparities in health. Breastfeeding reduces factors that affect infant morbidity and mortality, and can affect the risks for chronic disease.

Addressing the multifactorial barriers to breastfeeding requires changes in the knowledge and attitudes of families, health care providers, and the general public. Health professional training, resources for staff, educational materials, access to quality breast pumps, and early postpartum breastfeeding support are needed to promote and support breastfeeding. Systemic changes within hospitals, clinics, worksites, schools, childcare centers and other organizations are also needed.

Investments in breastfeeding promotion and support are cost-effective. Promoting and supporting breastfeeding requires funding for staff, equipment, educational materials, and other resources. Many opportunities for promoting and supporting breastfeeding are lost due to the lack of funding. While resources are required to promote and support breastfeeding, is cost-effective. A 1997 study estimated a savings of $112 per breastfed infant in six months (Montgomery and Splett). A follow-up study that looked at the second six months of life has just been completed, but is not yet published. The study demonstrates additional cost-benefits in the second six months of life. Dr. Miriam Labbok estimated a national cost savings of $4 billion if all infants in the United States were breastfed for 12 weeks (Labbok).

Work currently in process has demonstrated that interventions can and do increase breastfeeding initiation and duration. However, much remains to be done.

Strategy: Promote and support breastfeeding and the use of human milk for feeding infants and children.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
In 1997, the American Academy of Pediatrics described breast milk as "uniquely superior" for infant feeding and recommended that infants receive breast milk for at least the first year of life. A large body of research documents health and developmental benefits for breastfed infants. Breastfeeding beyond one year offers additional benefits to mother and child.

Many pregnant women and families are not informed about the benefits of breastfeeding. Even when they are informed of these benefits, societal barriers keep many women from initiating breastfeeding or result in their breastfeeding for only a short time. Families, health care providers, and the general public need to be informed about breastfeeding. Health care institutions, schools, and workplaces need to be assessed and systems changed as needed to support breastfeeding.

Additional resources:

Bibliographic resources:

< *Advancing Women's Health: Health Plans' Innovative Program in Breastfeeding Promotion*. 2001. http://www.4woman.gov, or American Association of Health Plans, http://www.aaph.org. A hard copy can be obtained from Renee Hyson, Medical Affairs, AAHP, at rhyson@aahp.org or (202) 861-1497.

< American Academy of Pediatrics Work Group on Breastfeeding. 1997. Breastfeeding and the use of human milk. *Pediatrics* 100(6):1035-39.

< American Dietetic Association. 2001. Position of the American Dietetic Association: Breaking the barriers to breastfeeding. *Journal of the American Dietetic Association* 101(10):1213-20.

< Anderson, J., Johnstone, B., and Remley, D. 1999. Breastfeeding and cognitive development: a meta-analysis. *American Journal of Clinical Nutrition* 70:525-35

< An annotated bibliography listing benefits of breastfeeding: http://www.breastfeeding.com/all_about/all_about_more.html

< Cunningham, A., et al. 1991. Breastfeeding and health in the 1980's: A global epidemiologic review. *Journal of Pediatrics* 118(5):659-65.

< Iowa Department of Public Health. 1995. *Community Based Coalition Building for Breastfeeding Promotion*. This is a reference for planning and coordinating breastfeeding coalitions. It includes tools for community assessment to determine factors that affect breastfeeding duration.

< Labbok, M. 1995. Costs on not breastfeeding in the US. *ABM News and Views, the Newsletter of the Academy of Breastfeeding Medicine* 1(1).

< Minnesota Department of Health. 1998. *Healthy Minnesotans - Public Health Improvement Goals for 2004.* St. Paul, MN: Author. [Refer to Goal 2, "Improve Birth Outcomes and Early Childhood Development"]. For copies, contact MDH, at (651) 296-9661. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Public Health Goals," scroll down and click on "Healthy Minnesotans Public Health Improvement Goals for 2004".

< Montgomery, D., and Splett, P. 1997. Economic benefit of breastfeeding infants enrolled in WIC. *Journal of the American Dietetic Association* 97(4): 379-85.

< United State Breastfeeding Committee. 2001. *Breastfeeding in the United States: A National Agenda.* Rockville, MD: U.S. Department of Health and Human Services, Health Resources and Services Administration, MCH http://www.usbreastfeeding.org/StratPlan.html, also available to borrow from MDH library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441.

< USDHHS. 2000. *Blueprint For Action on Breastfeeding*. The first comprehensive national breastfeeding promotion plan, www.4woman.gov/breastfeeding/index.htm.

Organizational resources:

< La Leche League International, http://www.lalecheleague.org/.

< MDH Library. Breastfeeding videos are available for borrowing, with new titles added periodically. The videos, for adults and children, cover a wide variety

of topics, including breastfeeding and promotion for women, their partners, and staff of agencies; pumping and expressing milk; and promoting sound breastfeeding support and hospital policy. To order, contact MDH Library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441. Please specify type of material requested on envelope or subject line.

< MDH Pregnancy Risk Assessment Monitoring System (PRAMS). This is a source of breastfeeding data for assessment and evaluation. For more information contact: Cindy Turnure, Ph.D., at (651) 296-6351, cindy.turnure@health.state.mn.us, Acting PRAMS Project Director, MDH Center for Health Statistics.

< National Breastfeeding Promotion Campaign: *Loving Support Makes Breastfeeding Work.* To obtain information or order materials, contact Best Start Social Marketing, at (800) 277-4975. For Minnesota implementation of the *Loving Support* campaign, or for organizations in Minnesota who would like billboards, television or radio spots contact Mary B. Johnson, WIC Breastfeeding Coordinator, at (651) 281-9906, mary.b.johnson@health.state.mn.us.

< Renville County Public Health. For information on how Renville County formed a local breastfeeding task force, which includes representatives from public health, clinics and the hospital, contact Elaine McDowell, Renville County Public Health, WIC Program, at (320) 523-3762.

< World Breastfeeding Week/Minnesota Breastfeeding Month. World Breastfeeding Week is the first week of August, World Association for Breastfeeding Action (WABA), http://www.waba.org.br/index.html. August is also Minnesota Breastfeeding Awareness Month. While breastfeeding promotion and support are important all year, breastfeeding advocates in Minnesota often plan special breastfeeding awareness activities during this month.

Evidence for strategy:
Extensive research documents diverse and compelling advantages to infants, mothers, families, and society from breastfeeding and the use of human milk for infant feeding.

The evidence mounts each month, yet many barriers to breastfeeding remain. Experience in Minnesota and the United States demonstrates that addressing barriers to breastfeeding in society and for the individual woman can and does affect breastfeeding. Breastfeeding initiation rates in Minnesota have increased from 61.6 percent of Minnesota women who initiated breastfeeding in 1990 to 76.2 percent in 2000. Six-month duration increased from 18.9 percent in 1990 to almost thirty eight percent in 2001[1]. While we have made progress in Minnesota, one fourth of our infant population receives no breast milk, and a yet larger number of infants are breastfed for only a short time. Research shows a dose–benefit of breastfeeding, with the most benefits received when breastfeeding is exclusive (not combined with formula feeding) and lasts for a year or

1 Mothers Survey. Ross Products Division, Abbott Laboratories.

more. Breastfeeding initiation rates in Sweden, a country that has done much to reduce barriers to breastfeeding, are 98%. For more information see the following web sites: http://www.who.int/nut/dbbfd.htm, and http://www.prairienet.org/laleche/eurorates.txt.

The significant social and economic benefits of breastfeeding include reduced health care costs and reduced employee absenteeism for care attributable to child illness. Breastfeeding reduces parental absence from work and lost income. If all U.S. newborns were breastfed for at least 12 weeks, the nation would save close to $4 billion annually due to illness reduction. Dr. Miriam Labbok, a physician and director of the World Health Organization's Collaborating Center on Breastfeeding, based this 1996 estimate on her analysis of national health cost data. In an April 1999 article in *Pediatrics*, the authors compared infants who were formula fed to infants exclusively breastfed for at least 3 months. They estimated that formula fed infants, had 2033 more office visits, 212 more days of hospitalization, and 609 more prescriptions, based on health service utilization for three illnesses (lower respiratory tract illnesses, otitis media, and gastrointestinal illness). These additional uses of health care cost the health care system between $331 and $475 per never-breastfed infant during the first year of life.

Many barriers to breastfeeding remain, as identified by a needs assessment within the Minnesota Women and Infant Children (WIC) program in 1991 and by Best Start Social Marketing in 1989 and 1997. There is evidence that when these barriers are reduced, more women will breastfeed. Research conducted by Best Start Social Marketing was used to develop the WIC national breastfeeding campaign, *Loving Support Makes Breastfeeding Work.*

Has this strategy been implemented in Minnesota?

Yes, many organizations, institutions, task forces, and programs are working to promote and support breastfeeding. Some of the activities within Minnesota include:

- The Lactation Friendly Workplace Program. This program worked to increase access to worksite support for breastfeeding throughout the state.
- Minnesota Breastfeeding Awareness Month. In conjunction with World Breastfeeding Week, August is Minnesota Breastfeeding Awareness Month. A variety of methods to promote and support breastfeeding have been used during these months. Most activities focus on increasing public awareness of breastfeeding.
- Baby-Friendly Hospitals. The Baby Friendly Hospital Initiative (BFHI) is a worldwide effort coordinated by WHO/UNICEF. The initiative has identified policies and procedures that can help establish breastfeeding. In the U.S., the effort is coordinated by Baby-Friendly USA. In Minnesota, one hospital has a current BFHI "Certificate of Intent." This hospital, and others are working on implementing the 10 steps as outlined in the BFHI, which have been demonstrated to effectively support breastfeeding.
- La Leche League. The La Leche League remains active in breastfeeding support, offering support groups for women in many Minnesota communities, and providing training to La Leche League leaders and others. They are also active

in promoting and supporting breastfeeding.

< Local Task Forces and Coalitions. Several local communities have task forces and coalitions that are working to promote and support breastfeeding. These include the Olmsted Area Breastfeeding Coalition, Wilkin County, the Isanti County Breastfeeding Network, Multi-County, the Marshall Area Breastfeeding Coalition, and others.

< Northside Breastfeeding Campaign. The League of Catholic Women, working with a variety of other organizations, initiated a breastfeeding promotion campaign in the near-north community of Minneapolis. The campaign included both public events and health professional education. Planning for the campaign involved a project coordinator, a community advisory group, a group of representatives from a variety of community programs and institutions, and a media advisory group. This campaign involved an intensive, multiple-strategy approach in one community. The Umi Zawadi ("my mother's gift to me") family festival was implemented in August 1998, and health professional education was provided in the fall of 1998. The media campaign was implemented in 1999. Materials from the campaign can be viewed at: http://www.nal.usda.gov/wicworks/Sharing_Center/statedev.html. The League of Catholic Women has given permission for others to reprint the campaign materials for non-commercial purposes. A disk with campaign materials can be obtained from: the National Center for Education in Maternal and Child Health (NCEMCH) Information Services staff, at (703) 524-7802, Fax: (703) 524-9335 or info@ncemch.org. Please provide complete contact information including name, organization name, mailing address, and phone number.

< Minnesota Department of Health, Minnesota WIC Program Breastfeeding Needs Assessment. WIC activities have been developed based on a 1991 breastfeeding needs assessment, which included recommendations for breastfeeding promotion and support activities. The assessment included interviews and focus groups with WIC participants and staff, and identified many societal barriers to breastfeeding. Ongoing needs are identified through monthly monitoring of WIC breastfeeding statistics, reports from local WIC staff, surveys of WIC participants and discussion with groups outside the WIC program.

< MDH Minnesota WIC Program breastfeeding activities. The Minnesota WIC program has implemented multiple approaches to promote and support breastfeeding. Many of the WIC activities also reach beyond WIC. An "enhanced" food package is available to breastfeeding participants who do not receive infant formula from the WIC program. All pregnant WIC participants are counseled about breastfeeding, with discussion of individual concerns and barriers, as well as benefits of breastfeeding. Activities include:

  < Capacity building resources and education. Tested approaches for individual counseling for pregnant and breastfeeding women, including a three-step counseling protocol, are used in WIC clinics. New educational materials e.g., videos (purchased), print materials

(purchased and state developed), refrigerator magnets with breastfeeding support numbers, and professional references are in use within WIC clinics.

- < Capacity building: training. WIC provides ongoing training for staff on breastfeeding. Contact the WIC Breastfeeding Coordinator (see contact information below) to learn of training sessions that may be open to staff from other programs.
- < Capacity building: coordination with other programs. WIC breastfeeding coordinator meetings, held in various regions of the state, are a way for breastfeeding advocates from a variety of programs to meet and share information. For information on breastfeeding coordinator meetings in your area, contact your local WIC staff or the state WIC breastfeeding coordinator (see contact information below).
- < Additional activities in local WIC programs. In addition to the statewide activities, each local WIC program identifies strategies based on needs and resources in its community. Activities vary among local WIC agencies. Examples include local breastfeeding task forces or coalitions, coordination between WIC and community hospitals, peer counselor programs, breastfeeding awareness activities, incentive programs, lending libraries, locally developed educational materials, manual breast pumps, breastfeeding support groups, breastfeeding classes, and others.

< *Loving Support* Breastfeeding Campaign. Breastfeeding is important for all infants. Most women experience some barriers to breastfeeding. Low-income families are the least likely to breastfeed and are often affected by multiple barriers. This public information campaign is one component of a broader effort to promote and support breastfeeding. The *Loving Support Campaign* is based on social marketing research and addresses common barriers to breastfeeding. In Minnesota, outdoor ads and TV spots were used in August 1998. *Loving Support* posters have been purchased and used by a number of organizations including the Minnesota WIC program, the Olmsted Area Breastfeeding Coalition, the Minnesota Area Lactation Consultants, and a variety of hospitals and clinics.

Indicators for this strategy:

- < Rates of breastfeeding or human milk feeding at hospital discharge. Data sources include community hospitals, WIC and beginning in 2002, the Prenatal Risk Assessment Monitoring System (PRAMS) from MDH.
- < Breastfeeding duration rates at 1 week, 3, 6, and 12 months. Data sources include community hospitals, WIC and beginning in 2002, the Prenatal Risk Assessment Monitoring System (PRAMS) from MDH.
- < Number and type of promotional activities during Breastfeeding Awareness Month.
- < Number of Baby-Friendly Hospitals in the state and community.
- < Numbers of people participating in, and participant satisfaction with, specific breastfeeding promotion and support activities.

- < Number of communities that form breastfeeding task forces, coalitions, or both.
- < Numbers of requests for resources and educational materials from the MDH Library.
- < Numbers and types of additional promotional and support activities conducted in communities.
- < Increased visibility of breastfeeding.
- < Decreased use of the baby bottle as a symbol for an infant.

For more information contact:

- < MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.
- < Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of material, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.

Special notes:

While breastfeeding is the preferred method of infant feeding, it is important to consider that darker skinned infants who are exclusively breastfed may need a supplement of vitamin D. The issue is not breastfeeding, but rather inadequate sun exposure, especially in Minnesota in the winter. People with more melanin in their skin require greater exposure to the sun for the adequate synthesis of vitamin D. Infants born to mothers with low sun exposure and low vitamin D intake during pregnancy may also be at risk for vitamin D deficiency and vitamin D deficient rickets.

There are few true contraindications to breastfeeding. AIDS or HIV is a contraindication to breastfeeding. Street drugs are a contraindication to breastfeeding. It is rare that medications are a contraindication to breastfeeding, although breastfeeding women are often told to stop breastfeeding when taking medications if health care providers are not familiar with medications and breastfeeding. Even if one medication is contraindicated, there is usually a suitable substitute. For additional information, see the resources in the related strategy, "Provide early and ongoing post-hospital support for breastfeeding."

Strategy: Promote and support breastfeeding and the use of human milk for all mothers and infants, with special attention to women and infants who are least likely to breastfeed.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:

Breastfeeding is the preferred feeding method for all infants. There are many barriers to breastfeeding, as described in the previous strategy. Some mothers face additional barriers to breastfeeding. Often infants of the mothers who face the greatest barriers to breastfeeding and their mothers, have the most to gain from breastfeeding. Mothers who are lower income, single, young, recent immigrants or refugees, Southeast Asian, Native American, or African American are less likely to breastfeed than the general population.

Disparities in health are evident in some segments of the population. Disparities in infancy include higher rates of low birth

weight, infections, infant mortality, and SIDS. Low Birth Weight occurs in all populations and at higher rates among African Americans. Breastfeeding reduces risks of necrotizing colitis, a sometimes fatal disease more common in low birth weight infants. Incidence and severity is decreased for numerous illnesses and infections among breastfed infants and children. Refugees and immigrants from cultures that traditionally breastfeed exclusively and for extended duration may lose the ovulation suppression effect from breastfeeding when they change breastfeeding patterns or supplement breastfeeding with infant formula when they move to the United States. This can result in more closely spaced pregnancies, which may strain economic resources of the family. Closer spacing of pregnancies may also contribute to low birth weight if the mother does not replete her nutritional reserves.

Diabetes, cardiovascular disease, obesity, breast and cervical cancer and other chronic diseases also disproportionately affect some populations. A growing body of evidence suggests that being breastfed may decrease the risk for chronic disease in later life, including decreasing risk for obesity (a contributing factor to several chronic diseases), and diabetes. Some recent research has also suggested a decreased risk of hypertension and asthma. Women who breastfeed for an extended time may decrease their risk for premenopausal breast cancer. Benefits of breastfeeding are summarized by two recent quotes:

< "Breastfeeding is a natural 'safety net' against the worst effects of poverty. Exclusive breastfeeding goes a long way toward canceling out the health differences between being born into poverty and being born into affluence. It is almost as if breastfeeding takes the infant out of poverty for those first few months in order to give the child a fairer start in life and compensate for the injustice of the world into which it was born." James P Grant, Executive Director of UNICEF.

< "The four strategies that we think belong in a chronic disease prevention agenda or program are first, breastfeeding. We know that breast milk is the best food for infants and there's some reasonable data to suggest that it may be an effective obesity prevention strategy." William H. Dietz, MD, Ph.D., Director of the Division of Nutrition and Physical Activity, Centers for Disease Control and Prevention, April 2001.

Identifying barriers to breastfeeding within segments of populations and for individuals, developing methods to address these barriers, and building on community strengths results in increases in breastfeeding rates. See references within the other strategies in this section for information on assessing community and individual breastfeeding barriers and strengths, educational materials, peer support and other strategies that may be adapted to specific segments of the population.

Additional resources:

Bibliographic resources:

< Dai, D., and Walker, WA. 1999. Protective nutrients and bacterial colonization in the immature human gut. *Adv Pediatric* 46:353-82.

< Dell, S., To, T. 2001. Breastfeeding and asthma in young children: Findings from a population-based study. *Arch Pediatr Adolesc Med* 155(11):1261-5.

< Dennis, CL 2002. Breastfeeding initiation and duration: A 1990-2000 literature review. *J Obstet Gynecol Neonatal Nurs* 31(1):12-32. Review. PMID: 11843016.
< Dietz, WH. 2001. Breastfeeding may help prevent childhood overweight. *JAMA* 2:2506.
< Forste, R., Weiss, J., and Lippincott, E. 2001. The decision to breastfeed in the United States: Does race matter? *Pediatrics* 108(2):291-6. PMID: 11483790.
< Gdalevich, M., Mimouni, D., and Mimouni, M 2001. Breastfeeding and the risk of bronchial asthma in childhood: A systematic review with meta-analysis of prospective studies. *J Pediatr*; 139(2):261-6.
< Healthy People 2010, Volume II, Focus Area 16-19: Increase the proportion of mothers who breastfeed their babies, http://www.healthypeople.gov/document/HTML/Volume2/16MICH.htm#_Toc494699668.
< Houghton, MD., and Graybeal, TE. 2001. Breastfeeding practices of Native American mothers participating in WIC. *J Am Diet Assoc* 101(2):245-7. No abstract available. PMID: 11271699.
< Khoury, AJ., Mitra, AK., Hinton, A., Carothers, C., and Sheil, H. 2002. An innovative video succeeds in addressing barriers to breastfeeding among low-income women. *J Hum Lact* 18(2):125-31. This video is available to borrowers; see the video resources under "Organizational resources" below.
< Long, DG., Funk-Archuleta, MA., Geiger, CJ., Mozar, AJ., and Heins, JN. 1995. Peer counselor program increases breastfeeding rates in Utah Native American WIC population. *J Hum Lact* 11(4):279-84.
< Martens, PJ. 1997. Prenatal infant feeding intent and perceived social support for breastfeeding in Manitoba first nations communities: A role for health care providers. *Int J Circumpolar Health* 56(4):104-20.
< Pettitt, DJ., Forman, MR., Hanson, RL., Knowler, WC., and Bennett, PH. 1997. Breastfeeding and incidence of non-insulin-dependent diabetes mellitus in Pima Indians. *Lancet* 350(9072): 166-8. PMID: 9250183.
< Pugh, LC., Milligan, RA., Frick, KD., Spatz, D., and Bronner, Y. 2002. Breastfeeding duration, costs, and benefits of a support program for low-income breastfeeding women. *Birth*; 29(2):95-100.
< vonKries, R., et al. 1999. Breastfeeding and obesity: Cross sectional study. *BMJ* 319(7203):147-50.
< Walker, M. 1992. Breastfeeding the premature infant. *NAACOGS Clin Issu Perinat Womens Health Nurs* 3(4): 620-33. Review.
< Wold, AE., and Adlerberth, I. 2000. Breastfeeding and the intestinal microflora of the infant--Implications for protection against infectious diseases. *Adv Exp Med Biol* 478:77-93. Review. PMID: 11065062.
< Zheng, T., Holford, TR., Mayne, ST., Owens, PH., Zhang, Y., Zhang, B., Boyle, P., and Zahm, SH. 2001. Lactation and breast cancer risk: A case-control study in Connecticut. *Br J Cancer* 84(11):1472-6.

Organizational resources:

< Baby Tracks incentive program. Working with Tribal leadership to develop supportive breastfeeding policies, including breast pumps available to Casino employees. Oras Smith, RN, WIC Director, Leech Lake

Band of Ojibwe. llbowic@paulbunyan.net.

< The Fond du Lac Band of Lake Superior Ojibwe supports breastfeeding at its rural reservation and urban Duluth, Center for American Indian Resources, sites. The Fond du Lac Breastfeeding Initiative includes: a public recognition photo bulletin board, periodic gifts, close coordination with medical providers, individual and group education, and an annual honoring feast for breastfeeding families. Contact Diana Plumer, Public Health Nurse at the Center for American Indian Resources, at (218) 279-4109, dianaplumer@fdlrez.com.

< Hmong Storycloth breastfeeding promotion poster, "Breastfeeding is Best". #141-072 2 MDH library, http://www.health.state.mn.us/library/pamphlet.cfm.

< MDH Fact Sheets, October 2001. See the section below. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "EHDI".

< *Eliminating Disparities in the Health Status of American Indians in Minnesota* (see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "American Indian").

< *Eliminating Disparities in the Health Status of Asian Americans in Minnesota* (see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Asian American").

< *Eliminating Disparities in the Health Status of African Americans in Minnesota* (see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "African American").

< *Eliminating Disparities in the Health Status of Hispanics / Latinos in Minnesota* (see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Hispanic/Latino").

< National Breastfeeding Promotion Campaign: *Loving Support Makes Breastfeeding Work.* Materials such as pamphlets for working with individuals and community awareness. To obtain information or order materials, contact Best Start Social Marketing, at (800) 277-4975.

< Nature's Way Circle, a Native American breastfeeding support program that includes doula services. Contact Mary Rose, at (651) 793-3803, American Indian Family Center, 579 Wells Street, St. Paul, MN 55101.

< Northside Breastfeeding Campaign. The League of Catholic Women, working with a variety of other organizations, initiated a breastfeeding promotion campaign in the near-north community of Minneapolis. The campaign included both public events and health professional education. Planning for the campaign involved a project coordinator, a community advisory group, a group of representatives from a variety of community programs and institutions, and a media advisory group. This campaign involved an intensive, multiple-strategy approach in one community. The Umi Zawadi ("my mother's gift to me") family festival was implemented in August 1998 and health professional education was provided in the fall of 1998. The media campaign was implemented in 1999. Materials from the campaign can be viewed at: http://www.nal.usda.gov/wicworks/Sharing_Center/statedev.html. The League of Catholic Women has given permission for others to reprint the

campaign materials for non-commercial purposes. A disk with campaign materials can be obtained from: the National Center for Education in Maternal and Child Health (NCEMCH) Information Services staff, at (703) 524-7802, Fax: (703) 524-9335 or info@ncemch.org. Please provide complete contact information including name, organization name, mailing address, and phone number.

Video resources available to borrow from the MDH library. To order, contact MDH Library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441. Please use the reference numbers listed with each video when borrowing the tapes. Tapes must be mailed to an organization or business address:

< *Breastfeeding. A Healthy Hmong Tradition*. #PWV42-01. The video discusses the tradition of breastfeeding in the Hmong culture, and includes scenes with a pregnant woman talking with her grandmother, obstetrician, and pediatrician about breastfeeding.
< *Breastfeeding. Another Way of Saying I Love You*. # V730-01; Mississippi WIC Program, 1999. 16 min single play or 48 minutes continuous play, or # V731-02 (48 min. cont. play). Available to order through Gibson Creative. (601) 352-9215 or gibsoncre@aol.com. It features breastfeeding women, and their family members, including a mom of a premature baby, a single working mother, a teen mom, and others. Fathers, grandmothers and grandfathers are also featured. See article by Khoury in "Additional resources:" above.
< *Keep With Tradition...Breastfeed*. #PWV10-01. Rosebud Sioux Tribe WIC Program and Sinte Gleska University. 20 minutes.
< *Mommy's Milk for Mommy's Baby* (English) #PWV37-01 or (Spanish) #PWV38-01. Texas Department of Health WIC Program, 1994. $7.50. 3.47 minutes. Good for children and adults.
< *Teenage Breastfeeding Mothers. No One Else Can Do What I'm Doing*. #PWV14-01. Tioga County WIC Program (New York), 1993, 9 minutes.
< *Tradition of Love*. (1994). #PWV24-01. Developed by the New Mexico Native American Breastfeeding Coalition, produced by Ambrose Communications. Order from Santo Domingo WIC Program, PO Box 238, Santo Domingo, NM 87052, at (505) 465-2214, ext. 214 or 215, Fax (505) 465-2688. 16 Minutes.

Evidence for strategy:
The health consequences of not breastfeeding, and lower breastfeeding rates in some segments of the population have been well documented. Breastfeeding rates in the US are rising. The greatest increase in breastfeeding initiation is occurring among WIC participants. WIC participants generally have more risk factors for not breastfeeding than the general population. WIC programs have assessed strengths and needs and implemented multiple strategies to promote and support breastfeeding. In Mississippi WIC changes in breastfeeding attitudes were demonstrated following observation of a breastfeeding promotion video (see "Additional resources" section above.) A number of studies have demonstrated the benefits of peer breastfeeding support. Significant barriers to breastfeeding have been documented, including attitudes of family and friends, attitudes of health care providers, and

returning to work or school. Other studies have shown that reducing the barriers and increasing support increases breastfeeding initiation and duration.

Has it been implemented in Minnesota?
Yes, a number of programs in Minnesota have developed breastfeeding promotion and support within Native American communities. These include Nature's Way Circle (peer support including doula's, and honoring feasts), White Earth Reservation (breast pump access for women working at the Casino), Leech Lake Reservation (breast pump access for women working at the Casino, and a breastfeeding task force), and Fond du Lac Reservation (honoring feast for breastfeeding women).

The Northside breastfeeding campaign developed a multi-faceted breastfeeding promotion and support campaign addressing barriers and benefits identified in the African American Community in North Minneapolis. St Paul – Ramsey County has developed breastfeeding promotion and support programs addressing issues in the Hmong community (for information about this program contact Deb Hendricks, at deb.Hendricks@co.ramsey.mn.us).

WIC programs throughout the state are working on addressing breastfeeding promotion and support needs, including addressing needs in segments of their populations least likely to breastfeed. Breastfeeding rates among Minnesota WIC participants are increasing. Minnesota has narrowed the gap in breastfeeding initiation between some, but not all segments of the WIC population.

Indicators for this strategy:
- < Rates of breastfeeding or human milk feeding at hospital discharge.
- < Breastfeeding duration rates at 1 week, 3, 6, and 12 months.
- < Numbers of people participating in, and participant satisfaction with, specific breastfeeding promotion and support activities.
- < Community involvement with breastfeeding promotion and support.
- < Integration of breastfeeding information into programs that address infant health or chronic disease risk.
- < Numbers and types of additional promotional and support activities conducted in communities.

For more information contact:
- < Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of material, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.

Strategy: Support baby-friendly hospitals, clinics, and other facilities.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
The Baby Friendly Hospital Initiative (BFHI) is a worldwide effort, initiated by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), to establish hospital practices that support breastfeeding. By

demonstrating that their policies and practices are in accordance with research criteria (which is based on the physiology of breastfeeding and on factors which interfere with breastfeeding), hospitals are certified as "Baby-Friendly Hospitals." Although the BFHI materials are designed for hospitals, clinics may also find them useful in assessing how their own organizational practices support or inhibit breastfeeding.

Additional resources:

- Minnesota Department of Health Library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441. Baby-friendly materials and a video ["One Hospital's Experience," 1993. #PWV11-01 UNICEF, 20 minutes] can be borrowed. Please specify type of material requested on envelope or subject line.
- The Minnesota WIC program has developed a checklist for use by WIC clinics to help assess their clinic's environment, policies, and procedures. This list could be adapted to other clinical settings. For information, contact the Minnesota WIC Breastfeeding Coordinator (see contact information below).
- UNICEF Baby Friendly Hospital Initiative (BFHI) in the U.S. Baby-Friendly USA materials include checklists for assessing current status and progress within hospitals. For information on this and the worldwide implementation of the BFHI, contact Baby-Friendly USA, at (508) 888-8044, Fax: (508) 888-8050, http://home.onemain.com/~ct1008688/bfusa.htm or (508) 888-8092, or info@babyfriendlyusa.org.
- World Health Organization, Family and Reproductive Health, Division of Child Health and Development. 1998. Evidence for the ten steps to successful breastfeeding. Geneva. For copies, call: 41-22-791-2632 or Fax: 41-22-791-4853. Available to borrow through the MDH library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us.

Evidence for strategy:

The available evidence in the United States and internationally indicates that implementation of the "ten steps" in maternity facilities can increase breastfeeding in many settings. The document, *Evidence for the Ten Steps to Successful Breastfeeding* (see information above), provides a review of research that supports each of the strategies outlined in the BFHI.

Has this strategy been implemented in Minnesota?

Yes, in Minnesota, several hospitals have received their certificate of intent and are working towards certification. Information on hospitals in Minnesota that have received their certificates or certificate of intent can be obtained from Baby-Friendly USA.

Indicators for this strategy:

- Number of hospitals and clinics that have received "Baby-Friendly" certification from the BFHI.
- Number of hospitals in the process of obtaining their certificates.
- Number of hospitals and clinics that are assessing their own environments,

policies, and procedures with regard to breastfeeding and comparing them to the 10 steps.
< Types of changes recommended and implemented as a result of these assessments.
< Number of hospitals and clinics that make needed changes as a result of their assessments.

For more information contact:
< Baby-Friendly USA, at (508) 888-8044, Fax (508) 888-8050, or info@babyfriendlyusa.org; http://home.onemain.com/~ct1008688/bfusa.htm .
< Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of materials, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.
< MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Special notes:
Baby-Friendly USA has received reports that pregnant women have requested hospitals certified for BFHI.

Strategy: Ensure training on breastfeeding for all who work with pregnant and postpartum women, infants and young children.

	Systems	Community	Individual
Primary	U		U
Secondary			
Tertiary			

Background:
The Baby Friendly Hospital Initiative has identified health professional training as essential for hospital support of breastfeeding. It is also important for others who work with women and children to understand the importance of breastfeeding. Training is needed for child care workers, employment counselors, teachers and other school staff, social workers, and many others. Despite the importance of training related to breastfeeding, many schools that train health professionals do not address breastfeeding issues. Breastfeeding physiology and management need to be included in health professional and paraprofessional training and continuing education. See the third strategy in this collection, "Support baby-friendly facilities," for related information.

Additional resources:
< Barnett, E., et al. 1995. Beliefs about breastfeeding: A statewide survey of health professionals. *Birth* 22:15-22.
< Esses, C., et al. 1995. Breastfeeding rates in New Zealand in the first 6 months and the reasons for stopping. *New Zealand Medical Journal* 355-57.
< Freed, G., et al. 1995. National assessment of physicians' breastfeeding knowledge, attitudes, training, and experience. *JAMA* 273(6):472-476.
< Freed, G., et al. 1995. Pediatrician involvement in breastfeeding promotion: A national study of residents and practitioners. *Pediatrics* 3:490-4.
< Howard, et al. 1993. The physician as advertiser: The unintentional discouragement of breastfeeding. *Obstetrics and Gynecology* 81(6): 1048-51.

- Minnesota Institute of Public Health. 1991. *Plan for Promoting and Supporting Breastfeeding in the Minnesota WIC Program.* St. Paul, MN. For copies, contact the MDH Library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us.
- World Health Organization, Family and Reproductive Health, Division of Child Health and Development. 1998. *Evidence for the Ten Steps to Successful Breastfeeding*. Geneva. For copies, call: 41-22-791-2632 or Fax: 41-22-791-4853. Also available to borrow through the MDH Library.

Evidence for strategy:
Knowledgeable and supportive health professionals have been shown to be a primary factor in influencing women who decide to breastfeed. Conversely, the lack of support from professionals has been demonstrated to contribute to a woman's choice not to breastfeed. If health professionals lack knowledge about breastfeeding, they are less likely to promote breastfeeding or to manage breastfeeding appropriately. The WHO document, *Evidence for the Ten Steps to Successful Breastfeeding*, (see, "Additional resources" above) underscores the importance of training health care providers about breastfeeding and suggests central components of the education. It also documents the connection between the knowledge of and support for breastfeeding and increased breastfeeding rates.

Has this strategy been implemented in Minnesota?
Yes, several hospitals in Minnesota are offering continuing education opportunities on breastfeeding. In addition, there has been an increase in the amount of information about breastfeeding offered by institutions that train health professionals. The MDH WIC program has received reports of changes to hospital and clinic practices following training on breastfeeding offered to local WIC staff and their community partners (from hospitals, clinics, and other organizations). All new WIC staff (both professional and support staff) receive information on breastfeeding at new-staff trainings. Continuing education related to breastfeeding is also offered yearly for WIC staff. The Northside Breastfeeding Campaign (Minneapolis), sponsored by the League of Catholic Women, coordinated a breastfeeding promotion campaign that included health professional education.

Women who use child care report the importance of support from the child care staff to their continued breastfeeding.

Indicators for this strategy:
- Number and type of trainings held.
- Target audiences of the trainings.
- Number of professionals and paraprofessionals trained.
- Changes in knowledge and attitudes regarding breastfeeding from the trainings (from pre- and post-tests).
- Type and number of changes in hospital and clinic practices occurring as a result of trainings.

For more information contact:

< Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of materials, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.

< MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Assess barriers to breastfeeding for the individual client, then address the barriers and discuss breastfeeding as the optimal infant feeding choice during prenatal care.

	Systems	Community	Individual
Primary			U
Secondary			
Tertiary			

Background:

Research has demonstrated many barriers to breastfeeding. Even when women know the benefits of breastfeeding, societal barriers can keep women from breastfeeding. One method for identifying barriers is for health care professionals involved in providing prenatal care to ask women, "What do you know about breastfeeding?" "What have you heard about breastfeeding?" or a similar open-ended question, rather than asking how they plan to feed their babies. By asking women what they know or have heard, health care professionals offer them the opportunity to discuss and address any concerns they might have. Inquiring about their feeding plans first, without assessing potential barriers, might, on the other hand, lead women to make a premature infant feeding decision, before they have had the opportunity to discuss any misconceptions which might keep them from breastfeeding. Assessing barriers can lead, therefore, to supporting women who will breastfeed if their questions and concerns are addressed.

Additional resources:

< *Best Start Training Program, Three-step Counseling Technique* (Rev. ed.). 1997. Best Start Social Marketing. Purchase from Best Start Social Marketing, at (800) 277-4975, or borrow from the MDH Library, at (612) 676-5274, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us.

< Biancuzzo, M. 1997. Breastfeeding education for early discharge: A three-tiered approach. *Journal of Perinatal Neonatal Nursing* 11(2):10-22.

< Bryant, CA., et al. 1992. A strategy for promoting breastfeeding among economically disadvantaged women and adolescents. *NAACOGS Clinical Issues in Perinatal Women's Health Nursing* 3(4):723-730.

< Hartley, B., and O'Connor, M. 1996. Evaluation of the *Best Start* breastfeeding education program. *Archives of Pediatric and Adolescent Medicine* 150:868-71.

Evidence for strategy:

Research documents increases in breastfeeding initiation after implementing this method in a prenatal clinic (see Hartley and O'Connor above). Anecdotal reports from Minnesota staff that have used the method indicate that it works well.

Has this strategy been implemented in Minnesota?
Yes, many WIC clinics throughout Minnesota are using the three-step counseling technique to identify and address barriers before discussing breastfeeding as the optimal infant feeding choice with their pregnant clients. Staff report the strategy has helped them identify and address barriers to breastfeeding. The Northside Campaign included training on this process in the training they provided to health professionals. Minnesota WIC staff and some staff from other programs were offered training on this method in 1991 with refresher workshops offered yearly at locations throughout Minnesota.

Indicators for this strategy:
- < Breastfeeding initiation and duration rates.
- < Ability of staff to identify and address breastfeeding concerns and issues.
- < Number of pregnant women who have had a health care provider speak to them about breastfeeding.
- < Number and type of health professionals and paraprofessionals who routinely assess barriers and discuss breastfeeding with their pregnant clients.
- < Number of women who report they breastfed as long as they planned to.

For more information contact:
- < Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of materials, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.
- < MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Offer breastfeeding counseling, information and support in hospitals, prenatal and pediatric clinics and offices; WIC and public health clinics; and during home visits.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Many women have questions about breastfeeding, both during the prenatal and postpartum periods. There is limited availability of accurate client educational materials about breastfeeding issues and how to breastfeed. Breastfeeding information that is available is sometimes inaccurate or misleading. Good-quality breastfeeding informational materials, readily available, at no or reasonable cost, and free of advertising, are needed. A needs assessment in the Minnesota WIC program indicated that clients do value and use written information about breastfeeding. Women were also interested in seeing videos about breastfeeding either in a private place in a clinic or by borrowing the videos and viewing them at home with their partners.

Additional resources:
Bibliographic resources:
- < Abramson, R. 1992. Cultural sensitivity in the promotion of breastfeeding. *NAACOGS Clinical Issues in Perinatal Women's Health Nursing 3*(4):717-722.
- < Howard et al. 1993. The physician as advertiser: The unintentional

discouragement of breastfeeding [Clinical Commentary]. *Obstetrics and Gynecology* 81(6): 1048-51.

< Minnesota Institute of Public Health. 1991. *Plan for Promoting and Supporting Breastfeeding in the Minnesota WIC Program.* St. Paul, MN: Contact the MDH library, at (612) 676-5091, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us.

< Smith, LJ. 1995. A score sheet for evaluating breastfeeding educational materials. *Journal of Human Lactation* 11(4):307-311.

< Valaitis, R., and Shea, E. 1993. An evaluation of breastfeeding promotion literature: Does it really promote breastfeeding? *Revue Canadienne de Sante Publique* 84(1):24-27.

Organizational resources:

< Minnesota Department of Health Library. To borrow or request material, contact MDH Library, at: (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441. Please specify type of material requested on the envelope or the subject line of the e-mail. Available from this library are:
  < Breastfeeding videos
  < *What to Expect in the First Week at Home*, a camera-ready pamphlet developed by the Minnesota WIC program. It addresses key issues in the first week, such as frequency of breastfeeding and signs of adequate intake. Specify English, Spanish, Hmong, or Somali. Permission to reproduce without modification other than adding phone numbers is granted.

Evidence for strategy:
There are documented barriers and educational needs related to breastfeeding. Providing targeted information to address potential barriers, then providing information on how to breastfeed, once a feeding decision has been made, is a strategy that has been reported as effective. As more is learned about the physiology of breastfeeding, some practices, such as timed feedings or limiting the number of feedings, as well as other advice that is commonly given, have been identified as interfering with the establishment of breastfeeding and building a milk supply. It is important that educational materials be based on physiology and research rather than opinion. See the previous strategy, "Assess barriers to breastfeeding for the individual client, then address the barriers and discuss breastfeeding as the optimal infant feeding choice during prenatal care," for related information.

Has this strategy been implemented in Minnesota?
Yes, several community task forces in Minnesota have developed breastfeeding educational materials cooperatively, helping to assure accurate and consistent breastfeeding information within their communities. Several hospitals or health plans have also formed task forces to review and select or develop educational materials.

The Minnesota WIC program uses materials to address common barriers to breastfeeding and educational materials about how to breastfeed, combined with a three-step counseling approach (see the strategy on breastfeeding as the optimal infant feeding

choice during prenatal care). WIC also uses a variety of client videos, both breastfeeding promotion videos and those that demonstrate positioning and breastfeeding. Materials are selected based on client needs. If the client has concerns about breastfeeding (such as embarrassment, feelings of family and friends, or concerns that she can produce sufficient breast milk), counseling and written materials to address that concern are provided. When a client decides to breastfeed, information on how to breastfeed is provided. WIC, in addition, provides anticipatory guidance, usually in the eighth or ninth month of pregnancy, to help women know what to expect in the early postpartum period and whom to call if they have questions. Videos are also used. This strategy, combined with other strategies, has resulted in increases in the breastfeeding initiation rates within the Minnesota WIC program every year since 1991.

Indicators for this strategy:

- < Number of prenatal and pediatric clinics, offices, and hospitals that offer breastfeeding materials.
- < Number and type of materials present in clinics, offices, and hospitals.
- < Breastfeeding initiation and duration rates.
- < Client surveys regarding information needs and how well they are met by information they receive.
- < Number of women who report they breastfed as long as they planned to breastfeed.

For more information contact:

- < Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of materials, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.
- < MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Provide early and ongoing post-hospital support for breastfeeding.

	Systems	Community	Individual
Primary	U	U	U
Secondary		U	U
Tertiary			

Background:

The American Academy of Pediatrics recommends continuing breastfeeding for a year or more. However, misinformation or unanswered questions and concerns about breastfeeding often lead to its early cessation. Lack of support from family and friends, and concerns about adequacy of milk supply or pain associated with breastfeeding are reasons commonly given for early cessation of breastfeeding. Concerns could be readily addressed if new mothers had the opportunity to have their questions answered. Therefore, it is important that breastfeeding mothers have easy access to health professionals and other resources for information and support and supplementary written materials to take home with them.

Home visiting programs, such as the Healthy Beginnings program, offer excellent opportunities to provide breastfeeding information and support, as well as to address other common concerns. Other methods for providing early postpartum support include mother-baby groups,

organizations such as La Leche League or other peer support programs, or an office visit or phone follow-up within two or three days after discharge in combination with written information provided to new mothers. For additional information, see the related strategies in this section on initiating peer-counseling breastfeeding programs and offering breastfeeding materials in prenatal and pediatric clinics, offices, and hospitals.

Additional resources:

Resources addressing barriers/needs:

< Edmonson, MB., Stoddard, JJ., and Owens, LM.. 1997. Hospital readmission with feeding-related problems after early postpartum discharge of normal newborns. *JAMA* 278(4):299-303.

< Hartley, B., and O'Connor, M. 1996. Evaluation of the *Best Start* breastfeeding education program. *Archives of Pediatric and Adolescent Medicine* 150:868-71.

< Jain, E. 1995. Early discharge of postpartum patients, changes in the physician's role. *Canadian Journal of CME.*

< Maisels, J., and Kring, E. 1998. Length of stay, jaundice, and hospital readmission. *Pediatrics* 101(6): 995-998.

< Matthews, MK. 1993. Experiences of primiparous breastfeeding mothers in the first days following birth. *Clinical Nursing Research* 2(3):309-326.

< Minnesota Department of Health, Division of Family Health. 1998. *Minnesota Healthy Beginning. Comprehensive Implementation Plan. Report to the Minnesota Legislature.* St. Paul, MN: Author. For copies, contact Junie Svenson, at (651) 281-9891, or junie.svenson@health.state.mn.us.

< Minnesota Institute of Public Health. 1991. *Plan for Promoting and Supporting Breastfeeding in the Minnesota WIC Program.* St. Paul, MN: Author. For copies, contact the MDH Library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441.

Resources for early postpartum strategies:

< Biancuzzo, M. 1997. Breastfeeding education for early discharge: A three-tiered approach. *Journal of Perinatal and Neonatal Nursing* 11(2):10-22.

< Chavez, L. 2001. Striking improvements in breastfeeding rates linked to low-tech study, http://www.ars.usda.gov/is/pr/2001/011219.htm.

< Moore, ER. et al. 1991. A community hospital-based breastfeeding counseling service. *Pediatric Nursing* 17(4):383-389.

< Neifert, M. 1992. Screening forms. Aid to breastfeeding. *Pediatric Management* 24-27.

< World Health Organization, Family and Reproductive Health, Division of Child Health and Development. 1998. *Evidence for the Ten Steps to Successful Breastfeeding*. Geneva. For copies, call: 41-22-791-2632 or Fax: 41-22-791-4853.

Resources for peer support:

< Kistin, N., Abramson, R., and Dublin, P. 1994. Effect of peer counselors on breastfeeding initiation, exclusivity and duration among low-income urban women. *Journal of Human Lactation* 10(1):11-15.

< Minnesota Department of Health Library. The library has both print and video materials available for borrowing.

To obtain print materials contact Connie Neuman, at (612) 676-5091, or connie.neuman@health.state.mn.us. To order videos, contact the Library, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441, at (612) 676-5090 or library@health.state.mn.us. Both can be checked-out on their web site at: http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us. Please specify type of material requested on the envelope or on the subject line of the e-mail. Some helpful materials specific to this strategy include:

< *Loving Our Children, Loving Ourselves*. 1993. A 36-minute video from Best Start Social Marketing. $25.00. An overview of Chicago's Breastfeeding Peer Counselor Program, the tape includes background on the community, interviews with peer counselors, and interviews with the administrative team.

< *Supporting Breastfeeding "Mother to Mother."* 1994. Boston, MA: Massachusetts WIC Program Breastfeeding Peer Counselor Training Program.

< *WIC Breastfeeding Peer Counselor Training Program/Mountain Plains Region.* 1996. Salt Lake City, UT: Utah WIC Program. $4.75 plus shipping. This manual contains information on peer counselors in the Mountain Plains Region, including roles, a confidentiality statement, liability issues, and training outlines. Local WIC programs can purchase a copy of this manual from the Utah WIC Program, 288 N 1460 West, Box 144470, Salt Lake City, UT 84114-4470, Phone: (801) 538-6960.

< Raj, V., and Plichta, S. 1998. The role of social support in breastfeeding promotion: A literature review. *Journal of Human Lactation* 14(1):41-45.

Resources for addressing breastfeeding concerns (health professional references):

< Dr. Hale's Pharmocology Website. http://neonatal.ttuhsc.edu/lact/

< Hale, T. 2002. *Medications and Mother's Milk* (10th ed.). Pharmasoft Medical Publishing. Order from Pharmasoft Medical Publishing, 21 Tascocita Circle, Amarillo, Texas 79124, at (800) 378-1317 or (806) 358-8138. http://neonatal.ttuhsc.edu/lact/html/books.html.

< Iowa Department of Public Health. 1995. *Community Based Coalition Building for Breastfeeding Promotion: Reference for Planning and Coordinating Breastfeeding Coalitions.* Des Moines, IA. This document includes tools for community assessment to determine factors that affect breastfeeding duration. Ask for the state WIC Nutrition Coordinator.

< Minnesota WIC program collects data on reasons for breastfeeding cessation. Contact your local WIC program to determine if this information is available.

< Mohrbacher, N., and Stock, J. 2002. *The Breastfeeding Answer Book,* 3rd Ed. Schaumburg, IL: La Leche League International. A comprehensive professional reference book, well-indexed and highly recommended. Contact La Leche League International, 1400 N. Meacham Road, Schaumburg, IL 60173, at (847) 519-7730, Fax: (847) 455-0215, http://www.lalecheleague.org/.

- Seattle-King County Department of Public Health. 1998. *Breastfeeding Triage Tool* (4th ed.). Seattle, WA: Author. Excellent, pocket-sized reference for breastfeeding problem-solving. Contact Seattle-King County Department of Public Health, Health Education Materials Sales, Phone: (206) 296-4902, Fax (206) 205-5281; 400 Yesler Way, 3rd Floor, Seattle, Washington 98104.

Organizational resources:

- (877) 214-BABY. For information on sources of breastfeeding support in the community, at (877) 214-BABY (toll-free referral to all counties in Minnesota).
- La Leche League in Minnesota, at (612) 922-4996, http://www.lalecheleague.org/Web/Minnesota.html.
- Minnesota WIC Program. WIC offers breastfeeding information and support. WIC clinic, at (800) WIC-4030.
- Nature's Way Circle, a Native American breastfeeding support program that includes doula services. Contact Mary Rose, at (651) 793-3803, American Indian Family Center, 579 Wells Street, St. Paul, MN 55101.

Evidence for strategy:

Research indicates that women who do not have their concerns about breastfeeding addressed are more likely to stop breastfeeding very early. Several methods are successful in providing post-hospital support for breastfeeding. Examples include:

- Breastfeeding assessments, which mothers complete at home, calling if they have problems (see Neifert article above).
- Hospital notification of mother/baby discharge and feeding status to public health nursing or WIC by Fax (with signed release) to enable early follow-up.
- Hospital-based follow-up for breastfeeding.
- "Warmlines."
- Information on phone numbers to call with questions.
- Calls made to postpartum women two or three days after discharge.
- Written information on what to expect in the first week at home and other methods.

Peer support programs have demonstrated effectiveness in increasing the incidence and duration of breastfeeding in a number of settings.

Has this strategy been implemented in Minnesota?

Yes, North Country Hospital in Bemidji has developed a program to provide breastfeeding support in the early postpartum period. They report an increase in breastfeeding initiation and duration. Nature's Way Circle offers group and now individual peer support, and the Northside Breastfeeding Campaign included a peer support component. Other hospitals, clinics, and public health programs have used a variety of strategies, including all those mentioned in the above evidence section.

Indicators for this strategy:

- Number and type of organizations in the community offering breastfeeding support.
- Number of breastfeeding women utilizing the different kinds of support in the community.
- Satisfaction of breastfeeding women with the support.

< Breastfeeding duration rates, especially rates within the first two weeks.

For more information contact:

< Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of materials, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.
< MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Develop systems to support women who are breastfeeding and returning to work or school.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:

Planning to return to work or school is a barrier to breastfeeding. Research has shown that some women do not initiate breastfeeding or breastfeed for only a short time when returning to work or school. Continuing to breastfeed after returning to work or school can be affected by:

< Knowledge of ways to combine breastfeeding and working (e.g. pumping, bringing the infant to the worksite, or partially breastfeeding).
< Knowledge of the benefits of continuing to breastfeed.
< Availability of a private place to pump.
< Access to a good-quality breast pump.
< Support from the child care provider.
< Workplace policies and support from supervisors and co-workers.
< School policies and support from administrators, teachers and other students.

Working to address any and all of these factors can increase the rates at which women continue to breastfeed after returning to work or school.

Additional resources:

Bibliographic resources:

< *Caring For Our Children: National Health and Safety Standards: Guidelines for Out-of-Home Child Care*, 2nd edition. Health and safety guidelines for child care in centers and in family homes. Searchable and downloadable versions are available on the National Resource Center for Health and Safety in ChildCare's web site http://nrc.uchsc.edu/CFOC/index.html.
< Chapter 369, MN S.F. No. 2751 Minnesota Breastfeeding Legislation that relates to working and breastfeeding. St. Paul, MN: Author. To get copy of the bill, contact the chief clerk's office, at (651) 296-2314, http://www.revisor.leg.state.mn.us/cgi-bin/getbill.pl?number=SF2751&session=ls80&version=latest.
< Cohen, R., and Mrtek, M. 1994. The impact of two corporate lactation programs on the incidence and duration of breastfeeding by employed mothers. *American Journal of Health Promotion* 8(6):436-441.
< Cohen, R., Mrtek, M., and Mrtek, R. 1995. Comparison of maternal absenteeism and infant illness rates among breastfeeding and formula-feeding women in two corporations. *American Journal of Health Promotion* 10(2):148-153.

- Hills-Bonczyk, S., Avery, M., Savik, K., Potter, S., and Duckett, L. 1993. Women's Experiences with Combining Breastfeeding and Employment. *Journal of Nurse-Midwifery* 38(5):257-266.

Organizational resources:

- Baby Tracks incentive program. Working with Tribal leadership to develop supportive breastfeeding policies, including breast pumps available to Casino employees. Oras Smith, RN, WIC Director, Leech Lake Band of Ojibwe, e-mail: llbowic@paulbunyan.net.
- Lactation Friendly Workplace Program (LFWP) materials are available to borrow through the MDH library (see next resource for contact information):
  - The MDH LFWP: *Community-Based Health Agency Orientation Packet*
  - The MDH LFWP: *Employer Orientation Packet* (contains a reproducible employee packet), and
  - The MDH LFWP: *Nursing Mother's Room Comments and Other Shared Wisdom...*
- MDH Library. The library has both print and video materials available for borrowing. To borrow materials or videos, contact the MDH Library, at (612) 676-5090, http://www.health.state.mn.us/library/library.htm or library@health.state.mn.us, 717 Delaware Street SE, PO Box 9441, Minneapolis, MN 55440-9441. Please specify type of material requested on envelope or subject line. Printed materials include the Lactation Friendly Workplace Program materials mentioned in the previous resource, and *Breastfed Babies Welcome Here*, a folder of information for breastfeeding promotion in day care centers. The folder contains a poster, a "mother's guide" which a day care provider can give to parents, and a "guide for child care providers." A single copy of the folder, booklet, or poster is available. For materials from *Breastfed Babies Welcome Here*, contact Connie Neuman, at (612) 676-5091 or connie.neuman@health.state.mn.us.

  Video materials include a variety of videotapes on breastfeeding and working, including:
  - For clients:
    - *Breastfeeding and Working – It's Worth the Effort*, (English) #PWV15-01.
    - *Breastfeeding and Working – It's Worth the Effort*, (Spanish) #PWV15-02.
  - For staff training:
    - *Breastfed Babies Welcome Here!*, #PWV39-01.
    - *Breastfeeding and the Working Mom*, a video with accompanying study guide, #PWV41-01.

Evidence for strategy:
Several Minnesota employers have been leaders for many years in their support for nursing mother's rooms. These include: several hospitals, the University of Minnesota, Lutheran Brotherhood and others. The MDH Lactation Friendly Workplace program was designed to demonstrate the feasibility and benefits of workplace breastfeeding support. Each business that agreed to participate in the evaluation of the program received an electric breast pump and comprehensive materials to help promote and maintain lactation rooms for employees. Evaluation of the program demonstrated the benefits of workplace support of breastfeeding. Other

research (Cohen and Mrtek) shows that workplace support of breastfeeding can lead to decreased employee turnover, increased satisfaction, less time away from work to care for sick infants, and cost savings.

Has this strategy been implemented in Minnesota?
Yes, some Minnesota employers have been leaders in establishing support for their breastfeeding employees. The Lactation Friendly Workplace program created 74 additional lactation rooms in businesses throughout the state. Each business that agreed to participate received an electric breast pump and comprehensive materials to help promote and maintain these rooms for employees.

During the 1998 session, the Minnesota Legislature recognized the importance of breastfeeding and the associated barriers related to working and breastfeeding. It enacted legislation that requires all Minnesota employers to make a reasonable effort to provide their employees with break time and a private place to express their milk. The law became effective August 1, 1998 (S.F No. 2751, 3rd Engrossment: 80th Legislative Session (1997-1998) Posted on Apr 2, 1998). Anecdotal reports from breastfeeding women demonstrate the positive impact this law has had on breastfeeding.

Indicators for this strategy:
- Number of worksites that have lactation rooms for employees.
- Number of schools that have lactation rooms for students and employees.
- Number of employees who use the facilities.
- Satisfaction of employees with the facilities.
- Number and types of worksite and school policies that support breastfeeding at work or school.

For more information contact:
- Laura Duckett, PhD, MPH, RN, Lactation Friendly Workplace Evaluation, at ducke001@umn.edu, Associate Professor and Director of Research, School of Nursing, University of Minnesota.
- Mary B. Johnson, at (651) 281-9906, MDH WIC Breastfeeding Coordinator. If you are requesting copies of materials, please email your request with your name and complete mailing address to: mary.b.johnson@health.state.mn.us.

The following contacts have worked to establish breastfeeding support in their workplaces or communities, and have agreed to talk with others:
- Kim Ball, Washington County Public Health and Environment, at kim.ball@co.washington.mn.us.
- Jennifer M. Nelson, at Jennifer.m.nelson@westgroup.com, for information about establishing breastfeeding support in the workplace.
- Kahoru.C.Reinert@seagate.com, for information about how an organization developed breastfeeding support as a part of the Lactation Friendly Workplace Program.
- Oras Smith, RN, WIC Director, Leech Lake Band of Ojibwe, at llbowic@paulbunyan.net.

Special notes:
The New Mothers' Breastfeeding Promotion and Protection Act, soon to be introduced (possibly in 2003), would ensure breastfeeding is a protected activity under civil rights law, protecting women from being discriminated against in the workplace for pumping milk or breastfeeding. The bill will also provide a tax incentive for employers to set up a lactation location, purchase or rent lactation or lactation-related equipment, hire a lactation consultant, or otherwise promote a lactation-friendly environment. The bill will grant working women breast milk breaks of up to one hour per day for up to one year following the birth of a child. The bill will also ensure all breast pumps on the market are safe and effective. For an update on this legislation check the following website: http://www.house.gov/maloney/issues/womenchildren/children.html.

CATEGORY: Pregnancy and Birth

TOPIC: INFANT MORTALITY

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Promote *Back To Sleep* and other educational messages to reduce the risk of infant death and promote a safe infant sleep invironment.	✔	✔	✔	✔	✔		
Create and disseminate educational messages to promote the concept of no primary or secondary tobacco exposure, and no alcohol and other drug use during pregnancy or while parenting or care taking.	✔	✔	✔	✔	✔		

Minnesota continues to have a low infant death rate. In 1997 and 1998 there were 5.9 infant deaths for every 1,000 live births. In 1999 there were 6.2 deaths per 1,000 births. And, in 2000, the rate was 5.6 deaths per 1,000 births. This places us very close to the *Healthy People 2010* objective of five infant deaths per 1,000 live births. However, encouraging as these numbers may be, not all populations in Minnesota reflect this decline equally.

The disparities between these numbers and the infant mortality rates of American Indians and populations of color, for example, are alarming. Because of the small numbers of these populations of color in Minnesota, it is advisable to look at their infant mortality data in terms of five-year running averages. The state's African American and American Indian infant mortality rates were more than twice as high as those for any other racial or ethnic group. From 1994 to 1998 there were 13.7 infant deaths for every 1,000 births in the African American population and 15.2 infant deaths per 1,000 births in the American Indian population. The infant mortality rate for the same years was 7.5 among Asians and 5.6 for whites, for every 1,000 births. The strategies presented here are intended to guide and support efforts to lower Minnesota's rates of infant mortality. For related strategies, see the section on Eliminate Disparities and on Eliminate Barriers and Improve Access to Health Care in the *Service Delivery Systems* category, and the category on *Alcohol, Tobacco and Other Drugs.*

Strategy: Promote *Back To Sleep* and other educational messages to reduce the risk of infant death and promote a safe infant sleep environment.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
The purpose of this strategy is to reduce the risk of infant death due to sudden infant death syndrome (SIDS) and selected fatalities due to unintentional injury, e.g., mechanical suffocation, hypothermia, entrapment in furniture or bedding, etc. The first step is to promote an educational message aimed at all pregnant and parenting women and men; all infant caretakers, including extended family members and child care providers; all medical, nursing, and related personnel who provide services to pregnant and parenting women and men; as well as the general public.

For its *Back To Sleep* campaign, the American Academy of Pediatrics Task Force on Infant Positioning and SIDS recommends that healthy infants be placed on their backs for sleep (unless parents are advised otherwise by a physician). See "Additional resources" below for further information.

What parents can do to reduce the risk of SIDS:

- Place healthy babies on their backs to sleep.
- Use a firm, snugly fitting mattress in a safe crib with slats no more than 2 3/8 inches apart.

- Do not place the baby on a waterbed, sheepskin, or beanbag cushion.
- Remove all pillows, fluffy, soft bedding, and stuffed toys from the crib.
- Place crib away from curtain or blind cords.
- Make sure nothing can be pulled or fall down into the crib.
- Avoid overdressing the baby or overheating the baby's room.
- Do not allow smoking around the baby.

SIDS risk reduction before birth includes:
- Obtain early and regular prenatal care.
- No use of drugs, alcohol, or tobacco while pregnant.

Deaths in childcare settings:
According to research conducted in 11 states, Minnesota had the highest rate of SIDS deaths that occurred in childcare settings. For the period January, 1995-June, 1997, 40 percent of Minnesota's SIDS deaths occurred in a variety of childcare settings (Moon, 2000). All caregivers must be told about the *Back To Sleep* campaign. New research suggests that infants who normally sleep on their backs are 18 to 19 times more likely to succumb to SIDS the first time they are placed prone (on their stomachs) to sleep (Cote, 2000).

Bed sharing deaths:
Infant deaths related to unintentional injury and asphyxia from bed sharing is increasing in Minnesota. Partly this is due to better death scene investigation and diagnosis by medical examiners and coroners. It may also be due to an increasing number of families who are choosing to sleep with their babies. Families need to understand the risks of this practice, especially for the youngest infants. Some infants die of overlay by an adult or an older child. Others are entrapped in bedding or become wedged in furniture spaces not designed with infant safety in mind. If parents chose to sleep with their baby, there are some safety measures that can improve infant safety:
- Never sleep with your baby on a sofa, waterbed, recliner, or other soft furniture. Avoid overdressing the baby or overheating the baby's room.
- Do not sleep with your baby if you smoke.
- Do not allow toddlers or other children to sleep with your baby.
- Do not sleep with your baby if either parent is overly tired.
- Do not sleep with your baby if either parent is on medication that makes you drowsy or has been drinking or using drugs including marijuana.
- Make sure the mattress is firm and fits the headboard and footboard tightly with no spaces where an infant may crawl, roll, or fall.
- Do not push the bed against a wall. The baby could become wedged between the wall and the mattress.
- Do not sleep with your baby if you are obese.
- Parents' long hair should be tied up securely before sleeping with the baby.
- Do not use pillows or heavy blankets, comforters, or quilts.
- Do not allow the baby's face and head to be covered.
- Always lay the baby on his/her back to sleep.

Additional resources:
Bibliographic resources:
- American Academy of Pediatrics (AAP). [Task Force on Infant Sleep Position and Sudden Infant Death]. 2000. Changing

concepts of Sudden Infant Death Syndrome: Implications for infant sleeping environment and sleep position. *Pediatrics*.
- Cote, A., Gerez, T., et. al. 2000. Circumstances leading to a change to prone sleeping in Sudden Infant Death Syndrome victims. *Pediatrics*, 106:e86.
- Infant sleep position and Sudden Infant Death Syndrome (SIDS) in the United States: Joint commentary from the American Academy of Pediatrics and selected agencies of the federal government. 1994. *Pediatrics, 93*(5), 820.
- Moon, R., Patel, K., Shaefer, S. 2000. Sudden Infant Death Syndrome in child care settings. *Pediatrics*, 186:295-300.

Organizational resources:
- American Academy of Pediatrics (AAP) www.aap.org
- Association of SIDS and Infant Mortality Programs, 630 West Fayette Street, Room 5-684, Baltimore, MD 21201, (410) 706-5062. www.asip1.org
- National SIDS Resource Center, 2070 Chain Bridge Road, Suite 450, Vienna, VA 22181, (703) 821-8955. www.sidscenter.org

Evidence for strategy:
Back To Sleep is a research-tested infant positioning technique proven to reduce the risk of infant deaths. The characteristics of a safe-sleep environment are based on principles of safety and infant death investigations. They have not been tested under a research model because of ethical prohibitions. Nevertheless, reports from around the world indicate that SIDS rates decreased following public information campaigns aimed at reducing the incidence of prone infant sleeping.

Has this strategy been implemented in Minnesota?
Yes, led by the Minnesota Sudden Infant Death Center, individual health plans and public health nursing agencies have educated professional staff and the women and families they serve. We have no state data as yet to demonstrate how many families are aware of the positioning and safety messages. National data, obtained two years after the recommendation by the American Academy of Pediatrics was made, showed that prone infant sleeping in the U.S. had declined dramatically, from 70 to 21 percent. Simultaneously, U.S. SIDS rates and Minnesota rates have dropped by 40 percent. It must be noted, however, that disparities exist for minority communities. African American babies are still 2.4 times more likely than Caucasian babies to die of SIDS, and American Indian babies are 2.8 times more likely to die of SIDS.

In 2002, a new Minnesota law requires that all licensed child care providers have education on SIDS risk reduction. Curriculum developed by the MN SID Center is being presented and implemented statewide.

In 2003, Minnesota will have data from the Pregnancy Risk Assessment Monitoring Survey (PRAMS), that will provide information on how many families are using *Back To Sleep* and how many are bed sharing.

Indicators for this strategy:
- Numbers and kinds of messages and educational programs developed.
- Numbers and types of health professionals who use the messages and programs.

- Numbers of community residents who receive the messages and educational programs.
- Changes in knowledge and attitudes about positioning.
- Reduction in infant and SIDS mortality numbers.

For more information contact:

- Cheryl Fogarty, at (651) 281-9947, cheryl.fogarty@health.state.mn.us, MDH Infant Mortality Consultant.
- Kathleen Fernbach, at (612) 813-6285 or (800) 732-3812, Fax: (612) 813-7344, kathleen.fernbach@childrenshc.org, PHN, Director, Minnesota Sudden Infant Death Center, Children's Health Care, 2525 Chicago Avenue South, Minneapolis, MN 55404.

Strategy: Create and disseminate educational messages to promote the concept of no primary or secondary tobacco exposure, and no alcohol and other drug use during pregnancy or while parenting or care taking.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:

The purpose of this strategy is to educate the public about the use of alcohol, tobacco, and other drugs during pregnancy and while parenting and care taking. The intent is to reduce the risk of infant mortality due to SIDS and some forms of unintentional injury including irreversible effects of alcohol on the unborn child. A secondary benefit of equal significance is the reduction in the incidence of low birth weight, very low birth weight, and premature births. For related strategies, see the category, *Alcohol, Tobacco and Other Drugs*.

The educational message can be targeted at all pregnant women, parents, and family members; all infant care takers, including extended family members and child care providers; all medical, nursing, and related personnel who provide services to pregnant women and parents; as well as the general public. To reach their intended audience and have the greatest impact, messages used to promote these concepts must be developed according to social marketing techniques that involve the targeted audience.

Additional resources:

Bibliographic resources:

- American College of Obstetrics and Gynecology. *Smoking Cessation During Pregnancy.* Educational Bulletin, 4 page office protocol for clinicians to identify pregnant patients who smoke and provide effective treatment. Email resources@acog.org or call 800-762-2264 and request item # AT260.
- Minnesota Governor's Task Force on Fetal Alcohol Syndrome. (1998, February). *Suffer the Children: The Preventable Tragedy of Fetal Alcohol Syndrome.* [Copies can be obtained from Minnesota Planning. Contact: (612) 296-3985.]
- United States Public Health Service, Department of Health and Human Services. *Quick Reference Guide for Clinicians: Treating Tobacco Use and Dependence*. Available from AHRQ (800-358-9295), CDC (800-CDC-1311),

National Cancer Institute (800-4-CANCER).

Organizational resources:

- American Legacy Foundation and Great Start, a smoking cessation initiative for pregnant women (with the American Cancer Society and the RWJ Smoke-Free Families Foundation). Great Start Quitline: 1-866-66-START; Great Start materials: GSMaterials@americanlegacy.org
- Minnesota Organization on Fetal Alcohol Syndrome (MOFAS) Contact: (651) 917-2370.
- National Center for the Prevention of Perinatal Abuse of Alcohol and Other Drugs. Contact: (800) 354-8824.
- National Clearinghouse for Information About Alcohol and Other Drugs. Contact: (800) 729-6686.

Evidence for strategy:

The avoidance of alcohol, tobacco, and other drugs during pregnancy and while caring for infants is scientifically proven to improve general health as well as reduce infant and adult mortality. The strategy suggested to influence behavior has not been tested in Minnesota, but a smoking-cessation method tested with pregnant women on Medicaid in Alabama has demonstrated success.

Has this strategy been implemented in Minnesota?

Yes, in the past several years, there have been numerous radio and TV spots about the use of alcohol while pregnant. Some were developed nationally, some in Minnesota. There has not been a similar effort focusing on the use of tobacco and other drugs by pregnant women, nor have there been efforts targeted at parents, family members, or caretakers.

Indicators for this strategy:

- Numbers and types of messages developed.
- Ways messages are distributed.
- Numbers of the target audience reached by these messages.
- Changes in knowledge and attitudes as a result of the messages.
- Increase in the number of parents and caretakers avoiding alcohol, tobacco, and other drugs while pregnant or caring for infants.
- Identification of pregnant women, parents, and caretakers and their use of alcohol, tobacco, and other drugs while pregnant or caring for infants.

For more information contact:

Cheryl Fogarty, at (651) 281-9947, cheryl.fogarty@health.state.mn.us, MDH Infant Mortality Consultant.

CATEGORY: Pregnancy and Birth

TOPIC: WOMEN'S HEALTH

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Increase the number of health care providers with a focus on women=s health, including certified nurse midwives (CNMs), nurse practitioners (NPs) and public health nurses (PHNs).	✔	✔	✔	✔	✔		
Include fish consumption advisory information in prenatal and women=s health care.	✔	✔	✔				

Women's health issues cut across all 18 Minnesota Public Health Goals and encompass women across the lifespan. Health concerns for women include examining the physical, biological, psychological, and social changes that take place throughout their lives from a variety of health, cultural, and racial backgrounds and belief systems. Women's health is important to Minnesota. Women make up 51 percent of the population and head over 90,400 single-parent households. Forty-six (46) percent of Minnesota women are aged between 15 and 44, when health issues affect not only their health, but also that of their (potential) children. Over the course of their lifetimes, women experience a higher incidence of chronic and acute illness, with resulting greater disability, than do men. Women have a higher risk of developing arthritis, osteoporosis, heart disease, Alzheimer's disease, hip fractures, urinary incontinence, and other chronic disabilities.

It is difficult to summarize the state of the health of women in Minnesota. On most national indicators, Minnesotans, including women, fare well. However, the most recent data in the state on selected health risk indicators demonstrate a need for public health attention.

Women are beginning to smoke at younger ages, increasing their risks of developing smoking-related disease. In Minnesota, women aged 18 to 30 who smoke daily are more likely to say they are addicted to cigarettes than are those who smoke less often.

Alcohol and other drug use among women in Minnesota has received particular attention in recent years. The rate of frequent drinking among women of childbearing age (aged 18 to 44 years) exceeds the rate in most other states (CDC, 1995, Frequent alcohol consumption among women of childbearing age Behavioral Risk Factor Surveillance System, 1991, *Morbidity and Mortality Weekly Report, 43,* 328-329, 335). Female alcoholics have death rates 50 to 100 percent higher than those of male alcoholics. Furthermore, a greater percentage of female alcoholics die from suicides, alcohol-related accidents, circulatory disorders, and cirrhosis of the liver (U.S. Department of Health and Human Services, National Institute on Alcohol Abuse and Alcoholism, No. PH 290, 1990, October).

The strategies presented here are intended to enhance the health care of women in Minnesota. To have the greatest impact, they should be implemented in conjunction with the other strategies in this category. For related strategies, see those on Eliminating Disparities and Eliminating Barriers and Improving Access to Health Care in the *Service Delivery Systems* category, and on Alcohol and Other Drug Use and Tobacco in the *Alcohol, Tobacco and Other Drugs* category.

Strategy: Increase the number of health care providers with a focus on women's health, including certified nurse midwives (CNMs), nurse practitioners (NPs), and public health nurses (PHNs).

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Provider characteristics, such as knowledge, skill, and preparation, are of consequence in influencing health behaviors of women. In addition, service delivery characteristics, such as payment for service, service setting, and visit schedules, are among the crucial factors that influence health behavioral change. Although certain sub-populations of women face additional obstacles to receiving health behavior counseling and implementing behavioral changes, it is incumbent upon health providers, public health, and health systems to gather further knowledge and develop skills to be more effective. Aggressive steps must be taken to identify interventions that promote health and well being among groups of women who are more vulnerable to health-damaging behaviors, including adolescent, low-income, and minority women.

The purpose of this strategy is to increase the number of certified nurse-midwives, nurse practitioners (NPs), and public health nurses (PHNs) who can implement women-centered health promotion and disease prevention programs in the state. Another purpose for this strategy is to assure that each CHS agency will have CNMs, NPs, and PHNs as part of its Maternal and Child Health (MDC)/women's health team. For a related strategy, see the strategies on Eliminate Barriers and Improve Access to Health Care - Promote Access to Health Care in the *Service Delivery Systems* category. Ways to accomplish this strategy include:

- Support legislation that would make funds available to students pursuing the above specialties.
- Support a statewide initiative to recruit students from diverse backgrounds (e.g., cultural, ethnic, and geographic) to enroll in such educational programs.
- Support legislation to increase funds to provide distance learning to accommodate students across the state.
- Support policy (professional, within health plans and delivery systems), which enhances ability for above practitioners to practice in the state.

Additional resources:

- Baldwin, LM., Raine, T., Jenkins, LD., Hart, LG., and Rosenblatt R. 1994. Do providers adhere to ACOG standards? The case of prenatal care. *Obstetric Gynecology, 84,* 549-56.
- Garceau, L., Paine, L., and Barger, M. 1997. Population-based primary health care for women. *Journal of Nurse-Midwifery,* 42(6), 465-77.
- Minnesota Department of Health. 1999. *Women's Health Databook: A Minnesota Portrait.* [This book provides an overview of the health of Minnesota women based on data from 1995 to 1997. It offers information on the demographic and socioeconomic characteristics of the state's female population, and when possible, reveals trends in mortality, natality, and prevalence of risk behaviors, sexually transmitted infections, health services, and chronic health problems. For copies, contact: MDH Division of Family Health, P.O. Box 64882, St. Paul, MN 55164-0882, Phone: (651) 215-8960, Fax: (651) 215-8953.]
- Murphy, P. 1994. Primary care for women: Health assessment health promotion, and disease prevention services. *Journal of Nurse-Midwifery,* 39, 47-50.

Evidence for strategy:
Working on the assumption that women who engage in "healthy behaviors" (cradle to grave) also have better reproductive health (better birth outcomes) than women who do not, this strategy advocates that programs, policies, and practitioners who adhere to or support "best practices" (professional guidelines) will more positively influence healthy women and healthy pregnancies and families. A study conducted by Baldwin (1994) showed that urban and rural obstetricians, urban and rural family physicians, and urban Certified Nurse-Midwives (CNMs), all adhered closely to guidelines provided by the American Academy of Pediatrics and the American College of Obstetricians and Gynecologists (ACOG). The CNMs adhered to the ACOG guidelines to the greatest degree, lending support to the results of at least two other studies demonstrating greater compliance of mid-level practitioners (i.e., Certified Nurse Midwives, Nurse Practitioners, Physician Assistants) to practice guidelines. Birth outcomes with nurse-midwives were also measured as being equal to or better than physician outcomes in a matched population. Health promotion and disease prevention messages were documented as being included in annual well-women and family planning visits, as well as prenatal care services, at a greater rate than with physicians.

Has this strategy been implemented in Minnesota?
Yes, Minnesota does have baccalaureate and master's educational programs in nursing and advanced nursing practice (nurse-midwives and nurse practitioners). There is only one graduate women's health nurse practitioner program, and it is in the University of Minnesota's School of Nursing. Minnesota Planned Parenthood has a women's health nurse practitioner educational program which will be offered at the master's level by the year 2004.

The Collaborative Rural Nurse Practitioner Project, funded by Robert Wood Johnson, is a coordinated effort among nurse practitioner educational programs in the state to increase the number of practitioners in rural Minnesota. There is no system in place to evaluate the effect this project has on health promotion and disease prevention messages.

Indicators for this strategy:
- < Client survey detailing what healthy behaviors (i.e., immunizations, seat belt usage) were addressed in a visit.
- < Provider survey, chart audit, or both documenting whether health promotion, teaching, safety checks, and nutrition counseling were included in the visit.
- < Establishment of standardized clinical guidelines.
- < Degree of adherence to guidelines.
- < Natality data.
- < Outcomes of recruitment efforts.
- < Student enrollment, completion of degree, and site of practice data (including identifying those practicing in underserved geographical areas and underserved populations).
- < Number of health plan policies, which integrate prenatal care and women's health, implementation of guidelines for practice in prenatal care and women's health, community outreach, and health promotion activities.

For more information contact:
MaryJo Borden, MDH, Women's Health Consultant, at (651) 284-0601.

Strategy: Include fish consumption advisory information in prenatal care.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Women of childbearing age and pregnant women represent a high-risk group for methyl mercury exposure, an environmental contaminant found in fish. Several well-documented human exposure episodes have proven that mercury is a very effective neurotoxin. Mercury has dose related effects that range from an alteration in the ability of nerves to conduct impulses to changes the way nerve cells divide and differentiate. This makes mercury particularly dangerous to developing nervous systems of fetuses and young children.

Adding to the concerns regarding the safety of eating fish containing methyl mercury are the results from a recently released CDC-NHANES report that indicated that 10 percent of their sample of women between 16 and 49 years of age had been exposed to levels of methyl mercury that are close to those which have observable adverse effects. Using this information and the number of births registered in the U.S in 1998, the U.S. EPA has estimated that as many as 400,000 newborns per year are at risk of elevated methyl mercury exposure. A report recently released by the American Academy of Pediatrics included the following statement: "the developing fetus and young children are thought to be disproportionately affected by mercury exposure, because many aspects of development, particularly brain maturation, can be disturbed by the presence of mercury. Minimizing mercury exposure is, therefore, essential to optimal child health". It is important to get the word out to pregnant women and women planning to become pregnant. This can best be done in two ways:

< Work with health care systems to incorporate fish consumption advisory information into their standard protocol for prenatal and women's health care.
< Form a partnership with providers to print and distribute fish consumption advisory educational materials to pregnant women and women of childbearing ages.

Additional resources:
Bibliographic resources:

< American Academy of Pediatrics Technical Report.(2001. *Mercury in the Environment: Implications for Pediatricians*.
< Centers for Disease Control and Prevention. 2001. *National Report on Human Exposure to Environmental Chemicals*.
< Minnesota Department of Health. *An Expectant Mother's Guide to Eating Minnesota Fish. What You Should Know If You Are Pregnant, Planning to be Pregnant ,or Nursing a Baby.* (MDH IC# 141-0709 English version, MDH IC# 141-0059 Spanish version).
< Minnesota Department of Health. *Eat Fish Often? A Minnesota Guide to Eating Fish.* (MDH IC# 141-0378).
< National Research Council (2000). *Toxicological Effects of Methyl Mercury*, National Academy Press, Washington, D.C.

Organizational resources:

- Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Fish Consumption Advice".
- Minnesota Department of Health. Web Page at: http://www.health.state.mn.us/divs/eh/fish/index.html.

Evidence for strategy:
Research, as described above, has conclusively documented the dangers of exposure to methyl mercury by pregnant women. Furthermore, research on providing information to people about issues that affect their health has been shown to increase knowledge and change attitudes. The effectiveness of including fish consumption advisory information in prenatal care has, however, not been empirically studied or field-tested.

Has this strategy been implemented in Minnesota?
Yes, awareness and educational materials are distributed by the MDH and by some clinics. Currently, in Minnesota, there is no coordinated effort or standard within the health care system for inclusion of fish consumption advisory information in prenatal care.

Indicators for this strategy:

- Increase in the number of expectant mother's guides distributed.
- Increase in the number of health care facilities in the MDH fish consumption advisory distributor database.
- Agreement by health care providers to incorporate fish advisory information into standard prenatal care procedures.
- Number of physicians and nurse midwives who incorporate fish advisory information into standard prenatal care procedures.

For more information contact:
Pat McCann, (651) 215-0923, patricia.mccann@health.state.mn.us, MDH Health Risk Assessment Unit, Division of Environmental Health.

Category:

SERVICE DELIVERY SYSTEMS

The strategies presented in this category can be used to help achieve the following public health improvement goals from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 8: Improve the outcomes of medical emergencies.

GOAL 15: Assure access to and improve the quality of health services.

GOAL 16: Ensure an effective state and local government public health system.

GOAL 17: Eliminate the disparities in health outcomes and the health profile of populations of color.

CATEGORY: SERVICE DELIVERY SYSTEMS

Minnesota-specific studies show that one of every 11 Minnesotans lacks health care coverage. Approximately one-fifth of those uninsured individuals are children. The inability to pay for health care services is often the most substantial barrier to getting needed medical treatment for the uninsured.

When uninsured individuals seek medical care, it is often for costly intensive treatment necessitated by the absence of routine and preventive services. These more intensive health care services create a greater health risk to individuals and a greater financial burden to both individuals and the health care system. The high-cost services received by uninsured individuals often exceed their financial resources, and the costs get transferred to the health care system, which does not receive compensation for them. Shifting the costs of treating the uninsured to the health care system results in increased provider charges, higher insurance premiums, and higher taxes.

In recent years, the debate over access to health care has often focused on the availability of affordable health insurance, but many other factors inhibit access to quality health care. Lack of cultural competence on the part of providers, inability to understand the health care system, lack of transportation and childcare, ineffective outreach strategies, discrimination, and lack of comparative information about available health care services can all stand as obstacles to getting quality health care.

It is important to ensure that all individuals have adequate health insurance coverage and that inability to pay for services is no longer a barrier to good health. It is equally important to eliminate or minimize other barriers to receiving quality health care. For instance, often un- or under-employment or self-employment means that individuals and their families are unable to obtain affordable health insurance. Policies that address the link between insurance and employment can provide affordable alternatives for those not employed by large private or public organizations. Also, working with communities to improve their social conditions that affect their health, such as access to healthy affordable food, safe places to play and exercise, increasing social cohesion, and promoting educational opportunities, can help people live healthier lives with less illness and disease.

Strategies in this category contribute to achieving these ends by: developing mechanisms to ensure that individuals have a practical ability to maintain their own health but utilize the health care system as necessary; increasing the health care system's capacity to appropriately address the needs of Minnesota's increasingly racially and ethnically diverse population; ensuring an adequate rural health care infrastructure to meet the health care needs of rural Minnesota; and providing more comparative information on the health care system to support consumer choice and system accountability.

CATEGORY: Service Delivery Systems

TOPIC: ELIMINATE BARRIERS AND IMPROVE ACCESS TO HEALTH CARE – CHILDREN AND ADOLESCENTS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Establish mutual child health goals through community collaboration.	✔	✔	✔	✔	✔		
Use and promote standard guidelines, recommendations, or both for child and adolescent preventive services.	✔	✔	✔	✔			
Decrease provider barriers to providing health screening for children.	✔	✔	✔	✔	✔		
Increase access to health screening for children.	✔	✔	✔	✔	✔	✔	
Increase access to adolescent-specific health services.	✔	✔	✔	✔	✔		
Improve effectiveness of adolescent-specific health services.	✔	✔	✔	✔			
Increase funding for adolescent-specific health services and improve reimbursement for adolescent sensitive services.	✔	✔	✔	✔		✔	

Children and adolescents are Minnesota's greatest resource. Assuring optimal health for all children, adolescents and their families is a major goal for those interested in maintaining and improving the public's health. According to the 2000 census, almost 30 percent of Minnesota's population is 19 years or younger, and many of them still have no coverage for their health care.

For those who do, the system is often fragmented, complicated to negotiate and focused on treating conditions. Increasing the coordination in communities of child-serving systems, developing a stronger focus on prevention, and increasing access to screening and early interventions for children will help to create a more family-friendly, seamless service delivery system.

Adolescents have unique health needs yet they are underserved in the health care system. They have fewer physician visits per year than almost any other age group. One reason is the lack of access to adolescent-focused health services. Increasing the number of adolescent-focused health services located in areas easily accessible and acceptable to adolescents can help to increase adolescent use of health services. Another reason is that traditional health services do not fit the needs of adolescents. Traditional health services are oriented primarily toward the treatment of physical disease and are designed to be reactive rather than preventive. Adolescent health needs are primarily social and behavioral in nature, issues that are more effectively addressed through preventive health services.

The strategies presented here focus on eliminating barriers and improving access to health care for both children and adolescents. See the sections on "Promote Access to Health Care" and "Health Care Coverage" in this category, and the section on "Parenting and Youth Development" in the category, *Child and Adolescent Growth and Development* for related strategies.

Strategy: Establish mutual child health goals through community collaboration.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary			

Background:
Early identification and prevention require efforts that extend beyond one setting. As Wallace (1994) notes, "Looking at the community as a system helps provide insights into community organization for change. The political, economic, health, education, religious, communications, recreational, and social welfare sectors, and voluntary grass root and other community groups compose the forces that influence the community as a whole and the individuals in the community." (*Maternal and Child Health Practices*, p. 91). Collaborative efforts between local and state health and human services providers, private health care providers and clinics, HMOs, schools, child care centers, and other important community groups can promote and increase early identification and prevention services as follows:

- Form community and interagency collaboratives that focus on children. In community collaboratives such as the Children's Mental Health and Family Services collaboratives, children's issues can be discussed, and regular communication and planning by all important community members can influence the community as a whole. Information obtained can be shared with all agencies and community members.
- Promote mutual goals. Children can benefit from consistent messages from a variety of health and community providers. These consistent messages help to create seamless systems that decrease barriers for children and their families. Other barriers to achieving these seamless systems need to be explored, addressed, and engaged. Collaboratives and coalitions can create a group mission including beliefs about the importance of early identification and preventive health services for children.
- Promote and encourage interagency teams and projects. Interagency projects that are generated from collaboratives (e.g., community resource networks) link providers and establish a central clearinghouse of information that can facilitate provider and community linkages. These projects and networks help to connect families to appropriate services in an efficient and timely manner. Collaboratives also can encourage the interagency coordination of services, including WIC (Women, Infants, and Children), Child and Teen Checkups, Head Start, ECSE (Early Childhood Special Education), ECFE (Early Childhood Family Education), and others. This interagency coordination can facilitate seamless systems of services for children and families and prevent the duplication of services.

Additional resources:

Bibliographic resources:

- Green, M. 2000. *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health. On-line: www.brightfutures.com
- Kang, R., October 1995. Building community capacity for health promotion: A challenge for public health nurses. *Public Health Nurses.* 12(5):312-318.
- National Commission on Children. 1991. *Beyond Rhetoric: A New American Agenda for Children and Families.* Washington, DC: U.S. Government Printing Office.
- Solloway, MR., and Budetti, PP. 1995. *Child Health Supervision: Analytical Studies in Financing, Delivery, and Cost-effectiveness of Preventive and Health Promotion Services for Infants, Children, and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health.
- Wallace, HM., Nelson, RP. and Sweeny, PJ. 1994. *Maternal and Child Health Practices* (4th ed.). Oakland, CA: Third Party Publishing.

Organizational resources:

- Cover All Kids Coalition 2002. Members of this public-private coalition work to promote health care coverage and preventive care for Minnesota children. Members work together to

increase awareness of health care coverage options for children, find new ways to reduce health disparities, and make it easier for parents to get preventive care for their children. (866) 489-4899, www.coverallkids.org

- Datanet is an online information system consisting of summarized statistical information serving Minnesota's governments, businesses, schools, nonprofit agencies and citizens. The system contains statistics about social, economic and demographic conditions in Minnesota. www.mnplan.state.mn.us/datanetweb

Evidence for strategy:
Research supports the concept that the communities' social and physical environments can act as either a climate for growth or a set of barriers. Communities that work together to make change have been found to increase knowledge of resources and empower individuals to improve health choices.

Has this strategy been implemented in Minnesota?
Yes, many communities have begun the process of creating collaboratives and coalitions with support from the agencies that make up the Minnesota Children's Cabinet: the Departments of Children, Families, and Learning; Health; Human Services; Economic Security; Corrections; Transportation; Finance; Public Safety; and Administration, as well as the Housing Finance Agency and Minnesota Planning.

Indicators for this strategy:

- Percentage of communities with a family service collaborative in place.
- Percentage of families knowledgeable about community resources and programs needed by their child and family members.
- Percentage of families using community resources and programs needed by their child and family members.
- Number and rate of incidents of substantiated child maltreatment.

For more information contact:
Nicole Brown, at (651) 215-8960, nicole.brown@health.state.mn.us, MDH Child Health Consultant, Maternal and Child Health Section.

Strategy: Use and promote standard guidelines, recommendations, or both for child and adolescent preventive services.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary			

Background:
The benefits of incorporating prevention and early intervention into health care practice have become increasingly apparent, as previously common and debilitating conditions have declined in incidence and severity. The American Association of Pediatrics advises that early identification of health problems in children leads to effective therapy of conditions for which definitive treatment is available. However, even in those instances in which the condition cannot be fully reversed, early intervention improves children's outcomes and enables families to develop the

strategies and obtain the resources for successful family functioning. Early intervention can be accomplished by advocating and using a system of care, which follows child- and youth-specific standards and guidelines. These standards have been created with the expertise and informed opinions of a large number of health professionals and consumers, based on their review of the literature and extensive dialogue. This strategy can be achieved in the following ways:

- Provide education for health service providers on following standard care recommendations for preventive services. Education for all private and public health providers should include recommendations from established guidelines such as *Bright Futures* and/or the *Guidelines for Adolescent Preventive Services* (GAPS). These standards seek to identify problems early and to improve children's health outcomes. They also go beyond treating disease to a comprehensive approach that actively promotes health and prevents disease before it occurs. Education should occur in formal educational settings (i.e., universities), as well as in workshops and continuing education presentations sponsored by professional organizations or community health agencies.
- Increase the number of Medicaid-enrolled children and adolescents who receive the benefit of Child and Teen Checkups. Child and Teen Checkups provide a means of prevention, timely detection, and treatment of health problems of a higher-risk population. Further education on the components and benefits of Child and Teen Checkups should be furnished for providers, clinics, health plans, and all agencies and staff who work with children. Current preventive health care recommendations, as well as identification of, and suggestions for, overcoming barriers to care should be discussed. Also, objective feedback to providers from health plans and the Minnesota Department of Human Services about how they're doing may increase the appropriate use of this program.
- Increase educational opportunities for families, agencies, and staff who work with children. Outreach to families and explanation of the benefits of routine preventive pediatric health care and services must be increased. Use of such program materials as *Putting Prevention into Practice - Child Health Guide* is a way for parents to track and prompt preventive care. Patient education through pamphlets and workshops sponsored by community health agencies and health plans in clinics and other community settings will increase understanding. Community-based educational initiatives to expand current popular knowledge about the importance of preventive health care services, current recommendations on prevention, and the different types of providers and ways to access them in each community should be enhanced.

Additional resources:

Bibliographic resources:

- American Academy of Pediatrics. March 2000. Recommendations for Preventive Pediatric Health Care. *PEDIATRICS* Vol. 105 No. 3, pp. 645-646 http://www.aap.org/policy/re9939.html

- American Medical Association. 1992. *Guidelines For Adolescent Preventive Services (GAPS).* Baltimore, MD: Williams and Wilkins. (312) 464-5000, www.ama-assn.org/ama/pub/category/1980.html
- Green, M. 2000. *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health. www.brightfutures.org
- Keller. 1983. Study of selected outcomes of the Early and Periodic Screening Diagnosis, and Treatment Program in Michigan. *Public Health Reports,* 98, 110.
- Minnesota Health Improvement Partnership. 2001. *Adolescent Preventive Health Services: Opportunities for Improvement*. Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".
- Solloway, MR., and Budetti, PP. 1995. *Child Health Supervision: Analytical Studies in Financing, Delivery, and Cost-effectiveness of Preventive and Health Promotion Services for Infants, Children, and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health.
- U.S. Department of Health and Human Services, Public Health Service. 1997) *Putting Prevention Into Practice-Child Health Guide.* Rockville, MD: Author. A program to increase the appropriate use of clinical preventive services, such as screening tests, immunizations, and counseling, based on U.S. Preventive Services Task Force recommendations. http://www.ahcpr.gov/clinic/ppipix.htm
- United States Preventative Service Task Force. 1996. *Guide to Clinical Preventive Services; Report of the U.S. Preventive Services Task Force*, 2nd Edition, Baltimore: Williams and Wilkins. http://www.ahcpr.gov/clinic/cpsix.htm
- Wallace, HM., Nelson, RP. and Sweeny, PJ. 1994. *Maternal and Child Health Practices* (4th ed.). Oakland, CA: Third Party Publishing.

Organizational resources:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools, guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Services".
- Cover All Kids Coalition 2002. Members of this public-private coalition work to promote health care coverage and preventive care for Minnesota children. Members work together to increase awareness of health care coverage options for children, find new ways to reduce health disparities, and make it easier for parents to get preventive care for their children. The Clinical Guidelines Committee of the Cover All Kids Coalition (which is comprised of physicians, nurses, and staff from health plans, MDH and DHS) are working to identify, clarify and communicate clinical guidelines information on the preventive care of

children. (866) 489-4899, www.coverallkids.org.
- Minnesota Department of Human Services. Child and Teen Checkups (C&TC) Program. http://www.dhs.state.mn.us/HlthCare/ctc/default.htm

Evidence for strategy:
Research shows that comprehensive preventive health care is beneficial and relatively inexpensive. Studies of Early and Periodic Screening, Diagnosis, and Treatment (EPSDT) programs in Michigan, North Dakota, Virginia, and Pennsylvania have documented effectiveness of preventive care in improving children's health status and lowering their medical costs. [Keller, 1983]

Has this strategy been implemented in Minnesota?
Yes, a variety of programs and organizations (e.g., Child and Teen Checkups, Cover all Kids Coalition) are working to encourage the use of standard guidelines and/or recommendations to promote preventive services.

Currently, the MDH, the Minnesota Department of Human Services, and health plans have representatives training providers to screen children using the Child and Teen Checkup guidelines throughout the state. In some counties, Child and Teen Checkup coordinators and health plans sponsor provider training in the private and public health settings.

Health Plans, working through the Metro Action Group (MAG), work with clinics to improve processes such as charting, billing and improving access of adolescents and disparate groups to preventive health services.

Indicators for this strategy:
- Percentage of children on Medical Assistance who receive Child and Teen Checkups according to the recommended schedule.
- Percentage of children who receive regular, comprehensive preventive health visits.

For more information contact:
Nicole Brown, at (651) 215-8960, nicole.brown@health.state.mn.us, MDH Child Health Consultant, Maternal and Child Health Section.

Strategy: Decrease provider barriers to providing health screening for children.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
The usefulness of preventive and early identification screening and services ultimately depends on health care provider participation. Ways to decrease barriers for providers include:
- Utilize educational seminars, technical assistance, and other dissemination techniques to improve health care provider information and participation. Educational workshops on reimbursement and billing issues, referral and community resources,

components of screening, state rules, and forms provided by state and community health agencies and health plans will decrease provider barriers.

- Increase the caliber and number of staff and decrease turnover of staff that work with children. Staff of programs and agencies that work with children are often among the lowest-paid and least-recognized professionals in the U.S. Staff (e.g., child care providers, early childhood and school teachers, school nurses, and child welfare staff) are often responsible for first identifying children's needs and making referrals. Increasing the caliber of staff and decreasing turnover in these agencies and programs through improved training and working conditions will strengthen early identification and prevention efforts. Training, provided by community health agencies and others, through continuing education workshops on the identification of children who need screening is one way to raise the caliber of staff. Also, increasing support for school nursing and advocacy for following recommended staffing levels will expand children's services greatly. Promoting the importance of staff who work with children is a necessary first step toward increasing their pay and working conditions.

Additional resources:

Bibliographic resources:

- Dggan, AK., Starfield, B., and DeAngelis, C.(1990. Structured encounter form: The impact on provider performance and recording of well-child care. *Pediatrics,* 85, 104-113.
- Green, M. 2000. *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health. www.brightfutures.org
- Minnesota Health Improvement Partnership. 2001. *Adolescent Preventive Health Services: Opportunities for Improvement*. Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".
- National Commission on Children. 1991. *Beyond Rhetoric: A New American Agenda for Children and Families.* Washington, DC: U.S. Government Printing Office.
- Solloway, MR., and Budetti, PP. 1995. *Child Health Supervision: Analytical Studies in Financing, Delivery, and Cost-effectiveness of Preventive and Health Promotion Services for Infants, Children, and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health.
- U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services* (2nd ed.). Baltimore, MD: Williams & Wilkins. http://www.ahcpr.gov/clinic/cpsix.htm
- Wallace, HM., Nelson, RP. and Sweeny, PJ. 1994. *Maternal and Child Health Practices* (4th ed.). Oakland, CA: Third Party Publishing.

Organizational resources:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools,

guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Services".

- Cover All Kids Coalition 2002. Members of this public-private coalition work to promote health care coverage and preventive care for Minnesota children. Members work together to increase awareness of health care coverage options for children, find new ways to reduce health disparities, and make it easier for parents to get preventive care for their children. (866) 489-4899, www.coverallkids.org
- Minnesota Department of Human Services. Child and Teen Checkups (C&TC) Program. Includes C&TC Documentation Forms for Providers and Clinics. http://www.dhs.state.mn.us/HlthCare/ctc/default.htm

Evidence for strategy:
Research indicates that decreasing barriers for providers through continuing education and providing structured preventive health documentation forms increase provider knowledge and participation [Duggan, et al., 1990]. Additional research supports the benefits of early identification and prevention services for children.

Has this strategy been implemented in Minnesota?
Yes, currently the MDH, the Minnesota Department of Human Services, and county Child and Teen Checkup coordinators provide training for health care providers on billing issues and components of screening, as well as information on decreasing barriers. The Minnesota Departments of Health and Human Services have also created provider documentation forms available for preventive well-child visits.

Health Plans, working through the Metro Action Group (MAG), work with clinics to improve processes such as charting, billing and improving access of adolescents and disparate groups to preventive health services.

In addition, a variety of programs and organizations (e.g., Child and Teen Checkups, Cover all Kids Coalition) are working to decrease provider barriers to providing preventive health screening to children.

Indicators for this strategy:

- Percentage of children who are immunized on an appropriate schedule.
- Percentage of children who receive regular, comprehensive preventive health visits.
- Percentage of children participating in early childhood care and education who do not require special education services in kindergarten or the first grade.
- Percentage of children with vision and hearing problems at the time of entry into kindergarten.

For more information contact:
Nicole Brown, at (651) 215-8960, nicole.brown@health.state.mn.us, MDH Child Health Consultant, Maternal and Child Health Section.

Strategy: Increase access to health screening for children.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary			

Background:
Several key activities can be implemented to help increase access to health screening for children. For related strategies, see the sections on Promote Access to Health Care, and Health Care Coverage in this category. Activities to increase access to health screening for children are described here:

- Provide outreach to eligible families to receive Medicaid. Currently, many children have limited access to care because they are uninsured. Outreach to increase services to children eligible for Medicaid is possible through joint efforts. Medicaid and public health agencies can use their public health infrastructures (i.e., access to schools, Head Start programs, and WIC) to coordinate Medicaid eligibility and enrollment with other services for children. They can also increase outreach to families by placing eligibility workers at different sites (out-stationing) such as clinics, hospitals, or WIC, or by providing transportation to welfare offices
- Increase insurance for children through employer-based plans. Family insurance through employer-based plans remains a primary vehicle through which many children receive health coverage. Barriers to employers providing benefits for dependants need to be explored, and expansion of employer-sponsored health coverage for children must be strongly advocated by the state, community, and each individual employer. Increasing awareness through community campaigns and dialog is a first step for community and state health agencies in understanding the barriers.
- Decrease barriers to health care. Children who do have insurance through private or Medicaid services continue to face other barriers to receiving preventive health care and early identification of health problems. Transportation, childcare issues, and the inability of a parent to take off work are health care barriers, which families confront. Promoting school-based health centers will decrease some of these concerns for school-aged children.
- Increase the use of recall systems to notify parents and children of upcoming screenings. Once children are incorporated into a primary health care system, a recall system to notify parents and children of their recommended upcoming health screening will increase numbers of children screened.

Additional resources:
Bibliographic resources:

- Green, M. 2000. *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health. www.brightfutures.org.
- National Commission on Children. 1991. *Beyond Rhetoric: A New American Agenda for Children and Families.* Washington, DC: U.S. Government Printing Office.

- Solloway, MR., and Budetti, PP. 1995. *Child Health Supervision: Analytical Studies in Financing, Delivery, and Cost-effectiveness of Preventive and Health Promotion Services for Infants, Children, and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health.
- U.S. Preventive Services Task Force. *Guide to Clinical Preventive Services* (2nd ed.). Baltimore, MD: Williams & Wilkins. http://www.ahcpr.gov/clinic/cpsix.htm
- Wallace, HM., Nelson, RP. and Sweeny, PJ. 1994. *Maternal and Child Health Practices* (4th ed.). Oakland, CA: Third Party Publishing.

Organizational resources:

- Cover All Kids Coalition. Members of this public-private coalition work to promote health care coverage and preventive care for Minnesota children. Members work together to increase awareness of health care coverage options for children, find new ways to reduce health disparities, and make it easier for parents to get preventive care for their children. (866) 489-4899, www.coverallkids.org
- Minnesota Department of Human Services. Child and Teen Checkups (C&TC) Program. Includes C&TC Documentation Forms for Providers and Clinics. http://www.dhs.state.mn.us/HlthCare/ctc/default.htm

Evidence for strategy:
Increasing access to care for children and families will increase health status. Research shows that children who receive Medicaid insurance are more likely than children with no insurance to have a regular source of medical care, visit physicians and dentists more frequently, and receive routine preventive care.

Has this strategy been implemented in Minnesota?
Yes, currently some counties provide out-stationing to increase the numbers of eligible families participating in Medical Assistance programs. Also, there are many school-based health care centers in middle and high schools, which decrease barriers for families. The Child and Teen Checkup program uses a reminder database to generate letters about upcoming screening to all eligible children on Medical Assistance.

Indicators for this strategy:

- Percentage of children and families covered by health insurance.
- Percentage of children who are immunized on the appropriate schedule.
- Percentage of school districts, which have a school-based clinic.
- Percentage of children who receive regular, comprehensive preventive health visits.
- Percentage of families whose transportation needs are met.
- Percentage of workplaces with family-friendly policies.

For more information contact:
Nicole Brown, at (651) 215-8960, nicole.brown@health.state.mn.us, MDH Child Health Consultant, Maternal and Child Health Section.

Strategy: Increase access to adolescent-specific health services.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary			

Background:
Adolescents are underserved in the health care system. They have fewer physician visits per year than almost any other age group. One reason for this is the lack of access to adolescent-focused health services. Increasing the number of adolescent-specific health services that are located in areas easily accessible and acceptable to adolescents can help to increase adolescent use of health services. For related strategies, see the section on "Parenting and Youth" in the *Child and Adolescent Growth and Development* category. Increasing access to adolescent-specific health services can be accomplished by working in one or more of the following four areas:

- Increase the awareness of adolescents and their parents of adolescent-specific health services. This is important because it can help to increase community support for, and utilization of, adolescent-specific health services. This can be achieved by working with health plans, CHS agencies, schools, etc., to get the word out about available adolescent-specific health services and their benefits for teens.
- Develop support for increased utilization of school nurses within local community schools. School nurses provide a valuable set of services to adolescents within the school setting. These services play an important role in connecting teens to needed health care. *Healthy People 2010*, a set of health objectives for the Nation, include an objective to increase the proportion of the Nation's elementary, middle, junior high, and senior high schools that have a nurse-to-student ratio of at least 1:750. In 1994, the ratio of school nurses to students was 1:1650 [University of Colorado Health Services Center, September 1994]. Increasing the number of nurses available to provide health services to students will improve access to health services for teens.
- Develop support for school-based or linked clinics. School-based health centers operate in or near schools to bring primary health care services to students who have difficulty accessing the established health care system in the community. These primary health care services include health assessment and screening, treatment of minor acute illness, counseling and health promotion, and management of stable chronic conditions. Locating clinics in or near schools reduces barriers to health services for youth. Developing support for school-based/school-located clinics requires work at the state level (to increase the demand and support for school-based/school-located clinics and to increase funding) and at the community level (to build community support for locating clinics in or near local schools).
- Develop support for adolescent health services in places frequented by high-risk youth (e.g., juvenile correction settings, drop-in centers for homeless youth, etc.). High-risk youth often have

the most significant barriers to needed health services. Locating adolescent-specific services in locations that already serve high-risk youth increases access to health care.

Additional resources:

Bibliographic resources:

- Aughey, D., and Myhre, E. 1997, February. Challenges in adolescent health: Who cares, why care, managed care. *Minnesota Physician*, 16-17, 34.
- *The future of children: School linked services*. 1992, Spring. Center for the Future of Children (the David and Lucile Packard Foundation, 2(1).
- Minnesota Health Improvement Partnership: Adolescent Health Services Action Team. 2001 *Adolescent Preventive Health Services: Opportunities for Improvement.* Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".
- School Health Policy Initiative. *Ingredients for Success: Comprehensive School-based Health Center., A Report on the 1993 National Workgroup Meeting* [Brochure]. [Available through the School Health Policy Initiative, Montefiore Medical Center, 111 East 210th Street, Bronx, NY 10467-2490).]
- USDHHS. *Healthy People 2010: Understanding and Improving Health.* 2nd ed. Washington, DC: U.S. Government Printing Office, November 2000. http://www.health.gov/healthypeople/
- University of Colorado Health Services Center, *A Closer Look: A Preliminary Report of Some of the Findings from the National Survey of School Nurses and School Nurse Supervisors*, September 1994.

Organizational resource:

- Minnesota Adolescent Health Care Coalition, an informal collaboration of more than 40 members representing health care providers, health plans, health associations, government, public health, hospitals, foundations, non-profit agencies, and educational organizations. The mission of the Coalition is to improve the health status of adolescents by influencing the health care system in order to better meet the unique needs of adolescents and their families. For more information, contact the Maternal/Child Health Section of the Minnesota Department of Health at 651-215-8960.
- Minnesota Department of Health. Adolescent Health Web Page. The site provides quick and easy access to current information and resources about teen health. For more information se the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Services".
- Minnesota Department of Human Services. Child and Teen Checkups (C&TC) Program. Includes C&TC Documentation Forms for Providers and Clinics. http://www.dhs.state.mn.us/HlthCare/ctc/default.htm

Evidence for strategy:

Studies show that access to school-based primary health care for teens is associated with increased use of services, decreased use of emergency rooms, and decreased hospitalizations.

Has this strategy been implemented in Minnesota?
Yes, there are a number of school-based/school-linked adolescent health clinics in Minnesota; in the Minneapolis and St. Paul public school systems, for example, there are clinics in the elementary, middle, and senior high schools.

Indicators for this strategy:
- Number of school-based/school-located clinics in the community.
- Utilization rates and demographics of the clinics.
- Ratio of school nurses to students in a school.
- Number of clinics in places frequented by high-risk youth.
- Level of awareness of, and support for, school-based/school-located clinics among adolescents and parents.

For more information contact:
Sarah Nafstad, at 651-281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Improve effectiveness of adolescent-specific health services.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔		
Tertiary			

Background:
Adolescents are underserved in the health care system. They have fewer physician visits per year than almost any other age group. This is due in part to traditional health services not fitting the needs of adolescents. Traditional health services are oriented primarily toward the treatment of physical disease and are designed to be reactive rather than preventive. Adolescent health needs are primarily social and behavioral in nature, issues that are more effectively addressed through preventive health services. The focus and content of adolescent health services need to be adapted to better meet the unique health needs of adolescents. Steps in implementing this strategy include:
- Develop an increased focus on healthy youth development in all health programs and policies (see the strategies on Parenting and Youth Development in the category, *Child and Adolescent Growth and Development*). Our current health care system is traditionally focused on health problems (primarily diagnoses and treatment of health problems and to a certain extent, prevention of health problems). The piece that is missing in youth health is a focus on promotion of healthy development, in addition to prevention of risk behaviors and health problems. This change in focus requires a culture change in our health care system. This involves education of those who work in these areas regarding healthy youth development and the discussion of ways in which this perspective can be infused into the current system.
- Promote the use of recognized adolescent health standards as the norm when providing health services to adolescents. Examples of these standards are the *Guidelines for Adolescent Preventive Services [GAPS]*, *Bright Futures, and Child and Teen Checkup*

Guidelines. These sets of guidelines have been developed by a broad range of adolescent health experts and are widely accepted by the health care system. Yet they have not been routinely implemented in current health systems and services. It is important to increase the acceptance and implementation of these standards as the norm for providing adolescent health services.

- Work with health professional training systems to improve adolescent health training curricula. Many health providers lack the knowledge, skills, and comfort to provide effective adolescent health services. This strategy focuses on increasing and improving training for health providers through front-end academic training (at universities, colleges, VoTechs, etc.) and through continuing educational training (through professional organizations, public health, etc.).
- Forge links between adolescent health, mental health, social services, and educational systems to improve integration of services for teens. Due to the psychosocial and behavioral nature of adolescent health problems, mental health and social services are an essential component of effective adolescent health services. Yet there is a wide gap between coordination and integration of physical health, mental health, and social services for teens. It is important to increase the coordination and integration of these systems.
- Involve adolescents in the design of health services. Youth input is essential in designing effective health services for teens.

Additional resources:

Bibliographic resources:

- American Medical Association, Department of Adolescent Health. (1992). *Guidelines for Adolescent Preventive Services (GAPS).* Chicago, IL: Author. [Contact AMA, Department of Adolescent Health, 515 North State Street, Chicago, IL 60610, Phone: (312) 464-5842. To order, call (800) 621-8335, or contact http://www.ama-assn.org/ama/pub/category/1947.html]
- Aughey, D., and Myhre, E. 1997, February. Challenges in adolescent health: Who cares, why care, managed care. *Minnesota Physician,* 16-17,34.
- Green, M. 2000. *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents.* Arlington, VA: National Center for Education in Maternal and Child Health. www.brightfutures.org
- Minnesota Health Improvement Partnership: Adolescent Health Services Action Team. 2001 *Adolescent Preventive Health Services: Opportunities for Improvement.* Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".
- Pittman, K. 1991. *A New Vision: Promoting Youth Development*, Center for Youth Development and Policy Research.
- Resnick, MD, et al University of Minnesota. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA* 278(10): 823-832. This is a national study that used a cohort of

MN adolescents. It provides an excellent overview of the "connections" between family, child, school and community that protect youth from risk behaviors.

Organizational resources:

- Adolescent Health Website with quick and easy access to current information and resources about teen health. Includes information and resources for providers, parents and youth. Screening tools, guidelines, educational materials and links to other great websites. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Services".
- Minnesota Adolescent Health Care Coalition, an informal collaboration of more than 40 members representing health care providers, health plans, health associations, government, public health, hospitals, foundations, non-profit agencies, and educational organizations. The mission of the Coalition is to improve the health status of adolescents by influencing the health care system in order to better meet the unique needs of adolescents and their families. For more information, contact Sarah Nafstad, at 651-281-9956, MDH Adolescent Health Coordinator.
- Minnesota Department of Human Services. Child and Teen Checkups (C&TC) Program. Includes C&TC Documentation Forms for Providers and Clinics. http://www.dhs.state.mn.us/HlthCare/ctc/default.htm
- National Adolescent Health Information Center. 1994, July. *Investing in Preventive Health Services for Adolescents* [Fact Sheet]. San Francisco: University of California School of Medicine, Division of Adolescent Medicine. [For more information, contact Department of Pediatrics and Institute for Health Policy Studies, 1388 Sutter Street, Suite 605a, San Francisco, CA 94109, (415) 502-4856, Fax: (415 502-4858; http://youth.ucsf.edu/nahic/.]
- University of Minnesota, Division of General Pediatrics and Adolescent Health, Adolescent Health Training and Fellowship Program. Information can be obtained by contacting Dr. Robert Blum, Director, Box 721, 420 Delaware Street, SE, Minneapolis, Minnesota 55455, (612) 626-2820.

Evidence for strategy:

Research has shown that traditional preventive services provided by physicians can have a significant impact on behavioral change, including behavioral change among adolescents. In addition, there is extensive research to show that adolescents who are supported by an array of protective factors (such as connection to caring adults, positive connection to school, opportunities and recognition for meaningful activities in the community, etc.) are less likely to engage in risky behavior and experience poor health outcomes. It is presumed that use of a healthy youth development framework in developing and implementing policies, professional training and funding will make a difference in the health outcomes of adolescents.

Has this strategy been implemented in Minnesota?

Yes, the Adolescent Health Care Coalition is focusing on strategies aimed at changing the health care system to focus on preventive

health services (using adolescent-specific standards, looking at funding, etc.). The Coalition is actively involved in reaching out to health care providers, funders and consumers with a health promotion/healthy youth development model of health care. They are also promoting the adoption of an Adolescent Health Position Statement among a wide variety of organizations involved in the health care system.

Indicators for this strategy:

- Number of adolescent health programs based on a healthy youth development model.
- Number of adolescent health policies based on a healthy youth development model.
- Number of adolescent health training programs for health professionals that use a healthy youth development model within their curriculum.
- Number of adolescent health funders who incorporate a healthy youth development/health promotion model into funding decisions.
- Number of health care providers who utilize adolescent health standards in their routine care of adolescent patients.
- Number of health care providers who are trained in adolescent health care and are comfortable providing services to adolescents and their families.
- Number of collaborative efforts focused on improving adolescent health that includes health, mental health, social services, and education providers.

For more information contact:
Sarah Nafstad, at 651-281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Strategy: Increase funding for adolescent-specific health services and improve reimbursement for adolescent sensitive services.

	Systems	Community	Individual
Primary	✔		
Secondary			
Tertiary			

Background:
Effective adolescent-specific health services are often not supported by the traditional health care system, nor are they adequately funded. These activities propose to stabilize funding to support and strengthen existing services:

- Increase funding for adolescent health services. This strategy focuses on funding of services from a broad perspective, including resources available from health plans, government agencies, social service agencies, and foundations. Special attention should be given to increased funding for school health services (i.e., school clinics and nurses).
- Improve reimbursement for adolescent sensitive services. Adolescents in need of sensitive health services (such as STD testing and treatment, mental health services, family planning, etc.) are often unwilling to seek services unless they can receive these services in a confidential manner. When services are provided confidentially, they are frequently not reimbursed by insurance companies due to problems with maintaining confidentiality through billing. Billing processes, such as sending an explanation of benefits notice

to the policy holder (often a parent or caregiver), threaten the ability of health providers to maintain confidentiality. This activity focuses on adapting reimbursement policies and procedures in ways that protect confidentiality for adolescents.

Additional resources:
Bibliographic resource:

- Congress of the U.S. Office of Technology Assessment. 1991, April. *Adolescent Health: Vol. 1. Summary and Policy Options.* Washington, DC: Author.
- Minnesota Health Improvement Partnership. 2001. *Adolescent Preventive Health Services: Opportunities for Improvement*. Minnesota Department of Health. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".

Organizational resource:

- Minnesota Adolescent Health Care Coalition, an informal collaboration of more than 40 members representing health care providers, health plans, health associations, government, public health, hospitals, foundations, non-profit agencies, and educational organizations. The mission of the Coalition is to improve the health status of adolescents by influencing the health care system in order to better meet the unique needs of adolescents and their families. For more information, contact Sarah Nafstad, at (651) 281-9956, the MDH Adolescent Health Coordinator.

Evidence for strategy:
The Minnesota Adolescent Health Care Coalition has been actively working on improving the reimbursement for adolescent sensitive health services by bringing together health plan representatives and health providers to initiate changes in billing procedures that will support confidentiality of services to adolescent patients. These efforts are currently in process, and, over time, their impact will become more evident.

Has this strategy been implemented in Minnesota?
Yes, many communities in Minnesota are looking for ways to increase funding for adolescent-specific health services. In addition, the Minnesota Adolescent Health Care Coalition is focusing on strategies aimed at changing the health care system to focus on preventive health services by using adolescent-specific standards, looking at funding, etc. See the evidence section above for more information.

Indicators for this strategy:

- Amount of funding available specifically for adolescent health services.
- Percentage of adolescent sensitive services for which reimbursement is received.

For more information contact:
Sarah Nafstad, at 651-281-9956, sarah.nafstad@health.state.mn.us
MDH Adolescent Health Coordinator.

CATEGORY: Service Delivery Systems

TOPIC: ELIMINATE BARRIERS AND IMPROVE ACCESS TO HEALTH CARE – CHILDREN AND ADOLESCENTS WITH SPECIAL HEALTH CARE NEEDS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Develop a medical home for children and adolescents with special health needs.	✔	✔	✔	✔	✔	✔	
Include health care issues and appropriate health care professionals in transitional planning for adolescents with special health needs.	✔	✔	✔	✔	✔		
Implement a standard for service coordination for children (aged 21 years and younger) with special health needs.	✔	✔	✔	✔	✔		
Promote family-centered, community-based, culturally competent, and coordinated care and services for children with special health needs and their families.	✔	✔	✔	✔	✔		

Much of the focus on access to health care has been centered on the financial barriers and on addressing the issues of the uninsured. Though it is beginning to change, many other access issues, including cultural competence among providers, transportation and childcare, have received less attention. Similarly, those for whom access is problematic have traditionally been defined as low-income, minority and/or rural. While it is true that these are very real issues for these people, another population requires similar attention with regard to access to health care.

Children, adolescents, and their families with special health needs experience barriers to proper health care that are unique to them. Families of children with special health care needs face challenges in obtaining services that are comprehensive. Their needs must be addressed by health, education, and social services. Care may be fragmented, duplicated, confusing, and costly. In addition, children with special needs and their families are uniquely challenged by the health care system. The special health conditions with which they live often put greater demands on caregivers and on the health care system; they require increased dependency on others; often children and adolescents with special health needs are unable to ask for help, or to communicate clearly with providers and/or family members; they experience social isolation, the misinterpretation of behaviors characteristic of their disability and societal attitudes that devalue people with disabilities.

It is crucial that service delivery systems adapt to accommodate those with special health needs to assure and promote optimal health, access to services, maximal habilitation and rehabilitation, well-being, prevention of secondary disabilities, unnecessary out-of-home placements, and premature death. In addition, communities and systems can also become more aware, responsive, and supportive to children with special needs and their families by including them in all aspects of community life as well as in program and policy-making decisions.

For related strategies, see the sections on Children and Adolescents, Promote Access to Health Care, and Eliminate the Disparities in this category; and the strategies in the *Child and Adolescent Growth and Development, Mental Health and Pregnancy and Birth* categories.

Strategy: Develop a medical home for children and adolescents with special needs.

	Systems	Community	Individual
Primary			
Secondary	✔		✔
Tertiary			

Background:
Children with special health needs frequently see a variety of medical and program specialists, each of whom makes recommendations, gives prescriptions, and offers treatment services. As a result, families may receive conflicting recommendations or they may have unrealistic expectations placed upon them by

disparate medical care providers. Frequently families feel that, because their child is seen by specialists, they do not need an ongoing relationship with a local medical care provider, and they utilize the local physician for episodic care instead of their child's primary care.

Families and professionals have identified the need for the provision of comprehensive services through a pediatric medical home for children with special needs. Simply put, a medical home means a source of ongoing, comprehensive, family-centered care in the child's community. Services for children with special needs are difficult for families and professionals to access and coordinate. Primary care providers are not always comfortable in providing care to children with special needs. In addition, some may not have the time and some may lack the resources and the knowledge of those resources necessary to coordinate them to meet the children's and families' needs. Lack of knowledge of a family's comprehensive needs and available community resources as well as non-family-centered care, poor reciprocal coordination, and cross-cultural interactions are barriers for families and professionals.

The development of a medical home for children with special needs requires new partnerships and changes in physician offices, management, coordination of care, staffing, and staff training. The medical home should include the following elements:

- Provision of preventive care, including but not restricted to: immunizations, growth and development assessments, appropriate screening, health care supervision, and patient and parental counseling about health and psychosocial issues.
- Assurance of ambulatory and inpatient care for acute illnesses, 24 hours a day, seven days a week (during the working day, after hours, and on weekends), 52 weeks of the year.
- Provision of care over an extended period of time to enhance continuity.
- Identification of the need for subspecialty consultation and referrals and knowledge of where and from whom they can be obtained. It is important to provide the consultant with medical information about the patient. It is equally important that there is some evaluation of the consultant's recommendations to ensure that they are indicated and appropriate, well implemented, and interpreted clearly by the family.
- Interaction with school and community agencies to assure that individual children's special health needs are addressed.
- Maintenance of a central record and database containing all pertinent medical information about the child, including information about hospitalizations. This record should be accessible, but confidentiality must be assured.

These elements should assure quality comprehensive services, including primary, well-child preventive, specialty, illness, and emergency care. However, all medical homes need to have:

- A family-centered approach to service delivery that is culturally competent.
- Geographic and financial accessibility so that a child may remain in his/her

medical home even if insurance status changes.
- Assurance that families have access to all relevant information regarding public and private sector insurance.
- Coordination (through community linkages and partnerships) of services needed by the child and family.
- A process for planning, providing, and evaluating services based upon partnerships with families, which incorporates the principles of family and professional collaboration.

As a special consideration, the onset of adolescence brings the youth and primary care provider unique challenges and opportunities in the provision of a medical home. The transfer of decisions about care, as well as the actual care, from the parent to the adolescent requires special training of the adolescent, parents, and primary care physician on process and techniques. Should that adolescent receive medical care coverage through a managed care entity, this entity becomes a partner in the planning and provision of the youth's care. All partners need training on the provision of a medical home to an adolescent with special health needs, including the issues surrounding transition of health care. The goal of this process is a successful transition of the child to the adolescent, and eventually the adult, health care system.

Additional resources:
- American Academy of Pediatrics. 1992. Ad hoc task force on definition of the medical home. *Pediatrics* 90(5).
- American Academy of Pediatrics. Medicaid managed care medical home. Available at http://www.aap.org/advocacy/mmcmdhom.htm. Arizona, Hawaii and Tennessee also have medical home projects. Information about these projects can be obtained from the American Academy of Pediatrics at http://www.aap.org/advocacy/releases/janmed.htm.
- Committee on Children With Disabilities. 1997. General principles in the care of children and adolescents with genetic disorder and other chronic health conditions. *Pediatrics* 99(4).
- 'SPECIAL CONNECTIONS' Newsletter – The SAFE at Home Project. MDH. Contact: Sarah Thorson, at (651) 281-9992, e-mail: sarah.thorson@health.state.mn.us.
- Reiss, J. *The Purchaser's Tool.* (This checklist can be used to evaluate health plan features for children with special health needs. This tool is not copyright protected.) The authors and sponsors encourage readers to print and distribute this document. Acknowledgement of the source of the material is appreciated. Contact: John Reiss, Ph.D., Institute for Child Health Policy, 5700 SW 34th Street, Suite 323, Gainesville, FL 32606. www.ichp.edu/mchb/purchaser.

Organizational Resource:
- The Washington State Medical Home Training and Resource Project. A statewide train-the-trainers project: A regional training network of 17 volunteer teams of physicians, public health or office nurses, and early intervention family resource coordinators provide training and consultation to local primary care providers, office staff, and others. Contact: Kate Orville, at (206) 685-1279.

Evidence for strategy:
This strategy uses several different models and has been field tested in several states, including Arizona, Hawaii, Tennessee, and Washington State. A model (SAFE at Home) is currently being developed and field tested by Minnesota Children with Special Health Needs (MCSHN) at the Minnesota Department of Health.

Has this strategy been implemented in Minnesota?
Yes, this strategy will be implemented as a demonstration project by MCHSN in cooperation with HealthPartners and UCare and with support from the federal Maternal and Child Health Bureau.

Indicators for this strategy:
- Number of children with special health needs who have a "medical home."

For more information contact:
Minnesota Children With Special Health Needs, at (800) 728-5420 or (651) 215-8956 (metro).

Strategy: Include health care issues and appropriate health care professionals in transitional planning for adolescents with special health needs.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary			

Background:
Often, the identification of children with special health needs stops with those individuals who have visible disabilities, require special education services, or both. In every school system in Minnesota, there are students with chronic health conditions who do not receive the benefits of transition-planning services because they do not qualify for special education services. Their conditions may not be readily apparent to the casual observer; however, their health status may have a significant impact upon their future post-secondary-training choices, as well as their employment opportunities.

In Minnesota, at the present time, only those students with an Individualized Education Plan (IEP) receive formal transition-planning services. State and local education agencies are mandated to initiate and carry out the transition-planning process for students with IEP's. Community Interagency Committees (CTICs) are responsible for the identification of current services, programs, and funding sources within the community for secondary- and post-secondary-aged youth with disabilities and their families. They are also charged with facilitating the development of multi-agency teams to address present and future transitional needs of individual students on their IEPs.

CTICs are required to assure that the transitional needs of individuals are met by developing a community plan addressing these expectations and to participate in systems-change activities by bringing to the table issues and identified gaps in services that relate to transitional planning for youth with disabilities. There are five areas of transitional planning that are reviewed in

each IEP: post-secondary education and training, employment, community participation, recreation and leisure activities, and home living.

Health care planning is not included as a separate entity and typically does not get attention for each student. Health care professionals (in the form of therapists and occasionally a school nurse) may be a part of the transition-planning team, but there is no consistent participation of these professionals for each Minnesota student with an IEP. The identification of those students with special health needs, long-term disability, or both, who do not have eligibility for special education services, is problematic. School health programs vary from school to school, and not all students with health concerns have contact with their school's health department.

In identifying those students who could benefit from health care planning assistance, it is important to do so based on the consequences of a health condition rather than on limitations of function or listings of diagnostic problems. Using a definition that emphasizes the consequences of a condition increases the number of students benefiting from transition services in their middle school and senior high school years. With this definition, 18 percent of the child population can be identified as having a health condition that is certain to last for at least one year and to cause limitation in function, activity, or social role; a dependency on medication, special diet, medical technology, assistive device, or personal assistance to compensate for, or minimize, limitation of function; or the need for medical care or related services over and above the usual for the child's age. School health programs can extrapolate potential numbers of students with health conditions in their system using this definition and begin the process of identifying those students so that transition-planning services can be implemented for them.

The changing face of medical care coverage in Minnesota makes addressing health care issues in transitional planning essential. Ensuring that a student leaves a secondary school program prepared for the next phase of living includes updating equipment, identifying and establishing appropriate adult medical care, and reviewing care coverage resources, as well as addressing the often unspoken questions surrounding human sexuality. Students need to be provided with opportunities to take responsibility for their own health care in a developmentally appropriate manner by giving them skills and knowledge for self-advocacy.

Steps that can be taken to implement this strategy include:

- School health staff can participate in the IEP staffings for those students aged 14-22 to identify their future health care needs.
- Notices can be inserted into the local school district's newsletter inviting parents of students with health concerns to contact the school health department to review health care needs and planning.
- A basic list of items to be reviewed on a periodic basis includes, but is not limited to:
  - Is there a primary care physician established for the student?

- Does the student have a "medical home"?
- If the student is being followed by a pediatric specialist, what, if any, arrangements need to be made to transfer that care to adult specialty medical care?
- Does the student have medical care insurance?
- Will that health care coverage continue past age 18?
- Are there any potential restrictions on what will be paid for by that coverage, such as, therapies, equipment, medical visits, specialty examinations, etc.?
- Does the student have a good understanding of his or her medical situation and know what care is optimal in the future in a developmentally appropriate manner?
- Is there an understanding of preventive medical and dental care needs?
- Does the student have any questions or concerns regarding human sexuality?
- Does the student use durable medical equipment that may need upgrading?
- Does the student have any assistive technology needs?
- Does the student's medical or physical condition have an impact upon future post-secondary training or employment choice?

Additional resources:

Bibliographic resources:

- Green, M. 1994. *Bright Futures: A Guideline for Health Supervision for Infants, Children and Adolescents.* Arlington, VA: National Center for Health Education in Maternal and Child Health.
- Minnesota Department of Health, *Minnesota Health Status Reports*. Each county health department has a copy for their county. In addition, requests can be made by phone: (651) 676-5062 or at http://www.mnplan.state.mn.us/datanetweb/health.html.
- Morningstar, ME. 1996. *University of Kansas Department of Special Education: Transition Quality Indicators.* Beach Center on Families and Disability.
- Stein, R., Westbrook, L., and Bauman L. 1996. A questionnaire for identifying children with chronic conditions: A measure based on a non-categorical approach. The Department of Pediatrics, Albert Einstein College of Medicine, NY. *Pediatrics.*

Organizational resources:

- The Minnesota Department of Children, Families and Learning. Contact: Jayne Spain, at (651) 582-8200.
- PACER, Phone: (612) 827-2966 or (800) 53-PACER, 4826 Chicago Avenue South, Minneapolis, MN 55417.

Evidence for strategy:

The inclusion of health care planning in transitional planning for adolescents with chronic illness, disability, or both improves adult outcomes, increases access to medical care and improves the likelihood of achieving the greatest possible independence, as well as assures the continuity of ongoing health care.

Has this strategy been implemented in Minnesota?
Yes, Cloquet Senior High School recently received an award of excellence, which is granted by the Minnesota Transition Leadership Committee, a state-level planning group, to those programs that demonstrate superior transition planning in Minnesota. One of the criteria is inclusion of health care planning.

Indicators for this strategy:
- Number of transitional plans that include health care planning components.
- Number of students without individual education plans who have chronic illness or disability and receive health care planning assistance prior to leaving high school.
- Number of schools using definitions of health conditions based on the consequences of the conditions.
- Number of schools using individual education plans.

For more information contact:
Minnesota Children With Special Health Needs, at (800) 728-5420 or (651) 215-8956 (metro).

Special notes:
In 1984, amendments to the Education Act for all Handicapped Children represented the first major attempt in federal policy to improve planning and preparation for transition from school to adult life for students with special needs. In 1990, the passage of the Individuals With Disabilities Education Act (IDEA) required state and local education agencies to initiate and carry out the transitional planning process for students with IEPs. It was at this time that Minnesota formed the State Transition Interagency Committee (SIC) to address transition issues, which have a statewide impact. The SIC formulated legislation that created community-level interagency committees known as Community Interagency Committees.

Strategy: Implement a standard for service coordination for children (aged 21 years and younger) with special health needs.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary			✔

Background:
Families of children with special health care needs face challenges in obtaining services that are comprehensive. Their needs must be addressed by health, education, and social services. Care may be fragmented, duplicated, confusing, and costly. Service coordination is a method of overcoming some of these obstacles. The term service coordination reflects current concepts of family and person-centered philosophies, and emphasizes the central role the individual/family plays in identifying needed services. Service coordination will assist individuals and families in working with complex systems across agency lines and will enhance their ability to live full lives in the community. Families are the ultimate decision-makers for their children.

Service Coordinators must be knowledgeable about other services, including special education, social services, family support, respite, community programs, public health, and parent-to-parent support, as well as local, state, and federal laws governing these services. It is recognized that the responsibility for meeting the needs of children with special health care needs is a responsibility shared by families, public agencies, and private providers. As the child grows, his or her needs change. The agency providing service coordination must assure that these needs are met and addressed as the child moves through the system and that the transition is smooth. Implementation of this strategy requires that:

- Children (aged 21 years or younger) with known or suspected special health problems are identified.
- An individualized assessment is conducted to identify psychosocial, mental health, medical, educational, and financial needs. Family resources should be assessed with attention to the family's values, choices, and culture.
- Service coordination to develop a comprehensive plan based on family needs, choices, and priorities assists the family in removing financial barriers and other barriers to obtaining service; identifies and clarifies resources; provides information and assistance in obtaining appropriate resources; helps in the coordination of services; offers periodic review and updating of the plan; and develops a single-family plan with involvement from agencies and organizations working with the family.
- Facilitation by the service coordinator of access to the appropriate medical, financial, educational, support, and social resources for children with special health needs and their families is done in a timely manner. The access includes advocacy in the education, health, social services systems, etc.
- Training provided to service coordinators on the roles and responsibilities of service coordination.
- Education is provided to the family regarding the diagnosis, methods of care, treatment protocol, and self-advocacy skills, so the family can make informed decisions and effectively use the care system.
- An information system for data collection is maintained.

Service coordination includes the identification of needs, assessment, and re-assessment; information and referral for families and professionals, including referrals for appropriate evaluation, treatment, and follow-up, as well as the connection of families to systems of care; development and monitoring of individual family-service plans; patient and family education; advocacy; crisis intervention; and ongoing family support. The skills of a service coordinator include, but are not limited to, assessment; advocacy; joint problem solving; identification of alternatives and linkage of resources; fact finding; information sharing; education or teaching; process interpretation and counseling; and observation and reflection. Standards need to be in place to ensure that children receive the best possible care, there is good communication among everyone involved, and costs are controlled without compromising the quality of care.

Additional Resources:

- Fiene, JI., and Taylor, PA. 1991. Serving rural families of developmentally disabled children: A case management model. *Social Work* 36:323-327.
- Interagency Early Childhood Intervention. 1995. *Many Hats of Service Coordination* (Chapter 3).
- Jackson, B., Finkler, D., and Robinson, C. 1992. A case management system for infants with chronic illnesses and developmental disabilities. *Children's Health Care,* 224-232.
- Minnesota Department of Health, Minnesota Children with Special Health Needs. 1995. *Case management/care coordination for children with special health needs.* For copies, contact: MCSHN, at (651) 215-8956 in the metro area, or (800) 728-5420.
- MDH, Minnesota Children with Special Health Needs. 1998. Managed care: Consideration for serving children with special health needs. *MCSHN Issue Brief,* 1(1). For copies, contact: MCSHN, at (651) 215-8956 (metro) or (800) 728-5420.
- Minnesota Systems of Interagency Coordination (MnSIC). 2001. *Service coordination for children and youth with disabilities ages 3-21,* Issue 2, available at http://www.mnsic.org.
- *Report to the Minnesota State Legislature on Interagency Alignment of Statutes and Rules for Children with Disabilities.* 1996. For copies contact: MDH Library, at (612) 676-5091.
- Smith, K., Layne, M., and Garell, D. 1994. The impact of care coordination on children with special health care needs. *Children's Health Care* 23(4).
- The Coordinated Interagency Act (Minnesota Statute 125A.023 and 125A.027).

Evidence for strategy:

In 1998, Minnesota passed two statutes, 125A.023 and 125A.027, known as the Interagency Services for Children with Disabilities Act. This system is now formally referred to as the Minnesota System of Interagency Coordination (MnSIC) by state and local partners. The purpose of this act is to: “develop and implement a coordinated, multidisciplinary, interagency intervention service system for children ages three to 21 with disabilities.” The legislation states that Minnesota must identify and develop a plan for every child and youth with a disability.

Has this strategy been implemented in Minnesota?

Yes, currently coordinated services are available for children up to age 9 with plans to provide them to children up to age 21 by 2003.

Indicators for this strategy:

- Number of children receiving service coordination.
- Changes in the child's health or illness status.
- Cost of care.
- Parent and family satisfaction.
- Number of school days missed.
- Number of referrals generated by the service coordinator.

For more information contact:

Minnesota Children with Special Health Care Needs, at (651) 215-8956 (metro) or (800) 728-5420. For more information see

the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Services for Children with Special Health Needs".

Strategy: Promote family-centered, community-based, culturally competent, and coordinated care and services for children with special health needs and their families.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
In 1987, the U.S. Surgeon General set as a national goal the promotion of family-centered, community-based, culturally competent, and coordinated care and services for children with special health needs and their families. In the intervening years, most public health and other programs working with this population have stated that their services are family-centered, community-based, culturally competent, and coordinated, but there has been no clear way for programs to assess their outcomes in regards to this standard.

Nationally accepted philosophies have been established and (briefly) include:

- Family-centered services. The family is central to a child's life, and, therefore, the family should be central to decisions that need to be made concerning the child's care. The family's needs and desires determine all aspects of service delivery and resource provision. Professionals are seen as the agents and the instruments of the family and intervene in ways that maximally promote family decision-making capabilities and competencies.
- Community-based services. This philosophy involves designing services to be delivered in the "least restrictive" manner to the child and family. This may mean in the home, close to home, in a child-care setting, at a relative's home, or wherever the family feels most comfortable and which fits with the service the provider can realistically offer.
- Culturally competent services. One of the most common barriers to family-centered services can be the difference in beliefs and customs held by families and their service providers. In addition to ethnicity or race, culture can be influenced by any combination of factors, including spiritual beliefs and social and educational experiences, as well as economic and geographic living conditions. Cultural differences have an impact on the definition and interaction of families, parenting behavior patterns, traditions, and language, as well as how illness, disability, or both are viewed. It is culture that defines the structure of all families, provides families with a variety of ways of coping with the world, and determines the way they respond to their fundamental role in providing food, shelter, nurturing, spiritual, intellectual, and emotional sustenance for their children.
- Coordinated services. Children with special health needs and their families typically require multiple services from

different providers associated with different agencies. As a result, services may become extremely fragmented. The many public and private programs that serve this population have differing mandates, eligibility requirements, and inconsistent policies. Coordinating these services is of utmost importance to the quality of life for the child and family. See the strategy in this section, "Implement a standard for case management for children (ages 21 years and younger) with special health needs," for additional information.

Utilizing a brief checklist to evaluate a program's progress towards the provision of family-centered, community-based, culturally competent, and coordinated services may be helpful. The following is a sample checklist to help assess if services meet these criteria:

___Is there consumer input during the planning process?
___Is there consumer participation in program evaluation?
___Is there a process in place to identify and document gaps in services?
___Is there an up-to-date awareness of other resources for families?
___Is there collaboration with other programs and systems to fill identified gaps in services?
___Is there a focus on family strengths and expertise?
___Is there an avoidance of deficit-based language and actions in describing or working with children with special health needs and their families?
___Is there a focus on all family members, not just those in the household?
___Is there a mechanism in place to solicit informal feedback from family members?
___Is there recognition and understanding of a family's aspirations and goals?
___Are there ways in place to appropriately involve "absent" family members?
___Is there permission for families to modify program plans as needs change?
___Is there support for family participation in established community activities?
___Is there recognition and understanding that a family defines itself?
___Is there allowance in the program for periods of transition in a family's life?
___Is there recognition when a family's needs have either been met or not been met?
___Is there help for families to "move on"?
___Is the staff culturally competent?
___Is there ongoing staff development on diversity issues?
___Is there acknowledgment of the possible differences in values between staff and the families served?
___Is there recognition of the impact that a family's own experiences, perhaps for generations, with the "system" may have on their comfort levels with program services?
___Are there ways to identify and provide feedback on institutionalized forms of discrimination?

Additional resources:

- Association for the Care of Children's Health. 1996. *Family Centered Care for Children Needing Specialized Health and Developmental Services.* Washington, DC: Association for the Care of Children's Health.

- Dunst, CJ. 1988. *Enabling and Empowering Families: Principles and Guidelines for Practice*. Bookline Books.
- Dunst, CJ., Trivette, CM., and Deal, AJ. 1995. *Supporting and Strengthening Families* (Vol. I and II). Bookline Books.
- Vincent, LJ. 1986. What we have learned from families. *OSER'S News In Print.*

Evidence for strategy:
Nationally, the Interagency Early Intervention programs, as well as the Head Start programs, have utilized family-centered service provision for many years as the cornerstone of their services for children and their families.

Has this strategy been implemented in Minnesota?
Yes, all infants and toddlers involved with the Interagency Early Intervention programs have an Interagency Family Service Plan (IFSP) based upon the principles of family-centered care. The IFSP serves as a model of how family-centered services can be developed in a variety of settings. All Head Start programs in Minnesota also practice family-centered service provision.

Indicators for this strategy:
- Number of families conducting periodic evaluations of their programs and services.
- Level of family satisfaction with programs and services.
- Level of family comfort with programs and services.
- Degree to which family needs have or have not yet been met.
- Numbers and types of family members involved in the programs and services.

For more information contact:
Minnesota Children With Special Health Needs, at (800) 728-5420 or (651) 215-8956 (metro). For more information see the website for strategies resources at: www.health.state.mn.us/stratgies/. Click on "Services for Children with Special Health Needs".

Special notes:
The provision of family-centered services is highly individualized. There is no "one size fits all." Family satisfaction with services varies from family to family, depending upon the family's needs at any particular moment.

CATEGORY: Service Delivery Systems

TOPIC: ELIMINATE BARRIERS AND IMPROVE ACCESS TO HEALTH CARE – PROMOTE ACCESS TO HEALTH CARE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educa-tional Systems	Community-based Organizations	Businesses/ Work Sites	Other
Encourage development and strengthening of Minnesota's health care work force through community, regional and state initiatives.	✔	✔	✔	✔	✔	✔	
Encourage development of regional and community health insurance options for small employers and self-employed individuals.	✔	✔			✔	✔	Individuals
Develop methods to ensure access to health and long term care for Minnesota's increasing senior and elderly population.	✔		✔		Area Agency on Aging		
Encourage sharing of health care resources among facilities within communities and within regions through informal and formal networking arrangements.	✔	✔	✔	✔	✔	✔	
Provide culturally competent health care services to new and diverse people.	✔	✔	✔	✔	✔		

Access to quality health care in Minnesota is unevenly distributed among the population, both demographically and geographically. A number of factors contribute to lack of access to health care, including:

- Availability of providers due to workforce shortages.
- Lack of access to affordable health care coverage.
- Aging population.
- Cultural barriers for new people attempting to negotiate a complex health care system.
- Distance, especially a problem in rural areas.
- Inability for consumers to understand complicated health care systems.
- Number and proportion of scheduled women who complete screening.

Workforce shortages are being experienced in all employment sectors, but are felt acutely in the health care sector, especially in rural communities, as young people migrate to larger population centers, and the remaining population is increasingly elderly. This issue is emerging not just as a concern, but has reached crisis proportions and must be addressed collaboratively by education, business, and government working together.

Lack of access to affordable health insurance coverage is becoming an increasing reality for many Minnesotans as health care costs rise at double-digit rates. This is particularly true for small business employees or self-employed individuals. Rural areas, where small businesses and self-employment is common and choices are limited, are especially affected. Under-insurance shows up in higher deductibles and co-pays, and limitations on health care options.

Minnesota's population is aging. Over the next two decades, the number of Minnesotans over age 65 is expected to increase by two-thirds, and those over 85 by almost three-quarters. Again, this demographic shift is felt more keenly in rural parts of the state. Older Minnesotans means more problems associated with aging: cancer and other chronic diseases, social isolation and mental health issues, and various forms of disability and dependency. This places stress on primary and acute care systems, emergency medical services, specialty and long-term care, and community-base services.

As Minnesota's populations of color and new populations continue to rise, our communities are challenged to expand their resources, including their health care systems. Language barriers, lack of cultural competence on the part of providers, absence of a diverse health care workforce, discrimination, lack of transportation, insurance difficulties and immigration issues all contribute as barriers to health for diverse populations (see the section on "Eliminate the Disparities" in this category for further information).

Distance has already been identified as an issue especially affecting rural areas. Combined with shortages in health care providers, lack of transportation and changing demographics (more elderly and more new people), distance between facilities, providers, and health care consumers affects both cost and access to care.

The strategies presented here attempt to address some of the barriers to access that have been identified. For related strategies

see "Health Care Coverage" within this category.

Strategy: Encourage development and strengthening of Minnesota's health care work force through community, regional and state initiatives.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
Workforce shortages are being experienced in all employment sectors, but are felt acutely in the health care sector, especially in rural communities, as young people migrate to larger population centers, and the remaining population is increasingly elderly. This issue is emerging not just as a concern, but has reached crisis proportions and must be addressed collaboratively by education, business, and government working together. Some ways to do this include:

- Encourage young people to enter health and long term care careers by convening partnerships between health and long term care employers, school districts, and post-secondary institutions to develop health careers curricula aimed at middle- and high-school age students that meet state graduation standards and articulate with post-secondary programs.
- Encourage community hospitals and clinics to provide internship and positive employment experiences for young people in their communities.
- Encourage community and health care leaders to consider ways to pool resources through networking or shared health care provider positions by convening partnership discussions.
- Educate consumers and employers on the use of non-physician alternatives to primary care, including nurse midwives, nurse practitioners, and physician assistants.

Additional resources:
Organizational resources:

- Health Education-Industry Partnership, Minnesota State College and University System, (507) 389-6224 or www.tip.mnscu.edu/heip/
- Minnesota Department of Children, Families & Learning, Division of Life Work Development, (651) 582-8513 or http://children.state.mn.us/
- Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".
- Minnesota Hospital & Healthcare Partnership, (651) 641-1121 or www.mhhp.com/

Evidence for strategy:
Statistical and anecdotal evidence exists of increasing health care worker shortages at all levels, including information about physicians, nurses, allied health, nurses aides, aging demographics, and migration to large urban centers from rural areas.

Has this strategy been implemented in Minnesota?
Yes, various strategies have been and are being implemented on a community, regional and statewide basis, including health professional loan repayment programs, health professional shortage area

designations, and health care-education partnerships.

Indicators for this strategy:
- Adequate supply of health professionals and non-professionals in both urban and rural health care settings.
- Health and long term care facilities continuing to operate in rural areas and underserved urban communities due to adequate worker supply.

For more information contact:
Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".

Strategy: Encourage development of regional and community health insurance options for small employers and self-employed individuals.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Lack of access to affordable health nsurance coverage is becoming an increasing reality for many Minnesotans as health care costs rise at double-digit rates. This is particularly true for small business employees or self-employed individuals. Rural areas, where small businesses and self-employment is common and choices are limited, are especially affected. Under-insurance shows up in higher deductibles and co-pays, and limitations on health care options. Ways that local organizations can do this include:
- Explore ways that members of communities and regions can pool resources to help small employers and self-employed individuals purchase affordable, quality health insurance products.
- Engage members of the community, including policy makers, community leaders, employers, health care providers, and consumers in developing strategies that balance affordable health insurance coverage with quality of care.
- Assist community members in accessing available resources for planning and execution of strategies.

Additional resources:
Organizational resources:
- Minnesota Department of Commerce, at (651) 296-6789 or (800) 657-3602 or www.commerce.state.mn.us/ [Regulates insurance companies or indemnity products.]
- Minnesota Department of Health, Health Economics Program, at (651) 215-5800. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Health Economics Program".
- Minnesota Department of Human Services, at (651) 296-1256 or (800) 657-3729, ext. 61256 or www.dhs.state.mn.us
- Minnesota Insurance Healthline (612) 222-3800 or (800) 642-6121.

Evidence for strategy:
The data indicate that increasing numbers of Minnesotans are either uninsured or underinsured.

Has this strategy been implemented in Minnesota?
Yes, health care purchasing alliances are being developed in five regions of the state: northwest, southwest, north central, and northeast regions of the state.

Indicators for this strategy:
- Development of community and regional health care purchasing alliances that are available to small employers and individuals.
- Measurements of uninsurance and underinsurance exhibit downward trend.

For more information contact:
Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".

Strategy: Develop methods to ensure access to health and long-term care for Minnesota's increasing senior and elderly population.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
Minnesota's population is aging. Over the next two decades, the number of Minnesotans over age 65 is expected to increase by two-thirds, and those over 85 by almost three-quarters. Again, this demographic shift is felt more keenly in rural parts of the state. Older Minnesotans means more problems associated with aging: cancer and other chronic diseases, social isolation and mental health issues, and various forms of disability and dependency. This places stress on primary and acute care systems, emergency medical services, specialty and long-term care, and community-base services. For related strategies see "Promote healthful aging and support the well-being of the elderly" in the category, *Disability/Decreased Independence*. Things that you can do to ensure access to health and long-term care for Minnesota's elderly population include:
- Convene community and regional partnerships between health and long term care providers, the faith community, policy makers, and consumers to develop appropriate and affordable health and long term care options for older members of the community.
- Educate senior citizens and their families about health and long term care options in their communities through existing senior citizen programs.
- Assist the community in considering ways to engage the healthy senior population in providing health and senior services to others in need through employment or volunteer opportunities.

Additional resources:
Organizational resources:
- Elderberry Institute/ Living at Home Block Nurse Program, (800) 320-1707 or www.elderberry.org/
- Minnesota Association of Area Agencies on Aging, (507) 288-6944 or www.minnesota-aaa.org/
- Minnesota Department of Health, Facility and Provider Compliance Division at (651) 215-5800. For more information see the website for strategies

resources at: www.health.state.mn.us/strategies/. Click on "Facility and Provider Compliance Division".
- Minnesota Department of Human Services, Minnesota Board on Aging, at (800) 882-6262 or www.dhs.state.mn.us/

Evidence for strategy:
Demographic statistics in Minnesota clearly indicate a growing elderly population, with its increasing demands on the health care system.

Has this strategy been implemented in Minnesota?
Yes, various strategies have been and continue to be employed to respond to the upward trends in aging population. Further expansion of programs will be required as the "baby boomer" population ages and there are more demands on the system.

Indicator for this strategy:
- Number and make up of community and regional partnerships looking at long term care options.
- Increased understanding among senior citizens and their families about health and long term care options in their communities.
- Numbers of senior citizens engaged in providing health and senior services.
- Numbers and kinds of senior services available in urban and rural Minnesota.

For more information contact:
Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".

Strategy: Encourage sharing of health care resources among facilities within communities and within regions through informal and formal networking arrangements.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
Distance has already been identified as an issue especially affecting rural areas. Combined with shortages in health care providers, lack of transportation and changing demographics (more elderly and more new people), distance between facilities, providers, and health care consumers affects both cost and access to care. Some ways to address this include:
- Convene discussions within communities between health care facilities, such as hospitals, clinics, long term care facilities, home care, public health, emergency medical services, pharmacy, and others to explore ways to share resources through the use of informal or formal networking arrangements.
- Convene discussions between community, county and regional leaders, health care facilities and providers, including hospitals, clinics, long term care facilities, home care, public health and others to explore ways to share resources and provide access to primary, specialty and emergency health care through the use of informal or formal networking arrangements.
- Assist community members in accessing available resources to assist them in

making networking arrangements strong and viable.

Additional resources:
Organizational resources:

- Minnesota Center for Rural Health, (218) 727-9390 or www.ruralcenter.org
- Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 215-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".
- Rural Health Policy Research Institute (RUPRI), (573) 882-0316 or www.rupri.org/
- Rural Health Research Center, University of Minnesota, (612) 624-6151.
- Rural Information Center Health Service (RICHS), 1-800-633-7701 or www.nal.usda.gov/ric/richs/

Evidence for strategy:
The large distances to facilities and providers, especially in rural areas, supports the need for collaboration and consolidation of services. This need becomes even more critical when other issues are factored in such as the documented health care workforce shortages in primary and specialty health care, home care, long term care, allied health, pharmacy and emergency medical services in rural and underserved urban areas.

Has this strategy been implemented in Minnesota?
Yes, community and regional health care services networking efforts have been growing over the last ten years. Initiation of the Minnesota Rural Hospital Flexibility Program in 1999 has encouraged communities and regions to develop networking relationships. Evidence indicates that further collaboration and regionalization of services will continue.

Indicators for this strategy:

- Number of and participants in discussions occurring in communities to explore ways of sharing resources.
- Numbers of community members that are accessing available resources and making networking arrangements strong and viable.
- Number of health care provider networks in Minnesota.

For more information contact:
Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".

Strategy: Provide culturally competent health care services to new and diverse people.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
As Minnesota's populations of color and new populations continue to increase in numbers, our communities are challenged to expand their resources, including their health care systems. Language barriers, lack of cultural competence on the part of providers, absence of a diverse health care

workforce, discrimination, lack of transportation, insurance difficulties and immigration issues all contribute as barriers to health for diverse populations (see the section on "Eliminate the Disparities" in this category for further information). Some ways that communities can address these issues include:

- Assess needs of new members of community through focus groups, surveys, and other assessment methods. Design training around perceived needs.
- Assess cultural competence of organizations and individuals through surveys, interviews, and group discussion.
- Develop training in partnership with people who are part of the population being addressed.
- Make use of alternative learning strategies, such as distance learning, workshops, and dialogues, as well as traditional classroom training.

Additional resources:
Organizational resources:

- Minnesota Center for Cross-Cultural Health, (612) 379-3573, www.crosshealth.com/
- Minnesota Cultural Diversity Center, (952) 881-6090 or www.mcdc.org/
- Minnesota Department of Health, Office of Minority and Multi-Cultural Health, at (612) 296-9799. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Minority Health".

Evidence for strategy:
Demographic statistics in Minnesota clearly indicate a growing influx of new people, not only in urban but in rural settings. In addition, disparities in health outcomes for populations of color in Minnesota are strong indicators that further development is required. As rural communities experience significant influx of new people, provision of culturally competent care will be crucial to healthy outcomes for all members of the community.

Has this strategy been implemented in Minnesota?
Yes, the Center for Cross-Cultural Health, begun in 1997, has been assisting health care providers and facilities meet the health needs of ethnically, linguistically, spiritually, and culturally diverse patients. In addition, health plans, systems and facilities in urban and rural communities have conducted their own training in cultural competence and diversity.

Indicators for this strategy:

- Changes in perception among staff in organizations that have received training in responding to diverse people.
- Changes over time in cultural learning needs.
- Perception by minority or ethnic populations that they are receiving appropriate health care delivered in a culturally sensitive manner, as measured by a survey or focus group tool.

For more information contact:
Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".

CATEGORY: Service Delivery Systems

TOPIC: ELIMINATE THE DISPARITIES

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Ensure a standard data collection system to document the health status of populations of color in Minnesota.	✔	✔	✔	✔	Community-based Clinics	✔	
Train providers to provide culturally competent care.	✔	✔	✔	✔	✔	Consulting Companies, Health Clubs	
Include race, ethnicity, socioeconomic status and primary language in all assessments of utilization of health care services and use that information to improve health care delivery.	✔	✔	✔	University of Minnesota	✔	✔	
Create an effective reporting mechanism for culturally insensitive encounters Minnesotans experience with the health care system.	✔	✔	✔		✔		
Enhance services to reflect the health needs of all populations in the community.	✔	✔	✔	✔	✔	✔	
Encourage the use of professional interpreters as needed for limited English-speaking and hard-of-hearing persons.	✔	✔	✔	✔	✔	✔	
Increase the number of practicing health care professionals who are members of under-represented racial and ethnic minority groups.	✔	✔	✔	✔	✔	✔	

The health of the nation appears to have improved over the past 35 years. Within that time, we have experienced an overall decline in death rates from all causes. In Minnesota, in particular, the health and life expectancy of our people consistently rank number one in the nation. But despite this overall health improvement, populations of color continue to experience poorer health and disproportionately higher rates of illness and death.

Recent data show some of the wide gaps and disparities in the overall health status of populations of color as compared to that of the white population. The report, *Populations of Color in Minnesota Health Status Report*, was published in the spring of 1997 by the Office of Minority Health at the MDH and focused on economic profiles, birth-related health indicators, mortality rates, causes of death, illness, injury, and access to health care. While these gaps and disparities did not develop over a short period of time and will not be resolved quickly, a concerted effort throughout the health system must address the following gaps and disparities in health outcomes and profiles of people of color in Minnesota:

< The incidence of low birth weight among African American women is two and a half times greater than the incidence found in the white population and higher than any other major racial or ethnic group. Infant mortality rates for American Indian and African American babies are more than twice as high (13.5 deaths and 13.2 deaths, respectively, per 1,000 live births) as those in the white population (5.5). The rates for Asian and Hispanic (7.1 and 7.0/1000 respectively) also remain higher than that for Whites. Furthermore, women of color are less likely to receive adequate or no prenatal care. American Indian women are six times more likely to receive inadequate prenatal care or no care at all than their white counterparts. All other racial and ethnic groups are three times more likely to receive inadequate care or no care at all than white women.

< Mortality information concerning populations of color leads to one immediate and overarching conclusion: from adolescence through adulthood, African Americans and American Indians in Minnesota die at much higher rates (two to three and a half times higher) than other racial and ethnic groups. The large disparities between these populations and other racial and ethnic groups call for strong community and government action.

< There is a gap in available data on morbidity or health status and diseases of populations throughout the lifespan. Also, there is a lack of quality-of-life data, as affected by illness or injury, for populations of color. The lack of comprehensive information is a major concern in public health surveillance activities across the nation and in Minnesota.

In examining barriers of cultural competency, the *Populations of Color* report noted that some people of color prefer to be treated by someone of their own racial or ethnic group, feeling that a physician, nurse, or other professional from their own group can understand them better, be more aware of their culture, and be easier to talk to. The report further noted that people of color are under-represented in several health-related occupations and that access to quality health care for people of color can be enhanced by increasing the representation of populations of color in the health professions. For related strategies, see the section in this category called, “Eliminate Barriers and Improve

Access to Health Care - Promote Access to Health Care". For more information about the MDH Office of Minority and Multicultural Health, see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Minority Health".

Collecting data and sharing information are necessary prerequisites to developing strategies designed to reduce or eliminate the health status disparities between populations of color and the white population. Obtaining information and focusing statistical research on minority health issues are essential for developing sound policies, implementing appropriate services, and assessing whether the services provided are achieving stated goals and objectives.

Race and ethnicity information must be collected in needs assessments conducted by public health agencies, health care plans, and the health system in general. The strategies presented here provide support for achieving these outcomes.

Strategy: Ensure a standard data collection system to document the health status of populations of color in Minnesota.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Populations of color and American Indians in Minnesota experience poorer health and disproportionately higher rates of illness and death than do whites. In addition, the 1997 Report, *Populations of Color in Minnesota Health Status Report,* found that the health priorities and needs of populations of color are not identical to those of the general population. The report constructed a health profile of populations of color based primarily on information obtained from birth and death certificates. The reasons for this were several. First, data on illness, injury, and other aspects of health status of populations of color are somewhat limited. Second, organizations that collect these types of data adhere to no consistent standard for identifying the race and ethnicity of the persons whom they serve. Third, in some instances, the race and ethnicity question remains unasked.

In order to set the right priorities and develop effective health programs for populations of color and American Indians, more accurate and comprehensive information is needed. The following steps are recommendations for collecting race and ethnicity data:

< *Categorization of race and ethnicity*. A standard race and ethnic classification scheme should be used when collecting health-related data on populations of color. The federal Office of Management and Budget (OMB), through *Statistical Policy Directive Number 15*, sets the standard for race and ethnic classification. These categories should be used for all tracking functions. The categories outlined are:
  < Race: White, Black, Asian, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander.
  < Ethnicity: Hispanic Origin, Not of Hispanic Origin.
  < *Categorization within race and ethnicity*. It is important to note that

the OMB standard is a minimum, and that it is recommended that agencies collect and report additional race and ethnic detail within the groups described, as long as the population detail can be aggregated into the five minimum groups. In Minnesota, many diverse populations with distinct characteristics exist within the standard categories recommended by OMB. The following are examples of specific populations that could be collected along with the standard categories:

- < Black/African American.
- < Ethiopian, Somali, Sudanese.
- < Asian: Hmong, Vietnamese, Asian American, Chinese (except Taiwanese), Korean, Laotian, Filipino, Camodian
- < Hispanic/Latino: Mexican, Puerto Rican, Guatemalan.

< *Identification of multiracial individuals*. It is recommended that individuals should be offered the option of selecting one or more racial designations. The OMB recommends that, when using the Race and Ethnic Standard Categories, the instructions, "mark one or more and select one or more" accompany the question.

< *Collection of data by self-reporting*. Race and ethnicity data should be collected by voluntary self-reporting, whenever possible. In the event that staff must identify the race/ethnicity of the person, a method must be provided to verify "self-reported vs. staff reported." Community education is necessary to stress the importance of self-reporting. In addition, extensive training is needed to ensure staff are asking individuals to report their race and ethnicity, or are asking parents to report on behalf of their children or a close relative to report on behalf of a deceased person.

Additional resources:

< Minnesota Department of Health/Urban Coalition. 1997. *Populations of Color in Minnesota: Health Status Report.* St. Paul, MN: MDH. Contact: MDH, Office of Minority and Multicultural Health, at (651) 297-5813.

< Minnesota Department of Health. 1998. *Minority Health Legislative Report.* St. Paul, MN: MDH. Contact: MDH, Office of Minority and Multicultural Health, at (651) 297-5813.

< Office of Management and Budget. 1998. *Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.* Contact: OMB, http://www.whitehouse.gov/omb/fedreg/ombdir15.html.

Evidence for strategy:

Former President Clinton had committed the nation to eliminating the disparities experienced by racial and ethnic minority populations in six areas of health status by the year 2010. According to the President's *Initiative on Eliminating Racial and Ethnic Disparities in Health*, "Eliminating disparities will require improved collection and use of standardized data to correctly identify all high risk populations and monitor the effectiveness of health interventions targeting these groups." At the federal level, the Department of Health and Human Services (HHS) has adopted a policy that requires all HHS-sponsored data collection and reporting systems to include standard racial and ethnic categories. The OMB provides a standard classification of federal data by race and ethnicity for these data collection and reporting systems. The standard classification scheme ensures a "common language to promote uniformity

and comparability for data on race and ethnicity..."

Has this strategy been implemented in Minnesota?
No.

Indicators for this strategy:
- < Number of agencies and organizations using the OMB *Statistical Policy Directive No. 15, Race and Ethnic Standards for Federal Statistics and Administrative Report*.
- < State grantees are required to use standard race and ethnic categories.
- < Legislation enacted to require health plans to use standard race and ethnic categories.

For more information contact:
MDH, Office of Minority and Multicultural Health, at (651) 297-5813. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Minority Health".

Strategy: Train providers to provide culturally competent care.

	Systems	Community	Individual
Primary	U	U	
Secondary	U	U	
Tertiary			

Background:
Populations of color and American Indians in Minnesota experience poorer health and disproportionally higher rates of illness and death than whites. In addition, the report found the health priorities, needs and concerns of populations color are not identical to those of the general population. To construct a health profile of people of color, the 1997 *Populations of Color in Minnesota Health Status Report* used information from the birth and death certificates, as well as, the U.S. Census records of 1990.

While data on illness, injury and other aspects of health status of people of color was somewhat limited, we know cultural competency is one of the cross-cutting issues which affect the quality of health and health care for populations of color and American Indians and is a factor in the wide health disparities between populations and the general population.

The tactics used to accomplish this strategy are intended to provide a broad framework for increasing the cultural competence of health care professionals in the health care setting, as well as those involved in public health program development and implementation.

For the purposes of this strategy, a standard definition of cultural competence will be used. Cultural competence used here is defined as "a set of congruent behaviors, attitudes and policies that are present in a system, agency, or individual to enable that system, agency or individual to function effectively in trans-cultural interactions." The word culture refers to an integrated pattern of human behavior that includes the thought, communication, action, customs, beliefs, values, and institutions of a group. Competency refers to the capacity to function effectively (Cross et al., 1989).

In order to become culturally competent, providers must continue to acquire skills, areas of knowledge, and personal attributes, including an understanding of the major

social and economic conditions affecting specific populations served, that enable them to work effectively in transcultural situations. While understanding cultural patterns is important, it is vital to recognize that they do not always apply to every member of a cultural group. Diversity exists within diversity, and every individual must be dealt with based on his or her own personal history, values, and experiences ("cultural common sense").

Because no system, program, or individual can ever know everything about every person of every group, cultural competence is never fully achieved. Rather, it is an ongoing process of development on systemic, programmatic, and individual levels. It is an understanding that cultural competency is not a one-size fits all model.

Some of the contributing factors to the disparities in the health status of populations of color and American Indians are the lack of culturally competent health providers in the health care system, and the failure of health professionals to recognize the impact of cultural patterns and their affects on health outcomes. While this strategy was developed to address the barriers regarding race and ethnicity individuals encounter, there are other groups that have not been socially included based on varying religious beliefs, physical and mental disabilities, age, sexual orientations, socioeconomic positions, geographic regions, and other subcultural characteristics. This strategy can also be applied to fostering an understanding of all cultures.

It should be recognized that individual bias among health care providers and public health practitioners negatively affects the quality of care people receive and discourages people from seeking health care when they need it or from participating in programs designed to protect, maintain, and improve health. Additionally, the delivery of culturally competent care is critical to the health system's ability to assess and respond appropriately to the health needs of diverse populations.

To improve cultural competency in health care delivery systems basic elements should include:

- Fostering an awareness of the practitioner's own understanding of race, ethnicity, and power.
- Understanding how race and ethnicity have an impact on health care. It is important to recognize that there may be incongruence between the cultural patterns of groups and the processes by which health care is offered.
- Understanding the complexities among populations with which providers may not be familiar. As with all populations, one individual is just that: one individual with their own needs and requirements.

Fundamental strategies include:

- Increasing the number of health care professionals of color, which will enhance an organization's cultural competency.
- Employing bilingual healthcare providers or using medical interpreters as needed for limited English-speaking persons, which will increase the accessibility of care, thereby increasing the organization's cultural competence.

Further, cultural competency is more than the use of interpreters alone. Each population (American Indian, African American, Asian American, Latino) has cultural patterns to be considered that affect health outcomes. Steps that can be taken to achieve this strategy include:

- Create an environment where developing cultural competence is valued. Top management of any organization must establish an expectation that cultural competence is relevant to the work of every individual in the organization and communicate that expectation broadly. This can be accomplished by:
  - Ensure upper management sets the tone by participating in learning opportunities that foster cultural understanding.
  - Evaluate managers' and supervisors' performances on the basis of their efforts to increase the cultural competence of their staff and themselves.
  - Introduce new employees to the concept of cultural competence and the role it plays in their work.
  - Invest the organization's resources to provide opportunities for training, whether in-service or outside of the organization. Require participation as a valuable part of staff development.
  - Ensure staff's efforts to increase cultural understanding are rewarded.
  - Integrate dimensions of cultural competence into other staff development opportunities, such as annual meetings, staff retreats, and conferences.
- Assess the cultural competence of the system, agency, and individuals to identify needs and opportunities for relevant cultural learning, by issuing a report card. This would highlight the specific learning needs within the organization in terms of organization wide, program-specific, and individual development needs. Based on available data related to the demographic make-up of the client base, the following steps should be taken:
  - Determine, within each organization, the opportunities for further development relating to cultural competence.
  - Determine, within each program area, its current capacity for understanding, and responding to, the needs of a diverse client base.
  - Assess the needs of clients through focus groups, surveys, and other assessment methods, to determine if there are any barriers to effective service delivery.
  - Provide staff with opportunities to assess their own cultural competence, including a reflection of their own culture and experience.
- Provide non-threatening opportunities for learning. Opportunities for staff to increase their knowledge, skills, and abilities to work with diverse constituents should be offered. Examples include:
  - Collaborate with existing community programs that have "firsthand" understanding of cultural patterns, especially those targeted at addressing health related issues.
  - Facilitate internal dialogues among staff to combine efforts for reaching diverse populations.
  - Use experience of clients in the learning opportunities. Develop training in partnership with the input of people who are part of the population being addressed. Compensate these individuals appropriately.
  - Make use of alternative learning strategies, such as distance learning, computer-aided training, workshops, and dialogues, as well as traditional classroom learning.
  - Utilize the vast cultural training opportunities external to the

organization by providing training funds for attendance at learning opportunities outside of the organization. Publicize these learning opportunities to staff.

- Provide a centralized location, such as a library or diversity resource center, for self-study learning.

Additional resources:

Bibliographic resources:

- Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide*; available at: http://www.thecommunityguide.org).
- Cross, TL., Bazron, BJ., Dennis, KW., and Isaacs, M..1989. *Towards a Culturally Competent System of Care* (Vol. 1). Washington, DC: CASSP Technical Assistance Center, Georgetown University Child Development Center, at (202) 687-8635, 3800 Reservoir Road NW, Washington, DC 20007.
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- Massachusetts Developmental Disabilities Council. 1990. *Disability and Diversity: An Annotated Bibliography.* Contact: Massachusetts Developmental Disabilities Council, (617) 727-6374, 600 Washington Street, Boston, MA 02111.
- Minnesota Department of Health. 1997. *Populations of Color in Minnesota: A Health Status* Report; and 1998, *Minority Health Legislative Report.* Contact: MDH, Office of Minority and Multicultural Health, at (651) 297-5813.
- Minnesota Public Health Association's Immigrant Health Task Force. 1996. *Six Steps Toward Cultural Competence: How to Meet the Health Care Needs of Immigrants and Refugees.* Contact: Center for Cross Cultural Health, at (612) 624-4668, http://www.crosshealth.com/.
- Rider, ME., and Mason, JL. 1990. *Issues in Culturally Competent Service Delivery: An Annotated Bibliography.* Contact: Research and Training Center on Family Support and Children's Mental Health, at (503) 725-4040, Portland State University, P.O. Box 751, Portland, OR 97297-0751.
- Thomas, RR. 1991. *Beyond Race and Gender: Unleashing the Power of Your Total Workforce by Managing Diversity.* American Management Association.

Organizational resources:

- American Society for Training and Development, at (800) 628-2783, 1640 King Street, Box 1443, Alexandria, VA 22313-2043.
- Bridge to Wellness Partial Hospitalization Program, at (415) 284-9154, 645 Harrison Street, Ste. 100, San Francisco, CA 94107.
- Center for Cross Cultural Health, at (612) 379-3573, http://www.crosshealth.com/; 1313 S.E. Fifth Street, Suite 100B, Minneapolis, MN 55414.

- Chicano Latino Affairs Council, at (651) 296-9587, 50 Sherburne Avenue, St. Paul, MN 55155.
- Council on Asian Pacific Minnesotans, at (651) 296-0538, 200 Aurora Avenue, Ste. 100, St. Paul, MN 55103.
- Council on Black Minnesotans, at (651) 642-0811, 2233 University Avenue, Ste. 426, St. Paul, MN 55114.
- Cross Cultural Health Care Program, 1200 12th Avenue S., Seattle, WA 98144, xculture@ix.netcom.com.
- Indian Affairs Council, at (651) 643-3032, 1450 Energy Park Drive W. #140, St. Paul, MN 55103.
- Minnesota Cultural Diversity Center, at (612) 881-6090, http://www.mcdc.org; 9633 Lyndale Avenue South, Bloomington, MN, 55420.
- Minnesota State Council on Disability, at (651) 296-1743, 121 7th Place, Ste. 107, St. Paul, MN 55105.
- Multicultural Resource Center, Mankato. Contact: Diana Olvedo-Munoz, at (507) 237-3173, P.O. Box 3301, Mankato, MN 56002-3301.
- Office of Minority Health Resource Center, U.S. Department of Health and Human Services, at (800) 444-6472, http://www.omhrc.gov, Rockwall II, 5515 Security Lane, Rockville, MD 20852.
- Powderhorn/Phillips Cultural Wellness Center, Contact: Atum Azzahir, at (612) 721-5745, 1527 E. Lake Street, Minneapolis, MN.
- Resources for Cross Cultural Health Care, at (301) 588-6051, http://www.DiversityRx.org, 8915 Sudbury Road, Silver Spring, MD, 20901.
- Society for Human Resource Management, at (703) 548-3440, http://www.shrm.org, 1800 Duke Street, Alexandria, VA 22314.

Evidence for strategy:
This strategy has been tested in a variety of organizations, such as hospitals and clinics, health management organizations, community support programs, and public health agencies. Surveys of training participants indicate an increased sense of confidence in working with diverse populations and a desire to continue in the cultural learning process. In all organizations surveyed, the effectiveness of increasing cultural competence is contingent upon management's support of the endeavor.

According to the Centers for Disease Control and Prevention's Task Force on Community Preventive Services, there is insufficient evidence to recommend or strongly recommend the following strategies: staffing to reflect cultural diversity of served community; use of interpreters or bilingual providers; and cultural sensitivity training programs for healthcare providers. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Has this strategy been implemented in Minnesota?
Yes, currently there are a number of community clinics that use the strategies named here to serve the increasingly diverse populations in Minnesota. Also, the Center for Cross Cultural Health opened in January 1997. It was designed to help health care providers and institutions meet the health

needs of ethnically, linguistically, spiritually, and culturally diverse patients. HealthPartners has engaged in successful diversity training efforts, and Hennepin County Medical Center has actively educated their practitioners in cultural competency. For example, forums are hosted on a periodic basis to invite different groups to highlight various strategies that have improved the quality of health care for patients.

Indicators for this strategy:

- < Changes in staff perceptions about diverse populations before and after the training.
- < Changes in staff perceptions that cultural competence is valued within the organization.
- < Changes over time in cultural learning needs.
- < Numbers of participants who report that the training was beneficial in relating to a diverse client base.
- < Numbers of learning opportunities offered and the participation rate of staff.
- < Numbers of clients and patients who report satisfaction with the service they receive.
- < Numbers of partnerships with community resources to provide ongoing guidance in the cultural learning process.
- < Increased staff from populations of color and American Indians.
- < Numbers of translation services available.
- < Overall increase in indicators listed above noted through biennial reports.

For more information contact:
MDH, Office of Workforce Diversity, at (651) 215-1258.

Strategy: Include race, ethnicity, socioeconomic status and primary language in all assessments of utilization of health care services and use that information to improve health care delivery.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Populations of color and American Indians in Minnesota experience poorer health and disproportionately higher rates of illness and death than do whites. A crucial component of improving the health status of populations of color and American Indians is to improve access to, and utilization of, health care services. The 1997 *Populations of Color in Minnesota Health Status Report* found that, where statewide data are available, people of color in Minnesota do not have the same access to health care. They are less likely to have health insurance of any kind or protective vaccinations and they have fewer population members working in health professions. Unfortunately, these findings do not provide a complete picture of access and utilization of health care services of populations of color because of the lack of data.

Information on race and ethnicity should be included in all community health assessments by governmental public health agencies, health plans, hospitals and clinics, educational systems, community-based organizations, and other agencies that provide health care services. The questions of race and ethnicity should be based on the OMB *Statistical Policy Directive 15* for race

and ethnicity standards, with the identity of race and ethnicity self-reported. (See the previous strategy, "Ensure a standard data collection system to document the health status of populations of color in Minnesota" for a description of the race and ethnicity standards.) These assessments should identify barriers to serving populations of color related to transportation, primary language, ethnicity, culture, age, disability, educational information, socioeconomic status, and service delivery systems that affect access to, and utilization of, services. For related strategies, see "Health Care Coverage" in this category.

Additional resources:

- Minnesota Department of Health /Urban Coalition. 1997. *Populations of Color in Minnesota: Health Status Report.* St. Paul, MN: MDH. Contact: MDH, Office of Minority and Multicultural Health, at (651) 297-5813.
- Minnesota Department of Health. 1998. *Minority Health Legislative Report.* Contact: MDH, Office of Minority Health, at (651) 297-5813.
- Office of Management and Budget. 1998. *Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity.* Related information at, http://www.whitehouse.gov/omb/fedreg/ombdir15.html
- U.S. Department of Health and Human Services. 1992. *Improving Minority Health Statistics: Report of the Public Health Service Task Force on Minority Health Data.*

Evidence for strategy:
At the federal level, the HHS has adopted a policy that requires all HHS-sponsored data collection and reporting systems to include standard racial and ethnic categories. The OMB provides a standard classification of federal data by race and ethnicity for these data collection and reporting systems.

Has this strategy been implemented in Minnesota?
No.

Indicators for this strategy:

- Number of governmental public health agencies, health plans, hospitals and clinics, educational systems, community-based organizations, business or work sites, and other agencies that provide race, ethnicity, socioeconomic status and primary language data in their assessments of utilization of health care services.
- Changes in utilization rates by populations of color.

For more information contact:
MDH, Office of Minority and Multicultural Health, at (651) 297-5813. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Minority Health".

Strategy: Create an effective reporting mechanism for culturally insensitive encounters Minnesotans experience with the health care system.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
"My daughter was suffering from a kidney infection when we visited her pediatrician for tests. I interacted with the pediatrician

and various lab technicians in the exam room for almost an hour. At the end of the exam the pediatrician suggested to my husband that I couldn't speak English. English is my first and only language." –An Asian American mother and public health professional, sharing her recent encounter with the health care system in Minnesota.

"As soon as they look at the patient and see he's an African-American or Latino, they assume automatically that he doesn't have insurance at all." –An Hispanic/Latino physician, sharing perceptions about his colleagues.

How often do these biases occur? The most recent evidence in a report entitled, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, conducted by the Institute of Medicine in 2002 (See "Additional resources" below) suggests that these biases occur far too frequently. Although several factors contribute to existing racial and ethnic disparities in health care, evidence suggests that bias, prejudice, and stereotyping on the part of the health care providers may contribute to differences in care. This report provides strong evidence that minorities tend to receive lower-quality health care than whites, even when insurance status, income, age and severity of conditions are comparable. This report also emphasized that differences in treating heart disease, cancer, and HIV infection partly contribute to higher death rates for minorities.

"Disparities in the health care delivered to racial and ethnic minorities are real and are associated with worse outcomes in many cases, which is unacceptable," said committee chair Alan Nelson, a retired physician, former president of the American Medical Association, and current special advisor to the chief executive officer of the American College of Physicians-American Society of Internal Medicine, Washington, D.C. "The real challenge lies not in debating whether disparities exist, because the evidence is overwhelming, but in developing and implementing strategies to reduce and eliminate them." Even well meaning people who are not overtly biased or prejudiced typically demonstrate unconscious negative racial attitudes and stereotypes. In addition, the time pressures that characterize many clinical encounters, as well as complex thinking and decision-making they require, may increase the likelihood that stereotyping will occur (Institute of Medicine, 2002).

In order to better understand the prevalence and influence of bias, prejudice, and stereotyping on the part of health care providers/workers, and to ensure that Minnesota can track its progress in reducing disparities, clinics, hospitals, and counties must create plans to, without violating patients/clients' privacy, collect and report data on health care access and utilization by patients' race, ethnicity, socioeconomic status, and primary language.

However, given the limitations of quantitative data collection methods, the aforementioned entities should create an effective mechanism for racial/ethnic minority patients/clients to report and document any culturally insensitive experiences they may have with specific providers/workers within Minnesota's health care system. These strategies are necessary and crucial in tracking Minnesota's progress towards eliminating health disparities.

Additional Resource:

Institute of Medicine. 2002. *Unequal Treatment: Confronting Racial and Ethnic*

Disparities in Health Care. Washington D.C. Contact: National Academy Press, at(800) 624-6242: http:// www.nap.edu/books/030908265X/html/.

Evidence for strategy:
None.

Has this strategy been implemented in Minnesota?
No.

Indicators for this strategy:
- < Number of governmental public health agencies, health plans, hospitals and clinics, educational systems, community-based organizations, business or work sites, and other agencies with a mechanism for patients to report culturally insensitive encounters.
- < Existence of culturally sensitive methods to ensure all clients are verbally and literally informed of this reporting mechanism.

For more information contact:
MDH, Office of Minority and Multicultural Health, at (651) 297-5813. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Minority Health".

Strategy: Enhance services to reflect the health needs of all populations in the community.

	Systems	Community	Individual
Primary	U		
Secondary			
Tertiary			

Background:
A key strategy to reforming community health care is to establish services that are consumer-driven and that represent the community's diverse cultures. Communities are composed of diverse cultures seeking ways to maintain or preserve their health or to restore their well-being. Health policies and priorities must reflect the unique needs of communities with diverse cultures and be based on a systems approach involving health care providers, organizations, educational institutions, and communities.

With input from the diverse cultures within the community, modifications of existing services can be made as well as new services designed. Theoretical assumptions on which service modification should be based (Leininger, 1991) include:
- < Care is essential for human growth, development, survival, and facing death.
- < Care is essential to curing and healing; there can be no curing without caring.
- < Forms, expressions, patterns, and processes of human care vary among all cultures of the world.
- < Every culture has lay, folk, or naturalistic care and usually professional care practices.
- < Cultural care values and beliefs are embedded in religious, kinship, social, political, cultural, economic, and historical dimensions of the social structure and in language and environmental contexts.
- < Effective services can occur only when the cultural values, expressions, or practices of the clients regarding care are known and used explicitly in the promotion and provision of health care services.
- < Differences in expectations between providers and receivers of services or care need to be understood in order to

provide beneficial, satisfying, and congruent services and care.
< Provision of services or care in culturally and linguistically congruent methods is necessary to the health or well-being of people from diverse backgrounds.

Additional resources:
Bibliographic resources:
< Gates, M. 1991. Transcultural comparison of hospital as caring environments for dying patients. *Journal of Transcultural Nursing* 2(2): 3-15.
< Gaut, D. (Ed.). 1993. *A Global Agenda for Caring.* (Pub.#15-2518). New York, NY: National League for Nursing Press. Chapters from the Australia conference.
< Leininger, M. 1991. *Culture Care Diversity and Universality: A Theory of Nursing.* New York, NY: National League for Nursing Press.
< Leininger, M. (Ed.). 1990. *Ethical and Moral Dimensions of Care.* Chapters from conference on ethics and mortality of caring. Detroit, MI: Wayne State University Press.

Organizational resources:
< Hennepin County Medical Center, Social Services Division. Contact: Ellen Rau, at (612) 347-2248.
< Mayo Clinic, Language and Cultural Services Department. Contact: Colette Namyst-Goldberg, at (507) 266-4161.
< Regions Hospital, International Services. Contact: Elizabeth Anderson, at (651) 221-8928.

Web Pages:
< Center for Cross Cultural Health, http://www.crosshealth.com/.
< Diversity RX, http://www.diversityrx.org.

Evidence for strategy:
Leininger's (1991) research findings support her theory that the diversity and universality of culturally relevant care have a bearing upon quality of life. She holds that since quality of life is culturally constituted and patterned, it needs to be studied and understood from a transcultural perspective. She studied five major cultures to illustrate culturally constituted dominant care patterns related to quality of life. These comparative data reflect more diversity than universality among cultures. Therefore, it is critical that the diversity of different cultures be reflected in modifications made to the delivery of health services.

Has this strategy been implemented in Minnesota?
Yes, most of the major hospitals in Minnesota have modified some of their services to meet the needs of an increasingly diversified clientele. For example, the Hennepin County Medical Center (HCMC) in Minneapolis and Regions Hospital in St. Paul hold regular International Clinics. These two hospitals, as well as the Mayo Clinic in Rochester and Children's Hospital in St. Paul, have developed their own systems for interpreter services and employ a considerable number of full-time staff interpreters.

Indicators for this strategy:
< Numbers and kinds of ways in which services are updated to be inclusive of the diverse clients in the community.
< Increase in the number of customer-provider interactions.
< Degree of client (from all cultures in the community) satisfaction with the services.
< Number of customers from diverse cultures who utilize services.
< Degree of intra-organizational diversity awareness and service delivery.
< Numbers of staff from populations of color in decision-making positions to

better serve their communities.
< Numbers of times and ways that populations of color are consulted regarding modifications of services and processes.
< Amounts, methods and numbers of clients of color that are compensated as valued members of the process for their advice and input.

For more information contact:
< Sheila Brunelle, at (651) 282-3853, sheila.brunelle@health.state.mn.us, MDH, Office of Rural Health and Primary Care.
< MDH, Office of Minority and Multicultural Health, at (651) 297-5813. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Minority Health".

Strategy: Encourage the use of professional interpreters as needed for limited English-speaking and hard-of-hearing persons.

	Systems	Community	Individual
Primary	U	U	
Secondary			
Tertiary			

Background:
Communication is essential in delivering health care services, but often difficult to achieve with limited-English speakers and hard-of-hearing persons. The responsibility for securing an interpreter falls primarily on health institutions and those institutions are responsible for providing the necessary means for patients and clinicians to communicate. Title VI of the Civil Rights Act of 1964 says that it is illegal for recipients of federal funding (i.e. Medicaid and Medicare reimbursement) to discriminate on the basis of national origin, which includes language. In other words, an institution not providing trained interpreter services could be in danger of losing its federal funds. Other laws that require or imply interpreter provision include the Hill-Burton Act, Medicaid Law, the EMTALA (federal anti-dumping law), and, in various states, several provisions of state law and Medicaid managed-care regulations. Similar anti-discrimination laws require institutions to secure sign-language interpreters at no cost to the client. This strategy is intended to provide support for health care organizations in implementing the laws, as well as to help eliminate disparities in health care.

The properly trained interpreter can be a valuable member of the health care team. As of January 1999, there is no formal certification or accreditation of interpreters in Minnesota. However, the Minnesota Interpreter Standards Advisory Committee issued its recommendations in a report, *Bridging the Language Gap* (see "Additional resources" below), about training, certification, and use of foreign language interpreters in Minnesota. Its members consisted of 75 individuals representing academia, health care, government, business, law, advocacy, community, and interpreter organizations. In addition, the University of Minnesota offers training for interpreters in the medical and legal fields.

Additional resources:
Bibliographic resources:
< Barrett, B., Shadick, K., Schilling, R., Spencer, L., del Rosario, S., Moua, K., and Vang, M. 1998. Hmong/medicine interactions: Improving cross-cultural

health care. *Family Medicine*, 30(3): 179-184.
< Brooks, T. 1992. Pitfalls in communication with Hispanic and African-American patients: Do translators help or harm? *Journal of the National Medical Association*, 84(11): 941-946.
< Carey, JJ., Rhodes, L., Inui, T., and Buchwald, D. 1997. Hepatitis B among the Khmer: Issues of translation and concepts of illness. *Journal of General Internal Medicine,* 12:292-298.
< Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide*; available at: http://www.thecommunityguide.org.
< D'Avanzo, C. Barriers to health care for Vietnamese refugees. *Journal of Professional Nursing* 8(4):245-253.
< Minnesota Interpreter Standards Advisory Committee. 1998. *Bridging the Language Gap.* For copies, contact: MDH Communications Office, at (651) 215-1305.
< Nelkin, V., and Malach, R. 1996. *Achieving Healthy Outcomes for Children and Families of Diverse Cultural Backgrounds. A Monograph for Health and Human Services Providers.* Southwest Communication Resources.
< Parsons, L., and Day, S. 1992. Improving obstetric outcomes in ethnic minorities: An evaluation of health advocacy in Hackney. *Journal of Public Health Medicine* 14(2): 183-191.
< Roppe, M. 1996. *The Role of the Emerging Medical Interpreting Profession in Improving Access to and Quality of Care for Patients with Limited English Proficiency.* [Master's Thesis]. Minneapolis, MN: University of Minnesota, School of Public Health.
< Westermeyer, J. 1990. Working with an interpreter in psychiatric assessment and treatment. *Journal of Nervous and Mental Disease* 178(12):745-749.

Organizational resources:

< Hennepin County Medical Center, Social Services Division. Contact: Ellen Rau, at (612) 347-2248.
< Mayo Clinic, Language and Cultural Services Department. Contact: Colette Namyst-Goldberg, at (507) 266-4161.
< Regions Hospital, International Services. Contact: Elizabeth Anderson, (651) 221-8928.

Web Pages and Individuals:

< Center for Cross Cultural Health, http://www.crosshealth.com/.
< Diversity RX, http://www.diversityrx.org.
< Bruce Downing, Ph.D., Director, Program in Translation and Interpreting, at (612) 624-6552, bdowning@maroon.tc.umn.edu.

Evidence for strategy:

More and more health care organizations are required by state and federal laws to provide professional interpreter services for their clients. Correspondingly, more research is being conducted within the different fields of the social sciences to determine the cost-effectiveness of professional community interpreters. A number of professional journal papers emphasize the importance of quality translation and interpretation, its long-run cost-effectiveness in terms of diagnostic accuracy, increased preventive visits, and decreased urgent care visits and the ease and comfort level of communication between the patient and the physician.

According to the Centers for Disease Control and Prevention's Task Force on Community Preventive Services, there is insufficient evidence to recommend or

strongly recommend the use of interpreters or bilingual providers. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Has this strategy been implemented in Minnesota?
Yes, health care organizations use a wide spectrum of strategies for overcoming linguistic and cultural barriers to care. These strategies include the use of bilingual providers, bilingual/bicultural community health workers, interpreters, and translated written materials. Certain models may work best in a particular health care setting, while others have wide application and can be useful in all settings. The HCMC in Minneapolis, Regions Hospital in St. Paul, the Mayo Clinic in Rochester, the Minnesota Department of Human Services, and the MDH have well-established systems for language assistance. For further information, contact the Social Services divisions at HCMC, Regions Hospital, and Mayo Clinic (see the above resources section for contact information).

Indicators for this strategy:
< Identification of needed interpreter services.
< Number of interpreters hired to provide these services.
< Increase in the number of interactions between health care delivery systems and providers and limited English-speaking clients and hard-of-hearing persons.
< Patient satisfaction with the communications.

For more information contact:
Sally Sabathier, at (651) 215-1300, MDH Communications Office.

Strategy: Increase the number of practicing health professionals who are members of under-represented racial and ethnic groups.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Populations of color and American Indians in Minnesota experience poorer and disproportionally higher rates of illness and death than the white population. In addition, the report found the health priorities, needs and concerns of populations of color are not identical to those of the general populations. To construct a health profile of people of color, the 1997 *Populations of Color in Minnesota Health Status Report* (see Additional resources" below) used information from the birth and death certificates, as well as the U.S. Census records of 1990. While data on illness, injury and other aspects of health status of people of color was somewhat limited, we know that there is an under-representation of qualified persons of color in health professions. This under-representation in health related occupations is mainly among African Americans, American Indians, and Latino/Chicano populations, and has a direct bearing on the health outcomes of those people. Also, access to quality health care

for people of color can be enhanced by increasing the representation of populations of color in the health professions.

The strategies summarized in this section are highly complex and must be addressed on many levels. They focus on increasing the representation of qualified people of color within the public health professions as well as in the direct health care occupations.

In order to effectively eliminate the under-representation of people of color who work in professional health care positions, there must be a multifaceted approach that encompasses the creation of an environment conducive to change, recruitment of new resources for use, and modification of selection processes to be inclusive, as well as work to retain diverse talent. Focusing on one of these areas without addressing the others will result in a revolving door syndrome where people leave at a greater rate than they enter the workforce. Additionally, recruitment without training managers and supervisors in cultural competency will result in turning a number of people away from the hiring process, often leaving them frustrated and mistrusting the system as a whole.

Strategies to increase the numbers of under-represented groups within the health care industry begin at the primary stages of career development and end at the actual process of retaining health care professionals already employed in the industry. The following action steps represent interventions at the primary prevention level and target individuals, communities, and systems. Taken together, they are intended to achieve the strategies set forth here.

Inspire youth to consider careers in the health care industry. Children begin to develop interests in careers as early as the elementary school level. Many children have not been exposed to certain occupations as a result of the pervasive under-representation of their own role models within those fields. Children who have never met people employed in the health care industry with whom they can identify cannot visualize themselves employed in that field. In order to instill in them a sense of hope and inspiration, efforts must be made to expose them to people with whom they can identify who have been successful in those occupations. There are a variety of approaches that public health agencies and direct health care employers can take to inspire youth to consider careers in the health care industry. Developing outreach initiatives and partnering with school systems that educate diverse student populations are effective methods through which the following can be achieved:

- Promote messages from practitioners already employed in these fields that inform students of the critical need for diversity within the health care professions. For example, African American epidemiologists can tell students, “There are not many epidemiologists that are African American and we need more.”
- Find creative ways, such as contests, science fairs, and other “fun” activities, to spark the interests of students and hold the attention of young learners.
- Provide mentoring initiatives that match talented health care practitioners with young students to help inspire youth. It is particularly important for those mentors to have the ability to relate to the student by sharing a common understanding about cultural patterns and challenges unique to certain

communities. This will avoid the dynamics present in some mentoring relationships in which the student feels inferior and the mentor superior.

- < Offer incentives for learning, such as internships that offer stipends applied toward continued academic development in the health care industry. Other incentives include academic credit for work and learning experiences in the field.
- < Work to expand existing programs in schools by offering resources and ideas so that learning is congruent with the expectations of employers beyond the academic environment.
- < Provide role models, such as athletes, to whom children gravitate, to talk about the importance of the role of health care professionals.
- < Introduce cultural healing as part of the health service system to help students understand the "real life" context of health care while embracing their own cultural values and traditions.

Increase the enrollment of students of color in higher education programs, such as schools of public health and medical schools. According to 1995 national graduation rates in schools of public health, the rate of graduation for students of color is 20.6 percent of the total graduating class. In Minnesota, the rate of people of color who graduate from the school of public health is only 3 percent of students (based on USDHHS statistics). The Minnesota Center for Research in Health Statistics offers financial support for doctoral dissertations focusing on statistical health research on racial and ethnic populations. For more information see the website for strategies resources at: www.health.state.mn.us/strategies. Click on "Dissertation".

While there are a number of factors that determine where a student will choose to obtain higher education, a school's environment can have a great impact on its ability to attract students of color from anywhere in the country. Here are some of the ways that educational institutions can create a welcoming environment for students of color:

- < Increase the representation of faculty, administrators, and support staff of color within the institution.
- < Assess the under-representation of faculty of color in comparison to the availability of educators in those areas and take affirmative action to eliminate that underutilization.
- < Recruit faculty and administrators of color actively, on a national level, from areas where there are higher concentrations of people of color.
- < Provide incentives for faculty of color within institutions by offering tenured position opportunities and the same benefit packages available to majority faculty members who may have other ties to the institution.
- < Provide support mechanisms for students of color who are studying in health-related fields.
- < Encourage employers to provide mentors who can relate to students on a variety of levels to help them maneuver throughout the academic system and connect them with hiring supervisors within their own institutions.
- < Offer mentors for students through internships that offer stipends or other forms of compensation for students while they are gaining practical application of their theoretical learning.
- < Urge academic institutions to encourage students to utilize available support resources present on many campuses.
- < Encourage educators within those

institutions to serve as catalysts for student organizing activities to push the institution to become more inclusive in the administration of programs.

< Provide information about available community resources that embrace the cultural values and traditions of students, particularly those who are unfamiliar with that geographic location.

< Look broadly at a variety of disciplines for potential candidates in the health care field.

< Acknowledge that, beyond the training available through schools of public health and medical school environments, technical and vocation training programs can often lead to further pursuit of specialized health care occupations.

< Increase the number of applicants selected for positions in the health care field. In order for an employer to effectively increase the number of individuals from under-represented groups employed in their organizations, a multifaceted approach must be employed. Beginning by creating an environment conducive to change, an employer can set the tone and develop a workplace that is aware of, accepts, and appreciates the value of diversity. This will have residual effects on the actual hiring process, as individuals who are responsible for making hiring decisions will be more aware of their own biases and how they affect their decision-making. These persons will then be more open to seeking out potential employees who do not fit one particular gender, age group, or ethnic category.

A key strategy to having an effective impact on an organizational culture in terms of embracing differences is to have solid and consistent support from upper management throughout the process. Leadership must clearly communicate an expectation that all employees understand that diversity is a core value and directly linked to the mission and vision of the organization. In many cases, employees must be given "permission" to seek understanding of cultural differences and be provided incentives for doing so. Once the foundation has been laid, there are a number of activities in which employers can engage to increase the representation in their applicant pools and within their workforce. They include:

< Assess the representation within the organization to identify underutilization where it exists and focus initiatives in those areas.

< Identify, by conducting underutilization analysis, job categories where under-represented individuals are trained and skilled. Goals should be set in direct correlation to the availability of *qualified* individuals for positions based on the requisite knowledge, skills, and abilities needed to perform the essential functions of those positions.

< Measure the progress of achieving goals to eliminate underutilization by each segment of the organization and hold individual hiring supervisors accountable for meeting those goals. *This does not imply the use of quotas*. Goals should be flexible, realistic, and related to objective labor market data.

< Reward individuals who, and sections of the organization which, demonstrate a commitment to achieving a diverse workforce.

< Communicate progress to organizational leaders so that they can celebrate successes and establish

strategies where additional progress is needed.
- < Broaden recruitment resources.
- < Establish relationships with community-based organizations designed to provide employment-based services to under-represented populations.
- < Advertise in publications read by populations of color.
- < Be present at community activities and events where under-represented populations will be present. Ensure that this presence is not sporadic.
- < Establish relationships with professional associations that are networks for populations of color in the variety of health care fields.
- < Utilize the expertise, connections, input and constructive criticism of staff of color within the organization.
- < Empower them to serve as representatives of the organization in outreach activities.
- < Serve on advisory councils and boards of directors, and as volunteers, in organizations that serve populations of color.
- < Select individuals based on objective, job-related criteria.
- < Assure that hiring supervisors and managers examine their hiring decisions to determine if biases are subconsciously affecting their decisions, always recognizing the hiring process can be somewhat subjective.
- < Establish clear criteria by which to measure an applicant's suitability for a position before the hiring process begins to increase the objectivity of the decision.
- < Use the same interview questions for each candidate interviewed and retain the notes for subsequent review. This will ensure that all applicants are evaluated according to the same standards.
- < Consider the value that the diverse attributes of the hired individual will add to the mission of the organization. Also, consider the ability of that individual to relate effectively to diverse cultures and groups as a factor in the hiring decision.
- < Work to retain talented employees of color. Let them know that they are important and valued members of the organization.
- < Assess the rate of separation of employees of color in proportion to their overall representation within the organization. Identify the personal or systemic reasons that employees of color voluntarily resign, are terminated, or do not pass probationary periods, particularly when their separation exceeds their overall representation within the organization.
- < Establish remedies that correlate with the reasons for employee turnover, such as mentorship initiatives and other support programs.
- < Create an organizational culture that is open to discussions about diversity and institutional barriers to access for employees. Create a mechanism that deals with employees' perceptions directly.
- < Promptly and thoroughly investigate allegations of discrimination when they are presented.
- < Offer conflict intervention techniques such as mediation.
- < Clarify expectations for satisfactory job performance and provide recognition to employees who are

meeting those expectations. Reward them with wage increases and promotional and training opportunities.

Additional resources:

Bibliographic resource:

< Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide*; available at: http://www.thecommunityguide.org).
< Minnesota Department of Health. 1997. *Populations of Color in Minnesota: A Health Status Report*; and 1998. *Minority Health Legislative Report*. Contact: MDH, Office of Minority and Multicultural Health, at (651) 297-5813.

Resources for inspiring youth to consider careers in the health care industry:

< Minnesota Hispanic Education Program, (651) 222-6014, 245 East 6th Street #467, St. Paul, MN 55101.
< Minnesota Minority Education Partnership. Contact: Bruce Vandal, at (612) 330-1645, 2211 Riverside Avenue, Minneapolis, MN 55454.
< St. Paul Public Schools, Minority Encouragement Program. Contact: Louis Yim, at (320) 255-4928, St. Cloud State University, Minority Studies Academic Program, Math-Science-Computer Camp, B120 Education Building, 720 4th Avenue South, St. Cloud, MN 56301-4498.
< Urban Coalition Education Initiative. Contact: Claudia Fuentes, at (612) 348-8550, 2610 University Ave W, Ste. 201, St. Paul, MN 55114-1090.

Resources to increase the enrollment of students of color in higher education programs, such as schools of public health and medical schools:

< American Indian Science and Engineering Society, Contact: Sandra Begay-Campbell, at (303) 939-0023, http://www.aises.org, 5661 Airport Blvd., Boulder, CO 80301.
< Association of American Indian Physicians. Contact: Margaret Knight, at (405) 946-7072, http://www.aaip.com, 1235 Soverign Row, Suite C-9, Oklahoma City, OK 73108.
< Bowen, W., and Bok, D. 1998. *Shape of the River.* Princeton University Press.
< Hraboski, FA. III. 1998. *Beating the Odds: Raising Academically Successful African American Males.* Oxford University Press.
< Leininger, M. 1991. *Culture Care Diversity and Universality: A Theory of Nursing.* New York, NY: National League of Nursing Press.
< Leininger, M. 1995. Transcultural Nursing: Concepts, Theories, Research, and Practice (Second Ed.). New York, NY: McGraw Hill Custom College Series.
< University of Minnesota Academic Health Sciences, Multi-Cultural Services, Academic Health Center, Contact: Jacqui Cottingham-Zierdt, at (612) 625-9940, cotti001@maroon.tc.umn.edu, I-125 Moos Tower, 515 Delaware Street SE, Minneapolis, MN 55455.
< University of Minnesota Duluth Center for American Indian and Minority Health, School of Medicine, Room 182, 10 University Drive, Duluth, MN 55812-2487, http://www.d.umn.edu/medweb/caimh.
< University of Minnesota, Office of Equal Opportunity and Affirmative Action. *Open Eyes, Open Minds: A Guide for Students of Color.* Contact: (612) 624-9547, 419 Church Street SE, Minneapolis, MN 55455.
< University of New York, Under Represented Graduate Fellowship

Program, State University Plaza, Albany, NY 12246. Contact: Ms. Jacqueline Davis Ohwevwo.

Resources for increasing the number of applicants who are selected for positions in the health care field:

- Arrien, A. 1998. *Working Together: Producing Synergy by Honoring Diversity.* New Leaders Press.
- Hubbard, EE. *Measuring Diversity Results* (Vol. 1).
- Jordan, FE. 1998. *The Lynching of the American Dream: In Defense of Affirmative Action.* Wizard Publications.
- Minnesota Department of Health. *Diversity/Affirmative Action Plan 1998-2000.* St. Paul, MN: MDH. Contact: Office of Workforce Diversity, 121 E. 7th Place, St. Paul, MN 55164, at (651) 215-1258.
- Thomas, RR. 1996. *Redefining Diversity*. American Management Association.

Evidence for strategy:

In terms of inspiring youth to consider careers in the health care industry, many of the strategies listed above have been proven to increase the interest of children in the health care field. Measurement of the effectiveness of this strategy is difficult, as it is a long-range endeavor and the effects may take years to manifest.

According to the Centers for Disease Control and Prevention's Task Force on Community Preventive Services, there is insufficient evidence to recommend or strongly recommend a strategy of staffing to reflect cultural diversity of the served community. A determination by this Task Force of insufficient evidence does not mean evidence of ineffectiveness. A recommendation of insufficient evidence means that available studies do not provide sufficient evidence to assess the strategy's effectiveness. For more information see The Preamble section of the Introduction to this document, under "Evidence-based Strategies," and The Community Guide at http://www.thecommunityguide.org.

Evidence for increasing the enrollment of students of color in higher education programs, such as schools of public health and medical schools, includes the fact that Affirmative Action has helped draw students of color into higher education programs. Evidence of the decline in enrollment rates for students of color absent such initiatives has been observed in California's higher education system after the passage of Proposition 209 (an anti-affirmative action bill that passed in 1996). A report entitled *Opportunities Lost: The State of Public Sector Affirmative Action in Post Proposition 209 California* reveals details of the rapid decline in enrollment rates for students of color.

Evidence for increasing the number of applicants who are selected for positions in the health care field includes the fact that this strategy has been tested in a variety of employment settings. The MDH has made progress in increasing the representation of people of color working in the agency. With mechanisms that ensure inclusion in the hiring process, the Department has had a steady increase in the number of employees of color over the last seven years. Currently, a study of employee retention is underway to pinpoint the reasons for employee separation.

Has this strategy been implemented in Minnesota?

Yes, in terms of inspiring youth to consider careers in the health care industry, a collaborative project between St. Paul Public

School's Minority Encouragement Program and Regions Hospital is one example of exposing youth to careers in the health care field at early ages. The MDH employees also conduct outreach efforts, targeting under-represented students in schools throughout the metropolitan area.

Regarding increasing the enrollment of students of color in higher education programs, such as schools of public health and medical schools, the Multi-Cultural Institute of the Academic Health Center of the University of Minnesota has worked diligently to increase the number of under-represented students enrolled in public health and medical schools in Minnesota. The American Indian Science and Engineering Society has, in addition, successfully promoted, sponsored, and graduated hundreds of American Indian students since its inception.

In terms of increasing the number of applicants who are selected for positions in the health care field, HealthPartners diversity director, Trudy Buford, has been instrumental in the integration of people of color into health care occupations within their organization. The MDH's Human Resource Management Division has worked with hiring managers and supervisors to select qualified individuals from diverse backgrounds for a variety of positions in the department.

Indicators for this strategy:
Indicators for inspiring youth to consider careers in the health care industry:

< Number of students who participate in health-related activities.
< Degree of student interest in health care careers.
< Number of ethnic and minority students who enter health-related professions.

Indicators for increasing the enrollment of students of color in higher education programs, such as schools of public health and medical schools:
< Number of students of color over time who enroll in higher education programs.
< Number of students of color over time who complete higher education programs.
< Correlation between these initiatives and the internal demographics of higher education programs.

Indicators for increasing the number of applicants who are selected for positions in the health care field:
< Increase in the number of people of color who apply and are selected for positions over time in a place of employment.
< Number of and length of time that employees of color stay at places of employment.
< Correlation between these initiatives and the internal demographics of places of employment.

For more information contact:
< MDH, Office of Minority and Multicultural Health, at (651) 297-5813. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Minority Health".
< MDH, Office of Workforce Diversity, at (651) 215-1258.

CATEGORY: Service Delivery Systems

TOPIC: EMERGENCY MEDICAL SERVICES INFRASTRUCTURE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Assess models of comprehensive trauma systems as they affect emergency medical services (EMS) provided for the state of Minnesota.	✔		✔				EMS Regulatory Board
Provide information and education for the general public on the recognition of emergency medical situations.	✔	✔	✔		Eight Regional EMS Programs		EMS Regulatory Board
Develop strong community systems that support the physical and psychological needs of children throughout the continuum of care, including a particular focus on services to children with special health care needs.	✔		✔			✔	EMS Regulatory Board EMS-C Resource Center
Assure that programs are in place to educate the general public on proper access to the enhanced 911 emergency telephone system.	✔	✔	✔		✔		EMS Regulatory Board
Implement a statewide EMS information system.	✔		✔		✔	✔	EMS Regulatory Board

It is imperative that all of Minnesota's population, both resident and transient, has access to emergency medical service (EMS) resources. Minnesotans should be able to summon help rapidly in emergency situations. Following a resident's call for help, a local EMS system must access and provide rapid response from public safety, fire and rescue (first responders), ambulance, and other appropriate emergency aid. This rapid response must occur without confusion and without a need for familiarity with a particular community or geographic location.

The Minnesota Emergency Medical Services Regulatory Board (EMSRB) consists of 19 members, most appointed by the Governor and serve as volunteers. These public officials represent emergency care providers, EMS organizations and consumers, and are responsible for developing public policy for the delivery of emergency care in Minnesota. EMSRB staff members implement these policies. The EMSRB is committed to an efficient, accessible, safe and modern emergency medical services system for Minnesota communities. The Board provides leadership to improve the quality of emergency medical care for the people of Minnesota through policy development, regulation, systems design, education, and medical direction.

The current EMS system in Minnesota relies heavily on trained and dedicated volunteers, as well as on trained paid personnel. It is vital to this industry that recruitment and retention of personnel be an ongoing effort. This includes not only response personnel, but also recruitment of physicians for medical direction of EMS systems and resources. These personnel must be properly trained and have access to appropriate equipment to meet the needs of all residents, including various age and risk groups.

The vital role of dispatch in any local system serves as the communication link with EMS resources. This includes effective public outreach to encourage the public to use the 911 emergency telephone system, instruct the public on what information is necessary to provide to the 911 dispatch center, and education to help reduce the number of nuisance or unnecessary calls to the 911 dispatch center.

The population of the entire state is affected by EMS. Users of the spectrum of EMS services range from the casual citizen on the street accessing EMS services or in need of service, to those with disabilities or chronic patients in long-term care facilities who depend upon EMS providers for medically assisted transportation for extended treatment regimens. Certain age groups can be considered a higher risk than others, for example, young adults (from injuries), high-risk employment populations (e.g. construction, mines, public safety, and farm work) and the aged (from falls and chronic illness). The strategies presented here are intended to strengthen the EMS system throughout Minnesota.

Strategy: Assess models of comprehensive trauma systems as they affect emergency medical services (EMS) provided for the State of Minnesota.

	Systems	Community	Individual
Primary			
Secondary	U		
Tertiary	U		

Background:
Minnesota does not have a formal, organized system of trauma care. However, many facilities have a strong commitment to providing high-quality care for trauma patients. Four hospitals have received American College of Surgeons (ACS) verification as Level One Trauma Centers: Hennepin County Medical Center, Minneapolis; Regions Hospital, St. Paul; St. Mary's Hospital, Rochester; and North Memorial Health Care, Robbinsdale. Three hospitals have received ACS verification as Level Two Trauma Centers: St. Luke's Hospital, Duluth; St. Mary's Medical Center, Duluth; and St. Cloud Hospital, St. Cloud. Other facilities with an interest in trauma care participate in a trauma registry alliance. In 1993, the MDH established a Traumatic Brain Injury/Spinal Cord Injury (TBI/SCI) registry in which all hospitals in the state must participate; however, participation in a comprehensive trauma registry is not required nor does one exist.

To provide a high-quality, effective system of trauma care, Minnesota must have a fully functional EMS system in place, and trauma components must be clearly integrated with the overall EMS system. Legislation enabling the development and implementation of the trauma care component of the EMS system should also be in place. This should include trauma center designation (using national standards as guidelines), triage and transfer guidelines for trauma patients, data collection and trauma registry definitions and mechanisms, mandatory autopsies, and quality improvement for trauma patients. Information and trends from the trauma registry should be reflected in public information and education and injury prevention programs. Rehabilitation is an essential component of any statewide trauma system, and these services should be considered as part of the designation process.

Additional resources:
- < Minnesota Department of Health Trauma Care Task Force. 1995. *Model Criteria for Trauma Stabilization Facilities and Community Trauma Facilities.* Minneapolis, MN: MDH Trauma Care Task Force. [For copies, contact the MDH Library, (612) 676-5091.]
- < Minnesota Department of Health Trauma Care Task Force. 1995. *Model Protocols for Triage and Transfer of the Trauma Patient.* Minneapolis, MN: MDH Trauma Care Task Force. [For copies, contact the MDH Library, (612) 676-5091.]
- < Minnesota EMS Regulatory Board Trauma Care Work Group. Contact: (612) 627-6000.

Evidence for strategy:
It stands to reason that in order to provide a high-quality, effective system of trauma care, Minnesota must have a fully functional EMS system with clearly integrated trauma components. This strategy is an integral part of the current work plan of the Minnesota Emergency Medical Services Regulatory Board (EMSRB), which includes collaboration with the MDH in developing a statewide trauma system.

Has this strategy been implemented in Minnesota?
No, but the State of Minnesota and many communities are moving in this direction. The Minnesota EMS Regulatory Board has established a Trauma Work Group to develop and implement strategies for a statewide trauma system. Linkages with many agencies and organizations have been

established, utilizing the *Model Protocols for Triage and Transfer of the Trauma Patient*, and *Model Criteria for Trauma Stabilization Facilities and Community Trauma Facilities* as the bases for discussion. These agencies and organizations include the Minnesota Medical Association, Minnesota Hospital and Healthcare Partnership, Emergency Medical Services for Children Resource Center, Minnesota Chapter of the American College of Surgeons' Committee on Trauma, Minnesota Chapter of the American College of Emergency Physicians, Minnesota Ambulance Association, Emergency Nurses Association, Minnesota Trauma Registry Alliance, the MDH, and the departments of Transportation, Public Safety, and Administration (911 emergency telephone service), as well as other state, public, and private organizations with interest in trauma care in Minnesota. Many hospitals in Greater Minnesota also maintain an active interest in assessing emergency capabilities and developing appropriate trauma care protocols and procedures.

Indicators for this strategy:

- < Description of Minnesota trauma care system components.
- < Comprehensive listing of partners and stakeholders.
- < Definition of primary responsibilities; analysis of need; and convention of any necessary state, regional, and local meetings to identify resources and obstacles to implementation of a state trauma system.

For more information contact:
Wayne Carlson, at 651-296-9725 or wayne.carlson@health.state.mn.us, Minnesota's Trauma/Emergency Medical Services System.

Strategy: Provide information and education for the general public on the recognition of emergency medical situations.

	Systems	Community	Individual
Primary		U	U
Secondary			
Tertiary			

Background:
Many people unintentionally access the EMS system inappropriately, for reasons other than immediate need for a medical or traumatic injury. For the system to work, it must be used as intended, for emergency medical situations. Conversely, others do not access the EMS system when they should, such as, in the case of chest pain and other symptoms of cardiac arrest. This lack of understanding requires that the general public learn to recognize emergency medical situations and to use the system appropriately in response to them. An EMS public information, education, and relations program can be developed and implemented for the general public. It should emphasize access to the EMS system and be based upon recognition of emergency medical situations. This can be accomplished collaboratively with public and private agencies.

Additional resources:

- < The EMS for Children (EMS-C) Resource Center is the primary contact for pediatric EMS activities in Minnesota. It provides information, coordinates education, performs research, and provides technical assistance in pediatric medical emergencies. See contact information below for address and phone number.

- The eight EMS Regional Programs provide many educational programs for the EMS community throughout the state. Addresses are available through the EMSRB website: http://www.emsrb.state.mn.us.
- Local Boards of Health also consider EMS through community health plans, which address EMS issues, such as, public education, access to emergency care, and support of community-based ambulance service training and continuing education. Contact your local public health agency for this information.

Evidence for strategy:
In Minnesota, there has not been a statewide public information, education, or relations campaign designed and implemented specifically for the recognition of emergency medical situations. Nevertheless, much research has been done on the effectiveness of such campaigns in teaching the general public about health conditions and behaviors. When designed and implemented well, they are highly effective.

Has this strategy been implemented in Minnesota?
Yes, the EMSRB has the authority to establish a statewide public information and education system. The Board's web site currently offers general information about the Board and links to other EMS web sites. A monthly bulletin is distributed statewide to providers and other interested persons. No staff personnel currently are designated to coordinate statewide public information and education efforts. At the local level, several programs are offered by EMS providers. They include CPR classes, clinics for babysitters, latchkey classes, first aid for little people, basic first aid, advanced first aid, CPR for day care providers, and first aid for business and industry. Many providers throughout the state provide professional and community-based EMS education classes and programs. Community Health Services Agencies have provided public awareness programs, citizen access programs, and other prevention programs directed toward citizen response and access of the local EMS system.

Indicators for this strategy:
- Expanded web site with information of general interest to the public.
- Expanded public information and education efforts by regional programs focusing on public access of EMS.
- Expanded collaborative efforts by the Board and Community Health Agencies to provide local educational opportunities for citizens.

For more information contact:
- Emergency Medical Services Regulatory Board, Trauma Project Manager, (612) 813-7534 http://www.emsrb.state.mn.us Provides information on current regulatory activities affecting pediatric EMS in the state.
- Emergency Medical Services Children Resource Center (EMSCRC), Court International Bldg., 2550 University Avenue West Suite 216, St. Paul, MN 55104, at (612) 813-7534.

Strategy: Develop strong community systems that support the physical and psychological needs of children throughout the continuum of care, including a particular focus on services to children with special health care needs.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Through the collaborative efforts between the Emergency Medical Services for Children (EMSC) Resource Center and the Emergency Medical Services Regulatory Board, Minnesota has made great strides to improve the care critically ill and injured children receive throughout the state. The EMSC Resource Center is a collaborative effort of the Emergency Medical Services Regulatory Board, Children's Hospitals and Clinics and the University of Minnesota Emergency Medicine Program. Through this effort pediatric emergency training has been made available through locally developed programs and nationally recognized courses. Since 1998 the EMSC Resource Center has provided pediatric training as a result of the fully or partially supported application of EMSC grant monies to 1,885 EMS providers, 782 nurses and physicians, 243 EMS instructors and 1,522 other individuals.

Through a Pediatric EMS Needs Assessment of Basic Life Support (BLS) and Advanced Live Support (ALS) completed in 1996 and 2000 we have gained valuable information to assist us in the development and implementation of improved EMS systems for children and supporting children's needs within communities. The 2000 survey focused on four primary areas including: equipment and protocols; education and training; quality assurance and continuous quality improvement; and public education and injury prevention.

The following activities have been or will be utilized to address the needs identified in the four areas:

< Revise pediatric guidelines and disseminate to ambulance services with a focus on those services not using pediatric guidelines.
< Develop a pediatric equipment assessment tool to assist EMS Specialists who perform inspections for ambulance licensing and provide nationally recognized essential and desirable pediatric equipment lists to BSL and ALS services.
< Encourage EMS Regional programs to assume a leadership role by collaborating with EMSRB and EMSC to increase quality assurance and continuous quality improvement activities.
< Assist EMS Regions to identify existing injury prevention programs/coalitions to foster opportunities for collaboration and increase resource allocation.
< Develop a fact sheet on pediatric education and distribute to all medical directors, managers and EMS education centers to describe methods and curricula to be used for training.

Children with special health care needs are another priority in the EMSC program. The EMSC Resource Center has developed a program for children with special health care needs to notify EMS agencies and hospitals about children within their communities and their emergency information plans. The program is called, PERK (Plan for Emergency Response for Kids). Education

has been provided to many BLS and ALS providers on how to care for children with special health care needs. Also, a three-year federal targeted issues grant is funding the development of a web-based Emergency Information Form (EIF) for post-cardiac surgery children. This will provide access to life-saving emergency information to a physician caretaker unfamiliar with the patient's history in an emergency setting.

Developing partnerships is another priority for the EMSC Resource Center. The EMSC Resource Center has partnered with the MDH Violence and Injury Prevention Unit to complete a study on Pediatric Traumatic Brain Injury. Just recently, the EMSC Resource Center began a partnership with the Hennepin County Poison System to provide poison prevention education to EMS providers and the public. Also, a partnership is underway with the Wisconsin EMS-C to duplicate their Basic Emergency Life Saving Skills in Schools (BELSS) in Minnesota. This course is targeted to high school students. It requires cooperation from various state agencies and school district leaders. Additional organizations that have partnered with the EMSC Resource Center to work toward improving emergency medical services for children include: America Heart Association, Hennepin County Trauma Services, St. Cloud Hospitals, North Memorial Medical Center, Allina Hospitals and Clinics, EMS Regional programs, Office of Traffic Safety, Emergency Nurses Association, and the American Academy of Pediatrics.

Additional resources:
Bibliographic resources:

- *2000 Pediatric EMS Needs Assessment in Minnesota*. Contact Claudia Hines, EMSC Resource Center (612) 813-7534.
- Emergency Medical Services for Children, National Taskforce on Children with Special Health Care Needs. 1997. EMS for children: Recommendations for coordinating care for children with special health care needs. *Annals of Emergency Medicine*. 30: 274-280.
- Glaeser PW. 2000. Survey of nationally registered emergency medical services providers: Pediatric education. *Annals of Emergency Medicine* 36:33-38.
- Minnesota Department of Health Injury and Violence Prevention Unit. *Pediatric Traumatic Brain Injury Research Study*. Jon Roesler, MDH Injury and Violence Prevention Unit, (651) 281-9841.
- Valluzze JL., Brown S., and Dailey B. 1997. Protecting the rights of children with special health care needs through the development of individualized emergency response plans. *Infants and Young Children* 66-80.

Organizational resources:

- American College of Emergency Physicians, Emergency Medical Services for Children - Working for Children with Special Health Care Needs, www.acep.org.
- Emergency Medical Services Regulatory Board, Trauma Project Manager, (612) 813-7534 http://www.emsrb.state.mn.us
- National EMSC Data Analysis Resource Center (NEDARC), http://nedarc.med.utah.edu.
- National Emergency Medical Services for Children Resource Center. www.ems-c.org.

Evidence for strategy:
The need to establish standards for emergency vehicle pediatric equipment and for comprehensive training programs in Minnesota is well documented and the method of developing and implementing a plan to do so is effective. Although the

EMSRB routinely checks for appropriate pediatric equipment during ambulance inspections, there are no minimum required standards for pediatric Basic Life Support and Advanced Life Support equipment in Minnesota. A minimum standard is being developed by a workgroup of the Emergency Medical Services for Children Resource Center of Minnesota. Until a standardized list is formalized, information is available from other sources. These recommendations were developed by a consensus of individuals interested in providing high-quality pediatric emergency care to communities and implemented in various communities in the U.S.

Has this strategy been implemented in Minnesota?
No, currently, there are multiple levels of emergency care in Minnesota, each with its own curriculum and training requirements for pediatric care. These training requirements may or may not include a pediatric emphasis, but do not include an emphasis on children with special needs. A survey has been conducted to assess the need and mechanisms for coordination of the training on pediatric emergency care. Based on this needs assessment and its recommendations, plans are being developed for the training of emergency staff in pre-hospital care of children. Information on the current training and plans for future training is available.

Indicators for this strategy:
< Development of minimum requirements for equipment guidelines of first responder units and ambulance services within the state.
< Development and implementation of pediatric training courses for all levels of EMS personnel responding to medical emergencies within the state.
< Number of emergency response vehicles equipped with appropriate pediatric equipment and supplies.

For more information contact:
< Emergency Medical Services Regulatory Board, at (612) 627-6000 or (800) 747-2011,www.emsrb.state.mn.us, 2829 University Ave SE # 310, Minneapolis, Minnesota 55414-3222. Provides information on current regulatory activities affecting EMS in the state.
< Emergency Medical Services for Children Resource Center, Court International Bldg., 2550 University Avenue West Suite 216, St. Paul, MN 55104, at (612) 813-7534, www.emscmn.org

Strategy: Assure that programs are in place to educate the general public on proper access to the enhanced 911 emergency telephone system.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	
Tertiary			

Background:
The Minnesota 911 program provides technical assistance to the cities and counties implementing, maintaining, and improving 911 systems; enforces rules that set system standards; and pays a share of 911 costs from the funds collected through a monthly statewide telephone surcharge. The 911 emergency number is designed to provide immediate access to emergency services. It saves time for the caller, reducing overall response time for emergency service

providers. More time is potentially saved with enhanced 911 systems, which provide location information of the caller to the 911 center. Legislation enacted in 1994 provided funding to bring enhanced 911 to rural areas. This accelerated the start-up of enhanced 911 services by promoting collaboration among legislators, regulators, state and local government administrators, and the telephone industry. Minnesota currently has virtually 100 percent enhanced 911 emergency telephone service coverage.

EMS regional projects, CHS agencies, local ambulance providers, and local public safety agencies have the expertise and knowledge to arrange and/or present educational programs on citizen access and usage of the 911 emergency telephone system.

Additional resources:

- Minnesota Department of Administration, Telecommunications Division of the InterTechnologies Group, www.admin.state.mn.us. [Click on "Services Index," and then click on "Telecommunications."]
- EMS regional programs: See the EMSRB Website for contact information. www.emsrb.state.mn.us.

Evidence for strategy:

Minnesota is one of 14 states in which people who dial 911 receive immediate access to emergency help, regardless of where in the state they make the phone call. To maintain effectiveness in local communities, use of the 911 emergency telephone system requires ongoing public educational efforts. Likewise, county and city agencies that receive 911 calls need standard operating procedures, comprehensive training for dispatch, and proper telecommunications equipment to best serve local community emergency needs.

Has this strategy been implemented in Minnesota?

Yes, with Minnesota among the handful of states with statewide-enhanced 911, educational efforts on the proper access of the 911 system have been an ongoing process for many years. With enhanced 911, programs will continue to promote an understanding of how enhanced 911 works, thus justifying its increased costs to the consumer. Of particular interest should be specific outreach efforts to groups, such as, the elderly, those with special health needs, or the chronically ill, who may access 911 more often than the general public.

Indicators for this strategy:

- Achievement of 100-percent enhanced 911 coverage (87 counties) within Minnesota.
- Presentation of targeted 911 education programs to specific population groups by CHS agencies.
- Integration of 911 calls from wireless systems into the statewide enhanced 911 network.

For more information contact:

- Jim Beutelspacher, (651) 296-7104, Minnesota Department of Administration, Minnesota 911 Program.

Strategy: Implement a statewide EMS information system.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
The National Highway Traffic Safety Administration has recommended that all states develop a reliable, valid, and integrated EMS information system that will meet the goals set forth in its report, *EMS Agenda for the Future.* These goals are:

- Describe an entire EMS event.
- Adopt uniform data elements and definitions and incorporate them into information systems.
- Develop mechanisms to generate and transmit data that are valid, reliable, and accurate.
- Develop integrated information systems with other health care providers, public safety agencies, and community resources.
- Provide feedback to those who generate data.

The reports generated from this statewide data collection system will include:

- Patient care enhancement - identify trends and issues in treatment and outcomes. An understanding and acceptance of evidence-based medicine recognizes that appropriate medical care in the pre-hospital setting is best determined by patient outcomes. An EMS information system grounded in sound data collection will enhance the capability to analyze clinical outcomes and effect change to assure high quality emergency medical care.
- EMS education program development. Training programs for EMS personnel can be tailored to advance learning skills by using innovative methodologies based upon current EMS pre-hospital data.
- Research opportunities. Reliable, accurate EMS pre-hospital data will attract research efforts to analyze and study, for example, ways to improve emergency patient care, develop injury prevention strategies, and chart future decision-making strategies for EMS policy development.
- Data linkage within the continuum of other data systems. Integrate EMS data with other key stakeholders who collect and analyze data to measure the impact of health care delivery from first call for help through rehabilitation.
- Finding resources. Reliable and valid data can advocate the distribution of limited resources for pre-hospital delivery of emergency medical services and direct policy decisions within health care financing reform strategies.

Additional Resources:

- Minnesota Emergency Medical Services Regulatory Board (EMSRB) Data Project Manager. Contact: (612) 627-6000.
- *EMS Agenda for the Future: Implementation Guide*. National Highway Traffic Safety Administration, U.S. Department of Transportation. www.nhtsa.dot.gov.

Evidence for strategy:
Minnesota Statute 144E.123 mandates the collection of statewide EMS prehospital data from licensed ambulance services. This data must be submitted to the EMSRB to enable implementation of a statewide EMS data collection system. The data collection

currently under development during 2002-2003 promises to be an effective method for EMS to gather and store statewide EMS prehospital data, as well as query and export this data to important state databases maintained by the Minnesota Department of Public Safety (Crash Outcomes Data Evaluation System) and the MDH (Traumatic Brain and Spinal Cord Injury Registry).

Has this strategy been implemented in Minnesota?
Yes, the EMSRB and local stakeholders are in the final stages of implementing this strategy statewide. Minnesota's stakeholders in emergency medical services, in concert with the EMSRB, firmly believe that a comprehensive EMS information system is essential for our state. Thoughtful implementation of this goal will enhance sound EMS policy debate and decisions as we move forward with a statewide system of emergency medical services for the State of Minnesota.

Indicators for this strategy:
- < Numbers and kinds of entire EMS events that are described using data from the information system.
- < The existence of a set of uniform data elements and definitions and their incorporation into information systems.
- < Numbers and kinds of mechanisms to generate and transmit data that are valid, reliable, and accurate.
- < The numbers and kinds of health care providers, public safety agencies and community resources that have integrated this information system with theirs.
- < Numbers and kinds of contributors to the data system that receive feedback from it.
- < Numbers of ways that the information from the system is used, e.g. patient care enhancement, EMS education program development, research opportunities, data linkages with other data systems, and finding resources.

For more information contact:
- < EMSRB, Data Collection Project Manager, Phone: (612) 627-6000 or (800) 747-2011, www.emsrb.state.mn.us, 2829 University Ave SE #310, Minneapolis, Minnesota 55414-3222.

CATEGORY: Service Delivery Systems

TOPIC: HEALTH CARE COVERAGE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Advocate for adequate health insurance coverage in either public or private programs for all community members.	✔	✔	✔	✔	✔		Minnesota Medical Associa-tion, Faith Communi-ties, Social Service Agencies, Minnesota Public Health Association
Encourage development of regional and community health insurance options for small employers and self-employed individuals.	✔	✔			✔	✔	Individuals

One important aspect of the quality of life in Minnesota is the health status of all Minnesotans. While numerous studies have shown that Minnesota is one of the healthiest states in the country, Minnesota faces a growing threat to the health of its residents. That threat is manifest in national trends toward more uninsured individuals and individuals whose coverage is inadequate, as indicated by higher deductibles and co-pays, and limitations on health care options. Individuals without adequate health insurance (under-insured), or any insurance at all (uninsured), are less likely to seek the medical care they need than are individuals with insurance. Likewise, the under-insured and uninsured are more likely to delay necessary care, particularly preventive care, than are the insured and thereby incur worse health outcomes than insured populations.

In the past, the uninsured that were seriously ill have been able to get uncompensated or charity care from hospitals, clinics, and individual physicians. However, concerns over cost have caused the health care market to become increasingly competitive. Insurance companies, health plans, hospitals, and physicians have sought to cut any and all excess costs. Because in the past, it was a portion of these excess costs that helped to provide charity care to an uninsured individual, it is becoming increasingly difficult for health care providers to provide the same level of uncompensated care.

Changes in the mechanisms through which Minnesotans obtain health coverage could also affect the number of uninsured Minnesotans. In 2001, 70 percent of Minnesotans were insured through employer-sponsored insurance. However, numerous reports have questioned the long-term stability of this source of insurance.

State policy decisions (e.g., MinnesotaCare) have been successful in lowering the number of uninsured children in Minnesota. In particular, the percentage of uninsured children in Minnesota has fallen from 5.3 percent in 1990 to 4.4 percent in 2001.

Likewise, policy decisions have been successful in reducing the rate of low-income uninsured. In 1990, 62 percent of the state's uninsured had incomes below 200 percent of the federal poverty guidelines. As a result, MinnesotaCare was designed to focus not only on children, but also on the working poor who might not have access to Medical Assistance. By 2001, the percentage of uninsured Minnesotans with incomes below 200 percent of the federal poverty guidelines had declined to 51 percent.

Although Minnesota is one of the healthiest states, boasts one of the lowest uninsurance rates in the country, and has implemented effective programs to reduce the uninsured, some populations in the state have not fared as well as others. Large disparities in uninsurance rates exist among populations of color and American Indians. In 2001, 4.6 percent of white Minnesotans were uninsured, while 6.7 percent of Asian, 15.6 percent of Black, 16.2 percent of American Indian, and 17.4 percent of Hispanic Minnesotans were uninsured.

In 2001, the overall rate of uninsurance in Minnesota was 5.4 percent (or approximately 266,000 people). No segment of the population is immune to this problem. It spans all ages, income levels, and regions of the state. Even those individuals with insurance could be affected by this issue in the future, as they change employers or as

employers elect to eliminate employer-sponsored insurance. Likewise, increases in the number of uninsured puts added burdens on Minnesota's health system and public programs, and generally reduces the state's overall health. Thus, the number of uninsured in the state is a problem that affects everyone in the state, either directly or indirectly. For related strategies, see the strategies on "Eliminate the Disparities" and "Promote Access to Health Care" in this category.

Strategy: Advocate for adequate health insurance coverage in either public or private programs for all community members.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Individuals without adequate health insurance, or any insurance at all, are less likely to seek the medical care they need than are individuals with insurance. Likewise, those with inadequate coverage and the uninsured are more likely to delay necessary care, particularly preventive care, than are the insured and thereby incur worse health outcomes than insured populations, and incurring greater expenses.

Populations of color, low income people and people living in rural communities are more likely to have difficulty accessing health care coverage. In 2001, a total of 4.4 percent, or 56,000, Minnesota children under 18 were uninsured. The uninsurance rates for children by race/ethnicity were 3.4 percent for white, 5.8 percent for Asian, 9.2 percent for American Indian, 11.0 percent for Black, and 15.6 percent for Hispanic/Latino children. Rural children were more likely to be uninsured than urban children (5.6 percent versus 3.9 percent), and most (76 percent) were income-eligible for government supported health care coverage already in place.

Many families are not aware that they are eligible for health insurance programs or do not understand and appropriately utilize their coverage options. Many assume that if they are not receiving cash assistance, they are ineligible for health care programs. Similarly, many participants think they cannot qualify if they are employed.

Research shows that children and adolescents who are uninsured are:
- 70 percent more likely to not receive medical care for common illnesses, such as ear infections.
- 30 percent less likely to receive medical care for injuries.
- less likely to receive preventive services;
- in danger of not receiving or delaying treatment which can lead to more serious illness and health problems.

Some children do not receive health care coverage because:
- Parents may lack knowledge of available health care coverage options; experience cultural and language barriers; and/or choose to not provide coverage for their children.
- Government programs may have eligibility rules that can act as barriers, e.g., lack of continuity of coverage; complicated enrollment processes and verifications; and/or be unaffordable.
- Private insurance may not be affordable.

Health problems that are discovered early are more likely to have good outcomes. Healthy kids do better in school, improving their chances to succeed in life. Getting kids health care coverage is not only important to children, but also to families, communities and to Minnesota's future.

Assuring that all community members have adequate health insurance coverage is an important step in protecting and promoting the health of all Minnesotans, including children and adolescents. Ways to accomplish this include:

- Simplify application, enrollment, and verification procedures for health insurance programs.
- Conduct public awareness and outreach programs to promote the importance and value of coverage as well as to increase awareness of eligibility criteria and understanding and appropriate utilization of coverage options. These can occur at township, county and state fairs; via local media such as newspapers, radio and local cable TV programs; at schools, health fairs, hospitals, worksites, centers of worship, community centers and gathering places. Messages and information and their dissemination must be culturally sensitive and appropriate and available in different languages as well as for limited-English-proficiency communities.
- Conduct health care coverage enrollment events in hospitals, centers of worship, schools, community centers and organizations, gathering places, child care centers, health fairs, etc.
- Put enrollment workers on site in clinics, community and gathering locations so that when eligible, uninsured families come in for services, they can be enrolled for coverage.
- Establish an environment throughout the community in which coverage is important and encouraged. In addition to making information about coverage options readily available to all community members (see above), additional activities include: promote free and low-cost health insurance programs as health coverage rather than handouts for working families; encourage families who are covered at work to take advantage of their coverage, and to take advantage of family coverage; and in interacting with families, ask if they have coverage and assure that they know when and how to use it.
- Work closely with schools to become active community leaders in assuring coverage of families, children and adolescents.
- Develop financial incentives for completed enrollment applications.
- Create a single, toll-free hotline that community members can call to get information on ways to obtain public or private health care coverage and other information.
- Facilitate participation of eligible families in programs and services that can refer them for health care coverage such as Early Childhood Health and Developmental Screening; Child and Teen Checkups; Head Start; Women, Infants and Children supplemental food programs; Minnesota Children with Special Health Needs clinics; and home visiting programs.
- Promote 1-877-kidsnow, a national referral line for referrals to state health insurance programs including MnCare in Minnesota.
- Offer express lane eligibility, e.g., if eligible for food stamps or free lunch, assume eligibility for Medical Assistance.

- Talk with your legislators about health care coverage policies, their accessibility and their impact.

Additional resources:
Bibliographic resources:
- Perry, M., and Stark, E. 1998. *Barriers to Medi-Cal Enrollment and Ideas for Improving Enrollment.* Kaiser Foundation.
- *Putting Express Lane Eligibility into Practice (A Briefing Book and Guide for Enrolling Uninsured Children who Receive Other Public Benefits into Medicaid and CHIP).* Published by the Children's Partnership and the Kaiser Commission on Medicaid and the Uninsured. Copies are available at: www.childrenspartnership.org.
- Ross, DC., and Jacobson, W. 1998. *Free and Low-cost Health Insurance: Children You Know Are Missing Out.* Washington, DC: Start Healthy Stay Healthy, Center on Budget and Policy Priorities.
- Shuptrine, SC., and Harvigsen, K. 1998. *The Burden of Proof: How Much is Too Much for Child Health Coverage?* Washington, DC: The Southern Institute on Children and Families/The Robert Wood Johnson Foundation.
- U.S. General Accounting Office 1998. *Medicaid: Demographics of Nonenrolled Children Suggest State OutreachSstrategies.* U.S. General Accounting Office.

Organizational resources:
- Children's Defense Fund, *Minnesota Low-Cost Health Care Directory*. This directory explains the health care options for uninsured or poorly insured families with children. The directory includes information on Medical Assistance; MinnesotaCare; and other low cost or free health services available in each county in Minnesota. The directory is available at: http://www.cdf-mn.org/healthdirect.html.
- Cover All Kids Coalition. Contact: 866-489-4899, www.coverallkids.org. Members of this public-private coalition work to promote health care coverage and preventive care for Minnesota children. Members work together to increase public awareness of insurance options for children, find new ways to reduce health disparities, and make it easier for parents to get preventive care for their children.

Evidence for strategy:
As the sources cited above demonstrate, people desire direct education about programs and seminars in their communities at which they can engage in conversations and ask questions; in addition, they consider personal contact important. Applicants perceive the enrollment process for health care programs as complex and time consuming, and lengthy enrollment forms and extensive documentation may keep families from applying. Participants' lives also alter frequently, and job changes are common.

It is well documented in the literature that public information campaigns can increase awareness and change attitudes about issues. It is also documented in the literature that combining public information activities with other community-wide activities can influence changes in behavior, in this case increased enrollment rates.

Has this strategy been implemented in Minnesota?
Yes, components of this strategy have been implemented by public and private sector organizations in many counties throughout the state, with varying degrees of success.

Indicators for this strategy:

- Ways in which application, enrollment, and verification procedures for health insurance programs have been simplified.
- Numbers and kinds of outreach programs, including enrollment assistance, conducted.
- Numbers of community members and families contacted through the outreach programs.
- Increased understanding of community members of enrollment options, their coverage and how and when to use it.
- Increased value placed on having insurance coverage.
- Kinds and numbers of financial incentives developed for completed enrollment applications.
- Existence and use of a single, toll-free hotline.
- Numbers of families that receive referrals for health care coverage from other programs and services in the community.
- Numbers of community members using 1-877-kidsnow.
- Existence and utilization of an express lane eligibility process.
- Increase in enrollment in public and private health insurance programs.
- Decrease in disenrollment in public and private insurance programs.
- Decrease in the number of Minnesotans, including children and adolescents, who experience a lapse in their health care coverage.

For more information contact:

- Children's Defense Fund, http://www.cdfmn.org/HealthCare/programs_MN.htm for information about eligibility criteria and how to apply for Minnesota programs.
- County human services offices.
- Minnesota Department of Human Services, Minnesota's Health Care Programs, http://www.dhs.state.mn.us/hlthcare/default.htm.
- Scott Leitz, at (651) 282-6361, scott.leitz@health.state.mn.us, MDH Health Economics Program, for information about the uninsured.

Strategy: Encourage development of regional and community health insurance options for small employers and self-employed individuals.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:

Lack of access to affordable health insurance coverage is becoming an increasing reality for many Minnesotans as health care costs rise at double-digit rates. This is particularly true for small business employees or self-employed individuals. Rural areas, where small businesses and self-employment is common and choices are limited, are especially affected. Under-insurance shows up in higher deductibles and co-pays, and limitations on health care options. Ways that local organizations can do this include:

- Explore ways that members of communities and regions can pool resources to help small employers and self-employed individuals purchase affordable, quality health insurance products.
- Engage members of the community, including policy makers, community

leaders, employers, health care providers, and consumers in developing strategies that balance affordable health insurance coverage with quality of care.
- Assist community members in accessing available resources for planning and execution of strategies.

Additional resources:
Organizational resources:
- Minnesota Department of Commerce, at (651) 296-6789 or (800) 657-3602 or www.commerce.state.mn.us/. [Regulates insurance companies or indemnity products.]
- Minnesota Department of Health, Health Economics Program, at (651) 215-5800. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Health Economics Program".
- Minnesota Department of Human Services, at (651) 296-1256 or (800) 657-3729, ext. 61256 or www.dhs.state.mn.us.
- Minnesota Insurance Healthline, at (612) 222-3800 or (800) 642-6121.

Evidence for strategy:
The data indicate that increasing numbers of Minnesotans are either uninsured or underinsured.

Has this strategy been implemented in Minnesota?
Yes, health care purchasing alliances are being developed in five regions of the state: northwest, southwest, north central, and northeast regions of the state.

Indicators for this strategy:
- Development of community and regional health care purchasing alliances that are available to small employers and individuals.
- Measurements of uninsurance and underinsurance exhibit downward trend.

For more information contact:
Minnesota Department of Health, Office of Rural Health & Primary Care, at (651) 282-3838. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Office of Rural Health & Primary Care".

Category:
UNINTENDED PREGNANCY

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 3: Reduce unintended pregnancies.

CATEGORY: UNINTENDED PREGNANCY

About half of all pregnancies in the U.S. are unintended. An unintended pregnancy is one that is identified by the mother as either unwanted or mistimed at the time of conception. Unintended pregnancy is both frequent and widespread. It occurs in all segments of society, not just among teens, unmarried women, poor women and minorities.

The 1995 National Survey of Family Growth indicates the following percentages of unintended pregnancies by age:

- 75% for women 15-19
- 59% for women 20-24
- 40% for women 25-29
- 33% for women 30-34
- 41% for women 35-39
- 51% for women over 40

While the percentages are higher for younger women, in absolute numbers, women ages 20-34 account for most unintended pregnancies because more women in those age groups become pregnant.

Although 77% of pregnancies to never married women are unintended, 31% of pregnancies to married women are unintended. Poverty is a risk factor for unintended pregnancy: the following are the percentages of unintended pregnancies by Federal Poverty Level (FPL):

- 61% for women <100% FPL
- 53% for women 100-199% FPL

However, even among women at greater than 200% FPL the percentage of pregnancies that are unintended is 41%

The consequences of unintended pregnancies are serious. When a pregnancy is begun without planning and intent, there is less opportunity to prepare for an optimal outcome. Unintended pregnancies are associated with adverse maternal behaviors such as delayed entry to prenatal care, poor maternal nutrition, cigarette smoking, and use of alcohol and other drugs. Women whose pregnancies are unintended are more likely to have infants who are low birth weight and are less likely to breastfeed. Their infants are more likely to be abused and more likely to die in their first year. Other negative social outcomes such as reduced education and career attainments of parents, increased welfare dependency, divorce, and domestic violence are associated with unintended pregnancy. Children born from unintended pregnancies are more likely to be raised by one parent, and these children are more likely to become teen parents themselves. Further, about half of all unintended pregnancies end in abortion.

There are financial burdens for unintended pregnancy as well. The Department of Human Services estimates that in Minnesota in 2001, there were 18,553 subsidized deliveries at an average cost of $3,386 for a total of $62,819,540. There were 22,144 recipients of first year services at a cost of $6,894 for a total of $152,669,942. If half of those pregnancies were unintended, the estimated cost for births and first year services from pregnancies begun without planning or intent is $107,744,741.

At the national level, the *Healthy People 2010* goal is to increase to at least 70% the proportion of pregnancies that are intended.

According to the Institute of Medicine (IOM) report on *The Best Intentions*, the US goal has already been achieved by other industrialized nations. The Institute of Medicine report calls for a new social norm where all pregnancies are consciously and clearly desired at conception. This will require a long-term effort to educate the public on the social, economic, and public health burdens of unintended pregnancy and stimulate interventions to reduce such pregnancies. The IOM recommends that efforts be structured around the following five goals:

- Improve knowledge about contraception and reproductive health.
- Increase access to contraception.
- Address the roles attitudes and motivation play in avoiding unintended pregnancy.
- Develop and evaluate local initiatives.
- Stimulate research on contraceptive methods, organizing services, and the determinants and antecedents of unintended pregnancy.

The National Association of City and County Health Officials published a set of action steps for local health departments in 1996. The report calls for more reproductive health education and more access to clinical reproductive services.

Access to quality family planning information and services is an important factor in planning for healthy pregnancies and preventing unintended pregnancies. The use of contraception increases the interval between births and contributes to a reduction in low birth weight, since a short interval between births is a well-established risk factor for low birth weight. Contraception also plays a role in the reduction of some sexually transmitted diseases that lead to future infertility. For related strategies, see the section "STD/HIV/AIDS" in the *Infectious Disease* category.

Of special concern is the high rate of unintended pregnancy among teens. Children of teen mothers are at a greater risk of growing up in a single-parent family, of having less-educated and less securely employed parents, and, therefore, of spending more time living in poverty. In addition, children of adolescent parents have higher risks of lower intellectual and academic achievement, lower educational expectations, and more behavioral disorders than do children born to older parents. Teen mothers are also more likely than older mothers to need the support of public assistance. In Minnesota in 1999, 48% of families who received Minnesota Family Investment Program (MFIP) funds began with a birth to a teen. It is estimated the 80% of all adolescent mothers will sometime receive government assistance during the 10 years following the birth of their first child.

There is no easy answer or single reason teens get pregnant. Many social systems influence their lives and behaviors. Risk factors include poverty, homelessness, school problems, dating at an early age, alcohol and substance abuse and other risk behaviors. Research indicates that teens are less likely to become pregnant if they have close, positive connections with caring adults, have life opportunities and goals, use contraceptives if sexually active, and are doing well in school. For related strategies see: the *Alcohol, Tobacco and Other Drugs* category; the section on "Adolescent Health - Parenting and Youth Development" in the *Child and Adolescent Growth and*

Development category; the section on "Mental Health" in the *Mental Health* category, and the section on "Youth Violence" in the *Violence* category.

Also of concern is that unintended pregnancies occur more frequently among some minorities and racial groups. Nationally, 72% of pregnancies among African American women and 49% of pregnancies among Hispanic women were unintended. Strategies to reduce unintended pregnancy must be culturally and ethnically specific to the population to be served and grounded in what research shows works. For more information, see the section, "Eliminate the Disparities" in the *Service Delivery Systems* category, and report, *Health Profile of Populations of Color* (MDH, 1997).

If more pregnancies were intended, there would be more healthy mothers and babies, health care costs would be reduced, both teenage and non-marital childbearing would be reduced, poverty and welfare dependence would be reduced and abortion would be reduced dramatically.The strategies presented here describe a multifaceted, comprehensive approach, involving public health professionals, medical clinicians, nonprofit corporations, the educational system, communities, and others with an interest in reducing unintended pregnancy. Population-based strategies must be implemented on the individual, community, and system levels in order to lower the rates of unintended pregnancy in Minnesota.

CATEGORY: Unintended Pregnancy

TOPIC: UNINTENDED PREGNANCY

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Provide assessment, policy development and planning, and assurance activities to reduce the incidence and prevalence of unintended pregnancy.	✔	✔	✔	✔	✔		Govern-ment Social Services
Provide or accessible, comprehensive family planning services specifically designed to meet the cultural, age, and gender needs of clients in a variety of settings.	✔	✔	✔	✔	✔		Media
Develop multi-faceted programs that support the prevention of adolescent pregnancy.	✔	✔	✔	✔	✔		Media
Improve public knowledge about family planning and reproductive health.	✔	✔	✔	✔	✔		Media
Promote healthy sexual behaviors.	✔	✔	✔	✔	✔		Media

Strategy: Provide assessment, policy development and planning, and assurance activities to reduce the incidence and prevalence of unintended pregnancy.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U		
Tertiary	U		

Background:
The Institute of Medicine Report on Unintended Pregnancy, *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*, suggests that despite the national attention on teen pregnancy and non-marital childbearing and the continuing controversy over abortion, the common antecedent of all three - pregnancy that is unintended at the time of conception - remains essentially invisible. It recommends a new national understanding about this problem and a consensus that pregnancy should be undertaken only with planning and intent. Moving towards a goal where all pregnancies are consciously and clearly desired at conception would require a long term effort to educate the public on the social, economic, and public health burdens of unintended pregnancy and stimulate interventions to reduce such pregnancies.

According to the IOM report, unintended pregnancy is not just a problem of individual behavior; it is also a problem of public policy and institutional practices. No single factor accounts for the high rates of unintended pregnancy; there are socio-economic, cultural, educational, organizational and individual components. Studies conducted nationally and in Minnesota indicate that many insurance companies, health plan companies, and managed care plans either do not cover the cost of family planning exams and contraceptives or require co-payments or other cost sharing. These financial barriers can limit access to needed family planning services that require contact with a health care professionals and the use of more effective contraceptive methods. Some women, men, and adolescents in need of family planning services may be unwilling to seek services unless they can receive these services in a confidential manner. Some billing processes by commercial insurance companies, health plans, or health maintenance organizations could threaten patient confidentiality.

Assessment, planning, policy development and assurance activities include collaborating across disciplines to understand the complex factors associated with unintended pregnancies, reducing barriers to information and services, and developing better ways to organize, finance, and evaluate appropriate services. Activities that support this strategy include:

- Conduct local surveys on the community's general knowledge about contraception and reproductive health.
- Conduct community needs assessments to determine need and support for family planning services. If needs assessment information is current, provide information to the community.
- Work with local pregnancy prevention programs to design evaluations that determine the program's impact on unintended pregnancy.
- Convene a group of community leaders from the health education, social service, business and other sectors to look at unintended pregnancy in the community.
- Apply for funding for an unintended

pregnancy prevention program that has a carefully planned evaluation component.
< Educate providers and educators on the effect of cultural mores on individual behavior.
< Survey clients to assess perceived or actual barriers to obtaining or using family planning.
< Conduct local research on men's attitudes and perceptions about family planning and use the findings to develop appropriate programs for men.
< Conduct local research with racial and ethnic groups in your community to determine attitudes and perceptions about family planning, and use the findings to develop appropriate programs for these populations.
< Share information on successful pregnancy prevention demonstration programs with other agencies, providers, and organizations.
< Work with private providers to develop and evaluate interventions they can use with their clients.
< Work with insurers to cover comprehensive family planning services, including prescription methods as part of their standard benefits.
< Advocate for billing policies that maintain patient confidentiality.
< Work with insurers to adapt reimbursement policies and procedures that protect patient confidentiality.
< Work with companies that buy the insurance to include comprehensive family planning services and to request confidential reimbursement policies for family planning services when they purchase policies.
< Inform individuals in managed care plans of the ability to access family planning services from the provider of their choice within the health plan.
< Provide a list of agencies that provide family planning services in a confidential manner.
< Educate community members, physicians, and other providers about the public health implications of Minor's Consent to Health Services issues.
< Assess the impact of private providers on access to contraceptive services and share this information with policy makers.
< Link local research on pregnancy prevention with research in psychology, demography, and sociology.
< Assess the rate of unintended pregnancy among prenatal care, or WIC clients.
< Monitor the length of time between when individuals call for family planning appointments and when they can get appointments.
< Obtain funding for the provision of subsidized family planning services.

Additional resources:

Bibliographic resources:

< Alan Guttmacher Institute (AGI). 1999. *Facts in Brief, Contraception Counts,* Washington D.C.
< Hatcher et. al. *Contraceptive Technology*. (17th Edition). New York: Irvington Publishers, Inc. Contact: Bridging the Gap Communications, P.O. Box 33218, Decatur, GA 30033 [$39.95 plus tax and shipping], or the Planned Parenthood Resource Center, at (612) 823-6568.
< Institute of Medicine. 1995. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. National Academy of Medicine Press.
< Kaiser Permanente Medical Group. December 1999. *Things a Department Can Do to Reduce Unintended*

Pregnancy, San Diego, CA.

< N.A.C.C.H.O. Spring 1996. *Unintended Pregnancy: Prevention Strategies for Local Health Departments*.

< Program for Appropriate Technology in Health. 1999. *Quarterly Update for Collaborating Prescribers*, Seattle.

Organizational resources:

< Alan Guttmacher Institute, at (212) 248-1951, http://www.agi-usa.org, 120 Wall Street, New York, NY 10005.

< MN Family Planning/STD Hotline, at (800) 783-2287.

< SIECUS (Sex Information and Education Council of the United States), at (212) 819-9770, http://www.siecus.org/, 130 West 42nd St., Suite 350, New York, NY, 10036-7802.

Evidence for this strategy:

At the national level, the *Healthy People 2010* goal is to reduce to 30 percent the proportion of pregnancies that are unintended. If this goal were achieved it would mean 200,000 fewer births each year that were unwanted and 800,000 fewer abortions annually as well. Research indicates that every tax dollar spent for contraceptive services saves an average of $3 in Medicaid costs for pregnancy-related health care and for medical care of newborns. According to *Business and Health*, adding coverage of contraceptives would add about 1 percent to employer's total health costs. But the additional cost would see an immediate return on investment through savings in sick time, maternity leave, replacement costs and reduced medical costs for unintended pregnancies. During a novel pilot project in Western Washington that enabled pharmacists to prescribe emergency contraceptive pills (ECPs) directly to women through collaborative drug agreements with doctors, 1,000 pharmacists and 140 pharmacies provided about 12,000 prescriptions in 16 months of service, potentially preventing 700 or more unintended pregnancies (assuming a 10% pregnancy risk and 75% method effectiveness). A clinic in the Kaiser Permanente system in San Diego made reducing unintended pregnancy a strategic goal. Strategies included educating providers and staff about unintended pregnancy, finding opportunities to educate patients, prescribing birth control and following up on use, increasing access to emergency contraception, and reducing administrative barriers to family planning appointments. In three years they reduced the number of abortions in their practice by 25 percent. The Alan Guttmacher Institute has conducted studies on the need for family planning services, has estimated the numbers of pregnancies averted by publicly supported clinics, and has produced state-level reports.

Has this strategy been implemented in Minnesota?

Yes, several assessment, policy, planning and assurance activities have been implemented. For example, the MDH Family Planning Special Projects grant program uses an assessment tool. A Statewide Plan For Teen Pregnancy Prevention and Parenting was recently developed which includes policy and planning implications. The Adolescent Health Care Coalition is focusing on strategies to support confidential reimbursement policies and practices for family planning services. MN SAFPLAN (State Association for Family Planning) is engaged in implementation of activities related to this strategy.

Indicators for this strategy:

- < Unintended pregnancy rates.
- < Number of subsequent births in Medicaid population that are farther apart than 24 months.
- < Availability of providers with billing practices that maintain confidentiality.
- < Availability of culturally competent information and services.
- < Availability of services for men.
- < Community intervention with an evaluation component.
- < Public awareness of the factors that promote and decrease unintended pregnancy
- < Public awareness of the ability to access the provider of their choice for family planning services outside of their insurance physician-mandated networks.
- < Number of providers of confidential family planning services in a community.
- < Number of health plans with billing procedures that maintain patient confidentiality.

For more information contact:

- < Judy Bergh, at (651) 281-9994, judith.bergh@health.state.mn.us, MDH Family Planning Special Projects Consultant.
- < Pam Hayes at (651) 281-9954, pamela.hayes@health.state.mn.us, MDH Reproductive Health Planner

Strategy: Provide or assure accessible, comprehensive family planning services specifically designed to meet the cultural, age, and gender needs of clients in a variety of settings.

	Systems	Community	Individual
Primary	U		U
Secondary	U		U
Tertiary			

Background:

Family planning services promote and protect public health by decreasing unintended pregnancy. Family planning is the voluntary planning and action by individuals to prevent, delay, or achieve a pregnancy. Family planning services include counseling and education, pre-conception care, screening and laboratory tests, and family planning methods. Family planning methods include abstinence, natural family planning, and all FDA approved methods of fertility control including emergency contraception and sterilization.

According to the Institute of Medicine (IOM), one of the causes of unintended pregnancy is the combination of financial and structural factors that make access to prescription methods of contraceptives a complicated and expensive process. Accordingly, they recommend improving access to comprehensive low-cost family planning services. The IOM report recommends that barriers to information and services can also be reduced by: increasing the proportion of policies that cover contraceptive services and supplies, and broadening the range of health professionals and institutions that promote and provide methods of family planning.

Of couples who regularly engage in sexual intercourse without contraception, 89 percent will conceive in one year. According to the *American Journal of Public Health*, in five years one sexually active woman would become pregnant 4.25 times without contraception. To use a contraceptive effectively, individuals must have access to it, be able to afford it, understand the effectiveness of the method, and know how to use it correctly. Activities that support this strategy include:

- Collect data on the need for family planning services and whether that need is being met.
- Survey clients to assess perceived or actual barriers to obtaining or using family planning
- Assure availability of different contraceptive methods, including abstinence, natural family planning, and all FDA approved methods.
- Provide family planning services that are culturally and ethnically specific.
- Recruit bi-lingual/bi-cultural service providers.
- Use clinicians who can respond to gender or cultural concerns of clients.
- Provide family planning services that are specific to men's needs.
- Hold clinics at times that are convenient to clients, e.g., expand hours of clinic operation to include some evenings and weekends.
- Have family planning material available in languages appropriate to clients.
- Reduce administrative barriers to timely family planning appointments.
- Monitor the length of time between when individuals call for family planning appointments and when they can get appointments.
- Increase the proportion of health care providers and pharmacies that provide information about or access to emergency contraception.
- Provide non-directive counseling at times and places convenient for clients.
- Develop patient follow-up programs to increase continuation rates of contraceptive use.
- Increase coordination and collaboration between family planning services and other health and social programs that serve at risk clients.
- Develop an informational brochure to increase awareness of family planning providers in the community.
- Include consumers in the development of programs.
- Work with Medical Assistance and other health and social programs on family planning access issues.
- Work with local hospitals, medical schools and family planning agencies to develop continuing education for care givers on family planning and contraceptive management.
- Develop an informational brochure to increase awareness of the ability of health plan company members to access the provider of their choice for family planning services outside of their insurance physician-mandated networks.
- Develop a simple referral form to assure continuity of care and adequate follow-up.
- Provide information to youth-serving professionals on how to access family planning services, so that they can provide consistent information to their clients.
- Include information and non-directive counseling on family planning during school sport physicals and general medical visits.
- Support schools that are interested in providing abstinence and contraceptives

as part of their health services.
< Develop health clinics that are school-linked, school-based, or both.

Additional resources:
Bibliographic resources:
< Bongaarts, J. and Westoff, CF. September 2000. The potential role of contraception in reducing abortion. Studies in Family Planning, 31:193-202.
< Cawthon, L. June 2001. *First Steps Database: Post-Partum Family Planning Services*, Department of Social and Health Services, Research and Data Analysis.
< Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide,* available at: http://www.thecommunityguide.org).
< Forrest JD., and Samara, R. 1996. Impact of publicly funded contraceptive services on unintended pregnancies and implications for Medicaid expenditures. *Family Planning Perspective*, 28(5):188-195.
< Hatcher, et.al. *Contraceptive Technology*. (17th Edition). New York: Irvington Publishers, Inc. Contact: Bridging the Gap Communications, P.O. Box 33218, Decatur, GA 30033 [$39.95 plus tax and shipping], or the Planned Parenthood Resource Center, at (612) 823-6568.
< Henshaw, Stanley K. 1998. *Family Planning Perspectives: Unintended Pregnancy in the United States*. Contact: Alan Guttmacher Institute, at (212) 248-1951, http://www.agi-usa.org, 120 Wall Street, New York, NY 10005.
< Institute of Medicine. 1995. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. National Academy of Medicine Press.
< N.A.C.C.H.O. Spring 1996. *Unintended Pregnancy: Prevention Strategies fro Local Health Departments*.
< United States Department of Health and Human Services. November 2000. *Healthy People 2010*, Vol. 1, Chapter 9, http://www.healthypeople.gov/.

Organizational resources:
< MN Family Planning/STD Hotline, at (800) 783-2287 or (651) 645-9360 (Twin Cities metropolitan area).
< Office of Population Affairs, United States Department of Health and Human Services, http://opa.osophs.dhhs.gov

Evidence for strategy:
The research indicates that every tax dollar spent for contraceptive services saves an average of $3 in Medicaid costs for pregnancy-related health care and for medical care of newborns. The average cost for pregnancy related care in a managed care system is about $4000. Over five years, the prescription methods save between $13,373 and $14,122 by preventing unintended pregnancies. Research also suggests that services that are culturally sensitive to the needs of the clients may enhance contraceptive acceptance and use. These services are more likely to be available if services are provided in a variety of settings. A Washington state Medicaid report on birth spacing in a population qualified for family planning services for one year after delivery showed that the two-year subsequent birth rate was two to three times higher for women who did not receive family planning services compared to those who did. According to a study featured in the June 2002 issue of *Pediatrics*, focusing more on providing family planning and prenatal care services could help improve infant mortality rates. That study indicated that if the United

States could be certain that every pregnancy is wanted and that mothers receive effective health care for themselves and their fetuses, there would likely be lower rates of low birthweight and other health problems. In addition, according to a study by the Population Council, even small increases in contraceptive use will decrease abortion rates. Other research is available to estimate the number of pregnancies averted by women who use family planning services.

This strategy is strongly recommended by the Institute of Medicine, the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at: http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?

Yes, the MDH Family Planning Special Projects (FPSP) grant program funds many projects throughout most of Minnesota, serving 62 of 87 counties. FPSP funds are distributed on a population-based formula to eight regions in the state, thus maximizing geographic accessibility. Services are provided in a variety of settings, including freestanding clinics, community clinics, private physician offices, and public health offices. Grantee agencies provide comprehensive services, including: public information to inform the general population about the importance of family planning and how to obtain services; outreach to specific populations in need of subsidized services; age and culturally appropriate education and counseling about reproductive health and contraceptive options; provision of all FDA approved contraceptives, including Natural Family Planning and sterilization; provision of appropriate medically related reproductive health services; follow-up care of contraceptive clients as needed; and referral to other services as needed. FPSP funds also support a statewide Family Planning and STD Hotline for referral to services and to answer family planning and STD related questions.

Title Ten of the Public Health Service also funds subsidized family planning services in Minnesota. The major recipient of Title X funding in Minnesota is Planned Parenthood of Minnesota/South Dakota, which uses its Title X funds to provide services in clinics that are located throughout the state. Two other recipients of Title X funding are the St. Paul-Ramsey County Department of Health which provides subsidized family planning services at the Public Health Center in St. Paul to residents of Ramsey County, and the MDH, which contracts with Teenage Medical Services to provide family planning services to adolescents in a low-income, racially diverse neighborhood of South Minneapolis. Both Title X and FPSP grantees provide services on a sliding fee scale; no one is denied service based on inability to pay. All grantee agencies commit to minimizing barriers to access wherever possible.

Indicators for this strategy:

- Unintended pregnancy rates.
- Number of subsequent births that are farther apart than 24 months.
- Medicaid costs for deliveries and first year expenses of pregnancies that are unintended at the time of conception.
- Number of health care providers and pharmacies that offer emergency contraception.
- Number of health insurance providers that cover family planning services and methods.
- Number of agencies that provide

subsidized family planning services in a community.
< Geographic areas without subsidized family planning services.
< Adolescent pregnancy rates.
< Proportion of sexually active ninth and twelfth graders who participate in the Minnesota Student Survey and report always using birth control.
< Numbers of bi-lingual/bi-cultural family planning providers.
< Number of professionals trained in adolescent health.

For more information contact:
< Pam Hayes at (651) 281-9954, pamela.hayes@health.state.mn.us, MDH Reproductive Health Planner.
< Judy Bergh, at (651) 281-9994, judith.bergh@health.state.mn.us, MDH Family Planning Special Projects Consultant.
< Erica Fishman, at (612) 625-4891, Maternal and Child Health Program, School of Public Health, U of M.

Strategy: Develop multi-faceted programs that support the prevention of adolescent pregnancy.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			U

Background:
Teen pregnancy is not just another single issue. Success at reducing teen pregnancy depends on unifying the efforts of parents, community based organizations, state agencies, legislators, research communities, business leaders, faith organizations and schools. The importance of a multi-faceted approach are detailed in the Minnesota State Plan for Teen Pregnancy Prevention and Parenting (www.moappp.org). Development and support for a continuum of programs from abstinence to comprehensive programs based on current research and best practices is essential to reducing teen pregnancy.

The recommendations of the State Plan are derived from current research and best practices. Specifically the plan calls for:
< Use of data and evaluation to inform program planning and continuous improvement
< Programs grounded in a youth development approach.
< Elimination of health disparities.
< Support and coordination of resources and services for teen-parented families.
< Assurance of community partnerships.
< Involvement of parents and other caring adults.
< Inclusion of men and boys.
< Support of comprehensive sexuality education.

Activities that support these recommendations include:
Systems
< Disseminate the Minnesota State Plan for Teen Pregnancy Prevention and Parenting and hold discussions about the implications of policy development at the systems level.
< Improve outcomes by focusing programs and adequate resources to youth and families with the greatest needs.
< Mandate and support on-going data collections and evaluation to assure the most effective programming and resources for youth and communities.

- Fund, reward and endorse programs that are based on current research and data.
- Ensure a quality education for all children, regardless of socioeconomic level, racial, ethnic or cultural background, to develop productive life skills and a promising future.
- Build systems and processes that assist families in creating an environment that contributes to the well-being and success of youth.
- Endorse comprehensive sexuality education that includes information about abstinence and contraception as important components of a complete education.
- Ensure that sex education reflects research-based approaches, is culturally relevant, and assures inclusion of all students.

Community

- Formally embrace youth development strategies that use dual approaches of reducing risks and promoting the strengths of individual, their families and the community.
- Recognize and engage youth as resources within their families, schools, and communities.
- Assure that program planning and implementation involve the targeted populations and acknowledge the diversity of cultures and communities.
- Convene all segments of the community to assure the ongoing development and progress of a plan to address teen pregnancy prevention.
- Use a health promotion approach that emphasizes changing community norms to support positive healthy behaviors through community partnerships.
- Foster collaboration among the whole community both public and private sector, to help solve the problems of teen pregnancy and teen parenting.

Individual

- Implement evidence-based curricula.
- As an adjunct to teacher-led instruction, train and support peer educators/leaders who can role model social skills and lead role-plays.
- Implement educational programs to improve parent/child communication about healthy sexuality.
- Implement programs designed to improve access or to provide comprehensive sexuality education.
- Implement programs to address emotional, legal, financial etc. responsibilities of paternity.
- Provide training to health care workers and others who work with adolescents on how to talk to youth about reproductive health issues.
- Implement programs that include multi-faceted components including curriculum implementation, community-organizing activities and public awareness.
- Implement effective Service Learning Programs.
- Implement youth development programs that combine life skills and sexuality education with involvement in community service.
- Provide assistance with academic subjects/homework beyond regular classes that will lead to school success.
- Provide mentoring opportunities – one-on-one regular contact for an extended period of time with trained adult for recreation, skill/relationship building.
- Implement programs that provide meaningful activities that enhance parent/youth communication and promote connectedness.
- Implement programs that focus on parent/caregiver education skill building

and involvement with their children.
< Implement after school activities that are linked with community resources (schools, faith communities, mosques, synagogues, etc.) to engage youth in physical activity, technology, leadership, etc.
< Provide employment opportunities and skill development through apprenticeships with business/other employers to assist youth in learning marketable skills while experiencing work.
< Implement programs for sisters of teen girls who became pregnant and offer individual case management and group activities and services.
< Implement life skills education/training for adolescents that include skills such as communications, decision-making, and goal setting.
< Develop intensive programs that last through high school and include: 1) family life and sex education; 2) regular attendance throughout school culminating in graduation; 3) a work-related intervention; 4) self-expression through the arts; and 5) individual sports.
< Implement a program that provides opportunities to meet with other pregnant or parenting teens to develop problem-solving skills, sense of uniqueness, personal power etc.

Additional resources:

< Advocates for Youth. *Communities Responding to the Challenge of Adolescent Pregnancy Prevention*, at http://www.advocatesforyouth.org.
< Child Trends, *Next Steps and Best Bets: Approaches to Preventing Adolescent Childbearing*, http://www.childtrends.org.
< Institute of Medicine. 1995. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. National Academy of Medicine Press.
< Minnesota Organization on Adolescent Pregnancy Prevention and Parenting (MOAPPP). *Community Empowerment Manual*. (800) 657-3697, or (651) 644-1447 Twin Cities Metro Area, P. O. Box 40392, St. Paul, MN 55104.
< National Campaign to Prevent Teen Pregnancy. 2001. *Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy,* by Douglas Kirby, Ph.D.; and *Get Organized: A Guide to Preventing Teen Pregnancy*. www.teenpregnancy.org.
< Philliber Research Associates. *Creating and Evaluating Successful Teen Pregnancy Programs,* http://www.philliberresearch.com/.
< University of Minnesota, Maternal and Child Health Program. May 2002. *Healthy Generations* Vol. 3,Issue 1. The focus of this issue is teen pregnancy, www.epi.umn.edu/mch.
< *A Work in Progress: Building a State Plan for Teen Pregnancy Prevention and Parenting, First Release.* April 2002. For more information email: www.moappp.org or prc@umn.edu or call (612) 626-2820.

Organizational resources:

< Alan Guttmacher Institute, at (212) 248-1951, http://www.agi-usa.org, 120 Wall Street, New York, NY 10005.
< Minnesota Coordinated School Health Program: www.mnschoolhealth.com.
< Minnesota Department of Health, Youth Risk Behavior Endowment web sites. For more information see the website for strategies resources at:

www.health.state.mn.us/strategies/. Click on "Youth Risk Behavior Endowment" and "Youth Risk Behavior Directory".

- Minnesota Organization on Adolescent Pregnancy Prevention and Parenting (MOAPPP), at (www.moappp.org), and at (800) 657-3697, or (651) 644-1447 Twin Cities Metro Area. P.O. Box 40392, St. Paul, MN 55104.
- National Teen Pregnancy Prevention Research Center, prc@umn.edu or (612) 626-2820.
- SIECUS (Sex Information and Education Council of the United States), at (212) 819-9770, http://www.siecus.org/, 130 West 42nd Street, Suite 350, New York, NY 10036-7802.

Evidence for strategy:
Unlike just a few years ago, evidence based research now exists about what works in the prevention of teen pregnancy. There is good evidence that programs that combine both sexuality education and youth development can reduce pregnancy for as long as three years. Both service learning programs and sex and HIV education programs have now been found to reduce sexual risk taking or pregnancy in different settings. In early 2003 the short term impact findings regarding abstinence education funded by Title V, Section 510 will be released. These findings will provide empirical evidence on the effectiveness of abstinence education programs.

Has this strategy been implemented in Minnesota?
Yes. Many programs recently received TANF funding to enhance and expand their multi faceted efforts to prevent teen pregnancy. All Counties, Tribes and 20 community-based grantees are eligible to receive funds to implement a rich array of multi faceted programs. MN Education Now and Babies Later is an example of a specific program that uses curriculum, community organizing and a public awareness campaign focused on changing community norms to support abstinence or postponing sexual involvement for youth 12-14.

Indicators for this strategy:

- The rate of pregnancy for teens 15-19.
- The rate of births for teens 15-19.
- The rate of births for teenagers of racial/ethnic groups 15-19.

For more information contact:

- Jill Briggs, at (651) 281-9781, jill.briggs@health.state.mn.us, MDH Teen Pregnancy Prevention Coordinator.
- Gabriel McNeal, at (651) 281-9962, gabriel.mcneal@health.state.mn.us, MDH MN ENABL Coordinator, MN ENABL Program.
- Nancy Nelson, at (800) 657-3697 or (651) 644-1447 (Twin Cities Metro Area), Director of MOAPPP for comprehensive adolescent pregnancy prevention programs.
- Sarah Smith, at (651) 281-9960 or sarah.smith@health.state.mn.us, MDH MN Abstinence Education Coordinator, MN Abstinence Education Program.
- Kristen Teipel, at (612) 624-0182, MCH Project Coordinator for the National Adolescent Health Center for MCH Personnel, Konopka Institute.

Strategy: Improve public knowledge about family planning and reproductive health.

	Systems	Community	Individual
Primary	U	U	U
Secondary		U	U
Tertiary			U

Background:
According to the Institute of Medicine one of the reasons for the high rates of unintended pregnancy in the U.S. is that Americans lack adequate knowledge about contraception and reproductive health. Accordingly, they recommend improving access to balanced accurate information about the benefits and risks of contraceptive methods for both women and men of all ages. Increased awareness of family planning in the community will increase access to needed services.

Activities that support this strategy include:
- < Initiate a marketing campaign on the consequences of unintended pregnancy and the need for family planning and reproductive health information and services.
- < Develop public health information efforts targeting individuals of all ages.
- < Broaden family planning outreach efforts to include men.
- < Broaden the range of service providers (visiting nurses, social workers, and health promotion staff) that provide family planning information.
- < Establish linkages with professionals and programs that deal with the target population to keep them informed of the family planning services in the community.
- < Use existing materials from family planning organizations and websites; adapt for local use.
- < Provide programs that target men and women.
- < Provide information on contraceptive methods available and how to support a partner's use of contraception.
- < Provide accurate information on the risks and benefits of each contraceptive method.
- < Provide written materials in several languages.
- < Provide written materials on where low-cost family planning services are available.
- < Provide promotional items advertising the family planning hotline.
- < Hold meetings at a time convenient to the individuals.
- < Distribute non-prescription methods.
- < Provide "Parents As Sex Educators" classes for parents and caregivers, so that they can feel more comfortable providing guidance and education to their children.
- < Develop table tents and laminated bathroom posters advertising the family planning hotline.
- < Develop an informational brochure to increase awareness of family planning methods and providers.
- < Develop posters and brochures that include types of services provided and how to access them.
- < Place information in locations, which the target population frequents (e.g., bars, factories, laundromats, grocery stores, beauty salons, and physician offices).
- < Develop promotional items (e.g., pens, cups, key chains, and paycheck-stub messages).
- < Develop and air radio spots.
- < Work with school drama classes.
- < Develop a cable TV show.

< Utilize the family planning hotline phone number, as well as local numbers.

Additional resources:
Bibliographic resource:
< Stern, G. 1992. *Marketing Workbook for Nonprofit Organizations*. St. Paul, Minnesota: Amherst H. Wilder Foundation.
Organizational resources:
< Family Planning Hotline Materials, at (800) 783-2287 or (651) 645-9360 (Twin Cities metropolitan area).
< Management Sciences for Health, www.msh.org.
< SIECUS (Sex Information and Education Council of the United States), at (212) 819-9770, http://www.siecus.org/, 130 West 42nd St., Suite 350, New York, NY, 10036-7802.

Evidence for strategy:
Healthy People 2010 cites numerous studies indicating a disturbing degree of misinformation about contraceptive methods and recommends increased public education efforts and improved accuracy in the media. The MDH family planning program staff have conducted marketing training sessions with several Family Planning Special Project Grantees. Agencies that have completed and implemented their marketing plans have reported an increase in the number of clients using their programs.

Has this strategy been implemented in Minnesota?
Yes, approximately 10 MDH Family Planning Special Project Grantees have implemented a marketing plan. Contact the MDH Family Planning staff (see "For More Information Contact:" below) for names of these agencies. This strategy has also been used in programs internationally.

Indicators for this strategy:
< Number of clients utilizing family planning programs.
< Number of clients who heard about services through marketing efforts.
< Calls to hotlines for family planning information.

For more information contact:
< Judy Bergh, at (651) 281-9994, judith.bergh@health.state.mn.us, MDH Family Planning Special Projects Consultant.
< Pam Hayes at (651) 281-9954, pamela.hayes@health.state.mn.us, MDH Reproductive Health Planner.

Strategy: Promote healthy sexual behaviors.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Sexual behavior is a part of normal human experience. Healthy sexual behaviors are consensual, non-exploitive, based on shared values, respect for relationships and people with different values, and honest. Individuals and couples who engage in healthy sexual behaviors have lower risks of unintended pregnancy and of contracting a sexually transmitted disease than those who do not. Unhealthy sexual behavior can have a number of physical, and mental health effects including unintended pregnancy, HIV and other sexually transmissible diseases. These in turn can lead to a variety

of other problems, including depression, substance abuse, infertility and increased health care costs. Having sexual contact at a time or in a way that is not wanted can lead to lower self-esteem and feelings of isolation and vulnerability.

Activities that promote healthy sexual behavior like healthy sexuality education, abstinence, delaying sexual intercourse, and consistent and correct use of contraceptives can have a positive impact on individual and community health. The Institute of Medicine report, *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families,* states that any effort to reduce unintended pregnancy must address the fact that the personal feelings, attitudes and motivations of individuals and couples can affect the risk of unintended pregnancy.

Because the effects of unhealthy sexual behavior are so broad, promotion of healthy sexual behaviors can have a major impact on the health and well being of a community. The challenge of achieving sexual health is, on one hand, a personal matter and individuals should take responsibility for their sexual health. On the other hand, public health practitioners should also recognize the role that community responsibility plays in protecting sexual health. Community responsibility includes access to information and services that give individuals the ability to make appropriate reproductive health choices. A related issue is how we communicate about sex and sexuality in the United States. Parents and teachers need to be able to talk frankly with young people about responsible sexual behaviors; sex partners need to talk honestly about safe behaviors; and health care providers need to talk comfortably and knowledgeably with patients about sexuality and sexual risk. Responsible sexual behavior is listed as one of 10 leading health indicators in *Healthy People 2010.*

Activities that support this strategy include:

- < Provide comprehensive sexuality education from a variety of sources, including parents, schools, faith institutions, peers, and the mass media.
- < Support schools in using a comprehensive sexuality education curriculum that emphasizes healthy sexuality, skill building, and factual information.
- < Provide “Parents As Sex Educators” classes for parents and caregivers so that they can feel more comfortable in providing guidance and education to their children.
- < Promote the Minnesota Family Planning Hotline as a place people can call to find information on healthy sexuality.
- < Provide training on non-directive counseling, provision of factual information, and culturally appropriate interventions.
- < Develop education programs that target ethnic and cultural groups.
- < Increase coordination and collaboration between family planning services and other health and social programs that serve at risk clients.
- < Support the effort of parents, families, religious and community institutions that provide sexuality education.
- < Work with organizations that provide continuing education to health professionals to improve their curriculum and to offer more training on sexuality.
- < Meet with medical providers regarding the importance of discussing sexual health concerns at al medical visits,

including the use of birth control for clients who are sexually active.

Additional Resources:

Bibliographic resources:

< Institute of Medicine. 1995. *The Best Intentions: Unintended Pregnancy and the Well-Being of Children and Families*. Institute of Medicine, National Academy of Medicine Press.

< Maternal and Child Health Program, University of Minnesota. May 2002. *Healthy Generations:* Vol. 3, Issue 1. This issue focuses on teen pregnancy and can be found on the web at www.epi.umn.edu/mch.

< Office of the U.S. Surgeon General. 2001. *The Surgeon General's Call to Action to Promote Sexual Health and Responsible Sexual Behavior.* Rockville, MD: US Government Printing Office. Available from: www.surgeongeneral.gov/library/sexualhealth/.

Organizational resources:

< Coordinated School Health Program. The MN Department of Children, Families and Learning, contact Kathy Brothen, at (651) 582-8842 or kathy.brothen@state.mn.us; and MDH, contact: Cara McNulty at (651) 281-9885, or cara.mcnulty@health.state.mn.us.

< Minnesota Family Planning Hotline, (800) 783-2287 or (651) 645-9360 (Twin Cities metropolitan area).

< Minnesota Organization on Adolescent Pregnancy Prevention and Parenting (MOAPPP), at (www.moappp.org), and at (800) 657-3697 or (651) 644-1447 (Twin Cities metropolitan area), P.O. Box 40392, St. Paul, MN 55104.

< SIECUS (Sex Information and Education Council of the United States), at (212) 819-9770, http://www.siecus.org/, 130 West 42nd St., Suite 350, New York, NY, 10036

Evidence for this strategy:

The Centers for Disease Control and Prevention has summarized the common elements of successful interventions. These included having a clearly defined audience, goals, and objectives; having a basis in sound behavioral and social science theory; having a focus on reducing specific risk behaviors; having opportunities to practice relevant skills; and including a broader context relevant to the risk population. Adolescents and adults often perceive that providers are uncomfortable discussing sexuality and lack adequate communications skills on this topic. An international study of sexuality education programs found that the best outcomes were obtained when education was provided prior to the onset of sexual activity and when information about both abstinence and contraception and STD prevention were included. The same study also found that sexuality education does not encourage sexual experimentation or increased sexual activity.

Has this strategy been implemented in Minnesota?

This strategy has been used in the Federal Title X Family Planning Program where they have held sessions on communicating effectively with clients about sexual health issues. Many school districts in Minnesota offer age appropriate comprehensive sexuality education to their students. Staff at the Department of Children, Families and Learning can provide assistance regarding curricula. Also, many public health agencies provide or participate in "Parents As Sex Educators" programs. They also work with teachers, school nurses and administrators in

assuring accurate, comprehensive sexuality education is provided to students. Contact MDH staff for names of agencies implementing this strategy.

Indicators for this strategy:

- Number of public health practitioners with specific training in sexuality, and sexual health issues.
- Proportion of providers who provide appropriate counseling on sexual health issues.
- Proportion of sexually active people who effectively use contraceptives to prevent unintended pregnancy.
- Number of school districts in Minnesota with comprehensive sexuality education programs.
- Percentage of twelfth graders who report on the Minnesota Student Survey that they get information about sex from parents and school.
- Numbers of adolescents who are abstinent or delay initiation of sexual intercourse.
- Percentage of adolescents who reported on the Minnesota Student Survey that they are sexually active and use contraceptives.
- Number of calls to the Family Planning Hotline with questions about healthy sexuality.
- Number of school staff and social service professionals with specific training in sexuality, and sexual health issues.

For more information contact:

- Pam Hayes at (651) 281-9954, pamela.hayes@health.state.mn.us, MDH Reproductive Health Planner.
- Judy Bergh, at (651) 281-9994, judith.bergh@health.state.mn.us, MDH Family Planning Special Projects Consultant.
- Jill Briggs, at (651) 281-9781, jill.briggs@health.state.mn.us, MDH Teen Pregnancy Prevention Coordinator.
- Kathy Brothen, at (651) 582-8842 or kathy.brothen@state.mn.us, Coordinated School Health.
- Sarah Stoddard Nafstad, at (651) 281-9956 sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.

Category:
UNINTENTIONAL INJURY

The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 7: Reduce the behavioral and environmental health risks that are primary contributors to unintentional injury.

CATEGORY: UNINTENTIONAL INJURY

In Minnesota, injury causes more deaths among children and young people than does disease. Unintentional injury was the single greatest killer of Minnesotans between the ages of one and 34 in the decade of the 90s, accounting for about one-fourth of all deaths. Furthermore, unintentional injury continues to be among the leading causes of death throughout the lifetime.

In addition to those who die, many additional Minnesotans are affected by unintentional injuries, sometimes for many years. They seek medical attention, are unable to perform normal activities, or are permanently disabled as a result of injury. Injuries from falls, being struck by or against something, poisonings, and motor vehicle crashes accounted for about 60 percent of all emergency room visits in Minnesota during 1999.

Different racial and ethnic groups are affected differently by injury. The rate of death from unintentional injuries is three times greater for American Indians and two times greater for African Americans that it is for whites.

The good news is that injuries are preventable. Multifaceted prevention strategies are the most effective. Successful injury prevention strategies focus on environmental risks, product design, human behavior, education, and legislative and regulatory requirements that support environmental and behavioral change. Many things can be improved in a community to minimize injury, such as traffic calming measures, installing sidewalks and crosswalks, and having purpose-built play and leisure areas constructed. Political lobbying and advocacy can bring about some changes in neighborhoods to increase the safety and livability of them. Community efforts to clean up vacant lots and debris can also help keep residents, particularly children, safe from injury. Policies that provide grants for adaptations in homes with elderly residents or children can minimize falls and poisonings.

For information on prevention of other kinds of unintentional injuries, see the web-based MDH publication, “Click Your Way to the Best Practices in Injury Prevention.” For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on “Injury”. In addition to topics covered in the Violence and Unintentional Injuries sections of this document, “Click Your Way” includes information on current data, firearms, bicycle injuries, drowning, sports and playground injuries, and poisoning.

CATEGORY: Unintentional Injury

TOPIC: BICYCLE INJURY

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Promote and offer incentives for bicycle helmet use among parents and children. Distribute helmets.	State and Local	U	U	U		U	Insurance companies; Minnesota Department of Public Safety and local law enforcement
Teach bike safety in schools and communities.	State and Local			U		U	
Teach motor vehicle drivers to watch for and be aware of bicyclists.	State and Local			U		U	Insurance companies
Enforce traffic laws for bicyclists.	State and Local						Minnesota Department of Public Safety and local law enforcement
Collect and analyze data and support new prevention efforts.	State and Local	U	U				

Bicycle safety can be promoted and bicycle-related injuries can be prevented through many strategies. See also "*Click Your Way to the Best Practices for Injury Prevention,*" a part of the MDH's Injury and Violence Prevention Unit website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".

The Problem:
In Minnesota, nearly 5,000 people are treated each year in hospitals or emergency departments for bicycle injuries, according to data from the MDH. Nearly 500 of them were injured in crashes involving bicycles and motor vehicles. In 1995, five people died in bicycle crashes in Minnesota while in 2000, 14 people died in similar events. Bike crashes in Minnesota cost, on average, more than $49,000 each, when one accounts for the costs of hospitalization, lost productivity and pain and suffering.

Nationally, 567,000 people were injured on bicycles and 813 died in 1997. Young people were particularly affected: two-thirds of the injuries and 31 percent of the deaths were children or youth under 16. For additional data, see: http://www.cdc.gov/ncipc/factsheets/bikehel.htm; www.safekids.org. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".

National data show that in the event of a crash, wearing a bicycle helmet reduces the risk of brain injury by at least 85 percent. If each rider wore a helmet, an estimated 500 bicycle-related fatalities and 151,000 nonfatal head injuries would be prevented each year; this amounts to one death per day and one injury every four minutes.

The most successful programs to increase helmet use combine education with helmet giveaways or discount programs and state or local legislation requiring helmet use. Some evidence suggests that legislative efforts are more cost-effective than school or community-based programs.

Promising strategies for which research is not conclusive include peer education and counseling by physicians. For other strategies, see: *National Strategies for Advancing Bicycle Safety - National Highway Safety Administrations* http://www.cdc.gov/ncipc/bike/call to action.htm.

Strategy: Promote and offer incentives for bicycle helmet use among parents and children. Distribute helmets.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
This strategy promotes institutional change among health plans, caregivers, community health organizations, and local public health practitioners. It affects the system and community levels and may be measured or evaluated at system, community and individual levels. At the system and community levels, we can survey to ascertain changes in policy and practice regarding support for helmet distribution.

For example, is age-appropriate counseling by primary care providers being provided in the community? At the individual level, we can continue to conduct observational studies to measure helmet wearing. The net effect of implementing this strategy is to shift community norms regarding helmet use.

Public health agencies may use their Maternal Child Health Special Project (MCHSP) grants or CHS funding to support bicycle helmet programs. Some insurance companies also offer subsidized helmets. Other funding can be obtained through local service organizations, such as, Kiwanis or donations by retailers.

Additional resources:
Bibliographic resources:

- American Academy of Pediatrics. 1997. *Injury Prevention and Control for Children and Youth.* Elk Grove, IL: Widome, M. (Ed.).
- Centers for Disease Control. 1990. Childhood injuries in the United States. *American Journal of the Diseases of Children*, Volume144.
- Dannenberg, AL, et al. 1993. Bicycle helmet laws and educational campaigns: An evaluation of strategies to increase children's helmet use. *American Journal of Public Health* 83 (5):667-674.
- Farley C., et al. 1996. The effects of a 4-year program promoting bicycle helmet use among children in Quebec, *American Journal of Public Health* 86(1):46-51.
- National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* Oxford: New York.
- National Highway Safety Administration. *National Strategies for Advancing Bicycle Safety*, available at: http://www.cdc.gov/ncipc/bike/call to action.htm.
- Otis, J., et al. Predicting and reinforcing children's intentions to wear protective helmets while bicycling. *Public Health Reports* 107 (3):283-289.
- Rivara FP., et al. 1994. The Seattle children's bicycle helmet campaign: Changes in helmet use and head injury admissions. *Pediatrics* 93(4):567-569.

Organizational resources:

- Bike Helmet Safety Institute at: http://www.bhsi.org/.
- Minnesota Department of Health, Injury and Violence Prevention Unit. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on " Bicycle Injury".
- State Bicycle Advisory Committee at: http://www.dot.state.mn.us/sbac/.

Evidence for strategy:
National data show that wearing a bicycle helmet reduces the risk of brain injuries, fatalities, and nonfatal head injuries from bicycle crashes. In addition, there is evidence to support the use of incentives is successful in establishing initial helmet use, although sustaining helmet use over time appears to be more difficult.

Has this strategy been implemented in Minnesota?
Yes, between 1994 and 1997, approximately 15 Minnesota communities participated in a comprehensive helmet promotion and observation campaign. Helmet use increased in each of the communities, although by differing levels, dependent upon age group.

Indicators for this strategy:
- Number and type of incentives offered.
- Change in parental behaviors.
- Number of helmets distributed.
- Observational studies to measure number of helmets being worn.

For more information contact:
Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Teach bike safety in schools and communities.

	Systems	Community	Individual
Primary		✔	
Secondary			
Tertiary			

Background:
The purpose of this strategy is to suggest alternative ways to reach people, particularly pre-school and elementary-aged school children; with the information and skills they need for the safe operation of bicycles. Law enforcement staffs are particularly well equipped to conduct bicycle safety training sessions at schools, city halls, police departments, or parking lots. In addition, staff members from bicycle repair shops may assist in offering equipment checks.

Additional resources:
- Bike Helmet Safety Institute, at http://www.bhsi.org/.
- National Bicycle Safety Network, at www.cdc.gov/ncipc/bike.
- SafeKids Campaign, at www.safekids.org.

Evidence for strategy:
Evidence exists to suggest that bike safety can be taught and learned in school and community settings.

Has this strategy been implemented in Minnesota?
Yes, many school districts invite local law enforcement and members of the state patrol to teach bike safety in the classrooms and to assist with bike safety rodeos.

Indicators for this strategy:
- Number of classes taught by location and group.
- Change in parental behaviors.
- Number of helmets observed being worn in communities.

For more information contact:
- Robert W. Fischer, at (651) 582-8873, MN Department of Children, Families and Learning.
- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Teach motor vehicle drivers to watch for and be aware of bicyclists.

	Systems	Community	Individual
Primary	✔		✔
Secondary			
Tertiary			

Background:
This strategy enhances and promotes the education of new and current motor vehicle drivers, to make them more aware of and responsive to bicyclists sharing the roadway with them. Along with the system changes

supporting education, individuals will need to be taught and will need to exhibit new learned behaviors in the operation of their motor vehicles.

Additional resources:

- Children's Safety Network, Education Development Center, at (617) 969-7100, provides materials and curricula for education.
- Minnesota Department of Health, Injury and Violence Prevention Unit. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".
- Minnesota Department of Public Safety, Office of Traffic Safety, at http://www.dps.state.mn.us/trafsafe/00crashfacts/2000crashhome.html.

Evidence for strategy:
This strategy is still being evaluated.

Has this strategy been implemented in Minnesota?
Yes, this strategy has been implemented in several communities, but not uniformly across the state.

Indicators for this strategy:

- Number of driving education companies and instructors incorporating bicycle safety in their classroom and behind-the-wheel instruction.
- Percentage of students who answer classroom questions correctly and who respond correctly to situations in the field.

For more information contact:

- Sharon Johnson, at (651) 215-9092, Department of Public Safety, Office of Traffic Safety.
- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Enforce traffic laws for bicyclists.

	Systems	Community	Individual
Primary	✔	✔	
Secondary			
Tertiary			

Background:
The purpose of this strategy is to empower state and local law enforcement officials to enforce existing traffic laws as they currently apply to bicyclists.

Additional resources:
Bibliographic resource:

- U.S. Department of Health and Human Services. 1991. *Setting the National Agenda for Injury Control in the 1990's.* Public Health Service, Centers for Disease Control and Prevention.

Organizational resources:

- Minnesota Department of Health, Injury and Violence Prevention Unit. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Bicycle Injury".
- Minnesota Department of Public Safety, Office of Traffic Safety at: http://www.dps.state.mn.us/trafsafe/00crashfacts/2000crashhome.html.
- Minnesota Department of Public Safety, State Patrol at: http://www.dps.state.mn.us/statepatrol/htm.

Evidence for strategy:
This strategy is still being evaluated.

Has this strategy been implemented in Minnesota?
Yes, but only episodically and not uniformly.

Indicators for this strategy:
- Number of citations issued to cyclists.
- Knowledge of cyclists about correct cycling behavior.

For more information contact:
Sharon Johnson, at (651) 215-9092, Department of Public Safety, Office of Traffic Safety.

Strategy: Collect and analyze data and support new prevention efforts.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary			

Background:
Quality data are necessary to determine the effectiveness of programs and to guide new prevention efforts. The purpose of this strategy is to provide data collection and analysis systems that will provide necessary information. Both qualitative and quantitative techniques can yield appropriate information.

Additional resources:
Bibliographic resource:
- Thompson, NJ., and McClintock, HO. 2000. *Demonstrating Your Program's Worth: A Primer on Evaluation for Programs to Prevent Unintentional Injury.* Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.

Organizational resource:
- Minnesota Department of Health, Injury and Violence Prevention Unit. Other sources of bicycle injury data include death certificates, hospital e-codes, trauma registries, the Department of Public Safety, Office of Traffic Safety, and BRFSS (Behavioral Risk Factor Surveillance System) data. Most of this data can be obtained from the MDH Injury and Violence Prevention Unit, at (651) 281-9857, the MDH Center for Health Statistics, at (651) 296-3036, or the Department of Public Safety, at (651) 215-9092.

Evidence for strategy:
Data collection and analyses create a foundation for solid public health planning, decision-making, and resource allocation.

Has this strategy been implemented in Minnesota?
Yes, data collection and program evaluation are integral activities at the MDH. The data on the mortality and morbidity of bike-related injury have been used to a small degree to make program decisions at the state and local levels across Minnesota.

Indicators for this strategy:
- Data systems expanded and supported at the state and local levels.
- Programs designed based on the data collected.
- Decisions made regarding injury prevention resources based on the data collected.

For more information contact:
Mark Kinde, at (651) 281-9832,
mark.kinde@health.state.mn.us, MDH
Injury and Violence Prevention Unit.

CATEGORY: Unintentional Injury

TOPIC: FIRES, FALLS AND OTHER HOME HAZARDS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Conduct home visits to assess the home environment for the risks of falls and other home hazards.	✔	✔	✔	✔	✔		Insurance Companies, MN Department of Human Services (DHS)
Conduct home visits to assess presence, distribute, install, and maintain smoke alarms.	✔	✔	✔	✔	✔		Insurance Companies, (DHS)
Offer home safety and injury prevention education and home safety supplies to the public through day care providers and community organizations and agencies.	✔	✔	✔		✔	✔	Day care, Head Start, Social Services, Insurance Companies, DHS, Retailers
Provide academic instruction on injury prevention and control.	✔		✔	✔	✔	✔	Insurance Companies, DHS
Provide age-appropriate and culturally sensitive counseling by primary care providers.	✔	✔	✔				
Collect and analyze data and support new fire prevention efforts.	✔	✔	✔	✔	✔	✔	Insurance Companies, DHS
Offer fire safety education following a burn or a visit to the emergency department.	✔	✔	✔	✔	✔	✔	Fire departments

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Provide instruction and public education on fire safety and burn injury care.		✔	✔	✔	✔	✔	
Enforce current smoke alarm legislation.	✔						Public safety agencies

Home hazards affect people of all ages, but especially the very young and very old. The strategies presented here specifically target fires, falls and other home hazards such as drowning, suffocation, and poisoning. The focus for all home injury prevention strategies is on the identification and correction of hazards in the home and on the promotion of safe behaviors. For additional information, see the strategies in the *Alcohol, Tobacco and Other Drugs*; *Decreased Independence/ Disability*; and *Mental Health* categories, and "*Click Your Way to the Best Practices for Injury Prevention,*" a part of the MDH's Injury and Violence Prevention Unit website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Injury".

Fires:
Fires cause many home injuries and deaths. Great strides have been made in reducing residential fire-related deaths. In 1999, 60 Minnesotans died, and 849 suffered fire-related injuries that were treated in hospital emergency departments. In 2001, 46 fire deaths were reported to the Minnesota Department of Public Safety. Death rates due to fire continue to decline, despite an increase in state population. Most, 76 percent of the state's fire deaths and 73 percent of injuries occurred in residential dwellings in 1990-1999.[1]

Risky behavior near flammable materials causes most residential fires in Minnesota. Examples include wearing loose clothing when cooking, smoking carelessly, using malfunctioning heating systems, and negligently using flammable liquids. In many of the smoking fire deaths, people were using alcohol or other drugs.

Those most at risk live in older homes built under less-stringent code requirements. Requiring smoke alarms has helped people escape from dangerous situations. In Minnesota, children under age 15 and adults aged 55 and above are particularly vulnerable to fire-related death and injury. Education, engineering, and enforcement have been recommended as successful strategies in a national symposium on fire safety, "Solutions 2000."[2] It is clear from the causes of fire-related death and injury such as careless smoking, inability to escape, and not knowing how to react in a fire, that education programs are essential. Smoke alarms in homes and sprinkler systems in hotels, motels, schools, health care and day care facilities are highly successful prevention strategies.

Falls:
Young children and older adults are particularly vulnerable to falls in the home. Although many people identify falls primarily as a risk for the elderly, falls were the most common cause of hospitalized injuries for all adults age 30 and over from 1990-99.

Specifically among elderly people, about one-third of all Americans have fallen, and

[1] *Fire in Minnesota 2000* and data from the State Fire Marshal Division, Department of Public Safety

[2] United States Fire Administration. (April, 1999). *Solutions 2000, Advocating Shared Responsibilities for Improved Fire Protection*. TriData Corporation, Arlington, VA.

most fall at home. Environmental conditions, slippery surfaces, uneven floors, poor lighting, loose rugs, unstable furniture, and tripping hazards all contribute to these falls. Environmental modifications (e.g., installing grab bars and removing tripping hazards) can prevent fall injuries.

Personal strategies to prevent falls include: regularly exercising to improve strength and balance, having a health care provider review all medications to ensure correct dose and possible interactions and having vision checked.

Also, clothing can also contribute to falls and injuries. Wearing well-fitting shoes with low or flat heels provides sturdy footing. Repairing torn or loose hems, and removing loose cords or belts, will help prevent tripping. Thin slippers with treads will help provide stability, by providing friction and allowing the wearer to feel the floor.

Other Home Hazards:
Just under half (48 percent) of the unintentional injury deaths of Minnesota children aged four years and younger occur in the home. In the decade of the 1990's, the leading causes of those deaths were fire, falls, drowning, and suffocation, (e.g., inhalation or ingestion of food or an object).

Most home injuries to young children can be prevented through modifying the home environment (e.g., reducing the hot water temperature or installing safety supplies such as smoke alarms, cabinet latches, and outlet plugs). Using these strategies with parental education will improve the potential of creating safe environments for children. Home injuries also are a serious problem for older adults. The leading causes of unintentional injury in the home for older adults (aged 55 and over) are falls, fire and burns, poisoning (e.g., from drugs, medicinal substances, gases), firearms, suffocation, and natural or environmental events (e.g., excessive heat or cold, hunger, or tornados). For related strategies see the category *Decreased Independence/ Disability*.

Strategy: Conduct home visits to assess the home environment for the risks of falls and other home hazards.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
The purpose of this strategy is to prevent injuries in the home by reducing home hazards and promoting safe behavior. This can be accomplished by using a *Home Safety Checklist* to identify environmental and behavioral risks and is most effective when used as part of a home inspection. A trained home visitor identifies and corrects home hazards that place residents or the family at risk for injury by fire, choking, suffocation, drowning, or falls and counsels the residents and/or family in injury prevention. The risks can be most successfully eliminated by providing the residents and/or family with basic safety supplies including smoke alarms, cabinet latches and locks, outlet covers, safety gates, and child car seats, and installing them.

Many public health agencies use their Maternal Child Health Special Project (MCHSP), Technical Assistance to Needy

Families (TANF) grants, or CHS funding to support home visits for this program. Some insurance companies also pay for these injury prevention visits. Funding for supplies can be obtained through local service organizations, such as Kiwanis or donated by retailers. The *Home Safety Checklist* and *Home Safety Checklist Inspector's Guide* are available from the MDH Family Home Visiting Program (see organizational resources below). The *Data Collection Tool*, available on CD-ROM from local public health agencies (see the strategy in this section "Collect and analyze data, and support new prevention efforts"), also provides training for professionals performing home safety inspections.

Additional resources:

Bibliographic resources:

< Centers for Disease Control and Prevention. 1990. Childhood injuries in the United States. *American Journal of the Diseases of Children* 144:627-646.
< Dershewitz, R., and Christophersen, E. 1984. Childhood household safety. *American Journal of the Diseases of Children* 138:85-88.
< Gallagher, S., Hunter, P., and Guyer, B. 1985. A home injury prevention program for children. *Pediatric Clinics of North America* 32:95-112.
< Jones, N E. 1993. Childhood residential injuries. *MCN: The American Journal of Maternal Child Nursing* 18(3):168-172.
< Marcus, BH., Banspach, SW., Lefebvre, RC., et al. 1992. Using the stages of change model to increase the adoption of physical activity among community participants" *American Journal of Health Promotion* 6 (6): 424-429.
< National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* Oxford: New York.
< Sullivan, M., Cole, B., Lie, L., and Twomey, J. 1990. Reducing child hazards in the home. *Journal of Burn Care and Rehabilitation* 11(2):175-179.
< Widome, M. (Ed.). 1997. *Injury Prevention and Control for Children and Youth.* Elk Grove, IL: American Academy of Pediatrics.

Organizational resources:

< The CDC's National Center for Injury Prevention and Control can mail reports and brochures. See their website at http://www.cdc.gov/ncicp to order materials.
< Minnesota Department of Health Family Home Visiting Program (for contact information, see "For more information contact:" below). Several tools available in CD-ROM format. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Safety Checklist". The tools are: *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults,* the *Home Safety Checklist* (developed for Native Americans), the *Home Safety Checklist Inspector's Guide,* and the *Home Safety Checklist Program Summary: 1989-1994.*

Evidence for strategy:

The *Home Safety Checklist* home visit program has been carefully evaluated. Originally pilot-tested in four counties in 1990, it was re-evaluated in 18 counties in 1994. As a result of this evaluation, the program and checklist were found to be effective in reducing home hazards that cause injury to young children and older adults.

Has this strategy been implemented in Minnesota?
Yes, in 1997 more than 100 agencies in Minnesota used the *Home Safety Checklist* including public health, Early Childhood Family Education (ECFE), Head Start, and other home visiting programs. It also was used by 75 public health nursing agencies, 35 of which used MCHSP funding for its support.

Indicators for this strategy:
- < Number and type of home hazards identified.
- < Change in parental and personal behaviors.
- < Number and type of home injuries sustained by children and/or older adults.
- < Number and type of supplies provided to residents and families.

For more information contact:
- < Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
- < Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Special Notes:
The "Home Safety Checklist Data Collection Tool" can be used to record information about home hazards identified, behavioral changes, supplies given, and child injuries sustained.

Strategy: Conduct home visits to assess presence, distribute, install, and maintain smoke alarms.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
The presence or absence of working smoke alarms is a key factor in fire fatalities. Nearly 70 percent of the state's 446 fatalities from 1990-1999 occurred in dwellings in which no smoke alarms were present, the alarms were present but not functional, or it was unknown if the alarms were working. In the deaths where a working smoke alarm was present, the victims were unable to react effectively because they were elderly, too young, mobility impaired, or alcohol or drug impaired.

Community-based smoke alarm installation programs are most successful when home visits are conducted by fire and public health professionals, trained volunteers, or both. The program may be conducted as a one-time, door-to-door neighborhood canvas, or as ongoing individual home visits. In either case, smoke alarms in the home are tested for correct placement and maintenance. If needed, free or low-cost smoke alarms and batteries should be available for installation and programs should target areas at high risk for residential fires, the elderly, the disabled, and residents and families with young children. Strobe light alarms can be effective for people who are deaf or hard of hearing.

Fire safety education should accompany a smoke alarm installation program or be provided in settings such as clinics,

emergency rooms, parenting classes, or home visits. Topics could include how to install and maintain smoke alarms, the design and practice of a fire escape plan, safe use of heating devices, proper storage of flammable materials, controlling children's access to lighters and matches, and proper treatment of burn injuries.

Additional resources:
Bibliographic resources:

< Kulenkamp, A., Lundquist, B., and Schaenman, P. 1990. *Reaching the Hard-to-Reach: Techniques From Fire Prevention Programs.* Arlington, VA: TriData Corporation. Copies may be obtained from TriData Corporation, 1500 Wilson Blvd., Arlington, VA.
< National Association of State Fire Marshals. 1994. *The Community-based Fire Safety Education Handbook.* Washington, DC: Rossomando & Associates.
< National Center for Injury Prevention and Control. 1996. *Efforts to Increase Smoke Detector Use in U.S. Households. An Inventory of Programs.* Centers for Disease Control and Prevention, http://www.cdc.gov/ncicp.
< Shults, R., Sacks, J., Briske, L., and Dickey, P. 1998. Evaluation of three smoke detector programs. *American Journal of Preventive Medicine* 15(3): 165-171.

Evidence for strategy:
Shults et al. (1998) summarize an evaluation of the long-term functional status of smoke alarms distributed to high-risk households in Minnesota and Oklahoma. They found that programs such as these can reduce residential fire injuries and that visiting homes is an effective way to distribute and evaluate the status of smoke alarms in high-risk households. The smoke alarms were still functioning at a three-year follow-up visit.

Has this strategy been implemented in Minnesota?
Yes, from 1994-97, seven communities were funded by the MDH to conduct home visits to assess the presence, maintenance, and functioning of home smoke alarms. Beginning in 1998, Hennepin, Aitkin, Itasca, and Koochiching Counties received similar funding. These programs have been replicated by many other communities throughout Minnesota.

In a 1994-97 study, the MDH Injury and Violence Prevention Unit found that only 55 percent of residences had a working smoke alarm on every level. (This unpublished study can be found in an MDH grant proposal submitted to CDC [1997] entitled *The Minnesota Collaborative Fire-Related Burn Prevention Program*.)

Indicators for this strategy:

< Number of correctly located and properly maintained smoke alarms in homes visited.
< Number of smoke alarms distributed and installed.
< Number of people who demonstrate changes in behaviors and attitudes about fire safety.

For more information contact:

< Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Special Notes:
The MDH Injury and Violence Prevention Unit has a tested tool, the "Household Smoke Detector Assessment Form," for use with home inspections for residential smoke alarm programs. Data collected with this tool can be used to evaluate the program's effectiveness. Call Mari Mevissen for copies of the tool.

Strategy: Offer home safety and injury prevention education and home safety supplies to the public through day care providers and community organizations and agencies.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
People are often unaware of common hazards that may cause serious injury. Educating the public through community organizations, clinics, and other public facilities can increase awareness of hazards and increase the likelihood that environmental and behavioral changes will be made to correct the hazards.
Changing environmental risks is most successful if residents and families are provided with basic safety supplies and shown how to use them. These supplies might include smoke alarms, toilet and cabinet locks, outlet covers, door knob covers, window cord shorteners, toddler safety gates, child car seats, bath mats, grab bars, flashlights, night lights, anti-scald sensors, and trigger locks.

In addition to using the *Home Safety Checklist* during home visits, strategies to distribute home safety supplies include giving supplies away during home visits, selling them at low cost at health care facilities and community health fairs, or giving them away at baby showers or adoption parties. For related strategies, see "Bicycle Injuries" in this category.

Additional resources:
Bibliographic resources:

< American Academy Of Pediatrics. 2001. Falls from heights: Windows, roofs, and balconies, (RE9951). *Committee On Injury And Poison Prevention* 107 (5):1188-1191.
< Frank, OR. 1996. Preventing falls in the elderly at home: A community-based program. *Medical Journal of Australia* 165 (4):238.
< Hennepin County Community Health Services. *Preventing Senior Falls*. This report includes checklists to assess personal risk factors and fall prevention tips, http://www.co.hennepin.mn.us/commhlth/reports/SeniorHealth.htm.
< Hokkanen, B., Wyman, JF., Elswick, RK., Ford-Smith, C., Fernandez, T., et al. (Unpublished paper). *A Modified Tinetti's Balance Scale: Reliability, Validity and Normative Values in Community-dwelling Older Adults*.
< King, MB. and Tinetti, ME. 1995. Falls in community-dwelling older persons. *Journal of the American Geriatrics Society* 43:1146-1154.
< Murrey, GJ., Helgeson, SR., Courtney, CT., and Starzinski, DT. 1998. State-coordinated services for traumatic brain injury survivors: Toward a model delivery system. *Journal of Head Trauma Rehabilitation* 13:72-81.

< National Fire Protection Association and the Centers for Disease Control and Prevention. *Remembering When: A Fall and Fire Prevention Program for Older Adults*. To order, call (800) 344-3555.
< Sattin, RW. 1992. Falls among older persons: A public health perspective. *Annual Review of Public Health* 13:489-508.
< Thurman, DJ., Alverson, C., Dunn, KA., Guerrero, J., and Sniezek, JE. 1999. Traumatic brain injury in the United States: A public health perspective. *Journal of Head Trauma Rehabilitation* 14 (6):602-15.
< Tinetti, ME., Baker, DI., McAvay, G., Claus, EB., Garrett, P., Gottschalk, M., Koch, ML., Trainor, K., and Horwitz, RI. 1994. A multi-factorial intervention to reduce the risk of falling among elderly people living in the community. *New England Journal of Medicine* 331: 821-827.
< Wolf, S., Barnhart, HX., Kutner, NG., McNeeley, E., Coogler, C., et al. 1996. Reducing falls in older persons: An investigation of Tai Chi and computerized balance training. *Journal of the American Geriatrics Society* 44:489-497.

Organizational resources:

< The Brain Injury Association of Minnesota, supports those affected by brain injuries of all types. Phone: (612) 378-2742 or toll-free in state: (800) 669-6442, Fax: (612) 378-2789, info@braininjurymn.org, http://www.braininjurymn.org. 43 Main Street SE, Suite 135, Minneapolis, MN 55414.
< Center for Urban and Regional Affairs (CURA), Phone: (612) 625-1551, Fax: (612) 626-0273 http://www.cura.umn.edu/. 330 HHH Center, 301 - 19th Ave. S., Minneapolis, MN 55455.
< Elderberry Institute, for information about "Living at Home/Block Nurse" programs. Phone: (651) 649-0315 or toll-free: (800) 320-1707. www.elderberry.org. 475 Cleveland Ave. N, Suite #322, St. Paul, MN 55104.
< Minnesota Department of Health. Several tools available in CD-ROM. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Safety Checklist". The tools are: *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults,* the *Home Safety Checklist* (developed for Native Americans), the *Home Safety Checklist Inspector's Guide,* and the *Home Safety Checklist Program Summary: 1989-1994.*

Evidence for strategy:
Researchers conclude that education in the home is most effective, but that education at day care facilities, in parenting classes, and in early childhood classes could also be effective.

The *Home Safety Checklist* home visit program has been carefully evaluated (see the previous strategy, "Conduct home visits to assess the home environment for falls and other home hazards."). Culturally specific home visits with community partners have proven effective within the Hmong community of St. Paul.

Providing other home safety supplies such as children's bike helmets, window screens, and safety gates have helped to protect against injury from falls.

The Living at Home/Block Nurse and Parish Nurse programs help elder adults to remain safely independent in their homes, with support from their neighbors. Some faith-based organizations employ parish nurses to attend to community members.

To help prevent falls, attending exercise classes that improve strength, balance, and coordination (like Tai Chi classes) are helpful, especially for older adults. For related information see the strategies in the *Decreased Independence/Disability* category.

Has this strategy been implemented in Minnesota?
Yes, education on home safety is provided in a variety of settings throughout Minnesota, including adult and child care facilities, ECFE programs, Head Start, and other home visiting programs. MDH has established grant-funded programs in Itasca and Aitkin Counties to conduct programs for older adults using the "Remembering When" curriculum.

Classes to improve balance and coordination are offered through community education organizations, health clubs, workplaces, and senior organizations. Health plans and clinics offer classes for their members, too.

Indicators for this strategy:
- < Number and types of organizations (day care facilities, well child clinics, health plans, etc.) that offer home safety education to their clients.
- < Percentage of clients who utilize the information and materials provided in their homes.
- < Number and type of supplies distributed.
- < Number and kind of methods and organizations used to distribute supplies.
- < Number of community residents who know about home safety and ways to injury-proof their houses.

For more information contact:
- < Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
- < Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Provide academic instruction on injury prevention and control.

	Systems	Community	Individual
Primary	U		
Secondary	U		
Tertiary	U		

Background:
The purpose of this strategy is to increase the knowledge of students preparing for professions that can influence injury prevention and control. Although prevention is key to injury control, not all schools of public health, medicine, nursing, law, or public policy address injury. Efforts should be made to incorporate injury control into the standard curricula of such training programs.

Additional resources:
Bibliographic resource:
- < U.S. Department of Health and Human Services. 1991. *Setting the National Agenda for Injury Control in the 1990's.*

Public Health Service, Centers for Disease Control and Prevention.

Organizational resources:

< Children's Safety Network, Education Development Center, at (617) 969-7100, provides materials and curricula for education.
< Local colleges, universities, and county extension educators supply important information, and well-informed guest speakers
< Minnesota Department of Health Injury and Violence Prevention Unit, provides numerous materials and speakers as resources for the development and implementation of professional education. Contact Mari Mevissen, at (651) 281-9864.
< Minnesota Institute for Public Health/ Minnesota Prevention Resource Center offers videos for loan, printed materials and evidence-based program supports. Phone: (763) 427-531, or (800) 782-1878 www.emprc.org. 2720 Highway 10, Mounds View, MN 55112.
< Minnesota Safety Council's SAFE KIDS Coalition, at (651) 228-7313, provides materials and curricula for education, http://www.safekids.org/ and www.mnsafetycouncil.org/kids/skcoal.htm.

Evidence for strategy:

In 1991, CDC, in *Setting the National Agenda for Injury Control in the 1990's*, recommended that public health take a lead role in providing academic instruction in injury prevention and control.

Has this strategy been implemented in Minnesota?

Yes, the University of Minnesota Schools of Public Heath, Nursing, and Medicine invite MDH Injury and Violence Prevention Unit staff to teach injury control in selected courses. Many baccalaureate-nursing programs include the *Home Safety Checklist* in their community health curricula.

Indicators for this strategy:

< Number of classes taught and educational seminars provided to students preparing for professions that can influence injury prevention and control.
< Number and types of professions in which classes and seminars are provided.
< Knowledge of students about injury prevention and control.

For more information contact:

< Evelyn Anderson, at (651) 281-9870, evelyn.Anderson@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
< Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Provide age-appropriate and culturally sensitive counseling by primary care providers.

	Systems	Community	Individual
Primary			U
Secondary			U
Tertiary			

Background:
The purpose of this strategy is to educate parents and children about the risks for injury. A health care professional that regularly sees the child and parents can be influential in changing parental behavior to reduce injury risk. In order to influence parental behavior most effectively, information must be provided in an age-appropriate and culturally sensitive manner. A variety of materials are available to assist with injury prevention counseling. For related information, see the strategies in the sections, "Eliminate Barriers and Improve Access to Health Care – Children and Adolescents," "Eliminate Barriers and Improve Access to Health Care – Children and Adolescents with Special Health Care Needs," and "Eliminate the Disparities" in the *Service Delivery Systems* category.

Additional resources:
Bibliographic resources:

< Eichelberger, Gotschall, Feely, Harstad, and Bowman. 1990. Parental attitudes and knowledge of child safety. *American Journal of Diseases of Children*.
< Graafmans, WC., Ooms, ME., Hofstee, HMA., Bezemer, PD., Bouter, LM., et al. 1996. Falls in the elderly: A prospective study of risk factors and risk profiles. *American Journal of Epidemiology* 143:1129-1136.
< Shumway-Cook, A., Gruber, W., Baldwin, M., and Liao, S. 1997. The effect of multidimensional exercises on balance, mobility, and fall risk in community-dwelling older adults. *Physical Therapy* 77:46-57.
< Tinetti, ME., Williams, CS. 1997. Falls, injuries due to falls, and the risk of admission to a nursing home. *New England Journal of Medicine* 337:1279-1284.

Organizational resources:

< American Academy of Pediatrics, TIPP (The Injury Prevention Program). This is the system most widely used to provide counseling to parents. It consists of *Childhood Safety Counseling Schedules,* safety information sheets, and safety surveys for use in providing anticipatory guidance to parents. The TIPP can be obtained from the American Academy of Pediatrics, at (800) 433-9016. Fact sheets can also be downloaded from www.aap.org.
< The Centers for Disease Control and Prevention (CDC), "Toolkit to Prevent Senior Falls" has camera-ready masters and fact sheets for health professionals to use in developing their own campaigns. Many materials are also available in Spanish; available at: www.cdc.gov/ncipc/pub-res/toolkit/toolkit.htm.
< Minnesota Department of Health. Several tools available in CD-ROM. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Safety Checklist." The tools are: *Home Safety Checklist for Young Children*, the *Home Safety Checklist for Older Adults,* the *Home Safety Checklist* (developed for Native Americans), the *Home Safety Checklist*

Inspector's Guide, and the *Home Safety Checklist Program Summary: 1989-1994.*

Evidence for strategy:
Research by Eichelberger et al. (see the resources section above) indicated that parents had significant educational needs concerning childhood injury, that they would most likely obtain information on child safety from their physicians and that physicians were cited as the parent's first choice for information on injury control and child safety. For more information, see the previous strategy, "Provide age-appropriate and culturally sensitive counseling by primary care providers."

Has this strategy been implemented in Minnesota?
Yes, most clinics in Minnesota provide some injury prevention education to parents.

Indicators for this strategy:
- Number of clinics that provide injury prevention education to parents.
- Types of injury prevention information offered by primary care providers.
- Changes made by parents in their homes as a result of the education.

For more information contact:
- Evelyn Anderson, at (651) 281-9870, evelyn.anderson@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Penny Hatcher, at (651) 281-9937, penny.hatcher@health.state.mn.us, MDH Family Home Visiting Program.
- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Pam York, at (651) 281-9831, pam.york@health.state.mn.us, MDH Nutrition and Physical Activity Unit.

Strategy: Collect and analyze data and support new prevention efforts.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Quality data is necessary to make decisions about the effectiveness of programs and to guide resources to new prevention efforts. The purpose of this strategy is to provide systems of data collection and analysis that will provide necessary information. The *Home Safety Checklist* program has a data collection tool that can be used during home visits. The *Home Safety Checklist Data Collection Tool* can be used to record information about home hazards identified, behavioral changes, supplies given, and child injuries. It is distributed on CD ROM to local public health agencies.

National researchers conduct studies on preventing injuries through use of safer building materials and methods. Each year the State Fire Marshal's office produces a report, *Fire in Minnesota*, which describes the residential fire problem as reported by local fire departments. The MDH Injury and Violence Prevention Unit has the *Smoke Detector Home Assessment Tool* for use in home inspections for residential smoke alarm programs. This tool is used to evaluate the effectiveness of programs. Qualitative data collection methods can also provide insight.

Additional resources:

Bibliographic resources:

< Bukowski, R. 1996. Fire risk or fire hazard as a basis for building fire safety performance evaluation: in *Fire Safety Engineering in the Pursuit of Performance-based Codes: Collected Papers*. W14: NISTIR 5878, United States Department of Commerce, Technology Administration, National Institute of Standards and Technology, Building and Fire Research Lab, Gaithersburg, MD, 20899-0001, http://www.bfrl.nist.gov/866/CIB_W14/COLLECTN.htm.

< Center for Disease Control and Prevention. *Healthy People 2010* identifies national goals to build a healthy U.S. population. It states that in 1988 the national baseline for residences with a functioning smoke alarm on every floor was 87 percent. One hundred percent is desired. For more detail, see www.cdc.gov.

< Minnesota Department of Public Safety, State Fire Marshal Division. *Fire in Minnesota*. St. Paul, MN. This report contains information on residential fires from local fire departments through the Minnesota Fire Incident Reporting System. For a copy, contact Suite 145, 444 Cedar Street, St. Paul, MN 55101, or download from www.fire.state.mn.us. State rules on building codes, www.revisor.leg.state.mn.us/arule/7510/ or at Minnesota's Bookstore.

< Minnesota Institute for Public Health/ Minnesota Prevention Resource Center offers free or low cost videos, printed materials and evidence-based program supports. Phone: (763) 427-531, or (800) 782-1878, www.miph.org. 2720 Highway 10, Mounds View, MN 55112.

< National Committee for Injury Prevention and Control. 1989. Chapter 2: Learning from data. Chapter 3: Working with data: in *Injury Prevention: Meeting the Challenge.*

Organizational resources:

< Minnesota Department of Health. The *Smoke Detector Home Assessment Tool* can be obtained by calling Mari Mevissen, at (651) 281-9864.

< National Center for Chronic Disease Prevention and Health Promotion Behavioral Risk Factor Surveillance System (BRFSS) presents reliable national and state prevalence data, including injury control and testing of smoke detectors; available at: http://www.cdc.gov/brfss/.

< The National Fire Prevention Association's One Stop Data Shop can provide national statistics and trend information. Contact Nancy Schwartz, (617) 984-7450, or visit the website: http://www.nfpa.org/Research/OneStopDataShop/OneStopDataShop.asp.

Evidence for strategy:

Data collection and analyses are fundamental public health tasks and create a foundation for solid public health planning, decision-making, and resource allocation.

The *Smoke Detector Home Assessment Tool* was used in a 1994-97 CDC-funded evaluation project to be an effective method of collecting data in the home.

Has this strategy been implemented in Minnesota?

Yes, the Home Safety Checklist data on the mortality and morbidity of home injury has been used to make program decisions on the state and local levels across Minnesota. For example, the Home Injury Prevention Program was funded partly because the data

showed that children aged 0-6 years are more frequently injured in their homes than in other locations.

Indicators for this strategy:

- < Data systems expanded and supported at the state and local levels.
- < Programs designed based on the data collected.
- < Decisions made regarding injury prevention resources based on the data collected.
- < Number of homes using the *Smoke Detector Home Assessment Tool*.
- < Number of agencies using the tool with their clients.
- < Degree to which program objectives have been met.
- < Numbers and types of decisions made based on data collected.
- < Continuation of data systems' expansion and support.

For more information contact:

- < Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- < John Weber, at (651) 281-9834, john.weber@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Offer fire safety education following a burn or a visit to the emergency department.

	Systems	Community	Individual
Primary			
Secondary			U
Tertiary			

Background:

Following a hospitalization or emergency department visit for a burn injury, patients and their families are referred to public health nurses for a home visit at which a safety assessment and education are conducted. This strategy requires referral mechanisms between the hospital and the local public health or home visiting agency. The purpose is to reduce the fire and burn hazards in the home. For additional information, see the strategies in this section on, "Conduct home visits to assess presence, distribute, install, and maintain smoke alarms", "Offer home safety and injury prevention education and home safety supplies to the public through day care providers and community organizations and agencies", and "Provide age-appropriate and culturally sensitive counseling by primary care providers."

Additional resources:

Bibliographic resources:

- < Kulenkamp, A., Lundquist, B., and Schaenman, P. 1990. *Reaching the Hard-to-Reach: Techniques From Fire Prevention Programs.* Arlington, VA: TriData Corporation. Copies may be obtained from TriData Corporation, 1500 Wilson Blvd., Arlington, VA.
- < National Association of State Fire Marshals. 1994. *The Community-based Fire Safety Education Handbook.*

Washington, DC: Rossomando & Associates.
< National Center for Injury Prevention and Control. 1996. *Efforts to Increase Smoke Detector Use in U.S. Households. An Inventory of Programs.* Centers for Disease Control and Prevention, http://www.cdc.gov/ncicp.
< National Fire Protection Association in cooperation with the Centers for Disease Control and Prevention. *Remembering When: A Fall and Fire Prevention Program for Older Adults*. To order, call 1-800-344-3555.
< Pratt, L. et al. 1998. Home visitors' beliefs and practices regarding childhood injury prevention. *Public Health Nursing* 15(1):44-49.
< Shults, R., Sacks, J., Briske, L., and Dickey, P. 1998. Evaluation of three smoke detector programs. *American Journal of Preventive Medicine* 15(3): 165-171.

Evidence for strategy:
A follow-up study in Hennepin County indicates that parents followed the recommendations of the public health nurse at a rate of 42 percent for burn prevention hazards.

Has this strategy been implemented in Minnesota?
Yes, the Hennepin County Burn Center and the Metropolitan Visiting Nurse Association implemented such a program in 1987, using the *Home Safety Checklist.*

Indicators for this strategy:
< Number of home assessment visits made.
< Number of hazards identified.
< Parental compliance with recommendations.

For more information contact:
< Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< Mari Mevissen, at (651) 281-0964, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.
< MDH Maternal and Child Health Section, Family Home Visiting Team, at (651) 215-8960. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Visit".

Strategy: Provide instruction and public education on fire safety.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
Good public education can prevent fire-related injury. Successful programs carefully target a particular aspect of fire safety, tailor the program to its audience, have allies in the community who support the work, use materials which are clear and readily-available, repeat messages, and have good evaluation methods.

In addition to accompanying smoke alarm installation in homes, fire safety education can be provided in clinics, emergency rooms, or parenting classes. Successful programs help people learn to identify hazards, install smoke alarms, practice a fire escape plan, safely use cooking and heating devices, properly store flammable materials, restrict children's access to lighters and

matches, and properly treat burn injuries.

Additional resources:

- The Federal Emergency Management Agency (FEMA) has created English and Spanish materials and materials specific to a variety of audiences with special needs that can be used in a public media campaign. Download from: http://www.usfa.fema.gov/applications/publications/ or contact The United States Fire Administration, Public Fire Education, 16825 South Seton Avenue, Emmitsburg, MD, 21727.
- National Fire Protection Association in cooperation with the Centers for Disease Control and Prevention. *Remembering When: A Fall and Fire Prevention Program for Older Adults*. To order, call (800) 344-3555.
- Schaenman, Stambaugh, Rossomando, Jennings, and Perroni. 1990. *Proving Public Education Works.* Copies may be obtained from TriData Corporation, 1500 Wilson Blvd., Arlington, VA.

Evidence for strategy:
The Schaenman reference demonstrates that public education on fire safety is effective and that it prevents more casualties and saves more money per staff-year than any other aspect of fire protection. Many aspects of the program can be used by multiple community partners.

Has this strategy been implemented in Minnesota?
Yes, many local fire departments in Minnesota conduct fire safety education. The Minnesota State Fire Marshal's office has supported fire education in K-12 classrooms. Little has been done to provide fire prevention education in higher education settings. The University of Minnesota, the St. Paul-Ramsey County Department of Health, and neighborhood groups have collaborated with Hmong peer educators to visit and assure safety in Hmong homes.

Indicators for this strategy:

- Number of trained fire educators in the state.
- Number of programs provided.
- Number of community agencies involved in fire safety education.
- Number of academic institutions that teach fire safety and injury prevention education.

For more information contact:

- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Enforce current smoke alarm legislation.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary			

Background:
The federal government (Public Law 102-522) and the state of Minnesota (Minnesota Statutes 299F.011, since 1993) require the placement of smoke alarms in all residences with sleeping quarters. This includes both private and rental properties.

Local fire marshals enforce compliance in rental properties through routine inspections or building codes and planning. Private property is not usually inspected, although it is checked upon sale of the home. To prevent loss, insurance organizations provide financial incentives for fire-resistant construction or controls and alarms.

Additional resources:

- National Center for Injury Prevention and Control. 1996. *Efforts to Increase Smoke Detector Use in U.S. Households: An Inventory of Programs.* Centers for Disease Control and Prevention.
- The U.S. Office of Housing and Urban Development (HUD). Free publications on installation of sprinklers and smoke alarms in support of PL 102-522, http://www.huduser.org/publications/destech/hudguide.html. These and other materials can be ordered from the U.S. Department of Housing and Urban Development, 451 7th Street S.W., Washington, DC 20410 Telephone: (202) 708-1112 TTY: (202) 708-1455, or download from their website at: www.hud.gov/healthy/index.cfm and http://www.huduser.org/publications/pdrpubli.html.

Evidence for strategy:
States with smoke alarm legislation have higher rates of smoke alarm use. Legislation, combined with education and technology, provide a comprehensive approach to the prevention of injuries.

Has this strategy been implemented in Minnesota?
Yes, Minnesota has a state law for smoke alarms, but it is not consistently enforced or supported with education programs throughout Minnesota.

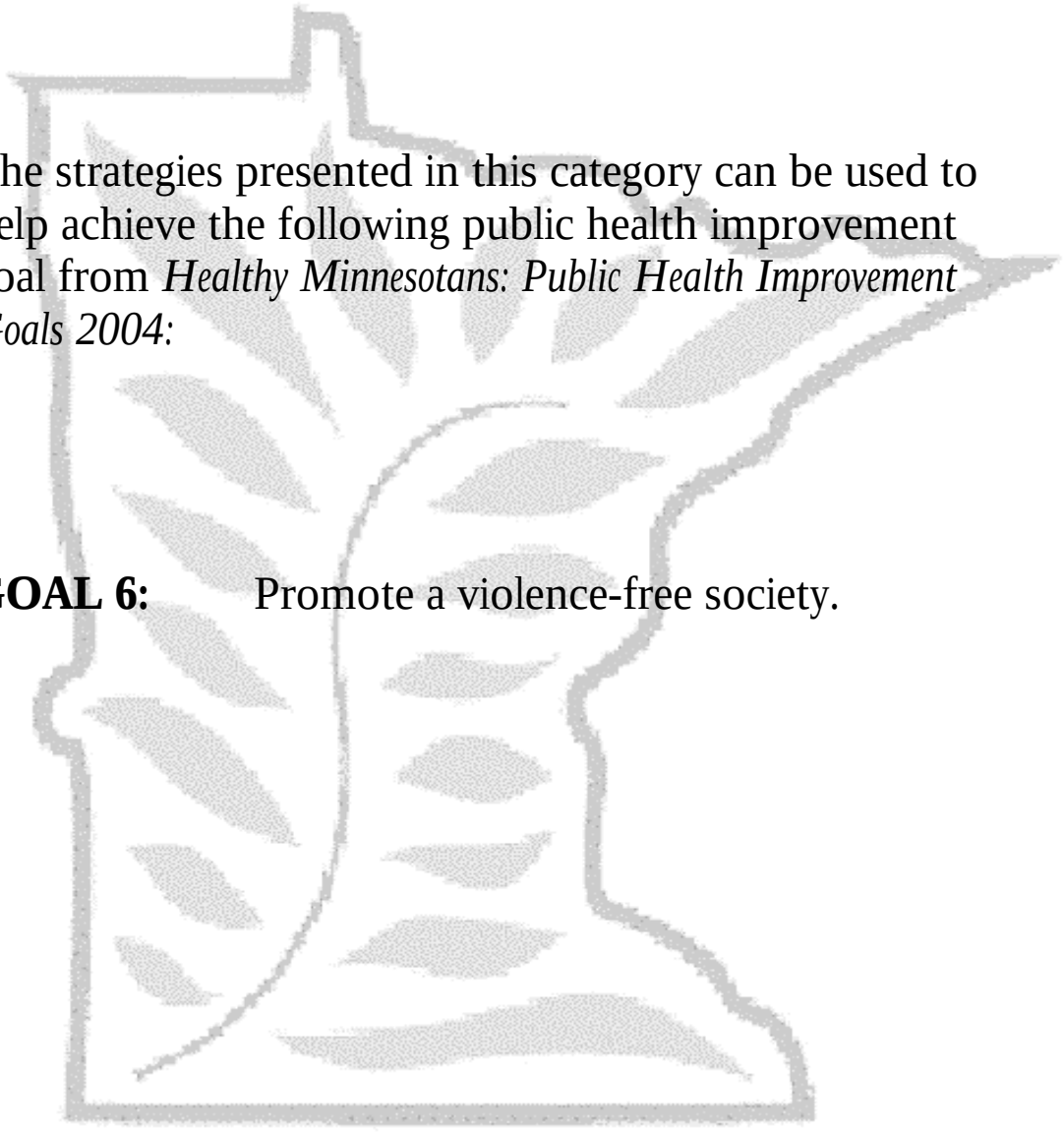
Indicators for this strategy:

- Every community would have a process to enforce smoke alarm legislation.

For more information contact:

- Mark Kinde, at (651) 281-9832, mark.kinde@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Mari Mevissen, at (651) 281-9864, mari.mevissen@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Category:
VIOLENCE



The strategies presented in this category can be used to help achieve the following public health improvement goal from *Healthy Minnesotans: Public Health Improvement Goals 2004:*

GOAL 6: Promote a violence-free society.

CATEGORY: VIOLENCE

Violence can be defined as words and actions that hurt people. Acts of violence include suicide, child maltreatment, domestic and intimate partner violence, sexual violence, and youth violence. While overall crime rates remain fairly constant, the impact of interpersonal violence and suicide extends its reach across multiple generations of families, communities, and systems.

While violence cannot be attributed to any one cause, many social and economic factors may contribute to violence. For example, poor and overcrowded living conditions, low wage jobs over which people have little control of their time and responsibilities, and competition for limited resources within a community, can exacerbate feelings of powerlessness or anger that cause people to act out in violent ways. Because these underlying causes are complex, they cannot often be prevented through a single approach. Prevention is ideally suited to a community-based, public health approach.

This approach includes:

- Collecting and analyzing violence data.
- Designing multidisciplinary interventions based on scientific evidence, violence prevention theory, and input from those community members most affected by violence.
- Developing community-wide, multiple source monitoring systems to track the effects of interventions.
- Utilizing a population focus to maximize reach and to include service providers, policy makers, and marginalized populations.
- Examining individual behaviors and environments as well as social behaviors and environments.

As a Minnesota health issue, violence affects all aspects of life. Physical and mental health are nurtured and allowed to flourish in families and communities that are violence-free.

For information on prevention of other kinds of unintentional and violent injuries, see the web-based MDH publication, *Click Your Way to the Best Practices in Injury Prevention*. *Click Your Way* can be found, along with current data and other information, at the Injury and Violence Prevention website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Violence Prevention".

CATEGORY: Violence

TOPIC: CHILD MALTREATMENT, INCLUDING CHILDREN WITH SPECIAL HEALTH NEEDS

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Promote culturally specific relational models of attachment, self-efficacy, community connectedness, and coping skills.	✔	✔	✔	✔	Community Coalitions		Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts, Media and Entertainment
Promote healthy child development through early intervention.	✔	✔	✔	✔	✔		Policy Makers, Social Services
Facilitate access to family home visiting.	✔	✔	✔	✔			Policy Makers, Social Services
Facilitate access to child development and disability information.	✔	✔	✔	✔	Community Coalitions		Policy Makers, Social Services Mental Health Services
Facilitate access to culturally- and disability-specific parenting information and support.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Facilitate referrals to mental and chemical health programs.	✔	✔	✔	✔	Community Coalitions, Counseling Centers	✔	Policy Makers, Faith Communi-ties, Social Services, Mental Health

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
							Services, Corrections, Law Enforcement, Courts
Collect and analyze data to inform interventions, policies, and the community.	✔	✔	✔	✔	Community Coalitions		Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Assess (including self-assessments) the strengths of individuals, families, communities, and systems and build upon those strengths to address risks for child maltreatment.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts Media and Entertainment
Educate the community to recognize and refer victims of child maltreatment to child protection, law enforcement, and supportive services.	✔	✔	✔	✔	Community Coalitions		Policy Makers, Faith Communities, Social Services, Mental Health Services
Conduct child mortality reviews.	✔	✔	✔				Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Educate parents about Shaken Baby Syndrome.	✔	✔	✔	✔	✔		Policy Makers

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Incorporate information on the maltreatment of children with special needs into mainstream child abuse prevention programs.	✔	✔	✔	✔	Family and Children-s Services Collaboratives, Children-s Mental Health Collaboratives		Faith Communities, Social Services, Advocacy Organizations

Child maltreatment is among the most prevalent and far-reaching forms of violence in Minnesota. It includes physical, sexual, and emotional maltreatment and physical and emotional neglect. It contributes to fatal and nonfatal injuries, disabilities, and mental health disorders and is associated with a range of social and intergenerational issues, including substance abuse and youth violence. The impact of child maltreatment on society at large includes national and state legislation, physical and mental health care, rehabilitative services, foster care, residential treatment, special education services, social services, law enforcement, adjudication and incarceration of juvenile and adult criminals, family stress, and the loss of earnings or poverty resulting from disability or other incapacity to secure or maintain employment (or both), and of the capacity to parent.

Reported and substantiated child maltreatment data reflect an over-representation of both black children and children with disabilities. Maltreatment can result in disabilities, while disabilities increase the risk of maltreatment. Fifty percent of typical children with severe neglect sustain permanent disabilities, including mental retardation and other forms of learning and cognitive disabilities. The maltreatment of black children is substantiated at a rate that is nearly nine times greater than that of Asian and white children (whose rates are lowest); the maltreatment of children with disabilities is substantiated at a rate that is nearly twice that of their peers without disabilities.

Effective child maltreatment prevention strategies focus on reducing risks and promoting strengths in ways that are culturally relevant and address the unique aspects of children with disabilities and special health needs. Central to these efforts is the promotion of healthy, relational models at all levels (individual, family, community, and systems) with the secure care giver-child attachment as the primary model.

Strategy: Promote culturally specific relational models of attachment, self-efficacy, community connectedness, and coping skills.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Child maltreatment prevention literature and research indicate that the experience of healthy, nurturing relationships beginning in infancy has a profound impact upon individuals' capacity to sustain healthy nurturing relationships throughout the life cycle. Within relationships, individuals begin to establish "working models" of self and others, of how to view themselves and others in the context of relationships. The primary "working model" is that of the primary caretaker and infant. Secure attachment between caretaker and infant depends upon the sensitivity and consistency of a caregiver's response to an infant's cues, including verbalizations, gestures, and facial expressions.

Caregivers' capacities to provide for infants' needs depends upon their own "working models," as well as upon the unique mix of strengths and risks they face in their lives. Prevention theory and research also demonstrate the many opportunities to reduce risks and build strengths in people's lives to ensure their resiliency to overcome negative influences. These opportunities exist at the individual, family, community, and systems levels, where healthy relational models can be encouraged and supported. A key question that drives effective approaches at all levels is: How does this intervention (program, policy, practice) promote resiliency?

Effective strategies include those that ensure individuals have the opportunity to direct their own lives in healthy and satisfying ways (self-efficacy), to build and sustain mutually beneficial relationships with their communities (community connectedness), and to be supported in learning and practicing healthy life skills (coping). Effective strategies must also accommodate and promote the unique aspects of different cultural groups, their histories, beliefs, and practices, as well as the unique aspects of people with disabilities. This includes:

- Teaching caregivers about child development, child behaviors, and the child's disability.
- Promoting natural supports (i.e., parent-to-parent) and community connections.
- Facilitating healing and resolution of a victim's experiences of maltreatment.
- Teaching and modeling healthy relationships (parenting, mentoring, partnering, and working relationships, as well as friendships), including how to manage challenges and conflicts.

Additional resources:

Bibliographic resources:

- Ainsworth, MDS. 1991. Attachments and other affectional bonds across the life cycle. In CM. Parkes, J. Stevenson-Hinde, and P. Marris (Eds.), *Attachment Across the Life Cycle* (pp. 33-51). New York: Routledge.
- Bavolek, SJ. 2000. The nurturing parenting programs. *Juvenile Justice Bulletin*. Available at http://www.ncjrs.org.
- Egeland, B., and Erickson, MF. 1986. Project STEEP: A prevention intervention with high-risk parents and infants [Proposal submitted to NIMH, Infancy Prevention Research Branch]. [For contact information, see the reference on the Children, Youth and Family Consortium below.]
- Freiberg, S., Adelson, E., and Shapiro, V. 1987. Ghosts in the nursery: A psychoanalytic approach to the problems of impaired infant-mother relationships. Columbus, OH: Ohio State University Press.
- Heneghan, AM., Horwitz, SM., and Levanthal, JM. 1996. Evaluating intensive family preservation programs: A methodological review. *Pediatrics* 97(4):535-542.
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10): 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

< Van Ijzendoorn, MH. 1990. Developments in cross-cultural research on attachment: Some methodological notes. *Human Development* 33: 3-10.

Organizational resources:

< Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
< Nurturing Parenting Programs, Family Development Resources, Inc., at (828) 681-8120 or (800) 688-5822, fdr@familydev.com.
< Search Institute, Minneapolis, Minnesota, at (612) 376-8955, http://www.search-institute.org.

Evidence for strategy:

It is well documented that if people have meaningful relationships with another person, their families, their communities, or all three, and if they have positive views of themselves and others, they are less likely to engage in violent behaviors toward themselves or others. Multiple tools have been designed to measure capacities, life skills, risks, strengths (assets or protective factors), mental health, and they may be implemented within programs.

Has this strategy been implemented in Minnesota?

Yes, in addition to ongoing Minnesota-based research at multiple sites (Project STEEP, University of Minnesota; see the Additional Resources section above), many organizations and disciplines are implementing aspects of this strategy. These include home visiting, mentoring, community coalitions, and early childhood family education programs. The Nurturing Parenting Program (see the Additional Resources section above), which includes aspects of this strategy and an additional focus on building parenting skills was field tested in Minnesota. The Nurturing Parenting Program has programs designed and tested with Hmong families, Hispanic families, African American families, and families in treatment and recovery.

Indicators for this strategy:

< Number and type of teaching opportunities for caregivers about child development, behaviors, and disabilities.
< Number of opportunities for and ways of building, parent-to-parent supports and community connections.
< Number and type of community resources available and accessible to victims and perpetrators of child maltreatment.
< Number of adolescents who self-report assets (feeling of belonging, intention of staying in school, presence of an important adult in their lives, feeling that their parents love them, etc.).
< Number of violent incidents toward children in a community.
< Number and type of injuries reported as a result of child maltreatment incidents.

For more information contact:

< Maureen Fuchs, at (651-281-9959), maureen.fuchs@health.state.mn.us, MDH Family Home Visiting Program.
< Junie Svenson, at (651) 281-9891, junie.svenson@health.state.mn.us, MDH Minnesota Healthy Beginnings Program.

Strategy: Promote healthy child development through early intervention.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Effective preventive outcomes are maximized when begun early, whether it be screening and intervention for disabilities, caregiver-child interactions, injuries, physical and behavioral developmental milestones, or mental health problems. Opportunities and places for early intervention include assessments done prenatally and at the time of birth; post-natal, infant, toddler, and early childhood health check-ups and immunizations; pre-school screening; home visiting; intakes for services; day care; and early childhood family education.

Additional resources:
Bibliographic resources:

< Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide,* at http://www.thecommunityguide.org).
< Minnesota Department of Health. 1996, 1998. *Public Health Nursing Practice Guidelines: Prevention of Violence Against Women and Children.* For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us
< PACER Center. 1997. *Let's Prevent Abuse: A Prevention Handbook for People Working With Young Families.* Contact: PACER Center, Minneapolis, Minnesota, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), http://www.pacer.org.

Organizational resources:

< Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
< Individuals with Disabilities Act. 1986. Part C, Programs for infants and toddlers with disabilities. Contact: MDH, at (800) 728-5420 or (651) 215-8956 (metro).
< Minnesota Department of Children, Families and Learning, Nancy Riestenberg, at (651) 282-6734.
< PAVE: Partnerships to Address Violence through Education, Center for Early Education and Development, University of Minnesota, Christopher Watson, at (612) 625-2898.

Evidence for strategy:
Studies document that early identification and intervention of physical, emotional, and health problems and other developmental delays increase the chances of minimizing lifelong complications from problems.

Home visitation programs are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org).

Has this strategy been implemented in Minnesota?
Yes, early intervention and screening services have been implemented in Minnesota for years, due to the Individuals with Disabilities Education Act (IDEA) and Minnesota's birth-to-five and child maltreatment laws. IDEA is the 20-year-old

federal law that guarantees the rights of children with disabilities to a free appropriate public education.

Indicators for this strategy:

- < Number and type of places and opportunities where screening for child development issues occurs.
- < Number of children or families screened.
- < Number of children identified with developmental issues that need to be addressed.
- < Number of caregivers, parents, or families identified with child development issues that need to be addressed.
- < Existence in the community of a seamless system of referral and follow-up for these issues.
- < Awareness by community members that these screening opportunities exist.

For more information contact:

- < Maureen Fuchs, at (651) 281-9959, maureen.fuchs@health.state.mn.us, MDH Family Home Visiting Program.
- < Nancy Reed, at (651) 282-2953, nancy.reed@health.state.mn.us, MDH Family Home Visiting Program.
- < Junie Svenson, at (651) 281-9891, junie.svenson@health.state.mn.us, MDH Minnesota Healthy Beginnings Program.

Strategy: Facilitate access to family home visiting.

	Systems	Community	Individual
Primary		U	U
Secondary		U	U
Tertiary			

Background:

Successful home visiting programs offer an array of services and link families with other programs and community resources. They work primarily through the establishment of collaborative relationships with other community providers and organizations serving families. Partners may include, but are not limited to, health care providers, hospitals, schools, human services, community corrections, minority organizations, and businesses. Some home visiting programs are targeted at families with multiple challenges and some are offered universally to all families. Increasing the availability and accessibility of home visiting programs to all in a community who can benefit is an important community-wide effort.

Additional resources:

Bibliographic resources:

- < Centers for Disease Control and Prevention's Task Force on Community Preventive Services. *The Community Guide,* available at: http://www.thecommunityguide.org).
- < Erickson, MF., and Egeland, B. 1995. Throwing a spotlight on the developmental outcomes for children: Findings of a seventeen-year follow-up study. In E. Wattenberg (Ed.), *Children in the Shadows: The Fate of Children in Neglecting Families* (pp. 113-126).

Minneapolis, MN: University of Minnesota, CURA.
< *The Future of Children: Home Visiting*. 1993. David & Lucille Packard Foundation. 3(3).
< Minnesota Department of Health 1996. *Public Health Nursing Practice Guidelines: Prevention of Violence Against Women and Children.* For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us.
< Olds, DL.,and Kitzman, HR. 1993. Review of research on home visiting for pregnant women and parents of young children. *The Future of Children* 3:53-92.

Organizational resources:
< Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
< Minnesota Department of Health Family Home Visiting Program. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Visit".

Evidence for strategy:
The research literature over the last 20 years indicates that home visiting is a successful strategy for improving child and family health outcomes and preventing child maltreatment. Prenatal home visits by nurses have been linked with increased birth weight, decreased smoking and substance use during pregnancy, improved dietary intake, increased use of prenatal care and community services, and fewer perinatal complications. Extended postpartum home visits by nurses have resulted in lower levels of maternal depression, greater social support, improved caregiver-infant attachment, fewer emergency room visits, less child maltreatment, improved high school completion rates among adolescent parents, reduced welfare use, and reduced subsequent pregnancies.

Home visitation programs are strongly recommended by the Centers for Disease Control and Prevention's Task Force on Community Preventive Services (see Community Guide at http://www.thecommunityguide.org).

Comprehensive training for all home visiting staff and ongoing supervision and support for the staff are critical elements of successful programs. Coordination with other home visiting programs, including Early Childhood Family Education (ECFE) and Head Start, is another important criteria for program success.

Has this strategy been implemented in Minnesota?
Yes, 19 MDH-funded home visiting projects to prevent child abuse and neglect have been implemented in Minnesota from 1992 through 2001. Minnesota Healthy Beginnings universal home visiting program is also implemented through the MDH. The Family Home Visiting Program, with TANF funds, is available to 87 counties and 11 tribes. In addition, there are multiple home visiting programs implemented through ECFE, Head Start, and other agencies.

Indicators for this strategy:
< Improvement of parenting skills.
< Increase in knowledge of child development.
< Increase in safe home environments.
< Increase in positive parent-child

interactions.
< Increase in the use of community resources.
< Reduction in the incidence of child maltreatment.

For more information contact:
< Maureen Fuchs, at (651) 281-9959, maureen.fuchs@health.state.mn.us, MDH Family Home Visiting Program.
< Nancy Reed, at (651) 282-2953, nancy.reed@health.state.mn.us, MDH Family Home Visiting Program.
< Junie Svenson, at (651) 281-9891, junie.svenson@health.state.mn.us, MDH Minnesota Healthy Beginnings Program.

Strategy: Facilitate access to child development and disability information.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
In order for individuals, families, communities, and systems (including policy makers) to be able to understand, support, and respond effectively to children's strengths and needs, people at all levels need to share an understanding of child development and disability information. Without this information, children's behaviors and other characteristics may be misinterpreted by caregivers, teachers, service providers, and others and result in inappropriate and potentially harmful responses. This information includes typical physical and behavioral developmental milestones, the unique developmental timelines and characteristics of children with disabilities and special health needs the unique vulnerabilities of children with disabilities for maltreatment, and the diverse meanings of language and behaviors across cultures and disabilities.

Systems and communities need to reach, include, be sensitive to, and become competent with families of multiple cultures, families who have children with disabilities, and children who have disabilities. Parental, professional, community training, education, and support are key components of this strategy.

Additional resources:
Bibliographic resource:
< Egeland, B., Erickson, MF. 1986. *Project STEEP: A Prevention Intervention with High-risk Parents and Infants*. Contact: Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, www.cyfc.umn.edu.

Organizational resources:
< Center for Early Education and Development, University of Minnesota. Contact: Christopher Watson, at (612) 625-2898.
< Local ECFE and Head Start programs. Contact your local school district for more information.
< PACER Center, Minneapolis, Minnesota, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), http://www.pacer.org.

Evidence for strategy:
Project STEEP (see the Erickson and Egeland article above) demonstrated the need for parents to learn about child

development in order to meet the needs of their children and to form healthy attachments.

Has this strategy been implemented in Minnesota?
Yes, many programs and resources throughout the state provide access to child development and disability information. These programs and resources include ECFE programs offered in all Minnesota school districts, county extension agents and programs, and disability advocacy organizations such as PACER or ARC.

Indicators for this strategy:
- < Number of community programs that offer information on child development and disabilities.
- < Accessibility of those programs to community members who need them.
- < Number of community members who use these community resources.
- < Level of satisfaction among community members with these resources.
- < Increase in knowledge among community members of child development and disabilities.
- < Number of parental self-reports of child maltreatment.
- < Number of child maltreatment incidents in the community.
- < Type of injuries reported as a result of child maltreatment incidents.

For more information contact:
- < Mary York, at (651) 281-9958, mary.york@health.state.mn.us, MDH Child Health Consultant, MCH Section.
- < MDH Minnesota Children with Special Health Needs Program (MCSHN), at (800) 728-5420, or (651) 215-8956 (metro).

Strategy: Facilitate access to culturally- and disability-specific parenting information and support.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
A key component in child maltreatment prevention strategies is ensuring that caregivers are equipped with the information they need to nurture healthy attachments with their children. Furthermore, the parenting capacities of families facing multiple challenges are stretched without necessary assistance, guidance, encouragement, and support. Parenting information and support are generally available through early childhood family education, libraries, and community programs. These resources may not be accessible to some parents due to differing cultural norms and values, isolation, or language differences. Also, some parenting issues may remain unaddressed because they are common only among certain cultures or to parents of children with specific disabilities. Furthermore, effective parenting approaches that have been generated from European cultures may not translate effectively across all cultures and may not always bring about the desired outcomes for children with disabilities.

Parenting information needs to be adapted to multiple cultures and to meet the needs of families who have children with disabilities and special health needs. Not only does the

information need to be adapted, but approaches to disseminate it may also need to be expanded, including community-based and family-to-family approaches. For example, many Hmong families have traditionally learned orally, rather than through writing. Also, many families of children with special needs are challenged to find competent childcare, so they can attend parenting classes or support groups. Systems and communities need to assess their efforts toward meeting these needs, identify the unique strengths and needs of all families, and include them when designing educational and supportive approaches.

Additional resources:
Bibliographic resources:

< Egeland, B., and Erickson, MF. 1986. *Project STEEP: A Prevention Intervention with High-risk Parents and Infants*. Contact: Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
< Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA* 278(10): 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.
< Van Ijzendoorn, MH. 1990. Developments in cross-cultural research on attachment: Some methodological notes. *Human Development* 33:3-10.

Organizational resources:

< Center for Early Education and Development, University of Minnesota. Contact: Christopher Watson, at (612) 625-2898.
< Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
< PACER Center, Minneapolis, Minnesota, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), http://www.pacer.org.
< Search Institute, Minneapolis, MN, at (612) 376-8955, http://www.search-institute.org.
< United Way First Call for Help, at (612) 335-5000 or (800) KIDS-709.

Evidence for strategy:
Project STEEP (see the Egeland and Erickson article above) demonstrated the need for parents to learn about child development in order to meet the needs of their children and form healthy attachments. It is also well known that providing information that is culturally and disability-specific will increase the likelihood of it being used appropriately.

Has this strategy been implemented in Minnesota?
Yes, parenting information and support that is culturally and disability-specific is generally available through local ECFE, Head Start, libraries, and ethnic and minority community-based organizations. Most of these agencies and organizations work collaboratively with cultural groups and families of people with disabilities to assure that the provision of parenting information and support is culturally- and disability-specific.

Indicators for this strategy:

< Number of community programs that offer culturally and disability-specific parenting information and support.
< Accessibility of those programs to community members who need them.
< Number of community members who use these community resources.
< Level of satisfaction among community members with these resources.
< Increase in knowledge among community members of parenting and parental support.
< Number of parental self-reports of child maltreatment.
< Number of child maltreatment incidents in the community.
< Type of injury reported as a result of child maltreatment incidents.

For more information contact:

< Maureen Fuchs, at (651) 281-9959, maureen.fuchs@health.state.mn.us, MDH Family Home Visiting Program.
< MDH Minnesota Children with Special Health Needs Program, at (800) 728-5420, or (651) 215-8956 (metro).
< Nancy Reed, at (651) 282-2953, nancy.reed@health.state.mn.us, MDH Family Home Visiting Program.
< Junie Svenson, at (651) 281-9891, junie.svenson@health.state.mn.us, MDH Minnesota Healthy Beginnings Program.

Strategy: Facilitate referrals to mental and chemical health programs.

	Systems	Community	Individual
Primary	U		
Secondary		U	U
Tertiary		U	U

Background:

Child maltreatment prevention efforts may be hindered by the unresolved or unmanaged mental or chemical health needs (or both) of families. These issues may go unaddressed for a variety of reasons. Systems, including policy makers, communities, and service providers can ensure access to these health services by promoting:

< Healthy youth development and chemical health promotional efforts in communities.
< Adequate health care coverage, including coverage for mental and chemical health services.
< Availability and accessibility of providers and programs.
< Culturally specific programs and services.
< Programs that address a range of associated issues (i.e., chemical health norms and attitudes in the community, history of victimization, etc.).
< Policies and community norms that support recovery.
< Education and training of community members and professionals on identification of mental illness and substance abuse and referral making to appropriate interventions.

For related information, see the strategies in the *Alcohol, Tobacco, and Other Drugs* category and the section on Mental Health in the *Mental Health* category.

Additional resources:
Bibliographic resources:

- Egeland, B., and Erickson, MF. 1986. *Project STEEP: A Prevention Intervention with High-risk Parents and Infants.* Contact: Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
- Heneghan, AM., Horwitz, SM., and Levanthal, JM. 1996. Evaluating intensive family preservation programs: A methodological review. *Pediatrics* 97(4):535-542.

Organizational resources:

- County social services agencies in Minnesota. They are very involved in the assessment, referral, and provision of and payment for, services in Minnesota counties.
- Mental Health Association of Minnesota, Minneapolis, Minnesota, at (612) 331-6840.
- Minnesota Association of Resources for Recovery and Chemical Health, http://www.marrch.org.
- Minnesota Department of Human Services, Chemical Dependency Program Division. For information about Rule 25 chemical dependency assessments and for information about chemical dependency treatment and aftercare programs in Minnesota, at (651) 582-1832.
- Minnesota Prevention Resource Center. This clearinghouse for information on a variety of chemical health issues has materials for use in classrooms, community-based programs, public information campaigns, etc. Contact: (800) 247-1303 or (612) 427-5310 (metro), http://www.emprc.org/index.html.

Evidence for strategy:
Families and individuals who could benefit from and do not have access to necessary mental and chemical health services are at greater risk for child maltreatment. Providing timely referrals for those who need them has been found to decrease the incidence of child maltreatment.

Has this strategy been implemented in Minnesota?
Yes, many programs and resources across the state facilitate access to mental and chemical health services. These resources include schools, counseling centers, county social service agencies, faith communities, and health care providers.

Indicators for this strategy:

- Availability and accessibility of mental health and chemical health programs.
- Existence of a seamless web of assessment, referral, and aftercare mechanisms in the community for mental and chemical health problems.
- Number of community members who use resources and use them appropriately.
- Satisfaction of community members with the services and programs.

For more information contact:

- Maureen Fuchs, at (651) 281-9959, maureen.fuchs@health.state.mn.us, MDH Family Home Visiting Program.

- Jay Jaffee, at (651) 281-9872, jay.jaffee@health.state.mn.us, MDH Chemical Health Promotion Coordinator.
- Candy Kragthorpe, at (651) 281-9833, candy.kragthorpe@health.state.mn.us, MDH Mental Health Consultant.
- Nancy Reed, at (651) 282-2953, nancy.reed@health.state.mn.us, MDH Family Home Visiting Program.
- Junie Svenson, at (651) 281-9891, junie.svenson@health.state.mn.us, MDH Minnesota Healthy Beginnings Program.

Strategy: Collect and analyze data to inform interventions, policies, and the community.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
A common measurement of child maltreatment is its reported and substantiated incidence. Although this measure can be useful, it also presents some distinct limitations.

For example, the available data do not reflect those incidents that are not reported or those that are reported but not assessed or investigated. Similarly, the data do not indicate why some populations have a higher incidence of child maltreatment than others. Child protection data include cases where maltreatment has not been determined but services are needed. The state's maltreatment data include cases in which:

- Maltreatment has been determined and child protection services needed.
- Maltreatment has been determined and no child protection services are needed.
- Maltreatment has not been determined and child protection services are needed.
- Maltreatment has not been determined and no child program services are needed.

By promoting a comprehensive, integrated data collection system, including monitoring of indicators from multiple sources, we can design and evaluate prevention interventions. Furthermore, as we track and analyze indicators, we must reflect both the strengths and risks of individuals, families, communities, and systems. This will ensure that subsequent interventions build upon existing strengths and successes. A comprehensive data collection system includes:

- Selection of data sets that are driven by prevention research and theory.
- Involvement of partners that represent multiple systems and community stakeholders.
- Shared data standards, categorizations, and technologies.

Additional resources:
Bibliographic resources:

- Chalk, R., and King, PA. (Eds.). 1998. *Violence in Families: Assessing Prevention and Treatment Programs.* Washington, DC: National Academy Press.
- National Committee for Injury Prevention and Control. 1989. *Injury Prevention: Meeting the Challenge.* New York: Oxford University Press.
- Reiss, AJ., Jr., Roth, JA. (Eds.). 1993. *Understanding and Preventing Violence.*

Washington, DC: National Academy Press.
< Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA* 278(10): 823-832. This is a national study that used a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Evidence for strategy:
Data collection and analyses are fundamental public health tasks that create the foundation for solid public health planning, decision-making, and resource allocation.

Has this strategy been implemented in Minnesota?
Yes, some statewide data collection efforts have begun, are ongoing, and are being newly developed, including the collection of child maltreatment injury data. Also, some communities have initiated risk and strength assessments and tracking of other health indicators related to child maltreatment.

Indicators for this strategy:
< Increase in the number of stakeholders designing, evaluating, and utilizing data collection systems and the resulting data.
< Increase in the number and variety of indicators being collected and analyzed.
< Decrease in incidence and risk indicators for child maltreatment.
< Increase in protective factors in individuals, families, communities, and systems.

For more information contact:
< Judy Kuck, at (651) 296-5416, Department of Human Services, Family and Children's Services Division.
< Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Assess (including self-assessment) the strengths of individuals, families, communities, and systems and build upon those strengths to address risks for child maltreatment.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Prevention theory underscores the importance of influencing the balance between risks and protective factors (strengths or assets), building protective factors to increase resilience across the life span. Resilience, in turn, serves to overcome the potential negative impact of risks and life's adversities. Systematic and sensitive assessments, including self-assessments, of the strengths of individuals, families, communities, and systems will indicate where to begin building and promoting those assets necessary to prevent child maltreatment. Through the purposeful, integrated promotion of asset-building in individuals, families, communities, and systems, communities can come together to prevent violence in multiple, tangible ways. Strength-based strategies include:
< Facilitating individuals, families, communities, and systems to identify

and prioritize their own strengths and needs. This can be done one-on-one, through community partnerships, or within individual systems.
< Involving all community stakeholders in designing preventive approaches.
< Approaches that are person-, family-, or community-centered, as opposed to an array of fragmented services and programs, focusing on the development of natural supports within families and communities.

Additional resources:
Bibliographic resources:
< Kretzman, JP., McKnight, JL. 1993. *Building Communities From the Inside Out.* Center for Urban Affairs and Policy Research, Northwestern University. Contact: Center for Urban Affairs and Policy Research, Northwestern University, 2040 Sheridan Rd., Evanston, IL 60208. http://www.northwestern.edu/ipr/abcd.html.
< Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10): 823-832. This is a national study using a cohort of Minnesota adolescents. It provides an excellent overview of the connections between family, child, school, and community that protect youth from risk behaviors.

Organizational resources:
< Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
< Family Resource Coalition of America, http://www.frca.org.
< PACER Center, Minneapolis, Minnesota, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), http://www.pacer.org.
< Search Institute, Minneapolis, Minnesota, at (612) 376-8955, http://www.search-institute.org.

Evidence for strategy:
There is extensive research to show that people who are supported by an array of strengths, assets, or protective factors (such as connection to caring adults, positive connection to school, opportunities and recognition for meaningful activities in the community, etc.) are less likely to engage in risky or violent behaviors or both. Rigorous program evaluation on the outcome of child maltreatment based on a strength-based framework has shown a positive impact. It is presumed, therefore, that use of a strength-based framework in policy, professional training, and funding will make a difference in the prevention of child maltreatment.

Has this strategy been implemented in Minnesota?
Yes, strengths-based approaches and asset building are being implemented through a variety of disciplines and community-based efforts. These approaches are the bases for most of the current youth development and healthy community initiatives in communities.

Indicators for this strategy:
< Resources are available and accessible for individuals, families, communities, and systems to use to assess their strengths.
< Increased participation in assessment and goal setting by individuals, families, communities, and systems.

- Number and type of efforts in the community that individuals, families, communities, and systems use to build upon their strengths.
- Number of times and ways that asset building addresses child maltreatment.
- Rate, over time, of child maltreatment reports and their demographics.

For more information contact:

- Maureen Fuchs, at (651) 281-9959, maureen.fuchs@health.state.mn.us, MDH Family Home Visiting Program.
- Nancy Reed, at (651) 282-2953, nancy.reed@health.state.mn.us, MDH Family Home Visiting Program.
- Junie Svenson, at (651) 281-9891, junie.svenson@health.state.mn.us; MDH Minnesota Healthy Beginnings Program.

Strategy: Educate the community to recognize and refer victims of child maltreatment to child protection, law enforcement, and supportive services.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:

All community members can become informed about child maltreatment indicators as well as how, and to whom, to report their reasons to believe maltreatment may have occurred. Also, through community-wide training and education, community members can become knowledgeable about preventive resources to which families can be referred. This includes self-protection and reporting skills training for children, including information that is adapted for children with disabilities. Essential topics for this education include:

- How to build and maintain community partnerships and collaborations.
- How state and federal child maltreatment statutes and their implementation and enforcement work.
- How local child protection and law enforcement practices and procedures work with regard to child maltreatment.
- How local child protection and law enforcement can best manage their child maltreatment caseloads.
- How to conduct surveys and assessments of existing community supports for families.
- What are the roles and responsibilities of mandated reporters, especially teachers and day care providers.
- What are the unique risks for maltreatment among children with disabilities, including out-of-home care, cognitive and communication challenges, increased dependency, lack of credibility as self-reporters, isolation, and painful intrusive medical care and therapies that may be confused with maltreatment.
- What are the behavioral and physical indicators of child maltreatment that may resemble disability or medical characteristics or reflect cultural practices or behaviors.

See the additional resources section below for educational programs and materials that are available for use by communities.

Additional resources:

- Beach Center on Families and Disabilities. *Abuse and Neglect of Children with Disabilities: A*

Compilation of Legal and Social Readings. Lawrence, KS: University of Kansas. Contact: The Beach Center on Families and Disabilities, University of Kansas, 3111 Haworth Hall, Lawrence, KS. 66045-7516, at (913) 864-7605.

< Farrow, F. 1997. *Child Protection: Building Community Partnerships.* Cambridge, MA: John F. Kennedy School of Government, Harvard University.

< PACER Center. 1997. *Let's Prevent Abuse: A Prevention Handbook for People Working With Young Families.* Also, contact: Let's Prevent Abuse Puppet Programs, PACER Center, Minneapolis, Minnesota, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), http://www.pacer.org.

< Scott, S., and Bruner, C. 1996. *Supporting Effective Citizen Involvement in Child Protective Services: A Guide for State and Local Officials.* Child and Family Policy Center.

< Sobsey, D. 1994. *Violence and Abuse in the Lives of People With Disabilities: The End of Silent Acceptance?* Baltimore: Paul H. Brookes Publishing Company.

Evidence for strategy:
Multiple studies have shown that public education can achieve three objectives, all of which are necessary for taking action. The objectives are: increasing knowledge of a topic or issue, which is accomplished by providing objective and pertinent information to the public; increasing the awareness and importance of taking action, and of how to do so appropriately; and influencing community attitudes about the issue or problem.

Has this strategy been implemented in Minnesota?
Yes, training and education for mandated reporters is available through the Minnesota Department of Human Services (see below for contact information) and local county child protection services throughout Minnesota. However, this audience can be expanded to include all community members.

Indicators for this strategy:
< Number (or existence) of community partnerships and collaborations that focus on child maltreatment.
< Number of educational sessions for community members on the state and federal child maltreatment statutes.
< Number of training sessions for local child protection and law enforcement personnel.
< Number of educational sessions on ways to survey for and assess for community resources for child maltreatment.
< Number and type of surveys and assessments of community resources conducted.
< Increase in knowledge and understanding of the roles and responsibilities of teachers and day care providers with regard to child maltreatment.
< Increase in understanding of the unique issues with regard to children with disabilities in relation to child maltreatment.

For more information contact:
< Deb Jones, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), PACER Center, Minneapolis, Minnesota: http://www.pacer.org.

< Judy Kuck, at (651) 296-5416, Department of Human Services, Family and Children's Services Division.

Strategy: Conduct child mortality reviews.

	Systems	Community	Individual
Primary			
Secondary	U	U	U
Tertiary	U	U	U

Background:
Systematic child mortality reviews provide critical information about individual, family, community, and system risks for fatal child maltreatment. The purpose of reviewing child mortality cases, is to make recommendations to state and local agencies to improve the child protection system, including modifications in statute, rule, policy and procedure. The child mortality review panel studies specific cases with the intent to develop better policy and thereby reduce the number of children who sustain fatal or near fatal injuries as a result of child maltreatment. Multidisciplinary participation on review panels reflects a variety of professional viewpoints, which enhance the policy and practice recommendations. Child mortality reviews are conducted by county agencies and in addition, select cases are also reviewed by the Minnesota Department of Human Services.

Additional resources:
Bibliographic resources:

< Anderson, R., Ambrosino, R., Valentine, D., and Lauderdale, M. 1983. Child deaths attributed to abuse and neglect: An empirical study. *Children and Youth Services Review*, 5, 75-89.
< Fontana, V., and Alfaro, J. 1987. *High Risk Factors Associated With Child Maltreatment Fatalities.* New York, NY: Mayor's Task Force on Child Abuse and Neglect.
< Wattenberg, E., and Kelley, M. 1997. *Research Notes on Fatal Maltreatment By Mothers.* School of Social Work/Humphrey Institute of Public Affairs, University of Minnesota. To obtain a copy, contact: (612) 626-8202.

Organizational resources:

< Center for Advanced Studies in Child Welfare, School of Social Work, University of Minnesota, Ester Wattenberg, at (612) 626-8202.
< Child Mortality Review Panel, Minnesota Department of Human Services, Fran Felix, at (651) 297-3834.

Evidence for strategy:
Child mortality reviews are required by state statute. Each case review is based on the information contained in the case file and other documents obtained from government agencies and medical facilities as well as the experience of those reviewing the case. To date, the panels are not able to document a connection between the work of the panels and a reduction in the rate of child mortality in Minnesota. However, some of the identified issues have been ameliorated. In 1998, a database was established by the Minnesota Department of Human Services, which will help to document progress on issues identified through the mortality review process.

Has this strategy been implemented in Minnesota?
Yes, the Child Mortality Review Panel was instituted in Minnesota in 1987. Local counties review every child death or near fatality, which meets the review criteria. The criteria include every child who died whose family received social services in the 12 months preceding the death of the child AND the manner of death was determined to be by suicide, homicide, Sudden Infant Death Syndrome, accident or could not be determined. Upon completion of the local mortality review, a written report of the review is sent to the Minnesota Department of Human Services. Cases selected for the State mortality review are cases where there appears to be broad policy or practice issues, which have an implication for broader policy changes or issues of the delivery of child protection services throughout the state.

Indicators for this strategy:
- < Existence of mechanisms to conduct systematic child mortality reviews.
- < Type of multidisciplinary professionals involved in the reviews.
- < Number of reviews conducted.
- < Increase in numbers of policy and practice recommendations implemented based on the results of the reviews.
- < Results of evaluations conducted on those policies and practices.
- < Decrease in number of child maltreatment fatalities.

For more information contact:
- < Fran Felix, at (651) 297-3834, Minnesota Department of Human Services, Child Mortality Review Coordinator.
- < Cheryl Fogarty, at (651) 281-9947, cheryl.fogarty@health.state.mn.us; MDH Infant Mortality Consultant.
- < Maureen Fuchs, at (651) 281-9959), maureen.fuchs@health.state.mn.us; MDH Family Home Visiting Program.

Strategy: Educate parents about Shaken Baby Syndrome.

	Systems	Community	Individual
Primary	U	U	U
Secondary			
Tertiary			

Background:
Shaken Baby Syndrome is the term used to describe the brain injuries that result when children birth to three years are violently shaken with or without physical impact. The results of Shaken Baby Syndrome are devastating; most victims will either die or suffer permanent disability.

Prevention of Shaken Baby Syndrome is based on the premise that most caregivers do not intend to injure or kill the child, but simply do not recognize the danger of shaking a young child.

An effective program to prevent Shaken Baby Syndrome was developed and tested in Western New York and has been replicated in several sites around the country. The program involves educating both parents of a newborn while they are still in the hospital about the dangers of shaking a baby. Parents are asked to sign an affidavit confirming that they have received this information. Other sites have used minor variations on this format.

Additional resource:
Organizational resource:
< Midwest Children's Resource Center, Minnesota, at (800) 422-0879.

Evidence for strategy:
In western New York, the results were dramatic: a more than 50 percent decrease in the incidence of Shaken Baby Syndrome. Results from other sites should be available shortly.

Has this strategy been implemented in Minnesota?
The Midwest Children's Resource Center is working with Twin Cities hospitals and the MDH to implement this strategy in Minnesota.

Indicators for this strategy:
< Number of parents receiving education.
< Incidence of Shaken Baby Syndrome.

For more information contact:
Sara Seifert, at (651) 282-2968, sara.seifert@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Incorporate information on the maltreatment of children with special needs into mainstream child abuse prevention programs.

	Systems	Community	Individual
Primary	U	U	U
Secondary	U	U	U
Tertiary	U	U	U

Background:
Children with special needs and their families may face unique risks for maltreatment. These include increased demands on caregivers; inability to distinguish between abuse and physical therapies; increased dependency on others; inability to self-defend, ask for help, or report maltreatment; decreased credibility as a self-reporter of maltreatment; social isolation; caregivers misinterpreting behaviors characteristic of a disability; and societal attitudes that devalue people with disabilities.

Children, families, health care providers, teachers, paraprofessionals, and other providers of services can help prevent maltreatment with an increased awareness and understanding of these unique risks. Approaches include:
< Adapting typical prevention strategies to each child's disability.
< Helping children learn about body parts, personal body space, and boundaries.
< Teaching children about abuse, e.g., how and whom to ask for help and when and how to report it.
< Teaching children, early on, about healthy sexuality.
< Providing opportunities for children to practice decision making, as well as social and assertiveness skills.
< Adding personal safety goals to each child's Individualized Education Program (IEP) and family's Individualized Family Service Plan (IFSP).
< Educating everyone who comes in contact with a child about that child's unique vulnerabilities.
< Assuring coordination between public health and child protection workers when child protection assesses a report of a child with medical issues or

disabilities that involve multiple therapies.

< Providing education or training for child protection workers to learn about children with developmental disabilities or high medical needs to better understand the issues that families struggle to overcome, and some of the resources available to assist the children and families.

It is important to implement these strategies as early and as often as possible, to coach the child in practicing help-seeking behaviors in multiple environments, and to work with a child's and family's strengths to foster life skills and resiliency. Communities and systems can also become more aware, responsive, and supportive of children with special needs and their families by including them in all aspects of community life, as well as in program and policy making.

Additional Resources:

< Beach Center on Families and Disabilities. *Abuse and Neglect of Children With Disabilities: A Compilation of Legal and Social Readings.* Lawrence, KS: University of Kansas. Contact: The Beach Center on Families and Disabilities, University of Kansas, 3111 Haworth Hall, Lawrence, KS 66045-7516, Phone: (913) 864-7605.

< Egeland, B., and Erickson, MF. 1986. *Project STEEP: A Prevention Intervention With High-risk Parents and Infants.* Contact: Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.

< PACER Center. 1997. *Let's Prevent Abuse: A Prevention Handbook for People Working With Young Families.* Contact: PACER Center, Minneapolis, Minnesota, at (612) 827-2966 (Voice) or (612) 827-7770 (TTY), http://www.pacer.org.

< Sobsey, D. 1994. Crime prevention and personal safety skills. In M. Agran, NE. Marchand-Martella, and RC. Martella, *Health and Safety for Persons With Disabilities: Applications Across Community Settings* pp.193-214. Baltimore: Paul H. Brookes Publishing Company.

< Sobsey, D., Gray, S., Wells, D., Pyper, D., and Reimer-Heck, B. 1991. *Disability, Sexuality, & Abuse: An Annotated Bibliography.* Baltimore: Paul H. Brookes Publishing Company.

< Sobsey, D. 1993. Sexual abuse of individuals with learning disabilities. In A. Craft (Ed.), *Practice Issues In Sexuality and Learning Disabilities,* pp. 93-115. London: Routledge.

< Sobsey, D. 1994. *Violence and Abuse in the Lives of People With Disabilities: The End of Silent Acceptance?* Baltimore: Paul H. Brookes Publishing Company.

< Sobsey, D., Wells, D., Lucardie, R., and Mansell, S. (Eds.). 1995. *Violence and Disability: An Annotated Bibliography.* Baltimore: Paul H. Brookes Publishing Company.

Evidence for the strategies:

Project STEEP (see the Egeland and Erickson article above) demonstrated the need for parents to learn about child development in order to meet the needs of their children and to form healthy attachments. It is also well known that providing information that is culturally- and disability-specific will increase the

likelihood of the information being used appropriately.

Has this strategy been implemented in Minnesota?
Yes, parenting information and support that is culturally and disability-specific is generally available through local ECFE, Head Start, libraries, and ethnic and minority advocacy groups. In addition, a number of Minnesota agencies work with cultural groups and families of people with disabilities to provide access to parenting information and support.

Indicators for this strategy:
- < Substantiated rates of maltreatment of children with disabilities will be no higher than those for children without disabilities.
- < Increased knowledge among children with disabilities, their families, and their service providers about the unique risks for maltreatment among children with special needs.
- < Prevention strategies are integrated throughout mainstream prevention education, as well as within the child's environments.
- < Presence of personal safety goals in children's IEPs and families' IFSPs.
- < Involvement of children with special needs and their families in community programs, policy making, and community life.

For More Information contact:
MDH Minnesota Children With Special Needs Program, at (800) 728-5420, or (651) 215-8956 (metro).

CATEGORY: Violence

TOPIC: VIOLENCE - DOMESTIC VIOLENCE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Increase availability, accessibility, and utilization of services for victims, perpetrators, and affected family members involved in domestic violence.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Promote relational models that focus on community connectedness, intimacy, and coping skills.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Assess (including self-assessment) the strengths of individuals, families, communities, and systems, and build upon those strengths to address risks for domestic and partner violence.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Collect and analyze data to inform interventions, policies, and the community.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Educate the community about the prevention, forms, and effects of domestic violence.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts, Media and Entertainment
Identify and promote community norms that discourage domestic violence, including norms from a diversity of cultures.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts, Media and Entertainment

Domestic violence is experienced among people who know and live with each other, including children in the home who witness violence. It includes actual or threatened physical, sexual, psychological, and economic abuse among married, divorced, separated, dating heterosexual, or same-sex adult and adolescent partners (current or former).

Domestic violence is associated with a wide range of physical and mental health problems, including injuries, depression, substance abuse, and child maltreatment. The consequences of domestic violence extend beyond the immediate family into subsequent generations and the extended family and into the health care systems, the workplace, schools, faith communities, and service systems, and throughout the community as a whole. For related information see also *Click Your Way to the Best Practices for Injury Prevention*, a part of the MDH's Injury and Violence Prevention Unit website, at: www.health.state.mn.us/strategies/. Click on "Violence Prevention".
See also the other public health strategies on violence in this category; and related strategies in the *Mental Health*; *Alcohol, Tobacco and Other Drug Use*; *Children and Adolescent Growth and Development*; and *Service Delivery Systems* categories.

Strategy: Increase availability, accessibility, and utilization of services for victims, perpetrators, and affected family members involved in domestic violence.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
In domestic and intimate partner violence prevention, it is essential to ensure that victims, perpetrators, children who witness battering, and other affected family members have access to the information and support they need to heal, be safe, and sustain healthy relationships. Many communities do not have fully accessible services or programs, including ones that are culturally and linguistically appropriate. Systems, communities, and service providers can ensure access to these important services by:

- Advocating for local and state support of services.
- Advocating for enforcement of laws that address domestic violence.
- Forming collaboratives to develop a coordinated community response across systems.
- Conducting local assessments to understand and address barriers to accessing services, including physical, social, cultural and language barriers.
- Advocating for adequate health care and mental health coverage, including reimbursement for violence-related treatment and services.
- Ensuring availability of providers and programs that are geographically and culturally accessible.

- Strengthening policies and community norms that promote help seeking and recovery.
- Educating and training community members and professionals to identify domestic violence and refer to appropriate interventions.
- Publicizing available services for victims and those perpetrating domestic abuse.

Additional resources:
Bibliographic resources:
- Carter, J. and Schechter, S. 1997. *Child Abuse and Domestic Violence: Creating Community Partnerships For Safe Families*. Family Violence Prevention Fund. http://www.mincava.umn.edu/link/fvpf1.htm
- Minnesota Department of Health. 1996, 1998. *Public Health Nursing Practice Guidelines: Prevention of Violence Against Women and Children*. For copies, contact: Sue Strohschein, MDH, at (320) 650-1078, sue.strohschein@health.state.mn.us.
- National Academy of Sciences. 1996. *Understanding Violence Against Women*. Washington, DC: National Academy Press.
- Olmsted County Public Health Services. 1998. *Improving Our Community Response to Domestic Violence: A Grassroots Approach in Southeastern Minnesota*. Rochester, MN: Olmsted County. For more information, contact: (507) 285-8370.
- St. Louis County Health Department. *Responding to Domestic Violence.* Duluth, MN: St. Louis County. For more information, contact: Jean Larson, at (218) 725-5236.

Organizational resources:
- The Alliance. A group of major shelters for domestic violence victims in Minnesota. Contact: (651) 646-9622.
- Central Minnesota Task Force on Battered Women. Conducts program for children who witness domestic violence. Contact: (320) 253-6900.
- Day One domestic violence crisis line. Links caller immediately to shelter services nearest them. Crisis line: (866) 223-1111. Shelters also can make recommendations and referrals to local batterers' treatment programs.
- Family Violence Prevention Fund. Provides information and professional training resources in areas such as health care and public policy. Go to http://endabuse.org
- The Men=s Line. Counseling and referral service for men, currently serving the Twin Cities metro area. Contact: (612) 379-6367.
- Minnesota Center for Crime Victim Services. Contact Paula Weber, at (651) 282-4826. For a directory of domestic violence programs in Minnesota, go to www.dps.state.mn.us/mccvs/
- Minnesota Coalition for Battered Women (MCBW). The state coalition of battered women's programs. Contact: (651) 646-6177.

Evidence for strategy:
Studies have shown positive outcomes over time when battered women receive shelter/advocacy services. Treatment programs for perpetrators of domestic violence have also demonstrated effectiveness in stopping domestic abuse, particularly when the treatment is based on professionally accepted standards. Quality

services for victims and perpetrators share the common goals of promoting safety, healing, and prevention of further abuse.

Children witnessing domestic violence are at high risk for mental health problems and involvement in future abuse. Also, the association between domestic violence and child maltreatment is very high. An effective intervention to interrupt this cycle of violence is to refer both victims and perpetrators to services and programs as early as possible.

Has this strategy been implemented in Minnesota?
Yes, a number of Minnesota communities have programs and services for victims, perpetrators, and their children. Some also have systematically assessed community strengths, including domestic violence resources. A regional collaboration in southeastern Minnesota has conducted an assessment to identify resources and to survey community members about gaps.

Indicators for this strategy:
- Number of programs, resources, and services available to victims and perpetrators of domestic violence.
- Number of ways that information about resources and services is available to those who need them.
- Number of health care professionals and paraprofessionals who receive training on domestic violence.
- Number of victims and perpetrators referred for services.
- Number of victims and perpetrators served.

For more information contact:
Amy Okaya, at (651) 281-9874,
amy.okaya@health.state.mn.us
Program Administrator, MDH Injury and Violence Prevention Unit.

Strategy: Promote relational models that focus on community connectedness, intimacy, and coping skills.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
Research indicates that an infant's experience of healthy, nurturing relationships has a profound impact on his or her capacity to sustain healthy, nurturing relationships throughout life. As a person develops relationships, he or she begins to establish Aworking models@ of self and others, of how to view relationships. Because many perpetrators of domestic violence were themselves victims or witnesses of domestic violence as children, prevention strategies should seek to resolve these past relational models, in part, by promoting healthy relationships and life skills.

Effective strategies should ensure that individuals have the opportunity to build and sustain mutually beneficial relationships with their families and communities, and to learn and practice healthy relationship-building and life skills. Effective strategies must also accommodate and promote the unique aspects of all cultural groups, as well as their histories, beliefs, and practices.

This includes:

- Promoting natural supports (i.e., parent-to-parent) within families and communities.
- Facilitating healing and resolution of a victim=s experiences of maltreatment.
- Teaching and modeling healthy relationships (parenting, mentoring, partnering, and working relationships, as well as friendships), including how to manage challenges and conflicts.

Additional resources:

Bibliographic resources:

- Ainsworth, MDS. 1991. Attachments and other affectional bonds across the life cycle. In CM. Parkes, J. Stevenson-Hinde, P. Marris (Eds.), *Attachment Across the Life Cycle* (pp. 33-51). New York: Routledge.
- Edleson, JL., and Eisikovits, ZC. 1996. *Future Interventions With Battered Women and Their Families.* Thousand Oaks, CA: SAGE Publications.
- Minnesota Department of Health. 1996, 1998. *Public Health Nursing Practice Guidelines: Prevention of Violence Against Women and Children*. Contact Sue Strohschein, MDH at (320) 650-1078, sue.strohschein@health.state.mn.us.
- National Academy of Sciences. 1996. *Understanding Violence Against Women*. Washington, DC: National Academy Press.
- Pranis, K. Restorative Values and Family Violence, to be published in Braithwaite and Strang *Restorative Justice and Family Violence*. Can be accessed online at http://www.corr.state.mn.us/organization/commjuv/pdf/rjvaluesconfrontingviolence.pdf
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-832.
- Van Ijzendoorn, MH. 1990. Developments in cross-cultural research on attachment: Some methodological notes. *Human Development*, 33, 3-10.

Organizational resources:

- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
- Minnesota Center Against Violence and Abuse, at (612) 624-1721 or (800) 646-2282, http://www.mincava.umn.edu.
- Search Institute, Minneapolis, MN at (612) 376-8955, http://www.search-institute.org.

Evidence for strategy:

It is well-documented that if people have meaningful relationships with another person, their families, their communities, or all three, and if they have positive views of themselves and others, they are less likely to engage in violent behaviors toward themselves or others. Many tools have been designed to measure capacities, life skills, risks, strengths (assets or protective factors), and mental health, and they may be implemented within programs.

Has this strategy been implemented in Minnesota?

Yes, many social programs implement and promote strategies such as home visiting, mentoring, community coalitions, and early childhood family education programs. In addition, faith communities and other formal and informal social organizations often are

highly effective in implementing this strategy.

Indicators for this strategy:
- Number of opportunities for, and ways of building, parent-to-parent supports and community connections.
- Number of adolescents who self-report assets (e.g., feeling of belonging, intention of staying in school, presence of an important adult in their lives, belief their parents love them, etc.).

For more information contact:
Amy Okaya, at (651) 281-9874,
amy.okaya@health.state.mn.us
Program Administrator, MDH Injury and Violence Prevention Unit.

Strategy: Assess (including self-assessment), the strengths of individuals, families, communities, and systems, and build upon those strengths to address risks for domestic and partner violence.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
Prevention theory underscores the importance of influencing the balance between risks and protective factors (strengths or assets), building protective factors to increase resilience across the lifespan. Resilience, in turn, serves to overcome the potential negative impact of risks and life=s adversities. Systematic and sensitive assessments (including self-assessments) of the strengths of individuals, families, communities, and systems, will indicate where to begin building and promoting those assets that can help prevent domestic violence.

Opportunities exist at the individual, family, community, and systems levels, to encourage and support healthy relational models. A key question that drives effective approaches at all levels is: How does this intervention (program, policy, practice) promote resiliency? Through the purposeful, integrated promotion of asset-building in individuals, families, communities, and systems, communities can come together to prevent domestic and intimate partner violence in multiple, tangible ways. Strength-based strategies include:
- Helping individuals, families, communities, and systems to identify and prioritize their own strengths and needs. This can be done one-on-one, through community partnerships, or within individual systems.
- Involving all community stakeholders in designing preventive approaches.
- Creating approaches that are person-, family-, or community-centered, as opposed to an array of fragmented services and programs. Approaches should focus on developing natural supports within families and communities.

Additional resources:
Bibliographic resources:
- Kretzman, JP., McKnight, JL. 1993. *Building Communities From the Inside Out.* Evanston, IL: Northwestern University. For information, contact: Center for Urban Affairs and Policy Research, Northwestern University, 2040 Sheridan Rd., Evanston, IL 60208.

http://www.northwestern.edu/IPR/abcd.html)

- Minnesota Department of Health. 1996, 1998. *Public Health Nursing Practice Guidelines: Prevention of Violence Against Women and Children.* Contact: Sue Strohschein, MDH (320) 650-1078, sue.strohschein@health.state.mn.us.
- National Academy of Sciences. 1996. *Understanding Violence Against Women*. Washington, DC: National Academy Press.

Organizational resources:

- Center for Reducing Rural Violence. Provides rural communities with technical assistance, research and evaluation, and education and advocacy to prevent violence and promote peace. Contact: Steve Hirsch, (218) 751-1585.
- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.
- The Initiative for Violence Free Families and Communities in Ramsey and Hennepin Counties. Action teams focus on preventing family violence by focusing on different sectors of the community. Contact: Shirley Pierce, at (651) 266-8020 (Ramsey County) or Lois Gunderson, (Hennepin County) at (612) 728-2094.
- Search Institute, Minneapolis, MN, at (612) 376-8955, http://www.search-institute.org.

Evidence for strategy:

There is extensive research to show that people who are supported by an array of strengths, assets, or protective factors (such as connection to caring adults, positive connection to school, opportunities and recognition for meaningful activities in the community, etc.) are less likely to engage in risky or violent behaviors or both. In addition, strength-based intervention approaches are more likely to be effective in interrupting the cycle of violence.

Has this strategy been implemented in Minnesota?

Yes, a large number of Minnesota communities and systems have initiated self-assessments, including formal assessments conducted with the Search Institute. Strengths-based approaches and asset-building are being implemented through a variety of disciplines and community-based efforts, such as the Initiative for Violence Free Families and Communities in Ramsey and Hennepin Counties, and efforts facilitated by the Center for Reducing Rural Violence. In addition, many schools and community organizations incorporate asset building into their youth development; ATOD (alcohol, tobacco, and other drug) prevention; adolescent pregnancy prevention; and crime prevention initiatives.

Indicators for this strategy:

- Resources are available and accessible for individuals, families, communities, and systems to use to assess their strengths.
- Policies are adopted that promote individual and family strengths, and that reduce barriers – including economic, cultural and language barriers – to community connectedness.
- Resources to assess and enhance their strengths are available and accessible for individuals, families, communities, and systems.

- Additional individuals, families, communities, and systems participate in assessment and goal setting.
- Number and type of efforts in the community that individuals, families, communities, and systems use to build upon their strengths.
- Number and type of activities implemented by individuals, families, communities, and systems to strengthen and build on assets.

For more information contact:
Amy Okaya, at (651) 281-9874, amy.okaya@health.state.mn.us, Sexual Violence Prevention ProgramCoordinator, MDH Injury and Violence Prevention Unit.

Strategy: Collect and analyze data to inform interventions, policies, and the community.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary	✔	✔	

Background:
A comprehensive, integrated data collection system, including monitoring of indicators from multiple sources, is integral to designing and evaluating prevention interventions. A comprehensive data collection system includes:

- Selection of data sets driven by prevention research and theory.
- Partners representing multiple systems and community stakeholders.
- Shared data standards, categorizations, and technologies.

Additional resources:
Bibliographic resources:

- Chalk, R., King, P. (Eds.). 1998. *Violence in Families: Assessing Prevention and Treatment Programs.* Washington, DC: National Academy Press.
- National Academy of Sciences. 1996. *Understanding Violence Against Women.* Washington, DC: National Academy Press.
- National Center for Injury Prevention and Control, National Centers for Disease Control and Prevention (CDC). To view publications and resources related to domestic and intimate partner violence data and research, go to http://www.cdc.gov/ncipc/dvp/fivp/fivp.htm
- Reiss, AJ., Jr., Roth, JA. (Eds.). 1993. *Understanding and Preventing Violence.* Washington, DC: National Academy Press.

Organizational resources:

- Minnesota Center Against Violence and Abuse, at (612) 624-1721 or (800) 646-2282, http://www.mincava.umn.edu.
- Minnesota Center for Crime Victim services, at (651) 282-6256.
- Minnesota Coalition for Battered Women, at (651) 646-6177.
- Minnesota Department of Health, Injury and Violence Prevention Unit. Contact Jon Roesler, at (651) 281-9841.

Evidence for strategy:
The promotion of a comprehensive, integrated data collection system, including monitoring of indicators from multiple sources, is a basic public health strategy that informs the design and evaluation of prevention interventions. Tracking and analyzing indicators must reflect both the

strengths and risks of individuals, families, communities, and systems to ensure that subsequent interventions build upon existing strengths and successes.

Has this strategy been implemented in Minnesota?
Yes, a range of state and local systems and organizations collect data related to domestic violence. State hospitals, emergency departments, and other organizations and agencies are currently contributing to the development of an integrated statewide intimate partner violence injury surveillance system, coordinated through the Minnesota Department of Health. Several statewide community surveys provide information on the prevalence of domestic and intimate partner violence.

Many organizations and systems recognize the need to collect data on domestic violence, but may lack the commitment, resources, or ongoing support for collecting and/or integrating data into planning and operations. There are ample opportunities for further data collection efforts and coordination through agencies as well as community-based services, including health care and public health.

Indicators for this strategy:
- Increase in the number of stakeholders designing, evaluating, and utilizing data collection systems and the resulting data.
- Increase in the number and variety of indicators being collected and analyzed.
- Increase in technical capacity and resources for data collection and evaluation among programs designed to prevent abuse.

For more information contact:
Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Educate the community about the prevalence, forms, and effects of domestic violence.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Education can occur in schools and colleges, within community organizations and collaboratives, in the workplace, among religious congregations, through web sites, through family and client education, and as part of community violence-prevention efforts. Education should include:
- Information to dispel myths about domestic violence.
- Identification of cultural norms that perpetuate domestic violence.
- Discussion of characteristics of healthy, nonviolent relationships.
- Information on risk factors and treatment for perpetration of domestic violence.
- Information on local services for victims, perpetrators, and those at risk.

Additional resources:
For referrals to local battered women's program prevention services, contact:
- Minnesota Coalition for Battered Women, at (651) 646-6177.
- Central Minnesota Task Force on Battered Women, at (320) 253-6900

Bibliographic resources:

- The Commonwealth Fund. 1998. *Addressing Domestic Violence and Its Consequences: Policy Report of the Commonwealth Fund Commission on Women's Health* and other Commonwealth Fund publications including survey reports. Available online at http://www.cmwf.org/
- *Domestic Violence Report.* A useful digest of current research and practice related to domestic violence. For copies, contact: (609) 683-4450.
- League of Women Voters of Minneapolis. 1990. *Breaking the Cycle of Violence: A Focus on Primary Prevention Efforts.* Contact: (612) 333-6319.
- League of Women Voters of Minneapolis. 1995. *Policy Report Update*. Contact: (612) 333-6319.
- Minnesota Department of Children, Families and Learning. 2001. *2001 Minnesota Student Survey.* St. Paul, MN: Minnesota Department of Children, Families and Learning. Surveys of public schools, residential behavioral treatment facilities, chemical dependency treatment programs, alternative schools/area learning centers, and juvenile correctional facilities. Contact: Jim Colwell, Minnesota Department of Children, Families and Learning, at (651) 582-8328.
- Minnesota Planning. 1999. *Keeping Watch: 1999 Minnesota Crime Survey.* St. Paul, MN: Minnesota Planning. For copies, contact: (651) 296-3985.
- Tjaden, P., and Thoennes, N. 1998. *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey.* National Institute of Justice, Centers for Disease Control and Prevention. Contact: National Criminal Justice Research Service, at (800) 851-3420, http://ncjrs.org.

Organizational resources:

- Center for the Prevention of Sexual and Domestic Violence. An educational resource on abuse and religion, http://www.cpsdv.org/
- Center for Reducing Rural Violence. Provides rural communities with technical assistance, research and evaluation, and education and advocacy to prevent violence and promote peace. Contact: Steve Hirsch, at (218) 751-1585.
- The Initiative for Violence Free Families and Communities in Ramsey and Hennepin Counties. Action teams focus on preventing family violence by focusing on different sectors of the community. Contact: Shirley Pierce, at (651) 266-8020 (Ramsey County) or Lois Gunderson, at (612) 728-2094 (Hennepin County).
- VAWnet Library. An online resource for advocates working to end domestic violence, sexual assault, and other violence in the lives of women and their children. http://www.vawnet.org/VNL/library/
- Violence Against Women Online Resources (VAWOR). A cooperative project of the national Violence Against Women Office and the Minnesota Center Against Violence and Abuse. http://www.vaw.umn.edu/index.asp

Evidence for strategy:

Experts agree that societal attitudes, beliefs, and practices serve to perpetuate domestic violence. As with other forms of health

promotion, perceptions and behaviors about domestic violence may be changed with accurate information and education at all levels of society. In the case of violence, experts believe that increased awareness and knowledge of the issues must exist in order for change to occur.

Has this strategy been implemented in Minnesota?
Yes, domestic abuse programs, community collaboratives, health care organizations and other professionals have been active in community education about domestic violence.

Indicators for this strategy:
- Number of community requests for information and presentations on domestic violence.
- Newspaper articles that include information addressing education topics listed in this strategy.
- Community observance of Domestic Violence Awareness Month (October).
- Formation of a multidisciplinary collaborative to provide comprehensive education about domestic violence (i.e., domestic abuse programs, perpetrator treatment, law enforcement, education, health care, public health).
- Number of schools working with sexual assault program staff to educate about sexual violence.

For more information contact:
Amy Okaya, at (651) 281-9874, amy.okaya@health.state.mn.us, Program Administrator, MDH Injury and Violence Prevention Unit.

Strategy: Identify and promote community norms that discourage domestic violence, including norms from a diversity of cultures.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Public discussion should occur about community norms and values that discourage domestic violence. Such norms can be discussed in the context of distinct cultural and religious community values. Healthy norms can be promoted by:
- Ensuring that students, employees, and members of institutions and organizations are covered by, aware of, and in compliance with their organizations' policies on sexual harassment and violence.
- Articulating community norms at community and organizational gatherings, such as community events, sports and recreational activities, civic and volunteer organization meetings, religious services, and gatherings at workplaces and schools.
- Building the capacity of parents and caregivers to foster empathy, a healthy sense of responsibility, and self-esteem in children through economic and social support, community programs, and home visiting.
- Developing and promulgating policies in the public and private sector that deter abuse and promote recovery from domestic violence.

Additional resources:

Bibliographic resources:

- Kretzman, JP., McKnight, JL. 1993. *Building Communities From the Inside Out.* To order, contact: Center for Urban Affairs and Policy Research, at (708) 491-3518, http://www.northwestern.edu/ipr/abcd.html Also available on loan from the MDH library.
- Lappe, FM., and DuBois, P. 1994. *The Quickening of America: Rebuilding Our Nation, Remaking Our Lives.*
- Resnick, MD., et al. 1997. Protecting adolescents from harm. Findings from the National Longitudinal Study on Adolescent Health. *JAMA*, 278(10), 823-832.
- *Toolkit to End Violence Against Women*. Provides concrete guidance to communities, policy leaders, and individuals engaged in activities to end violence against women. http://toolkit.ncjrs.org/

Organizational resources:

- Center for Reducing Rural Violence. Provides rural communities with technical assistance, research and evaluation, and education and advocacy to prevent violence and promote peace. Contact: Steve Hirsch, at (218) 751-1585.
- Children, Youth and Families Consortium, University of Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu
- Dads and Daughters, Duluth, MN. http://www.dadsanddaughters.org/
- The Family Violence Prevention Fund. Contains policy recommendations, prevention models, and special tools and information related to health care. http://www.endvaw.org/
- Institute on Domestic Violence in the African American Community. http://www.dvinstitute.org/
- The Initiative for Violence Free Families and Communities in Ramsey and Hennepin Counties. Action teams focus on preventing family violence by focusing on different sectors of the community. Contact: Shirley Pierce, at (651) 266-8020 (Ramsey County) or Lois Gunderson, at (612) 728-2094 (Hennepin County).
- Johns Hopkins Center for Communication Programs, "End Violence Against Women: Information and Resources" website. http://www.endvaw.org/
- Men As Peacemakers, Duluth, at (218) 727-1939.
- Minnesota Coalition for Battered Women, at (651) 646-6177.

Evidence for strategy:

In recent years, people have recognized that problem-focused strategies are only part of resolving large societal issues such as violence. Asset- or strength-based approaches are increasingly articulated and practiced in Minnesota and across the U.S. These approaches emphasize the positive values and behaviors that exist in a community and show how, by honoring and cultivating them, communities can move toward their own positive visions of health. Efforts stimulated by the Search Institute, John Kretzman and John McKnight, Michael Resnick, and others are demonstrating how communities can promote health by examining and exercising their own strengths.

Has this strategy been implemented in Minnesota?
Yes, numerous community collaboratives and coalitions in Minnesota have been formed based on approaches that build on community strengths. Organizations that routinely talk about values, such as businesses and religious congregations, can and sometimes do take advantage of natural opportunities to promote values that discourage domestic violence.

Indicators for this strategy:
- Development and review of organizational policies relating to domestic violence.
- Proportion of males included in domestic violence prevention efforts.
- Number and type of educational programs and opportunities for children, youth, and adults to learn about and discuss healthy relationships.
- Range of collaborators involved in domestic violence prevention.
- Number of parents receiving parenting education, support, mentoring, or all three.
- Number of news articles and editorials that speak out against domestic violence and affirm nonviolence.
- Community preferences for media and entertainment that do not glorify abuse or degrade women.
- Increased knowledge among community members about domestic and intimate partner violence.

For more information contact:
Amy Okaya, at (651) 281-9874,
amy.okaya@health.state.mn.us
Program Administrator, MDH Injury and Violence Prevention Unit.

CATEGORY: Violence

TOPIC: VIOLENCE - SEXUAL VIOLENCE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Increase availability, accessibility, and utilization of services for victims and perpetrators of sexual violence.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Collect and analyze data to inform interventions, policies, and the community.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Educate the community about the prevalence, forms, and effects of sexual violence.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts
Reduce risks and increase protective factors at the individual, family, community, and societal levels that discourage sexual abuse.	✔	✔	✔	✔	Community Coalitions	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts, Media and Entertainment

Sexual violence causes physical and emotional injuries which severely affect victims, families, and communities. Forms of sexual violence include sexual assault by a stranger, acquaintance, or partner; incest and other types of child sexual abuse; commercial sexual exploitation, such as prostitution; and sexual harassment. Experiences of sexual assault are associated with alcohol and other drug use, mental health problems, suicide attempts, early pregnancies, and other health problems.

To prevent sexual violence, all sectors of the community need to be actively involved in community-wide efforts. For related information see also "*Click Your Way to the Best Practices for Injury Prevention,*" a part of the MDH's Injury and Violence Prevention Unit website. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Violence Prevention".

See also public health strategies on violence; mental health; *Alcohol, Tobacco and Other Drug Use; Adolescent Health; and Service Delivery Systems.*

Strategy: Increase availability, accessibility, and utilization of services for victims and perpetrators of sexual violence.

	Systems	Community	Individual
Primary			
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:
Sexual violence is a form of abuse that has historically been under-addressed by communities, particularly when the victim knows the perpetrator. Victim-blaming and community disbelief are two of the many disincentives often faced by victims coming forward to report sexual abuse and seek help. When services specifically designed for victims of sexual violence are available, victims are assured greater safety in disclosing their abuse. Disclosure can have several health-positive effects (e.g., the victim receives important information and support for healing), and increases the likelihood that perpetrators will be identified, held accountable, and offered appropriate treatment.

Accessibility of treatment for perpetrators is also important in preventing sexual violence. Perpetrators may be discouraged from seeking help on their own, when community norms about sexual violence are ambivalent and when there is social stigma associated with perpetration. Counseling and treatment can be especially helpful to young people who exhibit sexually inappropriate or abusive behavior, and to those who recognize they are involved in sexually abusive or exploitative behavior and wish to change.

Because sexual violence involves particular laws, health effects, and social issues, people who are victims or perpetrators typically require specialized services such as counseling, treatment, legal services, advocacy, and medical services. Help is also often available for family members and others immediately affected by the abuse. Use of these services helps ensure that the abuse does not continue, and that the

individual has the opportunity and support for recovery. To be useful and accessible, services need to be appropriate in terms of culture, language, and age. Examples of specific activities include:

- Training public health staff, health care workers, counselors, clergy, those who work with children, and the community-at-large to identify and appropriately refer victims, perpetrators, and those at risk of perpetrating sexual abuse.
- Forming collaboratives to develop a coordinated community response to sexual violence cases across systems.
- Conducting local assessments to understand and address barriers to accessing services, including physical, social, and language barriers.
- Ensuring that treatment for perpetrators and services for victims are readily available, and that barriers to accessing help are minimized.
- Strengthening policies and community norms that support help seeking and recovery.
- Advocating for local and state support of services.
- Publicizing available services for victims and those at risk of perpetration.
- Advocating for adequate health care and mental health coverage, including reimbursement for violence-related treatment and services.

Additional resources:

Bibliographic resources:

- Huot, S. 1997, August. *Sex Offender Treatment and Recidivism.* St. Paul, MN: Minnesota Department of Corrections. Contact: Stephen Huot, at (651) 642-0279.
- Minnesota Department of Corrections. 1999. *Final Report to the Legislature of the Community-based Sex Offender Program Evaluation Project.* St. Paul, MN: Minnesota Department of Corrections, at (651) 642-0200.

Organizational resources:

- The Men's Line. Counseling and referral service for men, currently serving the Twin Cities metro area. Contact: (612) 379-6367.
- Minnesota Association for the Treatment of Sexual Abusers (MNATSA), Minnesota Chapter of the National Association for the Treatment of Sexual Abusers. Contact: Steven Huot, at, (651) 642-0279.
- Minnesota Center for Crime Victim Services (MCCVS) of the Minnesota Department of Public Safety. To locate local sexual assault victim services, contact: (651) 282-6256, http://www.dps.state.mn.us/mccvs/
- Minnesota Coalition Against Sexual Assault (MCASA). Represents sexual assault programs from across Minnesota. Operates the Sexual Violence Justice Institute which promotes a victim-centered community response to sexual violence through "Sexual Assault Multidisciplinary Response Teams" (SMART) Contact: Tammie Larsen, at (612) 313-2797, http://www.mncasa.org/
- The Network. Informal statewide organization of professionals who work with perpetrators of sexual violence. Contact: Tom Thompson, at (651) 643-2584.
- Sexual Assault Resource Service (SARS) Web site. Designed for nursing professionals involved in providing evaluations of sexually abused victims. Go to http://www.sane-sart.com/
- STOP IT NOW! Minnesota. Provides public education about child sexual

abuse and promotes self-identification and treatment for perpetrators. Contact: Project Pathfinder, at (651) 644-8515.

Evidence for strategy:
Services for victims, perpetrators, and their family members represent important efforts to reduce the likelihood that sexual violence will continue. Studies show that individuals who complete treatment are much less likely to re-offend, whether they were incarcerated or were only placed on probation.

When victims do not receive relevant information and services, there is increased risk that their legal rights, health and well-being will be further compromised.

Has this strategy been implemented in Minnesota?
Yes, currently there are approximately 90 programs in Minnesota providing services to victims of sexual violence. For perpetrators, there are about 50 treatment providers associated with the major professional organizations in this field. A significant number of counties and populations remain unserved by one or both types of provider.

Through the development of SMART in Minnesota, increasing numbers of organizations and systems have worked to provide a more sensitive and effective response to victims of sexual assault.

Indicators for this strategy:
- Utilization of sexual assault victim service programs.
- Utilization of sexual abuse treatment services.
- Degree of local funding for sexual assault and perpetrator treatment services.
- Creation of services in areas where currently there are none.
- Existence of services to meet needs of under-served populations, such as non-English-speaking clients.
- Visibility and collaboration surrounding outreach efforts in the community.
- Number of referrals from health care, public health, schools, community-based organizations, and worksites to appropriate services and treatment.
- Number of self-referrals to services and treatment for sexual violence.
- Extent of coverage by health plans and/or counties for sexual violence-related treatment and services.
- Number of professionals trained to identify and refer individuals experiencing sexual violence.
- Degree of stigma associated with seeking help for sexually abusive behavior.
- Identification and reduction of barriers to accessing services for different populations in the community.

For more information contact:
Amy Okaya, at (651) 281-9874, amy.okaya@health.state.mn.us, Program Administrator, MDH Injury and Violence Prevention Unit.

Strategy: Collect and analyze data to inform interventions, policies, and the community.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary	✔	✔	

Background:
Current systems data on sexual violence are incomplete and do not reflect the actual number of incidents. The promotion of a comprehensive, integrated data collection system is an integral strategy to inform the design and evaluation of prevention interventions. Indicators from multiple sources should be monitored. A comprehensive data collection system includes:

- Selection of data sets driven by prevention research and theory.
- Partners representing multiple systems and community stakeholders.
- Shared data standards, categorizations, and technologies.

Evaluation of prevention efforts is also critical to advance the understanding of effective interventions.

Additional resources:
Bibliographic resources:

- Chalk, R., and King, PA. (Eds.). 1998. *Violence in Families: Assessing Prevention and Treatment Programs.* Washington, DC: National Academy Press.
- National Academy of Sciences. 1996. *Understanding Violence Against Women.* Washington, DC: National Academy Press.
- National Center for Injury Prevention and Control, National Centers for Disease Control and Prevention (CDC). To view publications and resources related to domestic and intimate partner violence data and research, go to http://www.cdc.gov/ncipc/dvp/fivp/fivp.htm
- Reiss, AJ., Jr., and Roth, JA. (Eds.). 1993. *Understanding and Preventing Violence.* Washington, DC: National Academy Press.

Organizational resources:

- Minnesota Center for Crime Victim Services. Collect statistics related to sexual assault program services. Contact: Paula Weber, at (651) 282-4826.
- Minnesota Coalition Against Sexual Assault, at (612) 313-2797.
- Minnesota Department of Health, Injury and Violence Prevention Unit. Contact: Jon Roesler, at (651) 281-9841.

Evidence for strategy:
State and national surveys have consistently found that the vast majority of sexual violence incidents are unreported. By promoting a comprehensive, integrated data collection system; working to better identify sexual violence cases; and monitoring indicators from multiple sources, we can better inform the design and evaluation of prevention interventions. It is important to reflect both the strengths and risks of individuals, families, communities, and systems, to ensure that interventions build on existing strengths and successes.

Has this strategy been implemented in Minnesota?
Hospitals, emergency departments, and agencies that collect data on sexual violence are currently helping to develop an integrated statewide sexual violence injury surveillance system, coordinated through the Minnesota Department of Health. Several statewide community surveys provide information on the prevalence of sexual violence.

Many organizations and systems recognize the need to collect data related to sexual violence, but sometimes lack the

commitment, resources or ongoing support for collecting and/or integrating data into planning and operations. There are ample opportunities for further data collection efforts and coordination through agencies and community-based services, including health care and public health.

Indicators for this strategy:

- Increase in the number of stakeholders who are designing, evaluating, and utilizing data collection systems and the resulting data.
- Increase in the number and variety of indicators being collected and analyzed.
- Increase in technical capacity and resources for data collection and evaluation among programs designed to prevent abuse.

For more information contact:

- Amy Okaya, at (651) 281-9874, amy.okaya@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.

Strategy: Educate the community about the prevalence, forms, and effects of sexual violence.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:

Such education can occur in schools and colleges, community organizations and collaboratives, the workplace, religious congregations, web sites, sex offender community notification meetings, family and client education, and community violence-prevention efforts. Education should include:

- Information to dispel myths about rape and sexual assault.
- Identification of cultural norms that perpetuate sexual violence.
- Discussion of healthy sexuality and sexual behaviors in the context of child and youth development.
- Information on risk factors and treatment for perpetration of sexual violence.
- Information on local services for victims, perpetrators, and those at risk.

Additional resources:

- Minnesota Department of Health materials (to order, contact the MDH Sexual Violence Prevention. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Sexual Violence", or contact the MDH Library, at (612) 676-5090.
- *A Place to Start: A Resource Kit for Preventing Sexual Violence.* [Developed for communities by the Minnesota Department of Health.]
- *Town Meeting: A Community Response to Sexual Violence.* [Videotapes of the 1998 Town Meeting broadcast on Minnesota public television stations. Educational and presentation versions are available for stimulating discussion in your community.]

For referrals to local sexual assault program prevention services, contact:

- Minnesota Center for Crime Victim Services (MCCVS), Sexual Assault Program, at (651) 282-6256, http://www.dps.state.mn.us/mccvs/

- Minnesota Coalition Against Sexual Assault (MCASA), at (612) 313-2797, http://www.mncasa.org/

Bibliographic resources:

- The American College of Obstetricians and Gynecologists 1999. *Drawing the Line: A Guide to Developing Sexual Assault Prevention Programs for Middle School Students*. Available at http://www.acog.org
- Arizona Rape Prevention Education Project. Providing sexual assault statistics, research and evaluation online at http://www.u.arizona.edu/~sexasslt/arpep/index.html
- *Attorney General's Task Force on the Prevention of Sexual Violence Against Women Final Report.* 1989.
- Freeman-Longo, RE., and Blanchard, GT. 1998. *Sexual Abuse in America: Epidemic of the 21st Century.* Safer Society Press.
- League of Women Voters of Minneapolis. 1990. *Breaking the Cycle of Violence: A Focus on Primary Prevention Efforts.* Minneapolis, MN: League of Women Voters of Minneapolis.
- League of Women Voters of Minneapolis. 1995. *Policy Report Update.* Minneapolis, MN: League of Women Voters of Minneapolis.
- Minnesota Department of Children, Families and Learning. 2001. *2001 Minnesota Student Survey.* St. Paul, MN: Minnesota Department of Children, Families and Learning. General public school survey, and surveys of residential behavioral treatment facilities, chemical dependency treatment programs, alternative schools/area learning centers, and juvenile correctional facilities. Contact: Jim Colwell, Minnesota Department of Children, Families and Learning, (651) 582-8328.
- Minnesota Department of Children, Families and Learning. 2002. *Prevention and Intervention of Sexual Violence in Schools: Talking About "It."* A framework for understanding, preventing and responding to sexual violence in schools and other environments for youth. Available under 'Reports' section at http://cfl.state.mn.us/PUBRES.html
- Minnesota Planning. 1999. *Keeping Watch: 1999 Minnesota Crime Survey.* St. Paul, MN: Minnesota Planning. For copies, contact: (651) 296-3985.
- The National Center on Addiction and Substance Abuse at Columbia University. 1999. *Dangerous Liaisons: Substance Abuse and Sex.* Available online at www.casacolumbia.org.
- The National Center on Addiction and Substance Abuse at Columbia University. 2001. *Substance Use and Risky Sexual Behavior Fact Sheets* Available online at www.casacolumbia.org.
- National Center for Missing and Exploited Children. 1999. *Guidelines for Programs to Reduce Child Victimization: A Resource for Communities When Choosing a Program to Teach Personal Safety to Children.* For copies contact: (800) 843-5678 or www.missingkids.com.
- *Sexual Assault Report.* A useful digest of current research and practice related to sexual assault and sexual violence. For copies, contact: (609) 683-4450.
- Tjaden, P., and Thoennes, N. 1998. *Prevalence, Incidence, and Consequences of Violence Against Women: Findings From the National Violence Against Women Survey.*

National Institute of Justice, Centers for Disease Control and Prevention. Contact: National Criminal Justice Research Service, at (800) 851-3420, http://ncjrs.org.

- Wurtele, SK., and Miller-Perrin, CL. 1992. *Preventing Child Sexual Abuse: Sharing the Responsibility.* Lincoln, NE: University of Nebraska Press.

Organizational resources:

- Center for the Prevention of Sexual and Domestic Violence. An educational resource on abuse and religion. Information available at http://www.cpsdv.org/
- Minnesota Association for the Treatment of Sexual Abusers (MNATSA). Association members can provide general information about perpetrators of sexual violence. Contact: Stephen Huot, at (651) 642-0279.
- Minnesota Department of Corrections, Community Services Division. Information on sex offender treatment. Contact: Stephen Huot, at (651) 642-0279.
- Minnesota Department of Human Rights. Provides information, training, and enforcement related to sexual harassment. Contact: Gary Gorman, at (651) 296-5675.
- Sexuality and Family Life Educators. A network of professional educators dedicated to education about and promotion of sexual health. Contact: Jane Bates, at (651) 772-5555.
- The Sexual Violence Prevention Network. Meets quarterly in locations across Minnesota to support information sharing, networking and collaboration among those concerned with sexual violence prevention. Contact Amy Okaya, at (651) 281-9874.
- VAWnet Library. An online resource for advocates working to end domestic violence, sexual assault, and other violence in the lives of women and their children. Go to http://www.vawnet.org/VNL/library/
- Violence Against Women Online Resources (VAWOR). A cooperative project of the national Violence Against Women Office and the Minnesota Center Against Violence and Abuse. Go to http://www.vaw.umn.edu/index.asp

Evidence for strategy:

Experts agree that societal attitudes, beliefs, and practices serve to perpetuate sexual violence. As with other forms of health promotion, perceptions and behaviors about sexual violence may be changed through information and education at all levels of society. In the case of violence, there is consensus among experts that increased awareness and knowledge of the issues must exist in order for change to occur.

Has this strategy been implemented in Minnesota?

Yes, sexual assault programs, community collaboratives, and other professionals have been active in community education about sexual violence. See *A Place to Start: A Resource Kit for Preventing Sexual Violence* in the above list of references for other examples of how this strategy has been implemented.

Indicators for this strategy:

- Number of community requests for information and presentations on sexual violence.
- Number of prevention-related follow-up activities to sex offender community notification meetings.

- Newspaper articles that include information on the topics listed in this strategy.
- Community observance of Sexual Assault Awareness Month (April).
- Formation of a multidisciplinary collaborative to provide comprehensive education about sexual violence (e.g., sexual assault programs, perpetrator treatment, law enforcement, education, sexuality educators, public health, etc.).
- Evidence that sexual violence is addressed specifically by local violence-prevention collaboratives.
- Number of schools working with sexual assault program staff to educate about sexual violence.

For more information contact:
Amy Okaya, at (651) 281-9874, amy.okaya@health.state.mn.us, Program Administrator, MDH Injury and Violence Prevention Unit.

Strategy: Reduce risks and increase protective factors at the individual, family, community and societal levels that discourage sexual abuse.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary			
Tertiary			

Background:
Research and clinical experience with sex offenders has revealed certain risks and protective factors associated with the perpetration of sexual violence.

Risks are related to: socialization of males that affirms violence and dominance; lack of means to express or receive appropriate emotional responses from others; family turmoil and violence; neglect of child development, including sexual development; and in some cases biological and neurological conditions.

Key protective factors that make sexual violence less likely to occur include: the existence of warm, secure family relationships; emotional awareness and management skills (including those related to sexual feelings); and connectedness to friends, family and adults in the community.

Effective strategies, therefore, ensure that individuals build and sustain mutually beneficial relationships with their families and communities, and are supported in learning and practicing healthy relationship-building and life skills. Addressing social conditions that increase stress - such as poverty, lack of access to appropriate health care, and social isolation or discrimination - is also important as part of a comprehensive, ecological approach to prevention.

Public discussion can be convened to deal with community norms and values that discourage sexual violence. Such norms can be discussed in the context of distinct cultural and religious community values. Healthy norms and protective factors can be promoted by:

- Building the capacity of parents and caregivers to foster empathy, a healthy sense of responsibility, and self-esteem in children through economic and social support, community programs, and home visiting.

- Dispelling myths and messages that equate masculinity with dominance and violence.
- Ensuring that students, employees, and members of institutions that have policies on sexual harassment and violence are covered by, aware of, and in compliance with those policies.
- Recognition and support for healthy child and adolescent sexual development.
- Articulation of community norms at community and organizational gatherings, such as community events, sports and recreational activities, civic and volunteer organization meetings, religious services, and gatherings at workplaces and schools.

Additional resources:

- Minnesota Department of Health materials (to order, contact the MDH Sexual Violence Prevention. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Sexual Violence Prevention", or the MDH Library, at (612) 676-5090.
- *A Place to Start: A Resource Kit for Preventing Sexual Violence.* Developed for communities by the Minnesota Department of Health.
- *Town Meeting: A Community Response to Sexual Violence.* Videotapes of the 1998 Town Meeting broadcast on Minnesota public television stations.

Bibliographic resources:

- Ainsworth, MDS. 1991. Attachments and other affectional bonds across the life cycle. In C. M. Parkes, J. Stevenson-Hinde, & P. Marris (Eds.), *Attachment Across the Life Cycle* (pp. 33-51). New York: Routledge.
- Gilgun, JK. 1996. Human development and adversity in ecological perspective, Parts 1 & 2. *Families in Society: The Journal of Contemporary Human Services.* Vol. 77.
- Lappe, FM., and DuBois, P. 1994. *The Quickening of America: Rebuilding Our Nation, Remaking Our Lives.*
- Kretzman, JP., and McKnight, JL. 1993. *Building Communities from the Inside Out.* To order, contact: Center for Urban Affairs and Policy Research, at (708) 491-3518, http://www.northwestern.edu/ipr/abcd.html. Also available on loan from the MDH library, at (612) 676-5090.
- *The Surgeon General's Call to Action to Promote Sexual Health and Responsible Sexual Behavior*. 2001. Available online at www.surgeongeneral.gov/library/sexualhealth/call.htm
- *Toolkit to End Violence Against Women*. Provides concrete guidance to communities, policy leaders, and individuals engaged in activities to end violence against women. Go to http://toolkit.ncjrs.org/

Organizational resources:

- Center for Reducing Rural Violence. Provides rural communities with technical assistance, research and evaluation, and education and advocacy to prevent violence and promote peace. Contact: Steve Hirsch, at (218) 751-1585.
- Children, Youth and Families Consortium, University of Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu
- Men Can Stop Rape. Promotes gender equity and men's capacity to be strong without being violent. Go to http://www.mencanstoprape.org/

- Men's Messages Action Team of the Initiative for Violence Free Families and Communities in Ramsey and Hennepin Counties. Contact: Donald Gault, at (651) 266-2461.
- The Search Institute. Promotes positive youth development through community asset-building. Contact: (612) 376-8955, or go to http://www.search-institute.org.
- The Sexual Violence Prevention Action Team of the Initiative for Violence Free Families and Communities in Ramsey County. Contact: Grit Youngquist, at (651) 266-2407.
- The Sexual Violence Prevention Network. Meets quarterly in locations across Minnesota to support information sharing, networking and collaboration among those concerned with sexual violence prevention. Contact Amy Okaya, (651) 281-9874.

Evidence for strategy:
Many social programs implement and promote these strategies. These include home visiting, mentoring, community coalitions, and early childhood family education programs. In addition, faith communities and other formal and informal social organizations often are highly effective in implementing this strategy.

Community-based projects and many schools and community organizations incorporate asset building and risk reduction into their youth development and youth risk behavior prevention, adolescent pregnancy prevention, and crime prevention initiatives.

Has this strategy been implemented in Minnesota?
Yes, numerous community collaboratives and coalitions in Minnesota have been formed based on approaches that build on community strengths. Organizations that routinely talk about values, such as businesses and religious congregations often take advantage of natural opportunities to promote values that discourage sexual violence.

Indicators for this strategy:
- Development and review of organizational policies relating to sexual violence.
- Number of businesses that sell sexually exploitative media and services.
- Proportion of males included in sexual violence prevention efforts.
- Number of hours of school sex education at each grade level.
- Range of collaborators involved in sexual violence prevention.
- Surveillance of community events and media for use of key words, such as respect and sexuality.
- Percentage of children living at or below the poverty level.
- Number of parents receiving parenting education, support, mentoring, or all three.
- Number of community organizations working to strengthen families at risk of child abuse and neglect.
- Number of adolescents who self-report assets (e.g., feeling of belonging, intention of staying in school, presence of an important adult in their lives, belief their parents love them, etc.).
- Adoption and maintenance of state and local policies that promote individual and family strengths, and that reduce barriers - including economic, cultural and language barriers - to community connectedness.

- Availability and accessibility of resources for individuals, families, communities, and systems to use to assess and enhance their strengths.

For more information contact:
Amy Okaya, at (651) 281-9874, amy.okaya@health.state.mn.us, Program Administrator, MDH Injury and Violence Prevention Unit.

CATEGORY: Violence

TOPIC: VIOLENCE - YOUTH VIOLENCE

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other
Promote a safe and supportive home environment.	✔	✔	✔	✔	✔	✔	Policy Makers, Faith Communities, Social Services, Sports & Recreation, Victim Services, Mental Health Services, Law Enforcement, Courts, Child Care Providers.
Work with schools to proactively prevent violence.	✔	✔	✔	✔	✔	✔	Policy Makers, Social Services, Mental Health Services, Law Enforcement, Seniors.
Organize the community to reduce risks and increase protective factors.	✔	✔	✔	✔	✔	✔	Policy Makers, Faith Communities, Social Services, Mental Health Services, Corrections, Law Enforcement, Courts, Media and Entertainment, Seniors, Sports & Recreation, Professional Organizations.
Advocate with systems to address social conditions and improve system practices related to violence.	✔	✔	✔	✔	✔	✔	Faith Communities, Political Parties, Neighborhoods, Policy Makers, Social Services, Opinion Leaders, Professional Organizations.

Youth are disproportionately affected by violence. Between the ages of 12 and 17, they are twice as likely as adults to be victims of serious violent crimes and three times as likely to be victims of simple assault. In 2001, 38% of 9th grade girls and 59% of 9th grade boys in Minnesota reported that they had been pushed, shoved, or grabbed at school during the past year.

Violence takes many forms, and includes verbal, emotional, sexual and physical abuse. In all its forms, violence is most often perpetrated by someone known to the victim, including family members and peers. While society often draws distinctions between different violent behaviors and levels of severity, it is important to recognize that the degree and nature of harm can vary, based on individual characteristics and on the response of other individuals, the community, and systems.

Experiences of victimization are associated with many other health problems, including tobacco, alcohol and other substance use, injuries, early pregnancy, and psychological effects such as Post Traumatic Stress Disorder and depression.

In recent years, youth violence has increasingly been identified as a public health issue. This perspective has brought new opportunities for the synthesis of existing information and ongoing attempts to determine best and promising practices for prevention. At present, prevention approaches and data from many fields, such as education, criminal justice, psychology and public health, are beginning to reflect a growing consensus around key areas for prevention.

The strategies below are organized according to an ecological framework, indicating that prevention can and must occur at different levels of social organization. Prevention is most likely to be successful when work occurs at multiple levels simultaneously and when these efforts are connected and integrated. Public health is in a unique position to facilitate and advocate for prevention across these multiple levels.

The following are central approaches that apply to all strategies:

- Strengthen social ties with pro-social individuals and groups (connectedness).
- Collect data and conduct assessments that identify strengths as well as problems.
- Build on individual, community, and system strengths.

The following bibliographic and organizational resources provide information relevant to all four strategies below:

Bibliographic resources:

- Commission for the Prevention of Youth Violence. 2000. *Youth and Violence. Medicine, Nursing and Public Health: Connecting the Dots to Prevent Violence*, at http://www.ama-assn.org/ama/pub/category/3536.html.
- Komro, KA. and Stigler, M. 2000. *Growing Absolutely Fantastic Youth: A Review of the Research on "Best Practices"*. School of Public Health, University of Minnesota; Minneapolis, MN, at http://allaboutkids.umn.edu/konopka/.
- Mann, RP., Borowsky, I., Stolz, A., Latts, E., Cart, CU., and Brindis, CD. 1998. *Youth Violence: Lessons from the Experts.* Department of Pediatrics, University of Minnesota, and

Department of Pediatrics and the Institute for Health Policy Studies, University of California, San Francisco. http://allaboutkids.umn.edu/konopka/.

- Minnesota Center Against Violence and Abuse, at (612) 624-1721, (800) 646-2282, http://www.mincava.umn.edu.
- Minneapolis Department of Health and Family Support. 1998. *Promising Approaches to Youth Violence Prevention: A Program-planning Guide*. To order, call (612) 673-2301 or go to www.ci.minneapolis.mn.us/dhfs under 'Reports' section.
- *Minnesota Student Survey*. A survey of Minnesota 6th, 9th and 12th graders that includes data on violence and associated conditions, at http://cfl.state.mn.us/studentsurvey/.
- Olweus, D. and Limber, S. 1999. *Blueprints for Violence Prevention*, Center for the Study and Prevention of Violence, University of Colorado at Boulder, at http://www.colorado.edu/cspv/blueprints/order/order.htm.
- U.S. Department of Health and Human Services and Center for Disease Control, National Center for Injury Prevention and Control. 2000. *Best Practices of Youth ViolencePprevention: A Sourcebook for Community Action*. Order or read online at: http://www.cdc.gov/ncipc/dvp/bestpractices.htm.
- U.S. Department of Health and Human Services, U.S. Public Health Service. *Youth Violence: A Report of the Surgeon General*, at http://www.surgeongeneral.gov/library/youthviolence/youvioreport.htm.

Organizational resources:

- National Youth Violence Prevention Resource Center. A central source of information on prevention and intervention programs, publications, research, and statistics on violence committed by and against children and teens. The resource center is a collaboration between the Centers for Disease Control and Prevention and other federal agencies. Go to http://www.safeyouth.org.
- Partnerships Against Violence Network (PAVNET). A "virtual library" of information about violence and youth-at-risk, representing data from seven different federal agencies. The database is organized into three main search categories: research, promising programs, funding. Available at: http://www.pavnet.org.

See also the other public health strategies on violence (e.g., domestic, sexual, child maltreatment) in this category; and related strategies in the *Mental Health*; *Alcohol, Tobacco and Other Drug Use*; *Children and Adolescent Growth and Development*; and *Service Delivery Systems* categories.

Strategy: Promote a safe and supportive home environment.

	Systems	Community	Individual
Primary	✔	✔	✔
Secondary	✔	✔	✔
Tertiary	✔	✔	✔

Background:

The home environment can be a place to build a sense of security and peace for children and youth. Warm, caring relationships with caregivers and family members have been shown to reduce the risks for violent behavior as well as many other risk behaviors. In order to promote

freedom from violence at home, it is important that caregivers have the support and tools they need to parent effectively and model nonviolent behavior. Parent education and support can be very effective in building the capacity of parents. In addition, it is important that when violence exists in the home, family members are connected with appropriate services that can help end the abuse. Whether youth experience violence at home directly, or witness it, violence in the home is harmful.

Exposure to violence in the home can also occur through exposure to violent media. Studies indicate that such exposure can increase aggression, and in the case of the Internet, can also increase risk of victimization.

Strategies to promote nonviolence in the home include:

- Increasing the capacity of parents and/or caregivers to raise nonviolent youth.
- Assuring and promoting alcohol and chemical dependency treatment for parents.
- Supporting and facilitating help seeking where family violence occurs.
- Educating about the benefits and ways of restricting exposure to violent media.
- Promoting connectedness between family members and the community.

Additional Resources:

Bibliographic resources:

- Carter, J. and Schechter, S. 1997. *Child Abuse and Domestic Violence: Creating Community Partnerships For Safe Families*, Family Violence Prevention Fund, at: http://www.mincava.umn.edu/link/fvpf1.htm.
- Initiative for Violence Free Families and Communities. *Thriving With Your Teen*, a booklet designed to promote positive parenting of adolescents, at (651) 266-2404.
- Minnesota Department of Health. 1996, 1998. *Public Health Nursing Practice Guidelines: Prevention of Violence Against Women and Children*. For copies, contact: Sue Strohschein, at (320) 650-1078, sue.strohschein@health.state.mn.us, MDH Section of Public Health Nursing,
- Simpson, AR. 2001. *Raising Teens: A Synthesis of Research and a Foundation forAaction*. A Report of the Harvard School of Public Health Parenting Project. Contains a set of Five Basics of Parenting Adolescents, with a list of strategies for each, and information on adolescent development, at http://www.hsph.harvard.edu/chc/parenting/raising.html.
- Steinberg, L. 2000. *Youth Violence: Do Parents and Families Make a Difference?* at http://www.ojp.usdoj.gov/nij/journals/welcome.html.
- U.S. Department of Justice. 2002. A *Parent's Guide to Internet Safety*, at: http://www.fbi.gov/publications/pguide/pguidee.htm.

Organizational resources:

- Adults and Children Together against violence (ACT), a violence prevention campaign composed of a national multimedia campaign and community-based training programs. The campaign focuses on adults who raise, care for and teach children ages 0 to 8 years, at www.actagainstviolence.org.
- Children, Youth and Family Consortium, Electronic Clearinghouse, University of Minnesota, St. Paul, Minnesota, at (612) 626-1212, http://www.cyfc.umn.edu.

- Dads and Daughters, Duluth, MN. A resource and advocacy group to help fathers inspire, understand, and support their daughters, at http://www.dadsanddaughters.org.
- Family Resource Coalition of America, at (312) 338-0900, http://www.frca.org.
- First Call Minnesota. Regionally based information and referral to services such as individual and family counseling, domestic violence advocacy, perpetrator treatment, chemical dependency treatment, and other community support. Phone: (800) 543-7709, http://www.firstcall-mn.org.
- Jacob Wetterling Foundation. Parent information on abuse, and online 'Safety Tips for Teens' at www.jwf.org.
- Minnesota Center for Crime Victim Services. Offers information on local victim service organizations and other resources for victims of crime, at http://www.dps.state.mn.us/mccvs.
- Minnesota Department of Health Family Home Visiting Program, Maureen Fuchs, at (651) 281-9959, Maureen.fuchs@health.state.mn.us, Nancy Reed, (651) 282-2953, nancy.reed@health.state.mn.us, or Junie Svenson (tribal liaison), at (651) 281-9891, junie.svenson@health.state.mn.us. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Home Visit".
- National Institute on Media and the Family. A national resource for those interested in the influence of electronic media on early childhood education, child development, academic performance, culture and violence, at www.mediaandthefamily.org.
- PACER Center, Minneapolis, at (612) 827-2966 (Voice) Phone: or (612) 827-7770 (TTY), at http://www.pacer.org. Exists to expand opportunities and enhance the quality of life of children and young adults with disabilities and their families, based on the concept of parents helping parents.

Evidence for this strategy:
The Surgeon General has identified parent-child development center programs, home visitation by public health nurses to new parents and other parenting education programs to demonstrate results in building parenting skills that reduce risk for future violence. Secure parent-child attachment and homes free of violence are consistently identified as protective factors against violent behavior. The Commission for the Panel on Youth Violence has identified exposure to violent media as a significant contributing factor to youth violence and has recommended increased restrictions and controls in this area.

Has this strategy been implemented in Minnesota?
Yes, home visiting is offered throughout the state through local public health agencies. Additionally, parent-child development education is offered through Early Childhood Family Education programs statewide. A wide variety of services exist through health plans and local agencies to address violence issues within the home. In Ramsey County, efforts have taken place through the Initiative for Violence Free Families and Communities to promote successful parenting of teens. The Jacob Wetterling Foundation offers resources and a speakers' bureau to educate parents and their children about online safety.

Indicators for this strategy:
- Percentage of parents who have received parenting education.

- Percentage of youth who report experiencing violence at home.
- Percentage of youth who report witnessing violence at home.
- Percentage of youth reporting having been solicited online.
- Number of runaway youth.
- Numbers of local sales of violent video games.

For further information, contact:
Deborah Trombley, at (651) 281-9815, deborah.trombley@health.state.mn.us, MDH Alcohol and Violence Prevention Specialist.

Strategy: Work with schools to proactively prevent violence.

	Systems	Community	Individual
Primary	✔	✔	
Secondary	✔	✔	
Tertiary	✔	✔	

Background:
As another environment central to the lives of youth, schools offer further opportunities to promote nonviolence and safety, and to intervene where risk or violence occurs. As a social environment, schools have the capacity to set standards of respect, and to promote warm and supportive relationships within the school community. Schools can promote recognition and awareness of less visible forms of violence, such as sexual and intimate partner violence. They can also offer guidance and connect youth with supportive services.

Many programs exist to help students build skills that may help prevent nonviolence, however not all programs have been found to be effective (see "Additional resources" below). Research on school-based violence prevention indicates that comprehensive, school-wide approaches that involve not only students but also staff, administrators, parents, and the surrounding community, and that strengthen school policies and practices, are most likely to be effective.

One example of a comprehensive approach to youth violence prevention is bullying prevention, based on the model developed by Dan Olweus. Designed to target elementary, middle and junior high school students, these efforts seek to create a social climate with supportive adult involvement and positive adult role models, firm limits on behavior, and consistent noncorporal sanctions when bullying behavior is exhibited. Program components include school-wide and classroom strategies as well as strategies outside the school. These are examples:

- Fully implement evidence-based youth violence prevention programs.
- Promote on-site screening and intervention, including mental health services for trauma, loss, use of alcohol and other drugs, and abuse.
- Intervene early with students with multiple risk factors for violence.
- Create school climates that foster a sense of inclusivity and belonging among students.

Additional Resources:
Bibliographic resources:

- Centers for Disease Control and Prevention (CDC). 2001. *School Health Guidelines to Prevent Unintentional Injuries and Violence*, at http://www.cdc.gov/mmwr/PDF/RR/RR5022.pdf.
- Committee for Children. *Second Step: A Violence Prevention Curriculum*, and

Steps to Respect: A Bullying Prevention Program, at: http://www.cfchildren.org/str.html.

- Dash, K., et al. *School-based Prevention: Critical Components*. Available to order at: https://secure.edc.org/publications/prodview.asp?1153.
- Education World. 2000. *School Issues: Bullying Intervention Strategies That Work*, at http://www.educationworld.com/aissues/issues103.shtml.
- Minnesota Department of Children, Families and Learning. 2002. *Bullying – Small Word – Big Problem*. Information for teachers, parents, students and administrators about efforts to combat the incidence of bullying in Minnesota schools, at http://cfl.state.mn.us/bullying/bullying.html.
- Minnesota Department of Children, Families and Learning. 2002. *Prevention and Intervention of Sexual Violence in Schools: Talking About "It."* A framework for understanding, preventing and responding to sexual violence in schools and other environments for youth. Available under 'Reports' section at: http://cfl.state.mn.us/PUBRES.html.
- Minnesota Department of Human Services. 1999. *Kids Killing Kids: A Thoughtful Response*, at http://www.mincava.umn.edu/papers/kids.pdf.
- Office of the Minnesota Attorney General. 1999. *Safe Schools: Secondary Survey Compilation Report 1994-1998.* For more information, contact: (651) 296-7575, http://www.ag.state.mn.us.
- Olweus, D. 1994. *Bullying at School: What We Know and What We Can Do*, 140 pages. Blackwell Publishers, c/o AIDC, PO Box 20, Williston, VT 05495.
- Smith, A., Kahn, J., and Borowsky, I. 1999. *Best Practices in School-based Violence Prevention*. Minneapolis, MN: University of Minnesota Extension Service, at http://allaboutkids.umn.edu/konopka.

Organizational resources:

- Center for the Study and Prevention of Violence, University of Colorado at Boulder, at: http://www.colorado.edu/cspv/blueprints/model/tenbully.htm.
- Minnesota Department of Children, Families and Learning, Nancy Riestenberg, at (651) 582-8433, Prevention Specialist, for information about School, Drug and Violence Prevention Coordinators.

Evidence for Strategy:

Numerous research reviews exist that assess the effectiveness of different school-based violence prevention programs (see "Additional resources" above). Recommended programs vary somewhat according to the review criteria used. As mentioned earlier, efforts that do not comprehensively address violence school-wide and at multiple levels are less likely to be effective. Strategies should also be a permanent component of school environments, rather than temporary programs.

The Olweus Bullying Prevention Program is one program that has been evaluated by the Study of Violence Prevention at the University of Colorado Center, and it has been included in *Youth Violence: A Report of the Surgeon General* (see the resources listed in the introduction to this Youth Violence section). Full implementation of the program has been found to reduce frequency of bullying reports by up to 50

percent. This program also found a reduction in vandalism, fighting, theft, and truancy. The social climate of classrooms improved, consistent discipline was established, and students reported positive social relationships and positive attitudes toward schoolwork and school itself. Bullying programs that concentrate on the high school level are less effective and programs that address only the students exhibiting bullying behavior without a school-wide approach are less likely to show results.

Has this strategy been implemented in Minnesota?
The extent of use of these programs in Minnesota schools is unclear, but all school districts that receive state violence prevention education funds can include community involvement components. Elements of Olweus' bullying prevention strategy are included in prevention programs throughout Minnesota. The program has been replicated in its entirety in North and South Dakota, with similar positive results as previous implementations of the strategy. Among schools participating in the 1995 Minnesota Sexuality and Family Life Education Survey, instruction on date rape, sexual abuse, and/or sexual harassment varied significantly from year to year between 7th and 12th grade.

Indicators for this strategy:
- Improved data on bullying via increase in bullying reports.
- Improved peer relationships.
- Improved school climate.
- Increased percent of students reporting they feel safe at school.
- Percent of school staff involved in a comprehensive school violence prevention strategy.
- Percent of parents involved in a comprehensive school violence prevention strategy.

For more information contact:
- Nancy Riestenberg, at (651) 582-8433, Prevention Specialist, Minnesota Department of Children, Families and Learning.
- Deborah Trombley, at (651) 281-9815, deborah.trombley@health.state.mn.us, MDH Alcohol and Violence Prevention Specialist.

Strategy: Organize the community to reduce risks and increase protective factors.

	Systems	Community	Individual
Primary	✔	✔	
Secondary		✔	
Tertiary		✔	

Background:
Prevention at the community level seeks to involve community members, businesses, and organizations to help create a safer, healthier environment for youth. By working collectively to reduce risks and increase protective factors among youth and by modeling nonviolent behavior, communities can help prevent violence, along with many other risk behaviors.

Minnesota has several excellent resource organizations that can provide tools and guidance in effective youth development (see "Organizational resources" below). An understanding of youth development can be especially important in understanding risks and protective factors at each developmental stage.

Communities also play a crucial role in limiting drugs and weapons directly related to violence. Alcohol use is associated with both victimization and perpetration for many forms of violence, including physical and sexual assaults and homicide. In the seven-county metro area and for some racial/ethnic communities, the risk of assaultive injuries due to firearms is especially high. In particular, African American youth aged 15 – 24 have firearm injury mortality rates eight times greater than for all males 15 – 24 in Minnesota, and 15 times greater than the rates for all ages, races, and genders combined. In general, youth and young people are disproportionately both victims and perpetrators of firearm injuries and death. Community efforts to reduce youth access to alcohol and firearms are important strategies to reduce risk for violence. Ways to accomplish this include:

- Strategically engage in youth development approaches.
- Provide youth with opportunities to discuss and develop healthy intimate relationships.
- Reduce access to alcohol (See *Alcohol and Other Drugs* category).
- Reduce the proportion of persons living in homes with firearms that are loaded and unlocked. (Healthy People 2010 Objective #15-4).
- Strengthen community standards against violence, harassment, aggression, racism, sexism, heterosexism and bullying.

Additional Resources:

Bibliographic resources:

- Kretzman, JP., and McKnight, JL. 1993. *Building Communities From the Inside Out*. Evanston, IL: Center for Urban Affairs and Policy Research, Northwestern University. For further information. Contact: Center for Urban Affairs and Policy Research, Northwestern University, 2040 Sheridan Rd., Evanston, IL 60208, at http://www.northwestern.edu/ipr/publications/community/buildingblurb.html.
- Minnesota Amateur Sports Commission. *Keeping Youth Sports Safe and Fun*. Call (612) 785-5633 for copies.
- Minnesota Department of Health. 2002. *Being, Belonging, Becoming: Minnesota's Adolescent Health Action Plan*. For a copy, contact Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator,
- Minnesota Department of Human Services. 1999 *Kids Killing Kids: A Thoughtful Response*, at http://www.mincava.umn.edu/papers/kids.pdf.
- National Youth Violence Prevention Resource Center. *Youth Development as a Violence Intervention Model*, at www.safeyouth.org/topics/dev.htm.
- Russell, ST, Franz, BT, and Driscoll, AK. 2001. Same-sex romantic attraction and experiences of violence in adolescence. *American Journal of Public Health* 91(6):903-906.

Organizational resources:

- ASK Campaign, PAX gun violence prevention organization, at http://www.askingsaveskids.com/.
- Center for Reducing Rural Violence. Provides rural communities with technical assistance, research, evaluation, education and advocacy to prevent violence and promote peace. Steve Hirsch, at (218) 751-1585.
- Center for Youth Development and Policy Research. Provides many tools and resources to shape youth development planning, at http://cyd.aed.org/whatis.html.

- Forum for Youth Development. Offers information and resources for youth development planning, at http://www.forumforyouthinvestment.org/index.htm.
- Initiative for Violence Free Families and Communities in Ramsey and Hennepin Counties. Citizen action teams are organized to prevent violence by focusing on different sectors of the community. Contact: Shirley Pierce, at (651) 266-8020 (Ramsey County), or Lois Gunderson (Hennepin County), at (612) 728-2094.
- The Konopka Institute for Best Practices in Adolescent Health. Offers training and information on healthy youth development, at http://allaboutkids.umn.edu/konopka/.
- Minnesota Department of Health. 1998. *A Place to Start: A Resource Kit for Preventing Sexual Violence and Promoting Sexual Health*. A tool kit that contains a wealth of information and tools for sexual and youth violence prevention. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Sexual Violence".
- Minnesota Department of Health. For statewide data on child maltreatment, intimate partner and sexual violence injury data, contact Jon Roesler, at (651) 281-9841, jon.roesler@health.state.mn.us, MDH Injury and Violence Prevention Unit.
- Minnesota Institute of Public Health. For examples of efforts to limit access to firearms, at http://www.miph.org/guns/prevactv.html and http://www.miph.org/guns/index.html.
- Search Institute, Minneapolis, Minnesota. Community-based tools and resources to build youth assets. Phone: (612) 376-8955, at http://www.search-institute.org.
- University of Colorado at Boulder, Center for the Study of Violence Prevention, at http://www.colorado.edu/cspv/blueprints

Evidence for Strategy:
Community involvement in action to prevent youth violence has been included in virtually all major state and national recommendations. Youth development research indicates that youth who have fewer risks and more key protective factors are less likely to engage in violent behavior. The national Commission to Prevent Youth Violence, the National Youth Violence Prevention Resource Center, and others have identified that access to drugs and firearms predicts a greater likelihood of injury-causing violence.

Has this strategy been implemented in Minnesota?
Youth development approaches are being implemented in many communities in Minnesota, through specific and community-wide programs. Organizations, including those listed below, are providing coordination and technical assistance. Many communities are involved in reducing youth access to alcohol and there are numerous community projects seeking to limit the availability of firearms to youth. Community health service agencies often play an instrumental role in education and other approaches.

Indicators for this strategy:
- Percentage of youth that say they have a relationship with at least one caring adult.
- Breadth and accessibility of community opportunities for youth to develop their interests and skills.

- Percentage of youth involved in community activities.
- Success of local and state efforts to reduce youth access to alcohol.
- Success of local and state efforts to reduce youth access to handguns.

For more information, contact:

- Jay Jaffee, at (651) 281-9872, jay.jaffee@health.state.mn.us. MDH Chemical Health Coordinator.
- Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.
- Deborah Trombley, at (651) 281-9815, deborah.trombley@health.state.mn.us, MDH Alcohol and Violence Prevention Specialist.

Strategy: Advocate with systems to address social conditions and improve system practices related to violence.

	Systems	Community	Individual
Primary	✔		
Secondary	✔		
Tertiary	✔		

Background:

Social conditions such as poverty, homelessness, and inadequate responsiveness of systems can significantly contribute to family stress and risks to health and safety, and have been consistently associated with risks for violence. Typically, children and youth experience these conditions in numbers disproportionate to the general population. In 1997, families with children were three times more likely to live in poverty than were others. The lack of public willingness to overcome these conditions may be understood as another way that youth are victimized in our society. Persons working in health and other social systems are increasingly aware of the risks and impact of violence on youth. They have many opportunities to improve practices related to youth experiencing violence and to provide leadership in creating a social climate of compassion and regard for human worth. Here are some strategies:

- Advocate for policy initiatives to meet basic family support needs, including income, housing, food and nutrition, prenatal and childcare.
- Train professionals to recognize and respond to violence, and to refer individuals for support.
- Decrease institutional racism and heterosexism, and promote cultural respect, inclusivity, and competency.
- Endorse and promote a comprehensive package of preventive health services for youth ages 11-21 years. This could include screening, guidance and health counseling for violence victimization or perpetration, history of abuse and/or neglect, and information on mental health disorders and alcohol and other drug abuse.
- Advocate for funding to expand financing and reimbursement for preventive and primary adolescent health services.
- Ensure safe housing and neighborhoods.
- Provide housing and care for all youth who cannot live at home.

Additional Resources:

Bibliographic resources:

- Amherst H. Wilder Foundation. 2001. *Homeless Adults and Children in Minnesota: Statewide Survey of People Without Permanent Shelter*, and *Homeless Youth in Minnesota: Statewide Survey of People Without Permanent*

Shelter, at http://www.wilder.org/research/topics/homeless/statewide2001/index.html.

- *Chicago Violence Prevention Strategic Plan*. This document, coordinated through the Chicago Department of Public Health, is a framework for comprehensive citywide interpersonal violence prevention programs. Copies are available from Violence Prevention Programs, Chicago Department of Public Health, at (312) 747-8787.
- Minnesota Department of Human Services. 1999. *Kids Killing Kids: A Thoughtful Response*. Available at http://www.mincava.umn.edu/papers/kids.pdf.
- Minnesota Health Improvement Partnership, Adolescent Health Services Action Team. 2001. *Adolescent Preventive Health Services: Opportunities for Improvement*. Contains information and recommendations for improving health services to adolescents, including a proposed comprehensive package of preventive health services for youth. Call (651) 296-9661. For more information see the website for strategies resources at: www.health.state.mn.us/strategies/. Click on "Adolescent Health Report".
- Zeldin, S and Spivak, H. *Violence Prevention and Youth Development: Implications for Medical Clinicians and Community Health Organizations*. Academy for Educational Development, at http://www.aed.org/pubsyouth.html.

Organizational resources:

- Children's Defense Fund of Minnesota. Works to bring the needs of children to the attention of the general public and policy makers through research, education, and advocacy, at http://www.cdf-mn.org.
- Family Violence Prevention Fund. Provides information and professional training resources in areas such as health care and public policy, at http://endabuse.org.
- The Urban Coalition. A non-profit research and advocacy organization that works with low-income white communities and communities of color to address community, social, and economic issues. Call (612) 348-8850, http://www.urbancoalition.org.

Evidence for Strategy:
Numerous studies have found an association between poverty, homelessness, social disorganization and experience of violence among youth. Professional recommendations from state and national groups (see "Additional resources" above) contain numerous recommendations for system improvements, in particular with regard to public health and health care.

Has this strategy been implemented in Minnesota?
Many organizations in Minnesota advocate for improvements in social conditions that can have a positive impact on the health of youth. The Urban Coalition is one such group that is working to address community, social, and economic issues through research-based advocacy and policy development.

Indicators for this strategy:

- Percent of youth living in poverty.
- Numbers of youth living without permanent shelter.
- Percent of health care and public health providers trained to implement comprehensive screening and referral.
- Screening rates of health care and public health providers.

- Use of data on social conditions to communicate about youth violence prevention.
- Use of data on social conditions to communicate about youth violence prevention.
- Degree of organizational interaction between local public health agencies and state policy advocacy organizations.

For more information contact:

- Sarah Stoddard Nafstad, at (651) 281-9956, sarah.nafstad@health.state.mn.us, MDH Adolescent Health Coordinator.
- Deborah Trombley, at (651) 281-9815, deborah.trombley@health.state.mn.us. MDH Alcohol and Violence Prevention Specialist.

APPENDICES

APPENDICES

APPENDIX A

The 1998 Minnesota Health Improvement Partnership/
State Community Health Services Advisory Committee
Strategies Review Work Group

1998 Minnesota Health Improvement Partnership/State Community Health Services Advisory Committee Strategies Review Work Group

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Public Health Nursing Director
Dakota County Public Health Department

MEMBERS

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APPENDIX B

List of Categories, Goals and Problem Areas

List of Categories, Goals and Problems Areas

Strategies for Public Health, Volume 2, is organized by categories. Each broad category includes specific public health problem areas. Below is a list of the categories, the public health goals with which they correspond and the public health problem areas in which strategies are offered:

Alcohol, Tobacco and Other Drugs
(*Healthy Minnesotans*, Goal 1)
Alcohol and Other Drug Use
Tobacco Use

Child and Adolescent Growth and Development
(*Healthy Minnesotans*, Goals 2, 4)
Adolescent Health
- Parenting and Youth Development

Children=s Health
- Childhood Asthma
- Childhood Lead Poisoning
- Early Identification of Children with Special Health Needs
- Iron Deficiency Anemia

Chronic/Noninfectious Disease
(*Healthy Minnesotans*, Goals 1, 12, 13)
Alcohol
Arthritis
Asthma
Early Detection of Cancer
Diabetes
Heart Disease, Heart Attack and Stroke
Nutrition
Oral Health
Osteoporosis
Physical Activity/Inactivity
Tobacco
Weight Management

Disability/Decreased Independence
(*Healthy Minnesotans*, Goal 10)
Promote Healthful Aging and Support the Well-Being of the Elderly

Environmental Conditions
(*Healthy Minnesotans*, Goal 11)
Asbestos
Childhood Lead Poisoning
Clean Indoor Air/ Radon/Carbon Monoxide Poisoning
Fish Consumption
Food Safety/Protection
Safe Water

Infectious Disease
(*Healthy Minnesotans*, Goal 9)
STD/HIV/AIDS
Tuberculosis
Vaccine-Preventable Diseases

Mental Health
(*Healthy Minnesotans*, Goal 5)
Infant Mental Health
Maternal Depression
Mental Health

Pregnancy and Birth
(*Healthy Minnesotans*, Goal 2, 11)
Birth Outcomes and Prenatal Care
Breastfeeding
Infant Mortality
Women=s Health

Service Delivery Systems
(*Healthy Minnesotans*, Goals 8, 15, 17)
Eliminate Barriers and Improve Access to Health Care
- Children and Adolescents
- Children and Adolescents with Special Health Care Needs
- Promote Access to Health Care

Eliminate the Disparities
Emergency Medical Services Infrastructure
Health Care Coverage

Unintended Pregnancy
(*Healthy Minnesotans*, Goal 3)
Unintended Pregnancy

Unintentional Injury
(*Healthy Minnesotans*, Goal 7)
Bicycle Injuries
Fires, Falls and Other Home Hazards

Violence
(*Healthy Minnesotans*, Goal 6)
Child Maltreatment, Including Children
with Special Health Needs
Domestic Violence
Sexual Violence
Youth Violence

APPENDIX C

Definitions of Community Sectors
on the Strategy Grids

Definitions of Community Sectors on the Strategy Grids

Each strategy grid lists sectors in the community that have a potential collaborative role to play in implementing the strategies on the grid. The community sectors on the strategy grids and their definitions are:

- **AGovernmental Public Health Agencies@** refers to state and/or county/city units of government that are responsible for the health of the public. This includes county nursing services, single and multi-county public health agencies, local Boards of Health and the Minnesota Department of Health.

- **AHealth Plans@** refers to health maintenance organizations, preferred provider organizations, community integrated service networks, insured plans and other plans that cover health care services.

- **AHospitals and Clinics@** refers to any hospital and/or clinic in a community, or system of hospitals and/or clinics that serves a community.

- **AEducational System@** refers to state, county or local units of government that are responsible to provide education to the community such as K-12, vocational/technical education, colleges and universities. This also includes programs like Early Child Family Education, Head Start, Community Education and the University of Minnesota Extension programs and services.

- **ACommunity-based Organizations@** refers to non-profit or for-profit agencies and/or organizations in a community such as local coalitions (e.g., ASSIST or breast feeding coalitions), voluntary organizations (e.g., American Heart Association, American Cancer Society), advocacy organizations (e.g., Mothers Against Drunk Driving) and service organizations and agencies (e.g., community counseling agencies, community centers).

- **ABusinesses and Work Sites@** refers to businesses in a community that may be able to support and/or implement strategies, and work sites where members of a community work.

- **AOther@** may refer to any other units of government, sectors, organizations, agencies or groups in a community that have a responsibility for, or that can play a role in implementing strategies.

APPENDIX D

Blank Grid

CATEGORY:

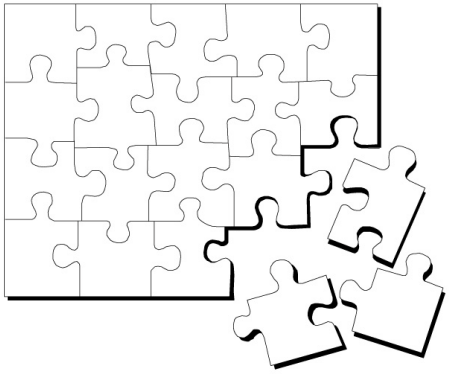
TOPIC:

The strategies below can be used to work on this topic.
Organizations that may play a role in implementing each strategy are indicated.

	Governmental Public Health Agencies	Health Plans	Hospitals & Clinics	Educational Systems	Community-based Organizations	Businesses/ Work Sites	Other

APPENDIX E

Community Prevention Planning Tools



Prevention Planning Tools:

A Self-Guided Set of Tools
For Use with Community Partners

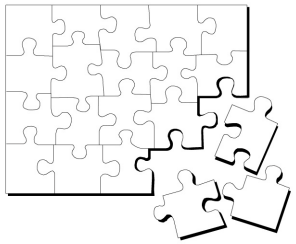
Minnesota Department of Health
Center for Health Promotion
PO Box 64882
St. Paul, MN 55164-0882
(651) 281-9830

These Prevention Planning Tools were developed for the Community Integrated Service Systems (CISS) project to support local communities in their efforts to improve service delivery systems for prevention and health promotion. The Federal Bureau of Maternal and Child Health funded the project.

 This document may be downloaded from the Minnesota Department of Health Web site at: www.health.state.mn.us/strategies/ and click on “Prevention Planning tools.” For more information, or if you require this document in another format, such as large print, Braille or cassette tape, please call (651) 281-9830.

April 2001

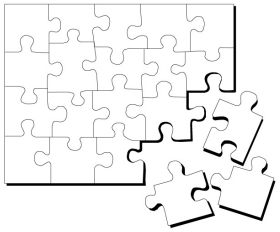
Minnesota Department of Health
Center for Health Promotion
PO Box 64882
St. Paul, MN 55164-0882
(651) 281-9830



Prevention Planning Tools

A Self-Guided Set of Tools
For Use with Community Partners

Table of Contents



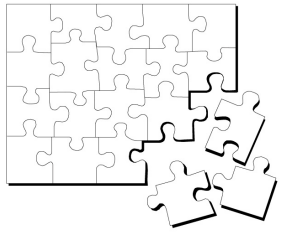
Introduction

These tools, taken as a whole, are designed to help community groups assess, develop, implement and mobilize their partners in a prevention and/or health promotion effort.

For any prevention effort, the group's plan can be developed in six steps:

1. Identify all potential community partners.
2. Brainstorm and research possible strategies and activities to try.
3. Identify who is already engaged in prevention activities and who could help in the future.
4. Clarify who can commit to what activity.
5. Pull all of the strategies together for a comprehensive look.
6. Develop an overall work plan.

This manual will walk you through each of these steps. After one or several meetings with your community partners, you will have developed a work plan that involves each and all of the community partners at the table.



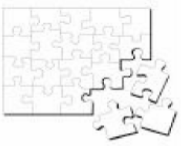
Step 1:
Find Partners Using the Community-Based Prevention Wheel

The Community-Based Prevention Wheel is designed to help the group brainstorm community partners.

Complete the Prevention Wheel with the group. In the center of the wheel, write in the partnership's common vision or goal. As a group, fill in the wheel with the names of both existing and potentially new community partners. A sample wheel that has already been completed is included.

Let the wheel lead your group into a discussion of:

- Who are the current partners interested in this prevention effort?
- How do we interest and involve potentially new partners?
- Who does this prevention effort strive to help, and how do we involve this population in the planning?
- Which organizations would benefit from changing the behavior?
- Which organizations would benefit from keeping this behavior?
  For example: Vegetable and fruit growers would benefit from reducing fat in our diets; producers of high fat snacks benefit from keeping diets the same.

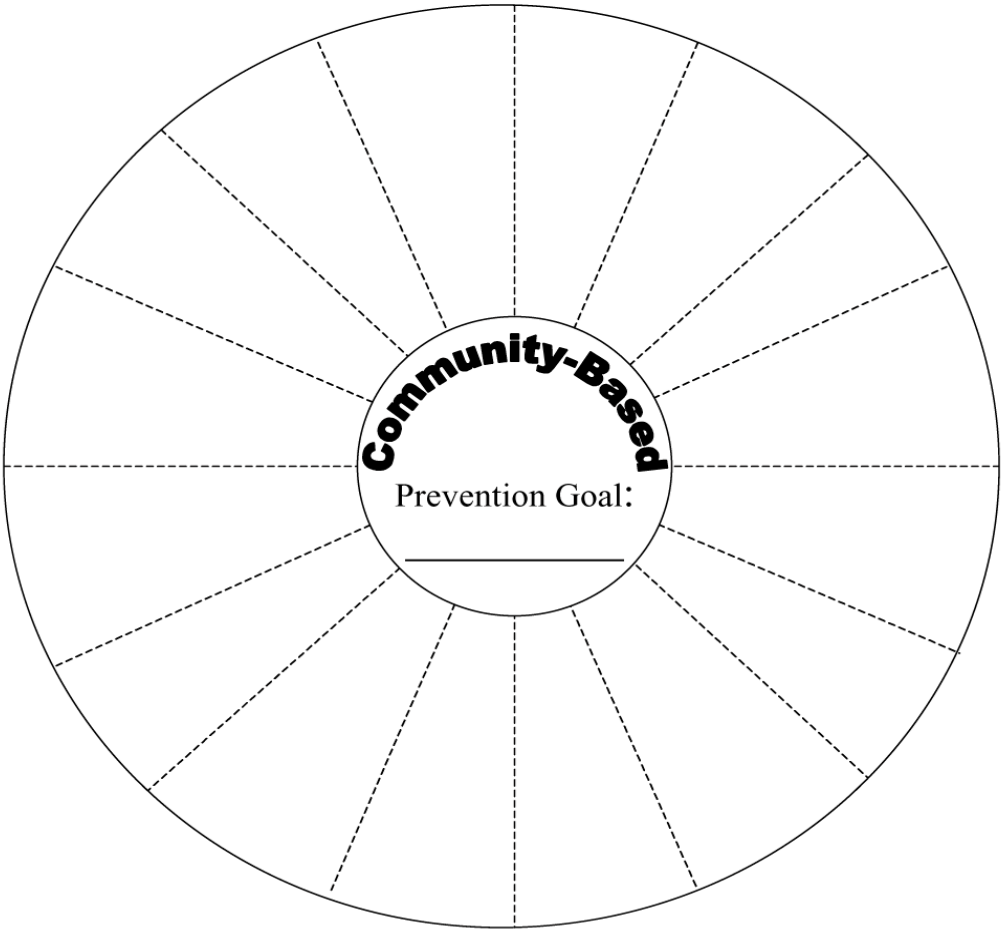


Step 1: Community-Based Prevention Wheel

Name of Partnership: _____

Date: _____

Enter the group's common vision or goal in the center of the wheel. Fill in the wheel with the names of both current and potentially new community partners.



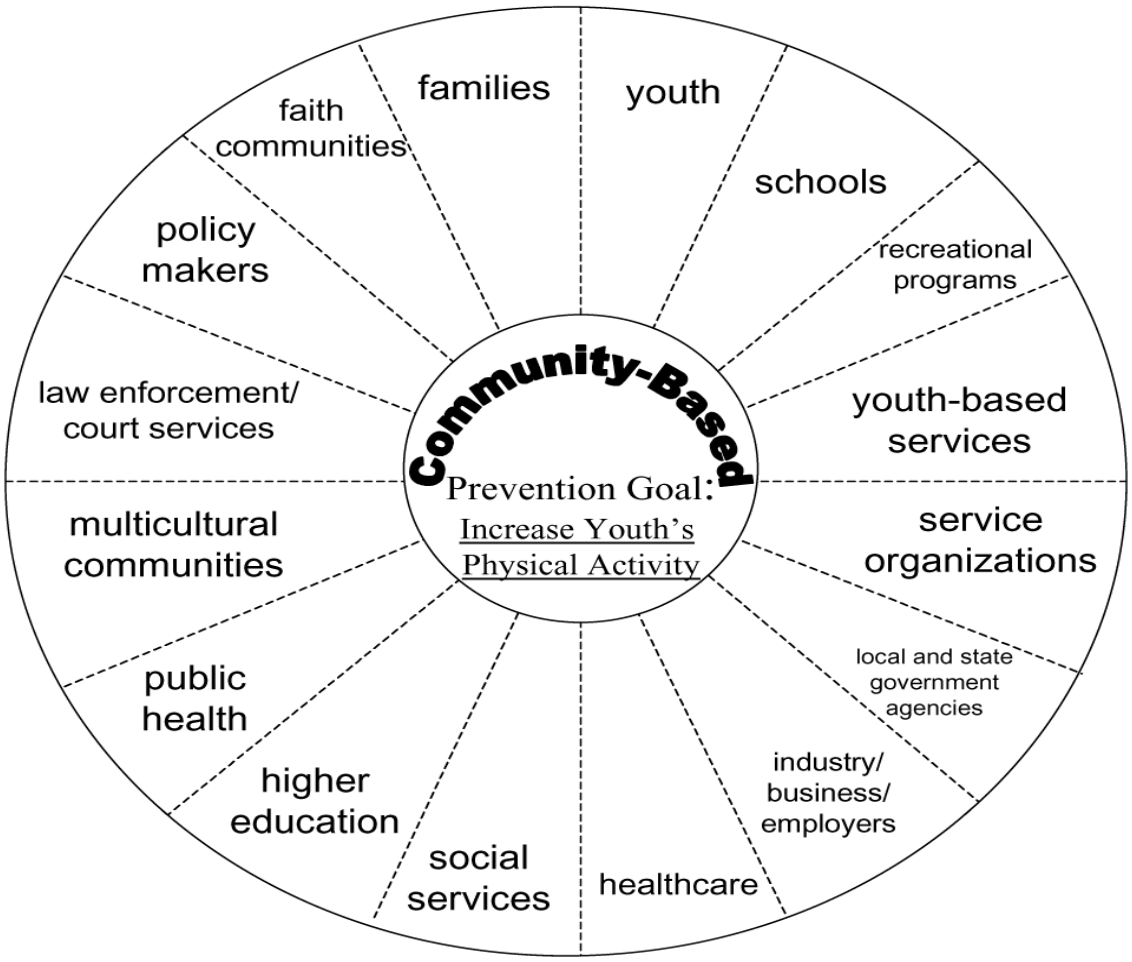
Turn page over for an example of a completed prevention wheel.

Minnesota Department of Health CISS Project, 1996-2000

Step 1: Community-Based Prevention Wheel

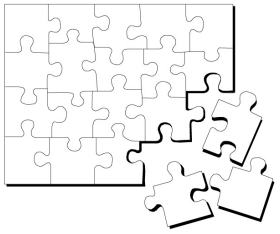
Name of Partnership: Partnership with Youth

Date: January 1, 2000



The wheel gives examples of community partners involved in the issue of increasing the physical activity levels of youth. Partners may also include the senior citizens, informal power brokers, advocates and adversaries in your community.

Minnesota Department of Health CISS Project, 1996-2000



Step 2:
Research Strategies That Work

Use this worksheet to build a list of strategies that have or could be used in your community's prevention effort.

First, list all of the existing strategies in your community. Under each, list the specific activities in place around that strategy. *For example: a community partnership's strategy might be to promote alternatives to alcohol use for those who choose not to or should not drink. A specific activity might be to encourage bars to offer and promote non-alcoholic, tasty, attractive drinks.*

Then, as a group, brainstorm a list of possible new strategies and activities. Encourage both innovative and evidence-based strategies.

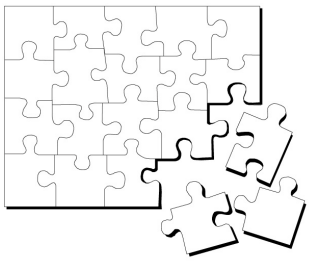
While building your list of strategies, consider:

- What strategies will work to prevent risky behaviors in individuals, the community and systems? (Systems are policies, laws and organizational structures and cultures.)
- What strategies will help build healthy supports for individuals, the community and systems?
- What strategies are evidence-based -- they have been proven elsewhere?
- What strategies are innovative -- they may lack evidence but are thought to work?

Examples of evidence-based strategies may be found in the following sources: the *Community Health Services (CHS) Strategies Document*, *Strategies for Adolescent Health Action*, the *Suicide Prevention Report*, the *Minnesota Health Improvement Partnership-Tobacco Report* (MHIP-T), the *Center for Disease Control Guidelines* and the *AHCPR Guides*. These materials may be requested from the MDH library by calling (612) 676-5090 or e-mailing library@health.state.mn.us.

Prioritize the strategies you have listed. Then choose which ones you wish to address in your community.

Share this list with people in your own organization. Can you add to the list? Subtract?



Step 2: Strategies That Work

Name of Partnership: _____

Develop a list that includes both innovative and evidence-based strategies. Under each strategy, list possible activities.

Strategy:
Activities:

Strategy:
Activities:

Strategy:
Activities:

Strategy:
Activities:

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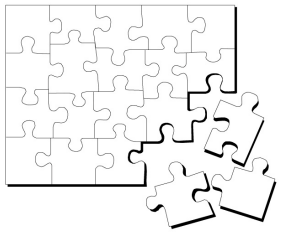


Step 3: Identify Each Partner's Activities

This step will help each community partner describe what prevention activities they are already, or plan to be, involved in.

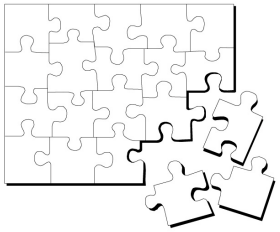
Note: Have each community partner complete this worksheet for his or her organization.

Down the first column, list each of the prevention strategies that the partner is involved in.

Then, break each strategy down into its activities, and list these activities in the second column beside the strategy.

Lastly, use the third column to list activities that could be done by this partner in the future to achieve that strategy.

For example, a strategy of Mock Duck Public School is to encourage regular physical activity. An activity is the school's participation in Fitness Fever. A future activity might be to encourage parents as well as students to participate in Fitness Fever.



Step 3: Identify Each Partner=s Activities

Name of Partnership: _____

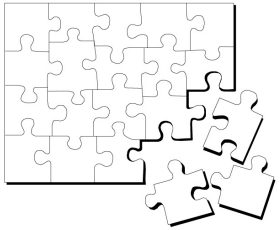
Address: _____

Phone: _____ Fax: _____ E-mail: _____

Name of person completing worksheet: _____

Select the strategies from Step 2 to enter into the first column. In the second column, describe your organization=s current activities regarding the strategy. If there are no current activities but there could be in the future, please put NONE in the second column. Describe what your organization could do in the future in column 3.

Prevention Strategies	**Describe the current activities.**	**Describe future efforts.**
Strategy:	**We are . . .**	**We could . . .**
Strategy:	**We are . . .**	**We could . . .**
Strategy:	**We are . . .**	**We could . . .**
Strategy:	**We are . . .**	**We could . . .**



Step 4: Clarify Each Partner's Role

It is important to clarify who is doing what within your community partnership so that limited resources can be put to their best use and efforts aren't duplicated.

Step 4 combines all of the strategies in Step 3 so all of the community partners can see who is doing what, where there might be duplication, and where they might work with each other.

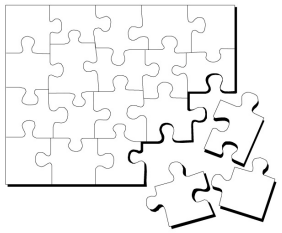
Note: Use a separate Step 4 page for each strategy given in Step 3.

Select a strategy from the lists generated in Step 3 and fill it in at the top of Step 4. In the first column, list all of the organizations participating in this strategy. From their Step 3, combine the current activities. In column 3, combine all of the future activities.

Review and discuss everyone's input for each of the prevention strategies. Share who is doing what and if some partners are doing the same or similar activities.

Answer:

- Who can team up?
- Are there any new partners who could help?
- Are they at the table or do they need to be invited?
  (New partners can be listed at the bottom of the page for each activity.)



Step 4: Role Clarification: Who Is Doing What?

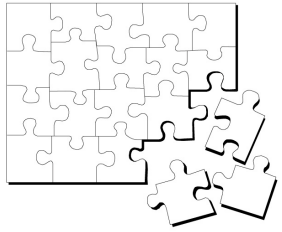
Name of Partnership:_____
Address: _____
Phone: _____ Fax: _____ E-mail:_____
Name of person completing worksheet: _____

Select a strategy to be addressed from the list generated by your group in **Step 3**. Use a separate **Step 4** sheet for each strategy.

Strategy: _____

Name of Community Organization	Describe current activities.	Describe what *could* be done in the future.

Additional community partners to contact for these activities:



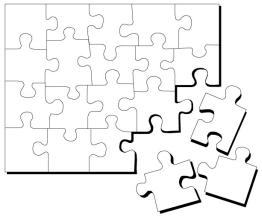
Step 5: Build a Comprehensive Plan

This worksheet will help the partnership visually represent all of the current strategies by organization.

List all of the strategies from Step 3 in the first column. List all of the partners in the first row. Place an X in boxes where a partner is participating in a particular strategy. Place an O in boxes where partners are considering future activity.

From this tool, discuss with the community partnership the following:

- What are the strengths of our community prevention efforts?
- What are the challenges and weaknesses?
- Are the existing activities giving consistent messages?
- Are there representatives from the target population involved in every step of the prevention plan?



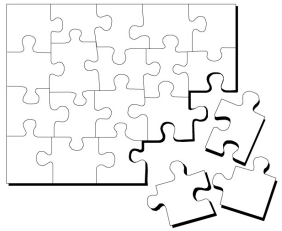
Step 5: What Does the Comprehensive Plan Look Like?

Name of Partnership: _____

Down the first column, list the strategies from the list generated in Step 3. List the partnering organizations along the top of the first row. Place an X in boxes where there is current activity. Place an O in boxes where there could be future activity. A blank box will mean there are no current activities regarding this strategy and none are intended in the future.

Names of Organizations in the Community Coalition

Strategies							



Step 6: The Ultimate Work Plan

Step 6 will bring all of the ideas of your group together.

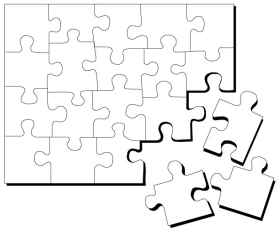
Prioritize the strategies from Step 5 and list them here based on their priority. Fill in the remaining columns as specifically as possible.

This tool is designed to answer the questions:

- What goal did we decide upon in Step 1?
- What strategies and specific activities have we decided upon?
- Who is committed to doing what?
- What additional support do we need?
- When will we begin and what is our target date for completion?
- How will we measure the desired outcome?

Be sure everyone receives a copy of the Work Plan.

Before you adjourn, set a date for the next meeting or conference call.



Step 6: The Work Plan

Name of Partnership: _____

Goal:

Strategy:	Who will carry out:	Who can help:	Resources needed:	Start Date:	End date:	Progress Notes:

What outcome and indicators of success do we expect in the short term? And in the long term?

APPENDIX F

Public Health Priorities 2002 –
Minnesota's Health Plans in Action

Public Health Priorities 2002

Minnesota's Health Plans in Action

Minnesota Health Improvement Partnership (MHIP) challenged its member organizations to put the group's public health improvement recommendations into action. In this document, you'll see how the Minnesota Council of Health Plans (MCHP) and its members act upon recommendations found in the report — A*dolescent Preventive Health Services: Opportunities for Improvement*.

Adolescent Preventive Health Services:

Opportunities for improvement

Page 1

MINNESOTA COUNCIL *of* HEALTH PLANS

Inform and educate providers and consumers about a comprehensive package of services for adolescents

Efforts by all Minnesota non-profit health plans:

Disseminated report to:

- Cover All Kids Coalition (CAK) – Best Practices Guidelines Work Group.
- MCHP's Medical Issues and Community Health committees.
- Developed, maintain, and fund information on adolescent preventive services on www.coverallkids.org.
- Participate in Child & Teen Check-Up (C&TC) regional groups such as the Metro Action Group (MAG) to conduct training for clinic employees and physicians regarding preventive health visits. Work to develop specialized provider training on adolescent health was in partnership with the University of Minnesota.
- UCare Minnesota representative co-chairs the MAG.
- Provide staff and fund CAK-Public Awareness Work Group, which is implementing various strategies to advocate for preventive services and coverage.

Special health plan initiatives:

- Metropolitan Health Plan's Public Health Collaborative on Adolescent Issues:
  - Key elements, including comprehensive services, were adopted by the Collaborative. (1998)
  - Letters addressing comprehensive screening were sent to parents of adolescents, along with health care providers. (1999-2000)
  - Posters were developed and distributed to places adolescents frequent in the community. These posters promote to adolescents the importance of regular preventive health care services. (2000-2001)
- Medica's and Metropolitan Health Plan's MATCH (Mothers Advocating Their Children's Health) project includes working with faith-based group to educate families about well child visits and what services those visits should include. (2001-ongoing)
- Health Partners, Medica, Metropolitan Health Plan and UCare Minnesota participate in Hennepin County's Member and Community Awareness (MACA) group which has developed language-specific resources (videos, written materials and presentations) and held community education sessions to help new immigrants better access health care services and emphasize the importance of preventive health visits.

Adopt and support a comprehensive package of preventive health services

Efforts by all Minnesota non-profit health plans:

- Adopted and disseminated preventive health care guidelines such as Institute for Clinical Systems Improvement (ICSI) and C&TC to provider networks.
- Participated in and staffed CAK – Best Practice Guidelines Work Group (2001-2002). This group is developing a toolkit on preventive services that details common elements that appear across multiple guidelines. (December 2001) HealthPartners representative serves as co-chair of this group.

Adolescent Preventive Health Services:

Opportunities for improvement

Page 2

- Participation on MHIP includes:
  - MCHP representatives are from HealthPartners and First Plan of Minnesota (First Plan).
  - HealthPartners representatives co-chaired the "Adolescent Preventive Health Services Action Team."
  - Members from various health plans participated on the MHIP action teams.
- Fund or pay for services delivered by providers.

Special health plan initiatives:

- Adolescent Health Conference: First Plan and St. Louis County Social Services convened the Northland Foundation, University of Minnesota – Duluth School of Medicine and others in roundtable discussion held Nov. 18, 1999, titled "Creating Healthy Adolescence." The forum gathered 60 community leaders to address all aspects of adolescent health. A list of priority adolescent health needs for the northeast region was a result of the discussion.
- Adolescent Health Care Access Survey – St. Louis County: The University of Minnesota – Duluth, public agencies and First Plan worked together to conduct research. All 16 year olds in St. Louis County participated in this survey during Fall 2001. The survey was administered through the public schools and alternative programs. Survey analysis is now underway. Results of the survey will help identify adolescent health priorities for St. Louis County.
- Incentives are offered through some of Minnesota's health plans to encourage families to complete C&TC visits for children through age 20.

Integrate the comprehensive package into existing services

Efforts by all Minnesota non-profit health plans:

- Working to integrate services across all payers (2002) through CAK – Best Practices Guidelines Work Group.
- Provided adolescent health specialist contacts to the Minnesota Department of Health for each health plan. (September 2001)
- Regularly send members information on recommended age-specific preventive health services.
- Fund or pay for services to be delivered by providers. (Ongoing)
- Comprehensive services are included in our recommendations for well child visits. (Ongoing)

Develop links between clinical prevention services, community resources

Efforts by all Minnesota non-profit health plans:

- Participate on CAK – Documentation & Community Referrals Work Group, Medica co-chaired. (2001)
- Remove barriers to accessing child and teen check-ups by providing contracts with school-based clinics.
- Exploring with St. Paul-Ramsey County Department of Public Health ways to collaborate on outreach to teens through school-based clinics.
- Participate on the Adolescent Health Care Collaborative [partnership with Hennepin County, Teenage Medical Service (TAMS), Minneapolis Health Department and health plans].

Minnesota Council of Health Plans

Adolescent Preventive Health Services:

Opportunities for improvement

Page 3

Special health plan initiatives:

- Develop materials linking clinical and community services:
  - HealthPartners developed adolescent health/parent education materials, "Totally Teen" magazine for clinic providers, adolescents and parents.
- Provided funding and support for community efforts:
  - Health Partners, Blue Cross Blue Shield of Minnesota and Blue Plus (BCBSMN), Medica, and UCare Minnesota provided funding and staff to serve on an advisory committee for The Urban Coalition's report, *The Health and Well-Being of Minnesota's Youth.*
  - Medica, HealthPartners, Metropolitan Health Plan and UCare Minnesota participate in the Minneapolis Public School's Healthy Learner Board's Immunization Initiative and the No Shots, No School Campaign.
- Created partnerships with faith-based communities:
  - Medica and Metropolitan Health Plan designed and funded MATCH. This effort worked to get children preventive services through a partnership with Minnesota State Baptist Convention Churches in Hennepin County.

Support the appropriation of funds for preventive health services for adolescents

Efforts by all Minnesota non-profit health plans:

- Worked with the Minnesota Department of Health and Administrative Uniformity Committee (AUC) on adolescent billing and coding issues. (Fall-Winter 2001)
- Provided the Minnesota Department of Health with billing and coding contacts from each health plan.
- Participate inthe Adolescent Health Care Coalition, a group working to increase funding for preventive health services for adolescents. (Ongoing)

Support appropriation of funds for training, education and recruitment for providers and clinicians.

Efforts by all Minnesota non-profit health plans:

- Applied for grant through the American Association of Health Plans in September 2001. Although the grant was not funded, we continue to look for other funding opportunities.
- Planning, organizing and funding the Adolescent Preventive Health Workshop.
- Active participants in MAG, working to address operational issues around C&TC. (Ongoing)
- Assisted with the development of Minnesota Pregnancy Assessment Form and supported regional training for providers in its use.

Special health plan initiatives:

- Metropolitan Health Plan provides group and one-on-one support and training for providers. (Ongoing)

Advocate for the comprehensive package of services

Efforts by all Minnesota non-profit health plans:

- Staff and participate in CAK – Best Practice Guidelines Work Group. The goal of the work is to increase utilization of preventive services (2002). HealthPartners co-chairs this group.

Minnesota Council of Health Plans

Public Health Priorities 2002

Minnesota's Health Plans in Action

Minnesota Health Improvement Partnership (MHIP) challenged its member organizations to put the group's public health improvement recommendations into action. In this document, you'll see how the Minnesota Council of Health Plans (MCHP) and its members act upon recommendations found in the report — *A Call to Action: Advancing Health for All Through Social and Economic Change.*

A Call to Action:

Advancing health for all through social and economic change

Page 1

MINNESOTA COUNCIL *of* HEALTH PLANS

Identify and advocate for strong public policy aimed at increased health insurance coverage for children

Efforts by all Minnesota non-profit health plans:

- Participated in Eliminating Disparities conference (Oct. 16-17, 2001) and supplied materials on Cover All Kids Coalition (CAK) and a list of community resources available from health plans.
- Participated in CAK – Eliminating Disparities Work Group. (2001)
- Participate in the Center for Population Health and its eliminating disparities objectives in its work plan for 2001-2002.
- Work with the Minnesota Department of Health, Children's Defense Fund – Minnesota and the Minnesota Department of Human Services on legislation to expand health care coverage, improve affordability of private coverage and fund government-sponsored health care programs.
- An additional 18,000 children will be covered under government programs. (2001)
- $240,000 was appropriated by the 2001 Legislature for Health Improvement Status grants.
- Staff and participate in CAK – Health Care Coverage Work Group. This group's goal is improving access to private health insurance. BCBSMN co-chairs this group.
- Participate on MHIP. UCare Minnesota represents Minnesota's health plans on MHIP's Civic Engagement and Eliminating Disparities Work Group.
- Advocate for enhancing availability of trained interpreters.
- Provided the Minnesota Department of Health with individual health plan contacts to help address social conditions.
- Developed, maintain and fund the CAK website.

Build and fully use a representative and culturally competent workforce

Efforts by all Minnesota non-profit health plans:

- Working with the Minnesota Public Health Association to create a work force development plan (2001-2002). Advisory Board leaders include representatives from MCHP and Medica.
- Provide a link among the Minnesota Medical Association's work to train physicians in cultural competence with efforts of the Minnesota Department of Human Services workgroup on Prepaid Medical Assistance Program (PMAP) Cultural and Linguistic Competence and CAK – Eliminating Disparities Work Group. (2001)
- Health plans are working to increase diversity of their staff through multiple human resource initiatives.
- Diversity training is required of most health plan staff. Staff members are encouraged to attend training and community activities to build cultural competence.

Special health plan initiatives:

- Sponsor providers who attend cultural competence training opportunities.
- Metropolitan Health Plan employees are learning Spanish.
- UCare Minnesota offers quarterly cultural competence training sessions for staff.

Build relationships with communities

Efforts by all Minnesota non-profit health plans:

- Contract with community-based agencies to provide comprehensive services where members live:
  - Many health plans have special programs that try to address barriers to obtaining health care. Examples of these efforts include interpreter services programs, transportation services and outreach education programs.
  - Metropolitan Health Plan offers an emergency cell phone and Women in Need program (WIN) for pregnant women.
- Sponsor activities that provide employees with community volunteer opportunities through organization such as The United Way, back to school programs and other community-based service organizations.
- Sponsor community improvement projects:
  - Medica worked in the Phillips Neighborhood to improve safety and housing.
  - Participate in HearthHome.
- Provide culturally and linguistically appropriate educational resources:
  - Educational and other materials for health plan members are produced at an accessible reading level and strive to be culturally sensitive. Many of these documents are translated into several languages. These criteria are used in purchasing materials as well.
  - Some health plans have produced and distribute educational culturally and linguistically appropriate videos in a variety of languages to providers, community groups and health plan members. Some topics include breast health, immunizations, accessing health care, preventive health visits and asthma self care.
  - Participate in the public/private collaborative, Foreign Language Health Resource Exchange Work Group, which is applying for funding to establish a clearinghouse of multilingual health resources.
  - Co-lead and fund an Immunization Steering Committee that provides information on immunizations to parents. These packets, available in six languages, are distributed through the hospitals at the time of delivery.

Special health plan initiatives:

Medica and Metropolitan Health Plan designed and funded Mothers Advocating Their Children's Health (MATCH). Through working with the Minnesota State Baptist Convention Churches in Hennepin County, this project worked to get children preventive services.

Readjust funding

Efforts by all Minnesota non-profit health plans:

- Worked with the Minnesota Department of Health to develop legislative language for the Health Status Improvement Grant, which was funded by the 2001 Minnesota Legislature. This funding includes efforts to address health disparities.
- Wrote a letter of intent to Blue Cross Blue Shield/Blue Plus of Minnesota Foundation to fund staff for the CAK – Eliminating Disparities work group. (September 2001)
- Through health plan foundations, provide funding to community-based organizations working on social conditions issues such as family support, housing, welfare to work programs and more.
- Many health plans provide funding to community-based organizations to support health-related services where members live.

A Call to Action:

Advancing health for all through social and economic change

Page 2

Minnesota Council of Health Plans

Special health plan initiatives:
Blue Cross and Blue Shield of Minnesota Foundation issued $1.4 million in grants to organizations, which are working to address health disparities.

Strengthen assessment, evaluation and research

Efforts by all Minnesota non-profit health plans:

- Collaborate with the Minnesota Department of Health's Refugee Health Program to promote the *Refugee Health Provider Information Guide* to providers and to help with provider training on refugee health assessments.
- Participate in PMAP Cultural and Linguistic Competence workgroup to develop a community needs assessment, which identifies needs of diverse PMAP populations. HealthPartners co-chairs this effort with the Minnesota Department of Human Services.
- Through CAK – Evaluation, Assessment & Research Work Group, questions on coverage and prevention were added to a statewide health survey. (2001)
- Provide funding and support for community efforts in assessment:
  - HealthPartners, BCBSMN, Medica, and UCare Minnesota provided funding and staff to serve on an advisory committee for The Urban Coalition's report, *The Health and Well-being of Minnesota's Youth.*
  - Many health plans have contributed funding to community needs assessments such as the Bridge to Health Survey (Northeast Minnesota and Northwest Wisconsin) and the Regional Health Profile (Southwest and South Central Minnesota counties).
- Participate in the Metro Refugee Health Task Force.
- Participate on the March of Dimes-sponsored work group on Racial and Ethnic Disparities in Infant Mortality.
- Participate on the Minnesota Department of Health Tuberculosis Advisory Committee that will advise the department on ways to strengthen tuberculosis prevention and control in both the public and private sectors. Emphasis also includes increasing TB screening and follow-up. UCare Minnesota co-chairs this group.

Special health plan initiatives:

- Metropolitan Health Plan and UCare Minnesota collect race/ethnicity data on members as it is available to them.
- Several health plans have funded culture-specific research regarding health and health care services. Examples of this research can be found in the Hmong and Somali communities.

Communicate and champion findings and recommendations.

Efforts by all Minnesota non-profit health plans:
Communicated the social and economic change findings with health plan employees. Examples include:

- First Plan of Minnesota's article on the report for their internal communications.
- HealthPartners sponsored presentations by the Minnesota Department of Health and is convening internal quality committees to address cultural competence and explore health care disparities issues.
- UCare Minnesota provided information to identified staff via email and routed the report to the senior management/leadership team.
- Metropolitan Health Plan has used PowerPoint® presentations developed by the Minnesota Department of Health to help address community needs. (Fall 2001)

A Call to Action:
Advancing health for all through social and economic change

Page 3

Minnesota Council of Health Plans

APPENDIX G

Levels of Prevention
and
Levels of Intervention

Levels of Prevention and Levels of Intervention

"Prevention is anticipatory action taken to prevent the occurrence of an event or to minimize its effect after it has occurred."[1] Not every event is preventable, but every event does have a preventable component.

Each strategy description contains a small table that indicates the Alevels of prevention@ and the Alevels of intervention@ of the strategy. The term, Alevels of prevention,@ refers to the points of problem development at which the strategy intervenes. There are three different levels of prevention:

- **Primary prevention** strategies are those that prevent problems or diseases before they occur or are diagnosed. Primary prevention strategies are implemented *before* there is evidence of a disease or injury; they *promote* health and keep problems from occurring in the first place. Primary prevention targets environments and populations or groups that are essentially well but could better manage self-care and/or reduce risk. Primary prevention strategies include community mobilization, asset-based community development, developing healthy public policies, social marketing, and public and professional consumer education.

- **Secondary prevention** strategies are those that *detect and treat problems early*. Secondary prevention strategies prevent problems from causing serious or long-term effects or prevent problems from affecting others. Secondary prevention strategies are implemented *after a disease or problem has begun, but before it is symptomatic*. Secondary prevention targets populations or individuals/families that have risk-factors or risk-exposures in common. Hallmark secondary prevention strategies include outreach, screening, and follow-up.

- **Tertiary prevention** strategies are those that *limit further negative effects from a problem, disease or injury*. Tertiary prevention prevents existing problems and their consequences from getting worse. Tertiary prevention strategies are implemented *after a disease or injury is established; they prevent the problem from getting worse*. Tertiary prevention strategies include treatment, supportive and rehabilitative services that minimize morbidity and maximize quality of life, including preventing secondary complications among those with disabilities or chronic diseases.

Levels of Intervention. The term, Alevels of intervention,@ refers to the focus of the strategy. Public health strategies may be directed at entire populations within a community, the systems that affect the health of those populations, and/or the individuals and families within those populations known to be at risk. Interventions at each of these levels of practice contribute to the overall goal of improving population health. There are three different levels of intervention for strategies, all of which serve to improve population health:

- **Individual-level** strategies are those that change knowledge, attitudes, beliefs, values, skills, practices and behaviors in individuals, either singly or in families, classes or groups. They are person-to-person interventions. Persons receive these individual

[1] Turnock, B. (1997). Public Health: What it is and how it works. Gaithersburg, MD: Aspen Publishers, Inc.

services because they are identified as belonging to a population-at-risk. Ultimate outcomes of individual-focused strategies are changes in the population=s health status/capacity.

- **Systems-level** strategies are those that change organizations, policies, laws and structures. The focus is not directly on individuals and communities but on the systems that serve them. Changing the system represents a cost-effective and long-lasting way to affect individuals. Ultimate outcomes of systems-focused strategies are changes in the population=s health status/capacity.

- **Community-level** strategies are those that change community norms, community attitudes, community awareness, community practices and community behaviors. They are directed toward groups of persons within the community or occasionally toward all persons in the community. Community-based strategies are measured in terms of how much of the defined “community” has received services. Ultimate outcomes of community-focused strategies are changes in the population=s health status/capacity.

APPENDIX H

How to Choose Strategies

How To Choose Strategies

When you are ready to choose the strategies to implement to achieve your goals or objectives, you may wonder where to start. To identify potential effective strategies:

- Involve community members in choosing the strategies. Involving community members in making decisions and taking action is critical to the success of that action. Effective community engagement results in activities and programs that reflect the strengths, needs and resources of the community, and outcomes that matter, that are understandable to community members and that reflect community expectations. For more information see the Community Engagement section of the Introduction to this document and the MDH Community Engagement website at: www.health.state.mn.us, search on "Community Engagement".
- Use *Strategies for Public Health, Volume 2* (available from your local public health agency or at: www.health.state.mn.us/strategies, search on "Strategies") as well as other sources to identify potential strategies to implement.

You will then have a number of strategies that could achieve your goals or objectives. However, you can't implement them all and only one or two of these strategies may be feasible or realistic for your agency or community. But which ones should you implement? Considering the questions below will help you determine one or two strategies per goal to implement:

- Does the strategy connect the information in your assessment to the goal you are working on?
- Is it a logical step toward the goal you want to achieve?
- Do you have the resources (staff, time, skills, interest, etc.) to implement this strategy?
- Is anyone else in the community already working on this?
- What would be the most successful approach for your agency to take: to do this strategy alone, to be the leader/coordinator of this strategy, or to stimulate action/leadership in the community?
- What is the likelihood that the strategy would be implemented without your action?
- Is your community ready for this strategy?
- If this is a continuing strategy, have you evaluated the results? Should you continue in, expand or reduce your role?
- Does this strategy emphasize primary prevention and a systems or community focus (see Appendix G, *Levels of Prevention and Levels of Intervention*, for more information)? [This question is especially relevant for public health agencies.]