



# The Minnesota Statewide Health Improvement Program

SHIP PROGRESS BRIEF - YEAR 3



Minnesota Department of Health  
P.O. Box 64975  
St. Paul, MN 55164-0975  
<http://www.health.state.mn.us>  
January 2013





# The Minnesota Statewide Health Improvement Program

## SHIP PROGRESS BRIEF - YEAR 3

For more information contact:  
Statewide Health Improvement Program  
Office of Statewide Health Improvement Initiatives  
Minnesota Department of Health  
P.O. Box 64882  
85 E. 7th Place  
St. Paul, MN 55164-0882  
Phone: 651-201-5443  
Fax: 651-201-5800  
TTY: 651-201-5797  
Web site: [www.health.state.mn.us/ship](http://www.health.state.mn.us/ship)

Upon request, this publication can be made available in alternative formats, such as large print, Braille or cassette tape.  
Printed on recycled paper.





*Protecting, maintaining and improving the health of all Minnesotans*

February 22, 2013

Dear Fellow Citizen of Minnesota:

Minnesota is a state as rich in traditions as it is rich in food, natural resources and beauty. We are an agricultural state, helping to supply the world with healthy produce, safe milk, and high-quality meats and grains. We are also traditionally an active people, who like to get outdoors in our forests, at the lake, and in our city parks.

Minnesotans also have a long tradition of working together. Newcomers marvel at how people come out of nowhere to help push when a car is stuck in the snow and carry jumper cables not for themselves but to help others. Similarly, we also have a long tradition of promoting good health — working together for the good of the community — investing in public health and building one of the finest health care systems in the nation. These investments led Minnesota to be ranked the healthiest state in the nation five of six years from 2000 to 2006 in America's Health Rankings.

It is in that spirit the Statewide Health Improvement Program (SHIP) is working to build a healthy future by relying on our traditions. When some people cannot find fresh fruits and vegetables, and when children can't safely walk to school because of a lack of sidewalks, we know we have work to do to reconnect people with healthy food and healthy activities. When we fall in health rankings, in part because of a lack of public health investments, we know we've strayed too far from the common-sense approach that an ounce of prevention is worth a pound of cure.

Behind all the research and statistics, SHIP is about giving communities the tools they need to help their residents make healthy choices. SHIP is a community driven project that is about making healthy living easier for all residents by bringing healthy choices back to Minnesota communities. I am excited about the power and promise of this approach, and about the partnerships we are forming. I am confident that Minnesota will enjoy the public health payoff on this investment for decades to come.

Sincerely,

A handwritten signature in black ink, appearing to read "Edward P. Ehlinger".

Edward P. Ehlinger, MD, MSPH  
Commissioner  
P.O. Box 64975  
St. Paul, MN 55164-0975

Executive Office • 625 Robert Street North • PO Box 64975 • St. Paul, MN, 55064-0975 • (651) 201-5810 phone  
<http://www.health.state.mn.us>

*An equal opportunity employer*



# Table of Contents

<b>Executive Summary</b> .....	<b>8</b>
<b>Introduction</b> .....	<b>11</b>
<b>Making Minnesota the healthiest state in the nation</b> .....	<b>13</b>
<b>Investing in prevention</b> .....	<b>16</b>
<b>Saving money: return on investment</b> .....	<b>17</b>
<b>SHIP Overview</b> .....	<b>18</b>
<b>History</b> .....	<b>18</b>
<b>How SHIP works</b> .....	<b>20</b>
Proven strategies—local control.....	20
Effective, evidence-based strategies.....	20
Local control .....	21
Partnerships .....	21
Technical assistance.....	22
Evaluation .....	22

**Year Three Results ..... 23**

- Schools lead the way ..... 23**
  - STRATEGY: More physical activity ..... 24
  - STRATEGY: Healthier food for kids ..... 25
  - STRATEGY: Tobacco-free post-secondary campuses ..... 25
- Strong partnership with business ..... 26**
  - STRATEGY: Comprehensive Workplace Wellness. 27
- Getting kids off to a healthy start..... 28**
  - STRATEGY: Healthier eating in child care ..... 29
  - STRATEGY: More physical activity in child care.... 29
- Communities make healthy living easier ..... 30**
  - STRATEGY: Making physical activity the norm ..... 31
  - STRATEGY: Better nutrition for everyone ..... 31
  - STRATEGY: Families living free of secondhand smoke ..... 32
- Working with health care providers to help improve the long-term health of patients ..... 33**
  - STRATEGY: Prevention in health care ..... 34
- Innovative Strategies ..... 35**

**Going Forward ..... 37**

- Better health: Healthy Minnesota 2020..... 37**
- Technical assistance from the Robert Wood Johnson Foundation ..... 38**
- Strategies ..... 39**
- Evaluation ..... 40**
- Sustainability ..... 42**

**Appendix A: Epidemiology Update ..... 44**

- Obesity..... 44**
- Tobacco use and exposure..... 44**

**Appendix B: Research Questions..... 46**

**Endnotes ..... 47**



## Executive Summary

In 2008, Minnesota policymakers recognized that containing spiraling health care costs could not be impacted by changes in medical care alone; investments in prevention were needed. With bipartisan support in the legislature, Minnesota passed a groundbreaking health reform law. One key component of Minnesota's health reform is investment in primary prevention activities, designed to improve population health through reducing the risk factors most contributing to chronic disease and thereby reducing health care costs.

Two-year SHIP grants were awarded on July 1, 2009, to community health boards (CHBs) and tribal governments across the state to decrease obesity by increasing physical activity and improving nutrition and reducing tobacco use and exposure. All 53 CHBs and nine of 11 tribal governments in Minnesota received SHIP funds. Grants were awarded through a competitive process for statewide investments of \$20 million in 2010 and \$27 million in 2011.

For the second funding cycle, FY 2012-13, SHIP received \$15 million, representing a 70 percent cut from the first two years. As a result, SHIP is now 18 community grants, covering just over half of Minnesota.

## E X E C U T I V E S U M M A R Y

Despite its much smaller size, in grantee areas SHIP is helping to create good health where Minnesotans live, work, learn and seek health care. Results from July 2009 through September 2012 include:

- 215 schools have worked on Safe Routes to School, with the potential to have 143,000 students more physically active as they walk or bike to school.
- 440 schools have been working on Farm to School strategies, giving access to locally-grown fresh fruits and vegetables to 235,000 students.
- 59 campuses are now or are in the process of becoming smoke-free, helping 146,000 students.
- In the first three years of SHIP, 940 worksites have engaged in the worksite wellness strategy with the potential to help 154,500 employees get more physical activity, eat healthier and quit tobacco.
- 580 child care sites pursued strategies for healthier eating, benefiting 10,400 children.
- 1,070 child care sites have increased physical activity for 23,900 children.
- 293 cities worked to increase non-motorized transportation.
- SHIP created or supported 71 farmers markets across Minnesota.
- Approximately 24,000 apartments are now smoke-free, meaning up to 52,000 people are no longer exposed to secondhand smoke at home.

Therefore, SHIP is well on the way to successfully improving the health of Minnesota. Our goal is to increase Minnesota's proportion of healthy weight adults by 9 percent (from 38 to 47 percent), and to reduce young adult tobacco use by 9 percent (from 27.8 to 18.6 percent) by 2020. Through broad public-private partnerships, sustained, statewide SHIP funding, and given our experience from the first three years of SHIP, this goal is obtainable.

In this task, it is important that SHIP succeed. Health care costs continue to escalate,<sup>1</sup> and people continue to suffer and die needlessly from chronic illnesses, such as heart disease, cancer and diabetes. Overweight and obesity threatens the health of our children, youth, adults and seniors, placing them at much greater risk for a wide variety of chronic diseases and health conditions. Obesity is showing signs of leveling off,<sup>2</sup> after doubling since 1980, and childhood obesity is also showing promise for improvement after tripling over the past 30 years,<sup>3</sup> but both remain devastatingly high. Tobacco use—declining for decades—is now leveling off, but with 16 percent of Minnesota adults still smoking.<sup>4</sup> Alarming, in Minnesota almost half of adults and over half of high school students are exposed to secondhand smoke.<sup>5</sup>

## E X E C U T I V E S U M M A R Y

To better understand its effectiveness and the return on investment, at the end of this fiscal year the Minnesota Department of Health (MDH) expects to report outcomes such as changes in access to healthy foods and changes in secondhand smoke exposure; changes in behaviors, such as changes in the numbers of people walking and biking; and other potential community benefits, such as the economic benefits of schools purchasing locally-grown produce from Minnesota farmers. These are all steps toward the ultimate goal of measuring changes in disease outcomes and health care costs.

At the same time, SHIP is working with the Prevention Impacts Simulation Model (PRISM) from the Centers for Disease Control and Prevention (CDC) to estimate how SHIP evidence-based strategies influence cardiovascular disease and other disease-related risk factors, deaths, and costs.

As SHIP goes forward, MDH is excited to plan for future directions for health improvement activities. As many SHIP strategies become the rule in Minnesota (for example, when every school that can is doing Safe Routes to School), SHIP will explore new strategies and areas for health improvement. Meanwhile, SHIP will look more toward helping harder-to-reach communities suffering the largest health disparities, and do so with the involvement of those most affected.

With these new approaches added to a solid foundation of proven strategies, plus rigorous evaluation and ever-improving support for grantees, SHIP is well-poised to provide real health improvement for all Minnesotans into the future.



## Introduction

At the end of the third year of the Statewide Health Improvement Program (SHIP), communities across Minnesota are making real improvements designed to make healthy living easier.

To encourage walking, Alexandria is rebuilding their main street with pedestrians as a priority. Residents of Baudette on the Canadian border are enjoying a farmers market that pulled in a quarter-of-a-million-dollars in sales last year. Kids who used to get picked up and dropped off are now walking to school in towns from Fairmont elementary schools to Lyndale School in Minneapolis to McGregor School in Aitkin County. The many kids living at Riverside Plaza in Minneapolis are no longer growing up exposed at home to second-hand smoke. TEAM Industries in Bagley and Park Rapids is saving money on insurance costs because of workplace wellness.

These are but a few of the hundreds of real, science-based, community-driven health improvement efforts taking place in the slightly more than half the state currently covered by SHIP.

What of the counties that were not able to be funded by SHIP for 2012-13? One of the tenets of SHIP is sustainability. One example is Dakota County, where many of the changes made in the first cycle of SHIP funding continue, from Safe Routes to School programs to Farm to School to 31 smoke-free apartment buildings. However, of the ten strategies they pursued as part of SHIP in the first round, they had to discontinue six, continuing with four at a greatly reduced level with other funding. As Mary Montagne, Dakota County Public Health, says, “there is so much more that could be done.”



*Villages at Essex Park  
apartment complex*



*Stewartville Farmers Market*

## CREATING A HEALTHIER OLMSTED

In Rochester, in front of the now smoke-free Villages at Essex Park apartment complex, is a bike path. The many children who live in the apartment complex are not only avoiding secondhand smoke, they are finding it easier to go biking and burn off some youthful energy. There's a good chance they may bike to school, too, since almost two-thirds of Olmsted County schools now have a Safe Routes to School program. At school, they may enjoy fresh produce from one of three school gardens or snacks from a healthy snack cart. They are more likely to participate in an Active Recess program now offered by one-third of schools.

What about the children's parents? If they work in Olmsted County, they may be one of 8,454 employees benefiting health- and cost-wise from one of 20 new Workplace Wellness programs at various worksites in the county. If they go to college, there is a 9 out of 11 chance that they are not going to be exposed to secondhand smoke on campus. On the way home, they may stop at a farmers market. "The farmers market in Stewartville is fast-becoming the place to be on Wednesdays! It means a lot to us in Stewartville to know that these fresh products are coming directly from our friends and neighbors," says Stewartville Mayor Jimmie-John King, a triple heart bypass survivor.

Depending on where they live, they may be more able to safely bike or walk. Thanks to SHIP, Rochester, Byron and Stewartville all have Complete Streets policies, ensuring more sidewalks, safe crosswalks and bike paths such as the one Essex Park residents enjoy. Lori Miller-Beach, a mother of four in Stewartville, says, "I was constantly driving my kids to their places of interest—pool, practices, friends' houses, school. The bike paths and sidewalks are a huge help to letting the kids safely journey to their destinations." April Sutor, senior vice president for United Way of Olmsted County and avid Rochester bicyclist, says that people now "feel more comfortable and safe riding to their jobs downtown and getting from one side of town to another. Where they were previously driving into the city center for work, they now cycle in warm weather."

Rochester is an international center for expert medical care. SHIP has worked with health care providers across the county to better refer patients to the obesity and tobacco prevention services they need, while supporting breastfeeding for new mothers and their babies. According to Kelly Corbin, SHIP grant coordinator at Olmsted County Public Health Services, "One of our Mayo doctors is now teaching her students about healthy community policy initiatives in her med school courses and utilizing the SHIP website and success stories as her class materials."

Olmsted County has embraced the concept of building good health on a community-wide basis for many years. “Our success can be attributed to a strong partnership with MDH and sustained funding over eight years since 2004,” says Corbin. “We were funded with Steps to a HealthierMN, [the first cycle of] SHIP, [Communities Putting Prevention to Work] and [the second cycle of] SHIP, which allowed us to sustain our engagement with key leaders and community members to continuously take the next step with improving the health of our community.”

Olmsted County is not a typical SHIP community, but it is a good example of what a community looks like after a number of years of sustained, community-focused health improvement.

“I’m a youth mentor and was asking the teenage girl I mentor, Kendra, how she got around town,” Corbin says. The city bus doesn’t service Kendra’s neighborhood so she and her four sisters use their bikes to get to school, the library or anywhere else. “SHIP helps kids like Kendra, those who need to use bikes or busses to get around because there is no other affordable option for their family. Thanks to SHIP the city is putting in bike lanes and connecting trails to make it easier for kids like her to get around. SHIP isn’t a ‘want;’ it’s a ‘need’ for our community and for kids like Kendra.”

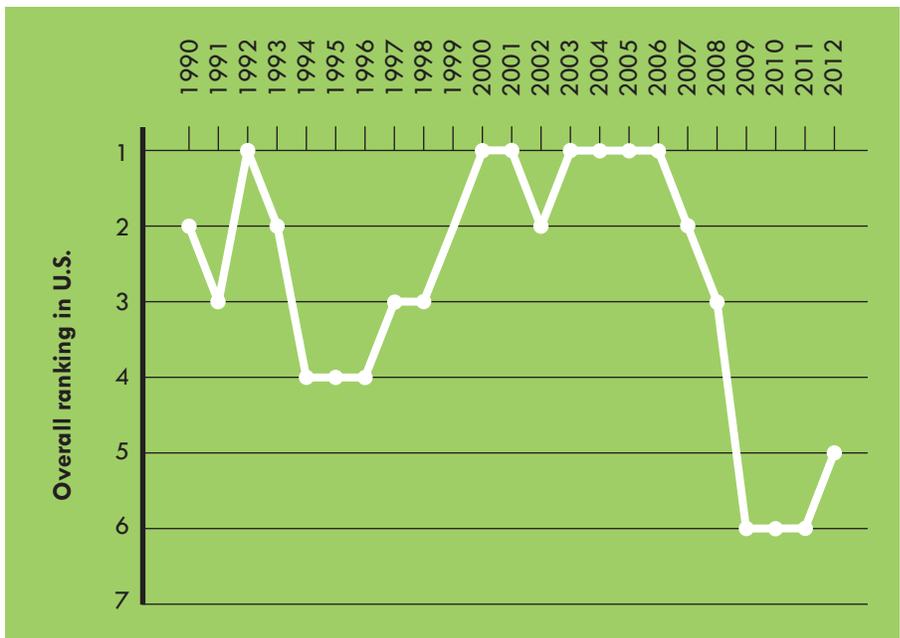
## Making Minnesota the healthiest state in the nation

Through broad public-private partnerships and with sustained funding, the goal for SHIP is to increase Minnesota’s proportion of healthy weight adults by nine percent (from 38 to 47 percent), and to reduce young adult tobacco use by nine percent (from 27.8 to 18.6 percent) by 2020.

Reaching this goal would have a substantial impact on the health of the state. A new analysis commissioned by the Trust for America’s Health and the Robert Wood Johnson Foundation and conducted by the National Heart Forum, found that if Minnesota could reduce the average body mass index of its residents by only five percent, the state could help prevent thousands of cases of Type 2 diabetes, coronary heart disease and stroke, hypertension, cancer and arthritis, while saving millions of dollars. For a six-foot-tall person weighing 200 pounds, a five percent reduction in body mass index would be the equivalent of losing roughly 10 pounds.

Can SHIP help Minnesota be the healthiest state in the country? Minnesota was exactly that as recently as 2006. We have since slipped to sixth overall, and fifth for children’s health.<sup>6</sup>

### Minnesota’s Overall Health Ranking



Source: <http://www.americashealthrankings.org/MN>

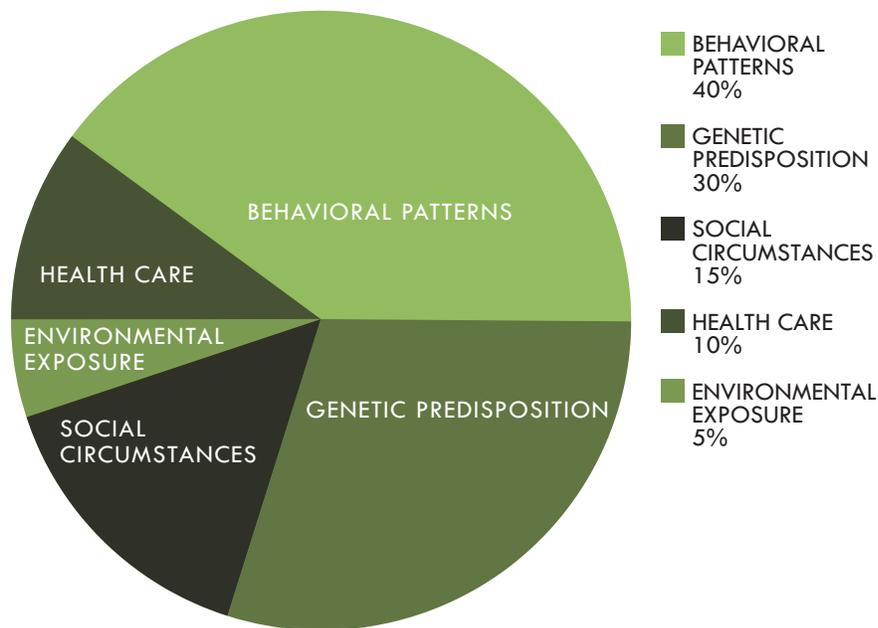
## I N T R O D U C T I O N

One factor in the decrease is the state's decreasing investment in prevention. Currently, Minnesota ranks 46<sup>th</sup> in the U.S. for state investment in public health. Minnesota's per capita local tax levy increased nearly 16 percent from 2006 to 2010, while per capita local tax levy expenditures by Minnesota local health departments decreased 2.4 percent. Another factor has been persistent health disparities. Good health is not equitably distributed across Minnesota. Health disparities exist between racial and ethnic communities, between different parts of the state—especially rural and urban, and northern and southern Minnesota—and between economic groups. Both concerns must be addressed if we are to improve health for all Minnesotans.

To become a leader in good health, it is important to understand what determines health. The causes of poor health are multifaceted. Behavior patterns are the underlying cause of 40 percent of premature deaths in the United States.<sup>7</sup>

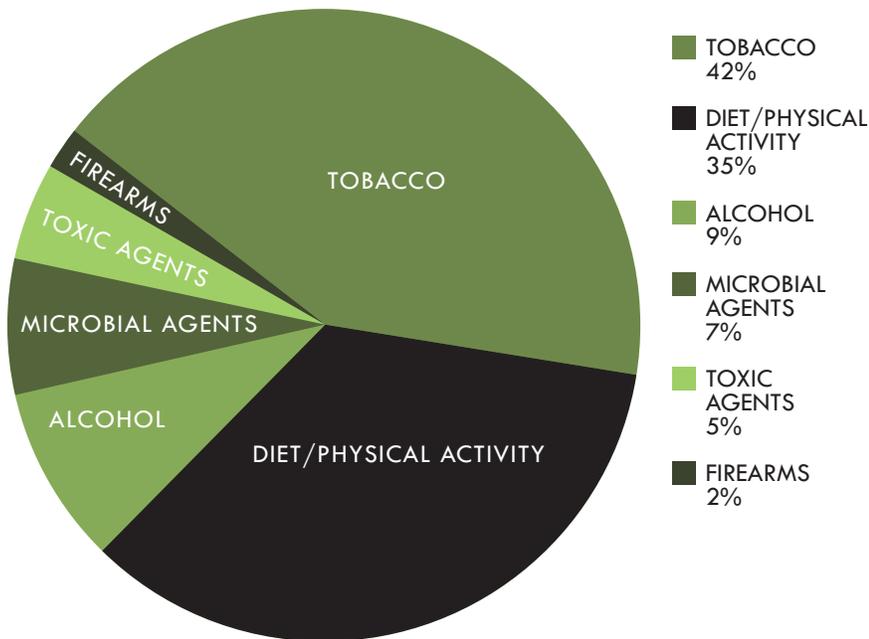
### Proportional Contribution to Premature Death

Schroeder S. N Engl J Med 2007;357:1221-1228



Of these behavior patterns that are attributable causes of death, 42 percent are tobacco use and exposure, and nearly a third are diet and physical activity.<sup>8</sup>

### Individual Behavior Choices: Attributable Causes of Death



Source: Mokdad et al, JAMA 2004;291 (10) 1238-45

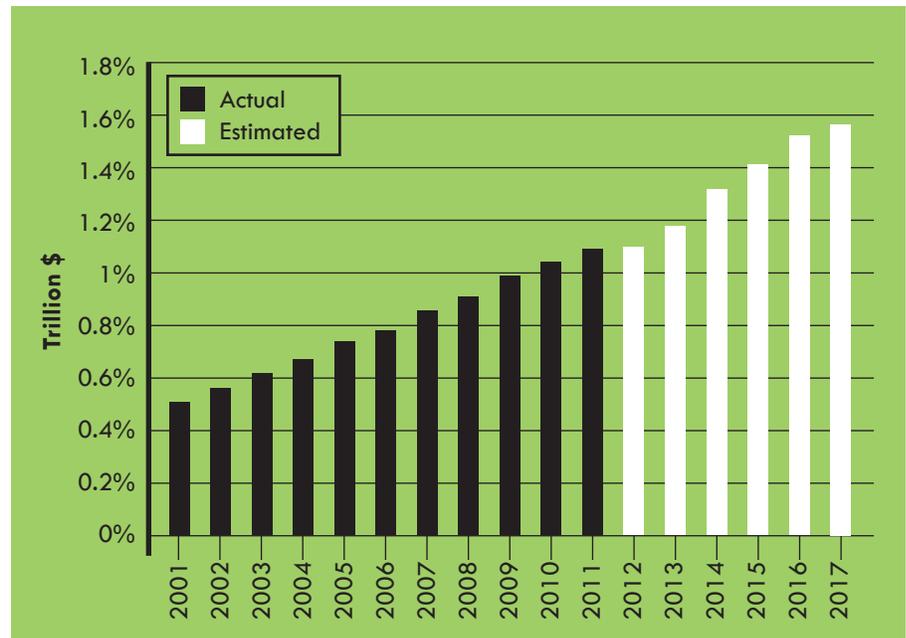
Therefore, we need to increase physical activity and improve nutrition while decreasing use of and exposure to tobacco if we are to make a substantial difference in the health of Minnesotans.

Unfortunately, decades of individual-focused health education campaigns have had little effect—obesity has doubled over the past 30 years and tobacco use and exposure remains a serious problem. The solution lies in addressing barriers to healthy living. An extensive body of research suggests that the community has a big role in encouraging or inhibiting healthy behaviors for individuals.<sup>9</sup>Therefore, working with communities to encourage healthier living—making it easier to walk and bike, making sure fresh fruit and vegetables are available nearby, siting schools so that kids can walk or bike, making smoke-free environments the norm on campuses and in parks, etc.—is an important key to improving health, and to once again have Minnesota be the healthiest state in the nation.

## Investing in prevention

SHIP, as part of Minnesota's 2008 health reform effort (see "SHIP overview"), is designed to improve health across Minnesota and thereby help rein in the ever-rising cost of health care. Unfortunately, health care spending in the country continues to spiral out of control.

### Health Care Spending; U.S.



Source <http://www.usgovernmentpending.com>

And the main drivers of spiraling health care costs? Again, behavioral risk factors--obesity and tobacco use and exposure.

### The cost of tobacco use

Approximately 16 percent of Minnesota adults use tobacco on a regular basis, costing in excess of \$2.87 billion in medical costs and 5,135 deaths in our state every year.<sup>10 11</sup> This is a per capita expense of \$554 for every man, woman and child in the state.<sup>12</sup> In addition:

- A history of tobacco use is associated with 26 percent higher medical costs.<sup>13</sup> Within three years of quitting smoking, a former smoker's health care costs are at least 10 percent less than if they continued smoking.<sup>14</sup>
- For every dollar spent on providing tobacco cessation treatment, the state potentially sees an average positive return on investment of \$1.32.<sup>15</sup>
- In Minnesota, approximately 11 percent of Medicaid costs are attributable to smoking-related medical expenditures.<sup>16</sup>

## The cost of obesity

A variety of studies have looked at the cost of obesity. HealthPartners found that each additional unit of body mass index increases medical costs by nearly two percent.<sup>17</sup> Meanwhile, a national study found that 27 percent of health care costs for adults over age 40 are associated with being physically inactive, overweight and/or obese.<sup>18</sup> Per capita private health insurance spending for obese adults was \$1,272 higher than that for normal weight adults in 2002.<sup>19</sup>

## Saving money: return on investment

Prevention is a good investment. By reaching the goal of reducing Minnesota's proportion of overweight and obese adults by five percent (from 63 to 58 percent), this alone could lead to health care savings of more than \$4 billion in 10 years and \$11 billion in 20 years.<sup>20</sup> In addition:

- Research has shown that each additional day of physical activity per week reduces medical charges by almost five percent.<sup>21</sup>
- A Minnesota study found that adults who are 50 years and older who increase their physical activity are more likely to have significant declines in their health care costs compared to those adults who continue to stay inactive.<sup>22</sup>
- There is strong evidence that worksite nutrition and physical activity programs increase physical activity, improve weight status and increase fruit and vegetable consumption among employees.<sup>23</sup> Studies suggest the return on investment for worksite wellness initiatives is approximately \$3 to \$6 saved for every \$1 spent.<sup>24</sup>

## Non-health related ROI

Meanwhile, though SHIP is specifically designed to improve health and decrease health care costs, its investment in Minnesota's communities reaps social and economic benefits as well. Investments in increasing availability of fresh fruits and vegetables from local growers—for example, farmers markets or Farm to School—means farmers have access to new markets. National research shows workplace wellness decreases health care costs for employers and employees, but also increases productivity through reduced absenteeism.<sup>25</sup> Smoke-free multiunit housing saves building owners money in reduced damage to apartments.<sup>26</sup> Complete Streets are not only safer for all, but are also attractive, and many communities find them to be valuable improvements that are good for business. Safe Routes to School can save schools money in transportation costs. Given SHIP's focus on community improvement, it's hard to find a SHIP strategy that does not create community benefits beyond health.

Our challenge is measuring these benefits. However, MDH is working to measure many of these during the second cycle of SHIP funding to provide a more complete picture of the outcomes of SHIP. (See "Going forward: evaluation.")



# SHIP Overview

## History

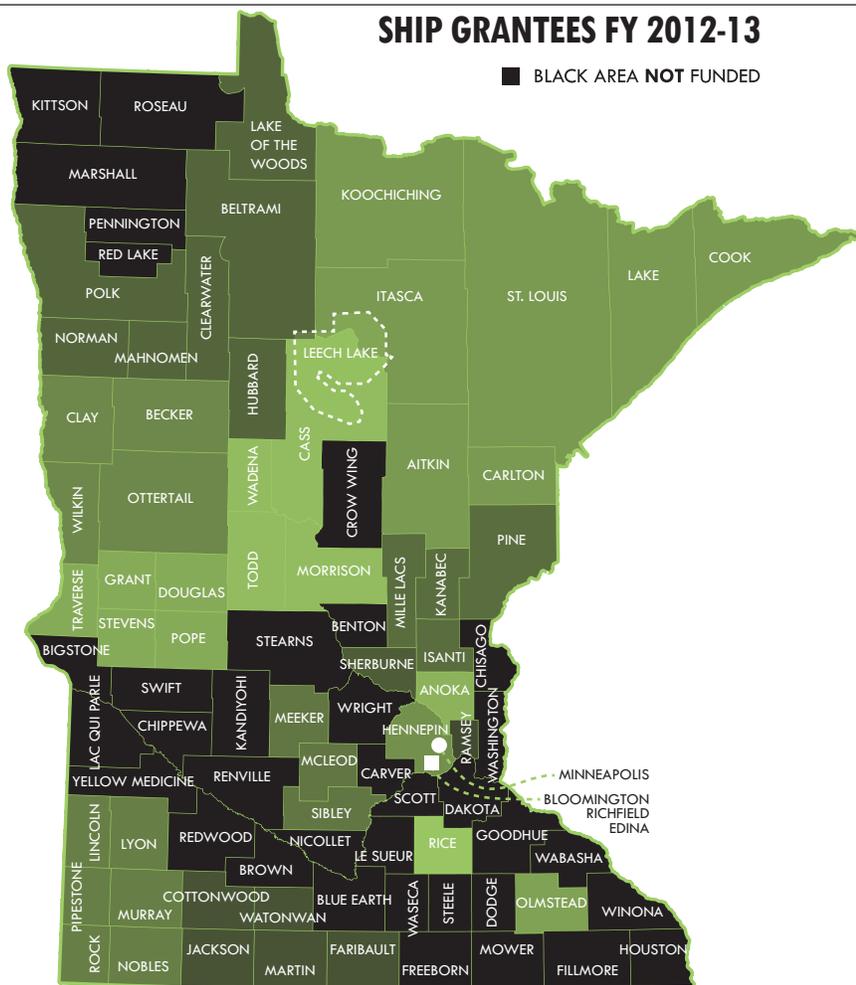
Two-year SHIP grants were awarded on July 1, 2009, to community health boards (CHBs) and tribal governments across the state to decrease obesity by increasing physical activity and improving nutrition and reducing tobacco use and exposure. All 53 CHBs and nine of 11 tribal governments in Minnesota received SHIP funds. Grants were awarded through a competitive process for statewide investments of \$20 million in 2010 and \$27 million in 2011.

For the second funding cycle, FY 2012-13, SHIP received \$15 million (a 70 percent cut from 2010-11), resulting in 18 community grants, covering just over half of Minnesota.

### SHIP 2012-13

- Funding \$15 million
- Grantees 18
- Counties 51
- Cities 4
- Tribal Governments 1

S H I P O V E R V I E W



**CURRENT GRANTEES:**

- Anoka County
- Cities of Bloomington, Edina and Richfield
- Carlton, Cook, Lake, St. Louis, Aitkin, Itasca, Koochiching Counties
- Clay, Wilkin, Becker, Otter Tail Counties
- Faribault, Martin, Watonwan, Cottonwood, Jackson Counties
- Hennepin County
- Horizon CHB (Douglas, Grant, Pope, Stevens, Traverse Counties)
- Kanabec, Pine, Isanti, Mille Lacs, Counties
- Leech Lake Tribal Community
- City of Minneapolis
- Meeker, McLeod, Sibley Counties
- Morrison, Todd, Wadena, Cass Counties
- North Country CHB (Lake of the Woods, Beltrami, Hubbard, Clearwater, Norman, Mahnomen, Polk Counties)
- Olmsted County
- Rice County
- Sherburne County
- Southwest HHS (Lincoln, Lyon, Murray, Pipestone, Nobles, Rock Counties)
- St. Paul-Ramsey County

SHIP has evolved in response to evaluation, experience, and reduced funding. Beginning in January 2012:

- MDH standardized its evaluation measures, outcomes and tools for each strategy for improved reporting capabilities.
- The number of strategies recommended to SHIP communities decreased from 33 to 14. This narrowed focus maximizes efficiencies and eliminates less impactful strategies. For example, using signage to encourage employees to climb worksite stairwells was dropped due to its lower impact.
- Both workplace and health care strategies were consolidated to maximize impact. Workplace wellness, an optional setting, now requires a comprehensive approach. Similarly, health care setting strategies, now optional, include overweight/obesity and commercial tobacco use prevention and reduction through assessment and referral. Supporting breastfeeding is also critical to ensure the youngest among us grow up strong and healthy.
- MDH has streamlined its grants management system to improve communications with grantees and better track results by strategy and by month.

## How SHIP works

### Proven strategies—local control

The Statewide Health Improvement Program (SHIP) works to prevent disease before it starts by helping create healthier communities that support individuals seeking to make healthy choices in their daily lives.

SHIP IMPROVES HEALTH BY INCREASING OPPORTUNITIES FOR HEALTHY CHOICES.

Increased opportunities for physical activity, nutritious food, and tobacco-free living...

...means more people are physically active, eat better, smoke less and are exposed less to tobacco smoke...

...which leads to a reduction of obesity and tobacco related diseases and cancers...

...ultimately lowering health care costs and improving the quality of life of Minnesotans.

### Effective, evidence-based strategies

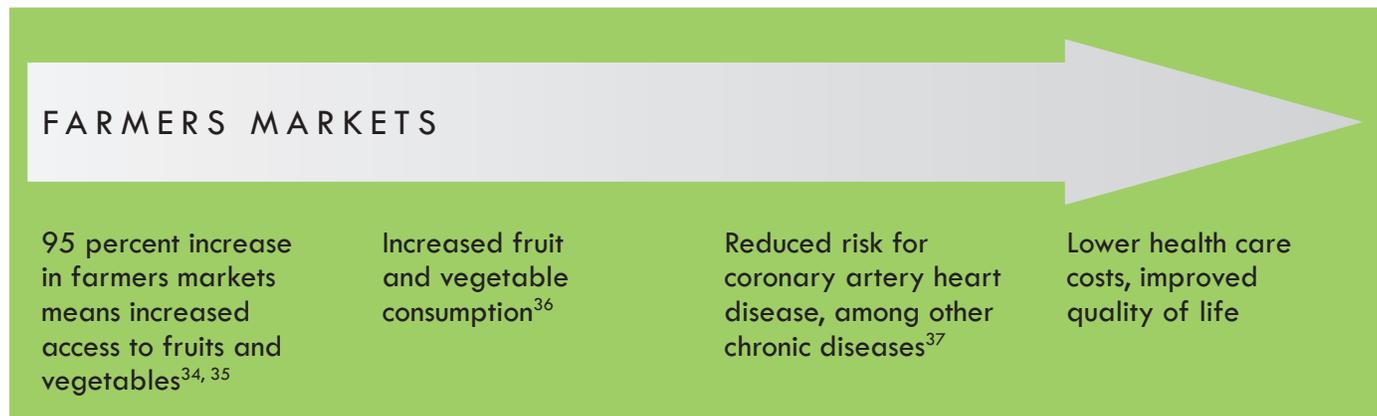
MDH developed a comprehensive menu of strategies designed to address obesity and commercial tobacco use and exposure. All strategies are researched-based and proven effective, all reflecting the current best practices in public health, including drawing from *The Guide to Community Preventive Services*<sup>27</sup> and CDC's *Best Practices for Comprehensive Tobacco Control Programs*.<sup>28</sup>

SHIP may look different than many traditional public health programmatic approaches. Traditional individual-based public health prevention programs generally result in behavior changes that can be difficult to sustain beyond the life of the program. For example, one traditional way to improve nutrition is to convince people to eat better through health education programs. These programs may or may not be effective, and generally any positive effect attained disappears when the campaign ends.

However, an extensive body of research suggests that the community has a big role in encouraging or inhibiting healthy behaviors for individuals.<sup>29</sup> Therefore, SHIP works with communities to create opportunities for healthy living by making towns safer for biking and walking, increasing access to healthy foods, making college campuses tobacco-free, and much more.

## S H I P O V E R V I E W

For example, SHIP works with local organizations, businesses and communities to encourage farmers markets. As a result, in the first two years of SHIP the number of farmers markets across the state jumped 95 percent, supporting access to fruits and vegetables for more Minnesota communities. Evidence shows that farmers markets have the potential to increase access to fruit and vegetables<sup>30, 31</sup> and to increase fruit and vegetable consumption.<sup>32</sup> And we know that increasing fruit and vegetable consumption by as little as one portion per day may lower the risk of coronary artery heart disease by four percent.<sup>33</sup>



### Local control

It is one of the key tenets of SHIP that local governments, businesses, schools and leaders are the experts when it comes to their communities. Strategies that work best in Minneapolis may or may not be the best option for Martin County or the Leech Lake Tribal Community. Therefore, the key to SHIP's success is working with communities so that their health improvement strategies are effective and relevant for them, fitting the needs of that particular community.

### Partnerships

Improving health outcomes requires strong public-private partnerships. SHIP has launched new community partnerships across the state not only with local public health and tribal grantees, but also with businesses, farmers, schools, community groups, chambers of commerce, hospitals, health plans, city planners, county boards, tribal officials and more. These partnerships have successfully implemented changes in schools, health care systems, workplaces, and the broader community level that help assure the opportunity for better health for more Minnesotans.

### **Technical assistance**

From the beginning of SHIP, it was clear that in order to be successful, technical assistance needed to be available to SHIP communities. A system was developed, and now a team of experts, both internal and external to MDH, provides specific trainings, responsive one-on-one technical assistance, extensive guidance documents and peer-to-peer technical assistance that bolsters grantees' ability to successfully implement SHIP strategies. At the beginning of the SHIP grants in 2009, many grantees had a steep learning curve on how to be successful in their communities. Now, as SHIP moves forward, grantees are becoming the experts, both in the state and nationally, and will increasingly help and mentor each other.

### **Evaluation**

Evaluation is an indispensable component of SHIP. It tells us what is working and where improvement is needed. SHIP evaluation is rigorous and science-based. It measures the impact of the state's investment in evidence-based, community health improvement practices, which over time work to prevent costly chronic diseases, such as heart disease, stroke, diabetes and cancer.

The evaluation methods and expected outcomes have evolved as SHIP grantees have advanced in their work. The evaluation framework builds on the progress made and lessons learned from previous SHIP funding cycles. (See "Going forward: evaluation" for details on SHIP evaluation currently underway.)





## Year Three Results

### Schools lead the way

In their role as educators of our young and as centers for community involvement, schools have one key to success for SHIP.

#### SUCCESS STORY MARTIN COUNTY: SAFE ROUTES + WALKING TUESDAYS = HEALTHY KIDS

With the help of SHIP, Safe Routes to School has become a school day staple in Fairmont. Safe Routes to School helps more kids walk and bicycle to school more often through infrastructure improvements, education and promotional activities. Beginning in 2010, the Safe Routes to School program in Fairmont was a hopeful discussion among local elementary schools, the Fairmont Police Department, a local hospital, newspaper and bus company as well as other business and community members. In 2012, the group's mission resulted in wider crosswalks, more curb cuts, extra crossing guards, pedestrian and bike safety education, and a Walking Tuesday program for local schools.

Getting kids moving is one key to creating good health. Since 1980, the number of overweight children has tripled. Safe Routes to School programs have been shown to increase physical activity by 20 to 200 percent, which should lead to healthier weights and healthier children.<sup>38</sup>

**“Working with schools helps SHIP reach out to the entire community. Once you have a school on board, the community is quick to follow because they see firsthand the change that can take place to make their communities a healthier place to live.”**

**—Chera Sevcik, SHIP supervisor, Cottonwood, Jackson, Faribault, Martin & Watonwan Counties**

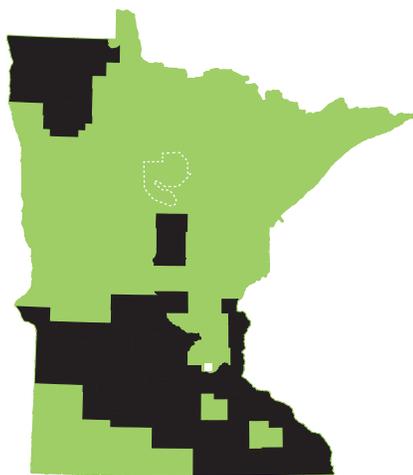
**“It does my heart good to see 50 bikes parked outside an elementary school. It’s a great problem to have when we run out of space on the bike racks!”**

**— Jo Anne Judge-Dietz of Olmsted County SHIP**

Walking Tuesday has become a weekly occurrence at four Fairmont elementary schools. Chaperones from the local Kiwanis Club led the group on a half-mile walk two days per week. “It was up to the kids but we had about 90 percent participation. And we had a chaperone for each bus so kids had someone to walk with,” commented Lia Lambert, SHIP community specialist.

“The chaperones look forward to it and really get involved with the group,” commented Joe Burns, retired Fairmont teacher and Safe Routes to School leader. “Comradeship has developed between these groups...they chat together and laugh. You can’t believe how many times shoes become untied in a half-mile walk,” chuckled Joe.

About 60 students participated in Safe Routes to School at least one of the weeks. Parents expressed relief that they can send their children off to walk or bike to school safely. Teachers are supportive too. According to Jessica Seide, Martin County SHIP affiliate, “The teachers are excited that kids are getting some physical activity in the morning because it helps them to concentrate more in the classroom.”



■ 2012 Active School Day

### **STRATEGY: More physical activity**

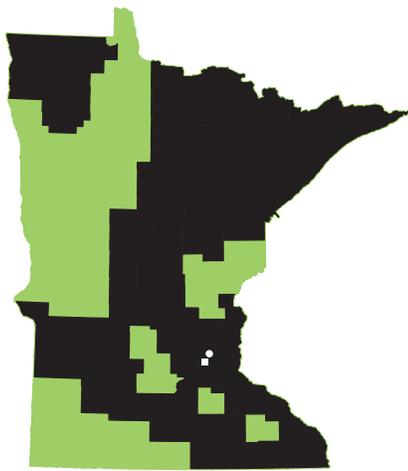
Inadequate physical activity is associated with increased disciplinary problems and diminished academic achievement among youth.<sup>39</sup> Across Minnesota, schools are working to increase physical activity within the instructional setting, building a foundation for lifelong physical activity. Active classroom breaks, physical education and recess all mean kids not only are healthier, but also learn better.

Safe Routes to School is a key strategy for getting kids moving. With Safe Routes to School, more kids walk and bike to school more often through infrastructure improvements, education and promotion. Walking and biking to school helps families stay active and healthy and kids arrive to school focused and ready to learn.

**RESULT: Through the first three years of SHIP, 215 schools have worked on Safe Routes to School, with the potential to have 143,000 students more physically active as they walk or bike to school.**

In 2012:

- 16 grantees are engaged in Active School Day.
- 13 grantees are working on Safe Routes to School.
- 153 schools are working on the Safe Routes to School strategy, with the potential of helping 90,800 schoolchildren be more active.
- 64 percent of the schools working on the Safe Routes to School strategy are new to the program.



■ 2012 Farm to School

### STRATEGY: Healthier food for kids

This strategy includes Farm to School and healthy school food options in snack carts, school stores, concessions, vending machines, food rewards, fundraisers, and celebrations.

By connecting local farmers to schools through Farm to School programs, schools are able to offer more fresh fruits and vegetables. Kids learn about where their food comes from, all while supporting local farmers.

Healthy school food options looks at all foods which are not part of the U.S.D.A. reimbursable school meal program (the Minnesota Department of Education works with schools to implement the U.S.D.A. reimbursable school meal program).

**RESULT: In the first three years of SHIP, 440 schools have been working on Farm to School strategies, giving access to locally grown fresh fruits and vegetables to 235,000 students.**

In 2012:

- All 18 grantees worked to bring healthy food to kids.
- 11 grantees are working on the Farm to School and/or school garden strategies.
- 245 schools are working on the Farm to School and/or school garden strategies, with the potential of helping 107,000 schoolchildren eat healthier.
- Half of the schools working on Farm to School and school gardens are new to those strategies.



■ 2012 Tobacco-free post-secondary campuses

### STRATEGY: Tobacco-free post-secondary campuses

Post-secondary schools are working to help students avoid exposure to secondhand smoke through tobacco-free campus policies. Meanwhile, schools of all sizes are working to connect students with smoking cessation services including quitlines, quitting websites and face-to-face counseling.

In the first cycle of SHIP, these were organized as two separate strategies—tobacco-free campuses and connecting students with smoking cessation services. Both are now considered together.

**RESULT: In the first three years of SHIP, 59 campuses are now or will soon be smoke-free, helping 146,000 students.**

In 2012:

- 17 grantees are working with campuses to ban tobacco use.
- 28 campuses are new to this strategy, reaching 108,000 students.

## Strong partnership with business

Healthier employees save money for businesses, reducing absenteeism and health care costs.

### RICE COUNTY IS ACHIEVING WELLNESS IN THE WORKPLACE

Over 8,000 employees across Rice County are on the move, making better food choices and reducing tobacco use. The secret behind their health kick? Rice County's SHIP worksite project, Healthy Rice County: Achieving Wellness in the Workplace.

Comprehensive workplace wellness has been shown to not only improve employee health but also business profits,<sup>40, 41, 42</sup> lowering health care costs and increasing employee productivity with an impressive return on investment of 3:1 to 6:1.

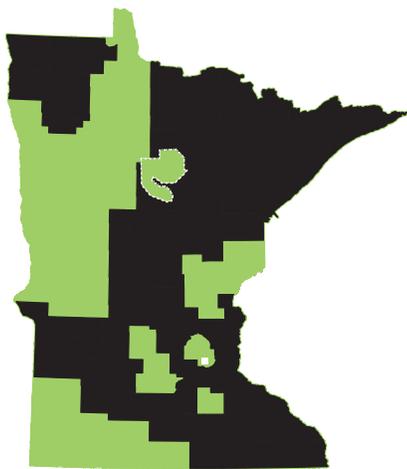
The program has thus far helped more than 20 worksites in Faribault, Northfield and surrounding areas to learn about ways to offer healthier foods and encourage employees to increase activity and reduce tobacco use.

"Interest in the program began when Rice County Public Health sent a press release to media outlets about the new SHIP initiative," says Natalie Ginter, Rice County SHIP coordinator. "Blue Cross and Blue Shield of Minnesota led the recruitment process by mailing invitation letters and making follow-up phone calls to top leaders and human resources staff of more than 80 Rice County organizations."

One example of the program's effectiveness is State Bank of Faribault, which has seen a rapid culture shift following its wellness initiatives. It offered employees an incentive of reduced health care premiums for taking certain steps to improve their health. Nearly all employees became engaged. The incentive criteria were participation in biometric screenings (for cholesterol, triglycerides and blood sugar) and a health assessment, setting a personal health goal, and attendance at two talks within a four-part series about healthy living. The employer also encourages physical activity through walking and exercise balls and offers information on healthy nutrition.

**"The Minnesota Chamber of Commerce strongly supports expanding opportunities for small businesses to participate in wellness programs. Employers care about the health of their employees. Businesses of all sizes should have the chance to implement wellness programs that will help employees lead healthier lives and strengthen Minnesota's workforce."**

**— Kate Johansen,  
manager of Health and  
Transportation, Minnesota  
Chamber of Commerce**



■ 2012 Workplace Wellness

### **STRATEGY: Comprehensive Workplace Wellness**

Comprehensive workplace wellness employs voluntary policies to improve nutrition, increase physical activity and promote smoking cessation among Minnesota workers, improving employee health while reducing absenteeism and the health care costs incurred by employers.

Comprehensive workplace wellness addresses healthier food (includes vending, cafeteria, catering, breastfeeding support), physical activity (includes active transportation such as walking, biking, transit; access to facilities such as on-site facilities, connect to area facilities, flexible scheduling), and tobacco-free worksites (includes access to cessation services and comprehensive cessation benefits).

In the first funding cycle of SHIP, all grantees were required to work on workplace strategies. In the second funding cycle of SHIP, this strategy was made optional due to funding cuts.

**RESULT: In the first three years of SHIP, 940 worksites have engaged in the worksite wellness strategy with the potential to engage 154,500 employees in more physical activity, healthy eating and tobacco cessation.**

In 2012:

- 11 grantees are implementing the workplace wellness strategy.
- 73 worksites are new to workplace wellness, with the potential to reach 16,500 employees.



## Getting kids off to a healthy start

We all want to raise healthy, happy kids, but sometimes it's not so easy. Sometimes parents and caregivers need support to be able to get little ones off to a healthy start.

**“I encourage all child care providers to attend these trainings—they’ve been incredibly helpful on many levels.”**

**—Becky Hagestuen, owner and primary care provider for Seeds to Grow Licensed Day Care in Andover**

### WELLS PRESCHOOLERS HIT THE GROUND RUNNING

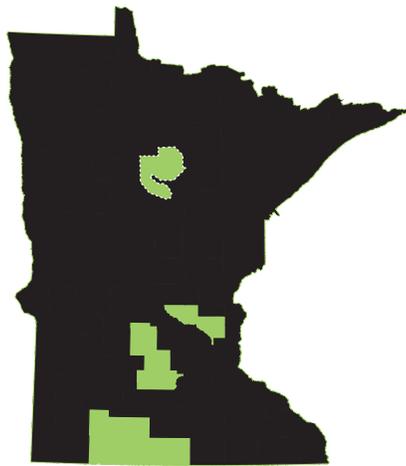
Carol Goeden, a family home daycare provider in Wells, Minnesota, wasn't sure what she was getting herself into when she signed up in 2012 for a free training provided by the Statewide Health Improvement Program. The trainings focused on encouraging physical activity and healthy eating among their young charges. Afterwards, Carol describes the training as awesome. “In 36 years of child care this was the best training I’ve attended. The presenters knew their material and were enthusiastic, and the day was well worth attending.”

The trainings highlighted two specific programs. Learning about Nutrition through Activities (LANA), originally developed by the Minnesota Department of Health, is a popular curriculum designed to help young children learn to taste, eat and enjoy more fruits and vegetables to promote good health, and has been shown to increase fruit and vegetable consumption. I am Moving, I am Learning (IMIL) works to get kids active, which is not only good for health, it's great for learning. Both programs help build a lifetime of healthy habits.

Participants received kits and materials which allowed them to begin implementing the program right away. The LANA curriculum was provided to each of the county-seat libraries for general circulation so providers could check it out as they needed it.

Carol and her kids hit the ground running. “We were able to start using IMIL right away and the kids love it. The nutrition information was also very valuable and the kids loved making and eating the ‘Stoplight Snack.’ I’ve already checked out the LANA curriculum at the library and used it with the kids!”





■ 2012 Healthy food child care

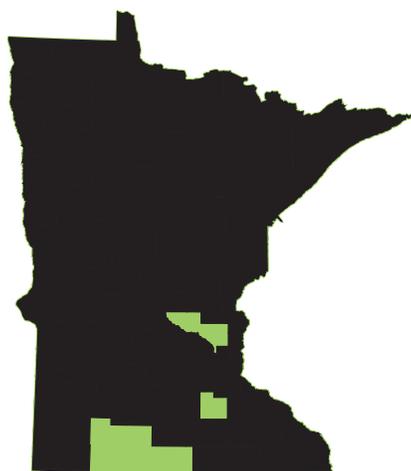
### STRATEGY: Healthier eating in child care

Getting started early is so very important; building healthy eating habits when kids are little helps lead to healthy habits throughout life. SHIP helps early childhood programs offer healthy eating practices, including the highly successful Learning About Nutrition through Activities (LANA) program.

**RESULT: Through the first three years of SHIP, 580 child care sites pursued strategies for healthier eating, benefiting 10,400 children.**

In 2012:

- 5 grantees are working at child care centers to improve healthy eating.
- 46 child care sites (both in-home child care and child care centers) are working on healthy eating strategies, potentially helping 2,200 children.
- 96 percent of child care sites working on healthy eating are new to SHIP, reaching 1,905 new children.



■ 2012 Physical activity child care

### STRATEGY: More physical activity in child care

Building physical activity into a young child's day through programs such as I am Moving, I am Learning (IMIL) helps them grow up healthy and strong, making physical activity a part of their lives.

**RESULT: Through the first three years of SHIP, 1,070 child care sites have increased physical activity for 23,900 children.**

In 2012:

- 4 grantees are working at child care sites to improve physical activity.
- 175 child care sites (both in-home child care and child care centers) are working on physical activity, potentially helping 2,900 children be active.
- Of the 175 child care sites, 96 percent are new to the strategy.

**“We want to provide a safe way for people who want to, to get from one end of town to the other, whether that’s by bike, on foot or even in a wheelchair.”**

**—Jeff Moberg, Southwest Health and Human Services**



## Communities make healthy living easier

The community in which a person lives has a huge effect on the healthy choices available. SHIP community efforts work to increase these choices which benefit virtually all Minnesotans, from the playgrounds kids use and the bikes paths they and their families enjoy, to their trips to the weekend farmers market and the air in their apartment.

### NEW—NOW SMOKE-FREE—TOWN

In 1973, “New Town—In Town” was the utopian project name for Riverside Plaza. Calling Riverside Plaza a ‘town’ is no exaggeration; it is the largest affordable housing development in the state, forming a neighborhood with 1,303 mixed income units housing approximately 4,440 individuals. Like a town, it has a K-8 charter school, grocery store, and resource center with social services, such as a computer lab and job training. On January 1, 2013, it became smoke-free.

Minneapolis SHIP, part of the City of Minneapolis Department of Health and Family Support, partnered with Wellshare International and the Association for Nonsmokers (ANSR) to pass a smoke-free building policy. The policy, applying to all indoor spaces, including individual apartments, means Riverside Plaza will be the largest housing complex in Minnesota to provide a smoke-free living environment for its residents.

“The smoke-free policy is going to support and make Riverside Plaza housing complex a better environment to live in,” says Abdulkadir Warsame, executive director, Riverside Plaza Tenant Association. “It will help the most needy or those vulnerable within the community—such as small children and the elderly—to breathe air free from tobacco.”

It took a lot of groundwork to be successful. Wellshare, a non-profit dedicated to improving health, conducted a door-to-door survey of residents, mostly East African immigrants. At first, 68 percent supported the policy. Wellshare then created a video for the property’s in-house cable show explaining the dangers of secondhand smoke and the upcoming policy change. Meetings were held with residents and staff to explain the policy and hear concerns. Eventually, 82 percent supported the policy. As a result, in late fall of 2011 Riverside Plaza decided to go smoke-free.

Building managers Sherman & Associates are now interested in expanding smoke-free air to their four other properties in Northeast Minneapolis.

Wellshare, the health department, ANSR and Sherman & Associates all working together show how SHIP partnerships can create benefits for all. Of course, most importantly, it was beneficial for the residents. Says Warsame, “This will go a long way to help in their health.”



2012 Active transportation

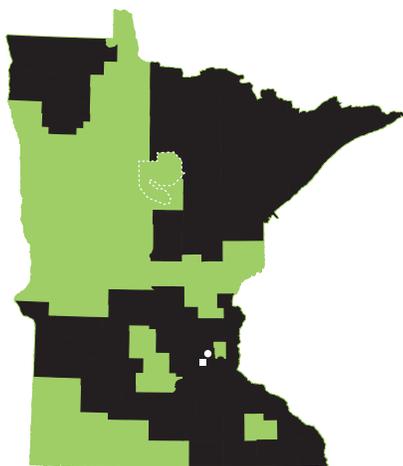
### STRATEGY: Making physical activity the norm

Cities and counties across Minnesota are working on creating master walk and bike plans; updating municipal plans to include Complete Streets with sidewalks and crosswalks; increasing access to connected walking and bicycling networks; connecting and promoting trail systems; and collaborating on projects that improve walkability and bikeability in communities.

**RESULT: In the first three years of SHIP, 293 cities worked to increase biking and walking.**

In 2012:

- 14 grantees implemented active transportation strategies in their communities.
- 66 cities were working on active transportation, potentially helping 1,000,000 people.
- 38 cities are new to active transportation, reaching 500,000 people.



2012 Farmers markets

### STRATEGY: Better nutrition for everyone

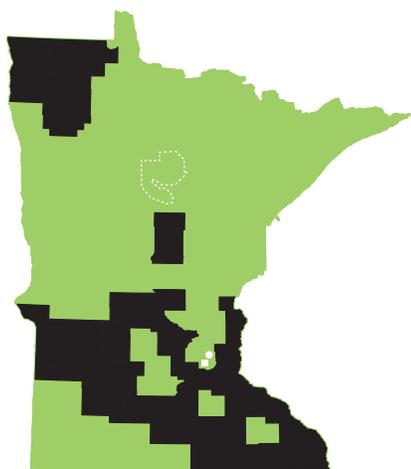
Too many Minnesotans cannot find fresh fruits and vegetables near their homes, or what they can find is limited and expensive. Therefore, SHIP works with communities to increase access to and consumption of fruits and vegetables through farmers markets, healthy corner store initiatives, and other community-based healthy eating strategies.

**RESULT: In its first three years, SHIP worked to support or create 71 farmers markets across Minnesota.**

In 2012:

- 13 grantees are working with communities to increase the availability of healthy food in the community.
- 9 grantees worked with 45 farmers markets, 18 (40 percent) of which were new to working with SHIP.

Community healthy food strategies were adjusted and combined for the second funding cycle of SHIP. “Community Healthy Food Environment” includes “farm to fork” (bringing local produce into non-school institutions such as hospitals and businesses), healthier food in stores and restaurants, and nutrition labeling in restaurants and on vending machines.



**2012 Smoke-free apartments**

**STRATEGY: Families living free of secondhand smoke**

SHIP grantees are working to reduce individuals’ exposure to secondhand smoke and increase access to cessation services for current tobacco users. Apartment building owners who go smoke-free can avoid the expense of apartments damaged by smoking, while families are able to live free of secondhand smoke.

**RESULT: In three years, approximately 24,000 apartments are now smoke-free because of SHIP, meaning up to 52,000 people are no longer exposed to secondhand smoke at home.**

In 2012:

- 17 SHIP grantees are working to increase their availability of smoke-free multiunit housing.
- 10,600 apartments are either smoke-free or will soon be smoke-free, with potentially 41,400 residents no longer exposed to secondhand smoke at home.



## Working with health care providers to help improve the long-term health of patients

In their position on the front lines of the battle against chronic disease, health care providers are powerful advocates for health improvement through prevention.

### ANOKA COUNTY CLINICIANS GET MOTIVATIONAL

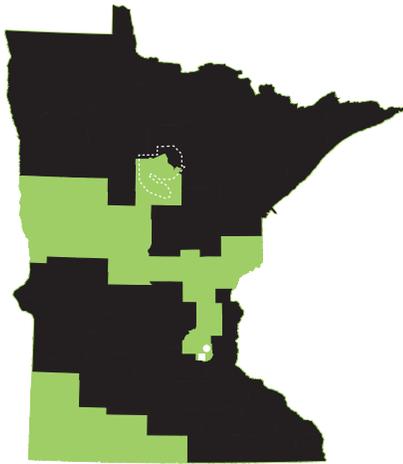
Effecting real behavior change for patients is often a challenge for health care providers. One answer: Motivational Interviewing (MI). Anoka County SHIP organized MI trainings for clinicians as part of addressing obesity and tobacco use and exposure with patients. MI is a directive communication style that allows patients to have a conversation to elicit intrinsic reasons for making a behavior change related to nutrition, physical activity, and tobacco, and has been shown to be effective in changing behavior.<sup>43</sup> Providers had the opportunity to practice reflective listening, methods to acknowledge clients' ambivalence, and strategies to shift the focus away from barriers toward self-motivating statements and goals.

Since January 2012, twelve clinicians/clinic staff have been trained in MI, including those at Nucleus Clinic and North Metro Pediatrics. 75 percent of patients at Nucleus Clinic are at or below the poverty level. Becky Fink, executive director of Nucleus Clinic, recognizes that preventive health services such as blood pressure and weight measurement, as well as education and promotion of healthy lifestyle behaviors, are important to help protect and maintain the health of her patients. Staff are enthusiastic about MI and the opportunity to enhance their practice.

North Metro Pediatrics is the only sliding fee scale, community-based pediatric clinic in Anoka County. The majority of North Metro Pediatrics patients are of low income and over 50 percent of the patients served are people of color. Director Connie Blackwell states, "We are very excited about MI. It is a wonderful way to empower our pediatric patients and their parents and build their confidence in making healthy choices most meaningful to them."

**Praise for Anoka County's breastfeeding specialist training: "The training was incredibly helpful. It gave us new ways to motivate our clients, helping us go more in-depth as to how the mother provides for her baby."**

**—Becky Marcoux, public health nurse, RN**



■ 2012 Health care participation

**STRATEGY:**  
**Prevention in health care**

Clinics and hospitals provide a unique setting where people discuss their health with medical providers, making providers key to the success of health improvement in Minnesota. Health care providers promote healthy lifestyle behaviors by encouraging individuals to maintain healthy eating habits, participate in regular physical activity, avoid the use of tobacco products and limit exposure to secondhand smoke, as well as make referrals to community resources.

A key chronic disease prevention strategy for health care providers is support for breastfeeding. Breastfeeding saves on health care costs because of fewer sick care visits, prescriptions, and hospitalizations.<sup>44</sup> Breastfed babies are at a lower risk for many health problems, such as ear and respiratory infections, diarrhea, asthma and obesity, and mothers who breastfeed are less likely to develop diabetes or breast or ovarian cancer.

In the first funding cycle of SHIP, all grantees were required to work on health care strategies. In the second funding cycle of SHIP, all health care strategies were combined into one comprehensive strategy and made optional due to funding cuts.

**RESULT:** In the first three years of SHIP, throughout the state grantees worked with health care providers. In the first two years, 60 public health and primary care clinics worked on patient assessment and referral and 73 on supporting breastfeeding. In 2012, 43 health care sites are working on these health care strategies combined.

In 2012:

- 9 grantees are currently working on health care strategies potentially helping 267,000 patients.
- 26 health care sites are new to working with SHIP, reaching 91,700 clients.



## Innovative Strategies

New in the second funding cycle of SHIP was the ability for grantees to explore “innovative strategies,” or strategies that are new and show promise for future SHIP work. Several promising programs resulted that may serve to inform SHIP work in the future.

### WADENA: MORRISON-TODD-WADENA COMMUNITY HEALTH BOARD: “IF YOU GOT IT, YOU’LL EAT IT”

Ms. Lil Swenson, 85, of Humphrey Manor in Wadena, has always enjoyed eating vegetables. “I always have tried to serve a balanced meal,” she says. Sometimes that’s not so easy, especially for those who may not be as mobile as they once were. So when public health, Meals on Wheels and local growers teamed up to provide fresh, nutrient-dense fruits and vegetables to homebound seniors, Lil was happy to take part. “I am used to having my own garden, but now I can’t do all of that.”

Todd and Wadena Public Health with SHIP funding implemented the Senior Fruit & Vegetable Program with the help of the Eagle Bend and Wadena Senior Nutrition Sites and the Staples and Wadena farmers markets. The program’s goal was to increase fruit and vegetable consumption in homebound seniors, since healthier eating is one key to better health. Increasing fruit and vegetable consumption by as little as one portion per day may lower the risk of coronary artery heart disease by four percent.<sup>45</sup>

The program is great for local growers, too. They have a steady, standing order every two weeks they can count on at a guaranteed price per pound.

People have noticed. “Other communities have already contacted us to replicate the program,” says Katherine Mackedanz at Todd County Public Health. “This program is a great example of using existing resources—local growers, senior nutrition sites, and Meals on Wheels drivers—to provide a valuable service delivering fresh, local fruits and vegetables to seniors.”

At the end of the summer season, Lil reflected on what she enjoyed the most about the program. She liked the excitement of anticipating what produce would come in the bags as well as the quality of the produce. “I was so impressed by how clean the produce was.”

In the first year, 43 seniors participated in the program. A five-pound bag of fresh fruits and vegetables were delivered every other week throughout this past summer. In total, 1,290 pounds of produce were delivered. The result was eating healthier. It worked for Lil. “If you got it, you’ll eat it,” she says.



*Fresh fruits and vegetables for seniors*

Three examples of innovative strategies are:

### **Healthy Hubs**

Currently, Minneapolis is working with four sites with a potential reach of 9,300 people. The Minneapolis Department of Health and Family Support identified four community organizations to serve as “healthy hubs.” Each ‘hub’ is targeting 2,000–5,000 people living in a specific geographic area and working to address smoke-free living, physical activity, healthy eating and health care. The organizations have two primary objectives: 1) expanding the concentration of healthy living resources in their communities, and 2) increasing community awareness and participation in new and existing healthy living resources through community engagement.

St. Paul/Ramsey County is working with public housing to create a healthy hub addressing tobacco, healthy eating and active living. Currently St. Paul is working with 1,432 housing units (apartments) with a potential reach of 5,600 people.

### **Healthy Developments**

Minneapolis is working with affordable housing to impact 22,000 sites with a potential to reach 48,000 people. The goal of the Healthy Housing Development strategy is to identify and exercise the leverage that Minneapolis has through its affordable housing funding programs to create/redevelop housing that protects and promotes health.

### **African American Health**

In their efforts to help populations most impacted by health disparities, St Paul/Ramsey County is working with predominately African American churches and their parishioners on health issues. Currently they are working with 12 churches with a potential reach of 8,600 members.



## Going Forward

To prepare for the prospect of a third cycle of SHIP in FY 2014-15, MDH is preparing a Request for Proposals for a competitive grant process. MDH is assessing its strategies, evaluation and sustainability with an eye toward continual improvement, and is benefiting from the work of Healthy Minnesota 2020 and outside evaluation from the Robert Wood Johnson Foundation.

### Better health: Healthy Minnesota 2020

As SHIP plans for the future, it will benefit from Healthy Minnesota 2020 as guidance, allowing for an integrated, community-driven, goal-oriented approach to health improvement.

Healthy Minnesota 2020 was released in August 2012 ([www.health.state.mn.us/healthymnpartnership/hm2020](http://www.health.state.mn.us/healthymnpartnership/hm2020)) with a simple vision: that all people in Minnesota enjoy healthy lives and healthy communities. The framework focuses primarily on the factors that create health, rather than on disease and other health outcomes.

The plan was developed by the Healthy Minnesota Partnership, a group convened by the Commissioner of Health to develop public health priorities, indicators and strategies to improve health and wellness for all Minnesotans. The members of the Healthy Minnesota Partnership come from rural, suburban and urban communities; from hospitals, health plans and public health departments; from business and government agencies; and from faith-based and community organizations.

With this broad base of support, three themes for Healthy Minnesota 2020 emerged:

- Capitalize on the opportunity to influence health in early childhood.
- Assure that the opportunity for health is available everywhere and for everyone.
- Strengthen communities to create their own healthy futures.

While predating Healthy Minnesota 2020, SHIP helped inform the work of the partnership and now serves as a major tool toward implementation of this vision. In fact, the three themes for Healthy Minnesota 2020 are a good expression of how SHIP works.

## Technical assistance from the Robert Wood Johnson Foundation

The Office of Performance Improvement at MDH received a grant from the Robert Wood Johnson Foundation Public Health Systems and Services Research Program to analyze how support for public health efforts in community-based health improvement is working.

The project looked at the first cycle of funding of SHIP grantees. Some lessons learned in implementing SHIP strategies include:

- SHIP and its philosophy of focusing on community-level health improvement changes (versus individual behavior change) represented a major learning curve for almost all grantees; however, those local health departments and grantees that were able to be flexible and embrace this new approach were better able to implement the program.
- Over time, most policymakers and community members were able to see the value of SHIP and many initiatives were sustained. Yet the timeframe was too short to truly see the full benefits of the work.
- Established relationships between grantees and community organizations seemed to better position projects for success.
- Ability of grantees to give out mini-grants was viewed as quite beneficial to the projects.
- Hiring staff as opposed to using consultants or contractors was important for sustainability.
- SHIP allowed local health departments to hire staff with more varied backgrounds than is typically found at the local level.
- The regional approach was highly praised and has resulted in local health departments working together and collaborating on other, non-SHIP activities.
- Additional resources were critical for beginning these types of projects, many of which were at least partially sustained after funding was reduced or eliminated because community members and county boards recognized the importance.

Suggestions for SHIP going forward include:

- Recommending a shorter list of potential strategies (as in the second cycle of SHIP)
- Grants manager approach much appreciated (as in the second cycle of SHIP)
- Statewide approach key—several respondents voiced that having support from neighboring grantees and feeling like everyone was in it together was important to their success.

## Strategies

As previously discussed, SHIP has developed a menu of strategies that are evidence-based, proven ways to increase physical activity, improve nutrition, and decrease use and exposure to commercial tobacco. Between the first cycle of SHIP funding and the second, adjustments were made based on evaluation and continued research with an eye toward continual improvement. For the next cycle of SHIP, this process of quality improvement will continue.

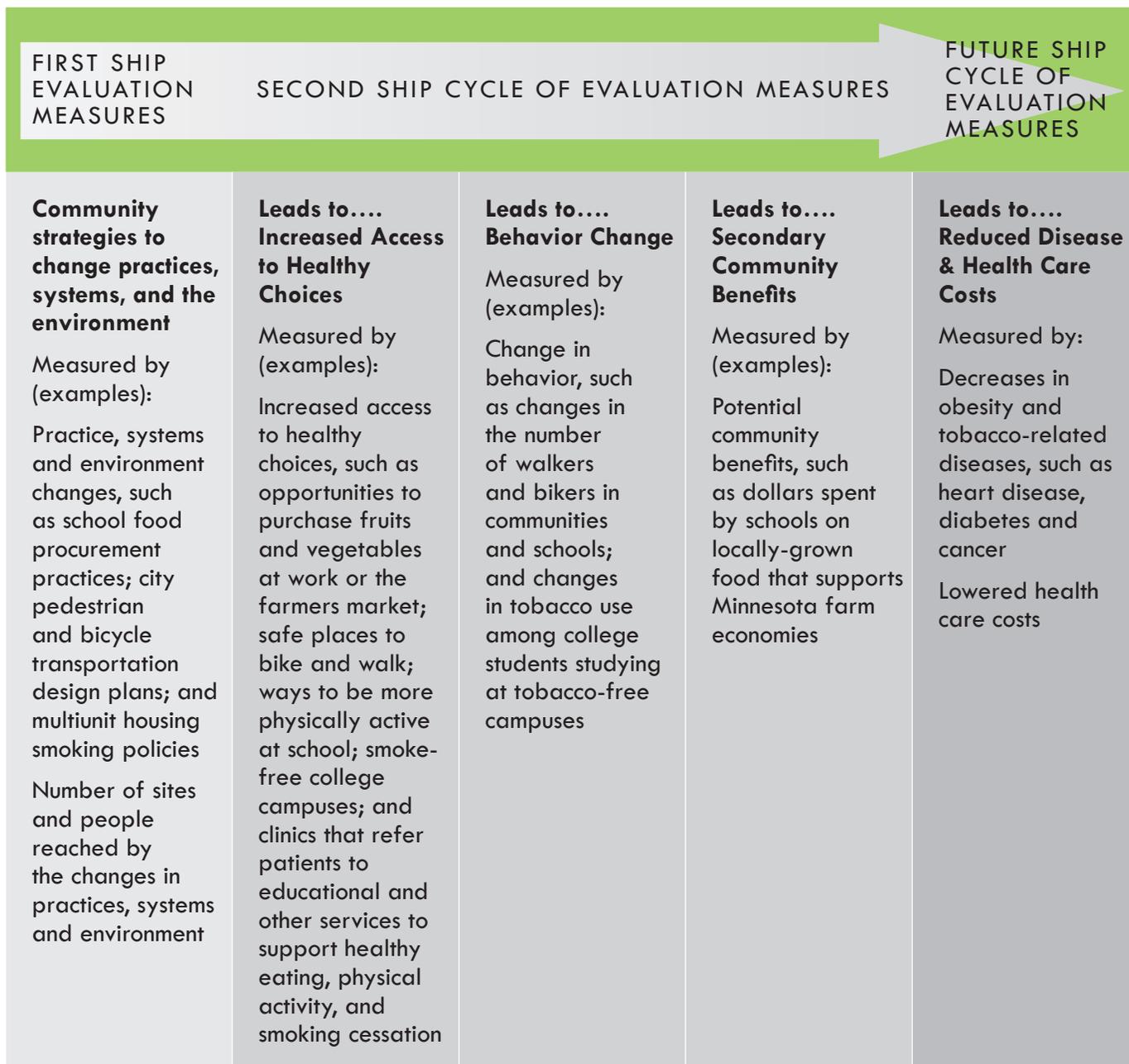
Over the long term, several new areas of interest are emerging nationally and locally that may inform future SHIP strategies. As SHIP looks more to populations that suffer unequal health outcomes, more strategies that work toward “health equity” will be developed and improved. For example, community engagement strategies—working with specific populations rather than only larger geographic areas—may prove fruitful in reducing Minnesota’s high rate of health disparities.

SHIP is at its foundation a realization of true primary prevention strategies—improving health before disease is present. SHIP does this by directly addressing “social determinants of health”—the concept that good health is created by more than biological determinism and individual choice, but the community in which Minnesotans live, work, learn and play. Given this understanding, SHIP looks toward developing strategies in partnership with our grantees that will address more social determinants of health in new and innovative ways. Early childhood, mental health, and the previously mentioned health equity are three areas where the SHIP model may be applied effectively in the future.

## Evaluation

SHIP evaluation methods and reporting systems continue to improve as the program matures, all building toward a goal of measuring behavior change, community and state public health outcomes, and cost savings.

### SHIP evaluation model and timeline



## G O I N G F O R W A R D

During the first cycle of SHIP funding from 2009-2011, evaluation focused on changes in practices, systems and the environment that made healthy choices easier in school, community, worksites and health care settings. The first cycle of evaluation also documented the number of sites and people reached by SHIP community strategies.

The second funding cycle of SHIP evaluation is underway now. With this evaluation phase, MDH will begin to measure outcomes such as changes in access to healthy choices, early behavior change and other community benefits (see table on previous page).

SHIP evaluation is increasingly able to measure changes in access to healthy choices (such as access to fruits and vegetables and healthy food vending options), and is also starting to measure behaviors (such as changes in numbers of people walking and biking). Changing behavior across a community, however, requires multiple strategies and sustained effort, so MDH will need to continue to monitor and enhance measurement of behavior change over time.

SHIP evaluation is also striving to capture other potential community benefits, such as the economic benefits of schools purchasing locally grown produce from Minnesota farmers, and the potential for improving student academic performance. These outcomes also take time to emerge and measure. (For details on specific areas of evaluation now underway, see Appendix B: Research Questions.)

The long-range goal for SHIP evaluation, assuming sustained support for an ongoing comprehensive program, is to measure changes in disease outcomes and health care costs. Long-term state trends can be measured by public health surveillance systems which track population-level health behavior and practices and disease prevalence and deaths. Efforts are also underway to work with state health care systems to improve preventive health care services and measure health care quality, health outcomes, and costs associated with obesity and tobacco-related diseases.

In addition, MDH recently began working with PRISM (Prevention Impacts Simulation Model), developed by the CDC. PRISM is a web-based tool that helps users model the likely impact of public health tobacco and obesity prevention strategies on a population's health. PRISM can be used to estimate how combinations of clinical, behavioral, environmental and other evidence-based interventions could influence cardiovascular disease and other disease-related risk factors, deaths, and costs. Through synthesizing the best available scientific evidence from multiple sources, PRISM:

- Models individual and combined interventions
- Estimates short- and long-term population health trends
- Projects future costs averted

MDH will use the PRISM modeling system to predict how SHIP strategies can improve chronic disease outcomes and reduce health care costs into the future.

## Sustainability

Sustainability is at the core of the SHIP menu of strategies. SHIP works toward long-term, community level change that will reap benefits for years to come.

This concept was put to the test when SHIP ceased to be statewide at the end of 2011. To gauge how sustainability works, it is useful to look at Dakota County, a grantee from the first cycle of SHIP that was not refunded.

According to Mary Montagne, health promotion supervisor at the Dakota County Public Health Department, the first cycle of SHIP “engaged numerous partners—schools, cities, businesses, and health care agencies—to actively work to increase healthy food options, physical activity, and reduce tobacco use and exposure in effective, sustainable ways.”

Schools across Dakota County have continued with the work started in 2009-11 with SHIP funding. For example, to do a Farm to School program, barriers have to be addressed. How do we connect with a farmer? Will kids like the food? How much will it cost? Once these barriers are addressed, they generally remain addressed. Connections are in place. Kids not only love the locally-grown fruits and vegetables, parents are expecting it to be served. Costs are dealt with (and with Farm to School, due to less food being thrown out, the costs may not have been as big of an issue as first thought).

Woodland Elementary School in Eagan is part of the large Rosemount-Apple Valley-Eagan School District, with 36 schools serving over 27,000 students. In March 2012, Woodland principal Lisa Carlson, Woodland food service manager Wendy Knight, and Barbara Griffiths, District 196 food and nutrition supervisor, gave MDH commissioner Dr. Ed Ehlinger and staff a tour of the school. The goal for MDH staff was to learn about new health-focused changes in the school, district and county. The school and district staff’s pride in Woodland was evident, for good reason. Baked chicken, fresh steamed vegetables, wheat berry salad and fresh fruit cups were on the menu, and kids lined up enthusiastically for the mostly locally-sourced meal. Add in the activity room where kids go to move while they learn math and other subjects and their Safe Routes to School program, and we have a true success story for the health of these Dakota County kids.

Not being a SHIP grantee, Dakota County did not report its SHIP outcomes for 2012. However, in addition to the schools making steady progress in healthy nutrition and physical activity, we know the active living efforts completed by cities in the first cycle of SHIP continue to support and encourage biking and walking. Dakota County Technical College and Inver Hills Community College continue to be smoke-free. At least some, if not all, child care programs that incorporated physical activity and nutrition programming continue to do so.



Dakota County has not done it without support. In large part because of their good work in building healthy communities, they have been able to win other funding, such as from Blue Cross and Blue Shield of Minnesota. Both current and former grantees often find that success breeds more success. Montagne reports, “We were able to access almost \$500,000 in external, non-SHIP funding for trails and other construction to support active living.”

But not everything continued, says Montagne. “When SHIP funding ended, we ceased working with businesses on tobacco issues (such as tobacco-free apartments and worksite grounds), and have been limited in working on Safe Routes to School. We don’t doubt that many of those policy changes have continued; however, we are unable to monitor or support them and there is so much more that could be done.”

While Dakota County had a good start in 2009-11, Montagne says there is much work left to do. “My priorities would be to support the schools to continue their work...[in] healthy eating and physical activity.” She cites the need for time and support to see efforts through on Safe Routes to School and physical activity initiatives. Plus, “We made great progress in tobacco-free apartments during the first two years of SHIP [31 smoke-free buildings]. It would be wonderful to expand that to protect more people from secondhand smoke and help others cut back and quit.”

This story is repeated in unfunded counties across Minnesota. Sustainability is real, but there is much work left to do.

\*\*\*

The needs are many, but the promise of SHIP is great. Helping communities build good health is not easy work, but it is work we must undertake as a state if we are to leave the next generation healthier than the last, their health care costs reasonable, and their communities stronger.

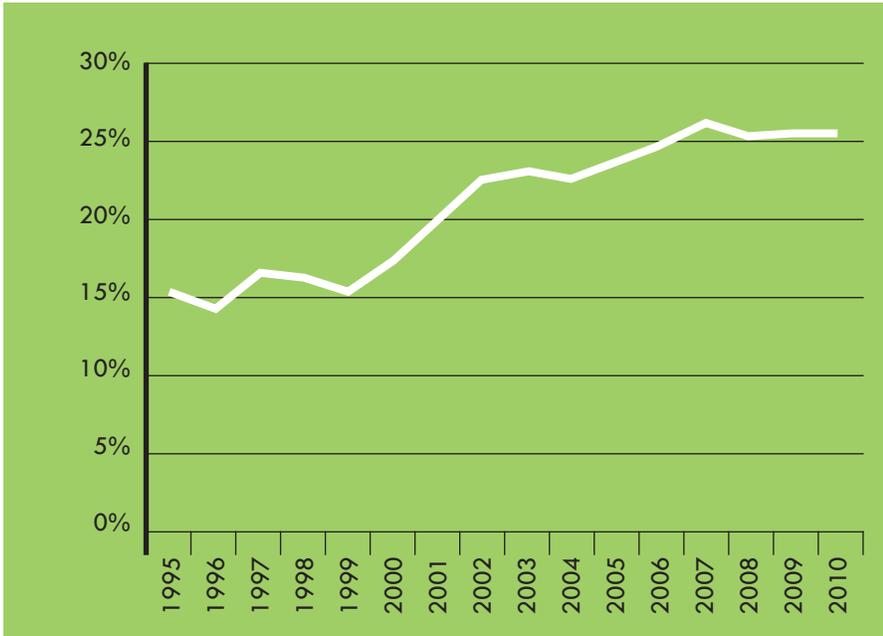
It is fitting that we return to Olmsted County, where this report began. Stewartville mayor Jimmie-John King, of whom we told his story of appreciation for the new farmers market, says, “With all the heart-healthy fruits and vegetables available, myself and our community are living happier and healthier lives. It means a lot to us in Stewartville to know that these fresh products are coming directly from our friends and neighbors.” This describes SHIP better than all the preceding pages.

Says Kelly Corbin, SHIP grant coordinator and resident of Rochester, “In the end this is my hometown, where I grew up, and SHIP is helping to make the community better for the next generation of hometown kids. I can see the kids at Essex Park apartments who are now living in smoke-free homes walk across a ‘complete street’ to the neighborhood school where they get healthy snacks and a locally-grown lunch, all thanks to SHIP. That’s just one neighborhood, but I could take you all around my city and point out how SHIP has made a difference. I couldn’t be more proud of my hometown.”



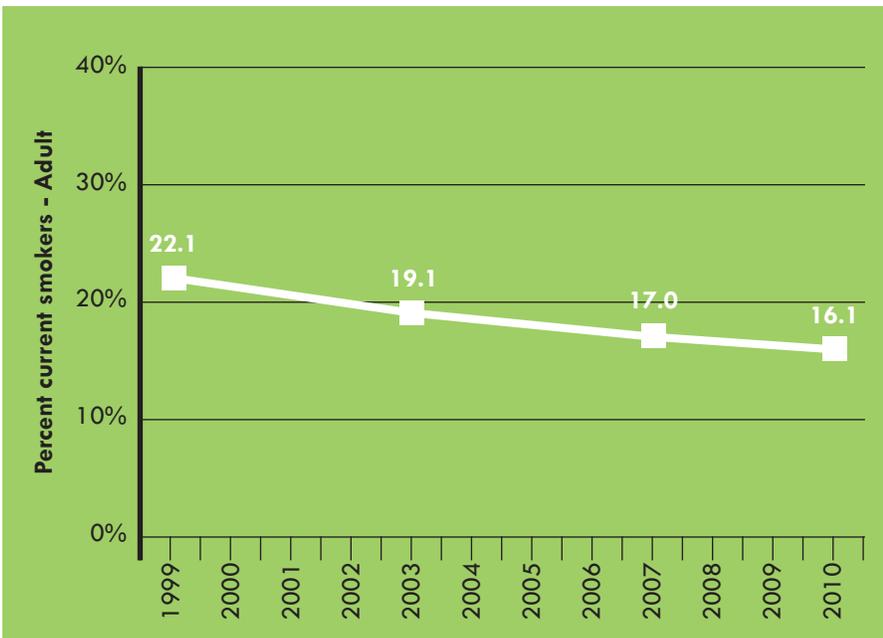
# Appendix A: Epidemiology Update

## Percent of Obese Adults - Minnesota



Source: <http://www.cdc.gov/brfss/>

## Percent current smokers



Source: Minnesota Adult Tobacco Survey: Tobacco Use in Minnesota 1999-2010  
<http://mnadulftobaccosurvey.net/>

## Obesity

Obesity rates have leveled off and there are some indications of declines in various populations. Why is less clear. In a September 2012 issue brief, “Declining childhood obesity rates—where are we seeing the most progress?” the Robert Wood Johnson Foundation concludes, “Growing evidence suggests that strong, far-reaching changes—those that make healthy foods available in schools and communities and integrate physical activity into people’s daily lives—are working to reduce childhood obesity rates.” To be sure, there are many variables in what drives—or may end—the obesity epidemic of the past 30 years, but one would expect that the great deal of effort and attention that has been applied to it locally and nationally may be having its intended effect.

Nationally, more than two-thirds of adults and almost one-third of children and adolescents are overweight or obese, and since 1980 obesity rates have doubled for adults and tripled for children.

## Tobacco use and exposure

Despite significant progress toward reducing the number of Minnesotans who smoke cigarettes or use smokeless tobacco, 21 percent of Minnesota adults are still current tobacco users, including 16 percent who are current cigarette smokers. Cigarette smoking was responsible for the premature death of an estimated 5,135 Minnesotans in

2007, about one in every seven deaths in the state.<sup>46</sup>

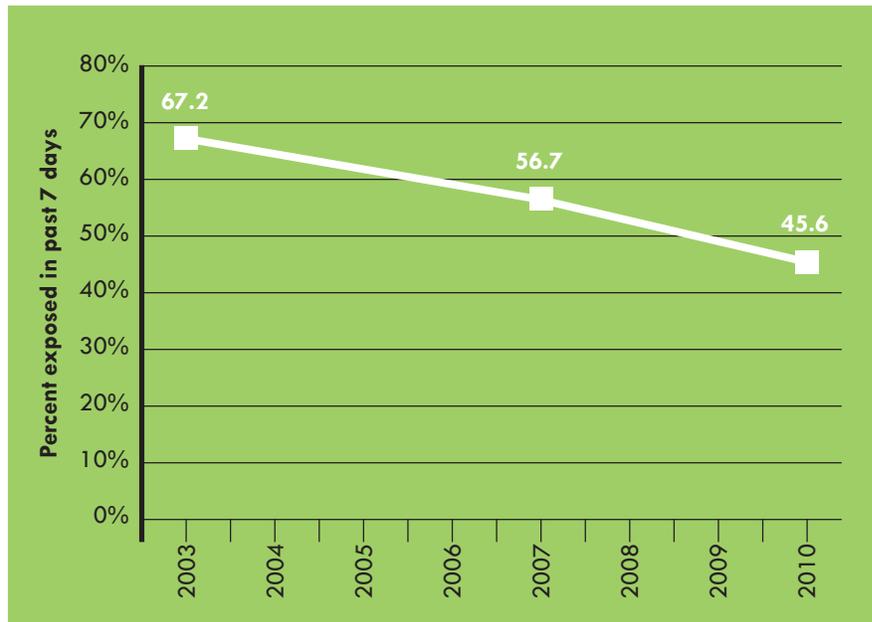
Reducing exposure to secondhand smoke is one of the major components of a comprehensive strategy to reduce the damage caused by tobacco use. Across the nation, 3,000 adult nonsmokers die of lung cancer and an additional 46,000 die of coronary heart disease each year due to secondhand smoke exposure.

Each year, secondhand smoke is responsible for \$215.7 million in excess medical costs in Minnesota; these costs are borne by individuals, businesses, and government. This estimate is conservative; it does not include costs for long-term care, nor does it consider the significant economic cost of lost productivity due to the more than 66,000 individuals suffering from diseases caused by secondhand smoke.

The 2011 Minnesota Youth Tobacco Survey found that 52.5 percent of high school students were exposed to secondhand smoke in the past seven days and 37.7 percent of middle school students were exposed. Over one-third of students (34.2 percent in middle school; 36.0 percent in high school) reported that they live with someone who smokes.

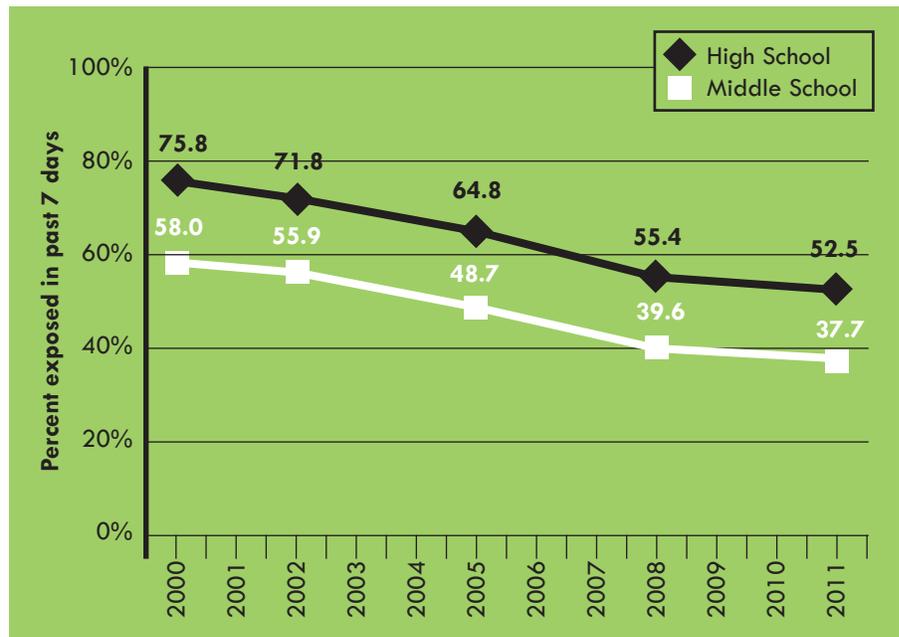
Minnesota's Youth Tobacco Surveys show that children who are exposed to smoking at home or in public settings are more likely to begin smoking as adolescents and to become regular smokers as adults.

### Percent exposed to secondhand smoke in past 7 days - Adults



Source: Minnesota Adult Tobacco Survey: Tobacco Use in Minnesota 1999-2010 <http://mnadulttobaccosurvey.net/>

### Percent exposed to secondhand smoke in past 7 days - Youth



Source: 2011 Minnesota Youth Tobacco and Asthma Survey

# Appendix B: Research Questions

The SHIP evaluation was designed to answer a range of research questions. Some examples of questions the SHIP evaluation is trying to address include:

## HEALTHY EATING:

How effectively do schools, communities and worksites implement healthy eating policy and practice standards? Do changes in policy and practice influence the types of foods offered in schools, communities and worksites? Two case studies work to answer the question: If healthy foods are offered, do students or community members consume them? Do child care providers perceive that children in child care sites are eating more fruits and vegetables?

## PHYSICAL ACTIVITY:

How effectively do schools, communities and worksites implement physical activity policy, practice and environmental change standards? Do changes in policy, practice and the transportation environment increase the number of students and community members who bike or walk? Do child care providers perceive that children in child care sites are becoming more physically active?

## COMMERCIAL TOBACCO USE:

How effectively do post-secondary schools, communities and worksites implement tobacco-free policy and practices? Do tobacco-free policies and practices encourage people to quit smoking? Are people reporting less exposure to secondhand smoke?

## SECONDARY COMMUNITY BENEFITS:

When Farm to School programs are implemented, do schools purchase more locally-grown produce? Do students in schools with strong nutrition and physical activity policies and practices have better

academic outcomes?

## HEALTH CARE AND WORKSITE:

How long does it take health care clinics to transform their care delivery system so it provides preventive screening, counseling and referral systems to assist patients that want to lose weight and stop smoking? Are health care clinics screening, counseling and referring their patients to health improvement resources to address obesity and tobacco use? If yes, do clinics follow-up to determine if their patients act on referrals? Over time, with strong preventive health services, does the health of patients improve? Do employer expenditures for employee health care decrease as worksite wellness programs are implemented?

## SPECIAL EVALUATION PROJECTS

In the second cycle of SHIP evaluation, there are several evaluation case studies that focus on behavior change:

- Measuring corner store changes in sales of fresh fruits and vegetables, as a proxy to assess changes in customer consumption.
- Noting changes in school food options and observing children's food consumption.
- Assessing a worksite wellness program and measuring employee health behavior changes.

# Endnotes

1. [http://www.usgovernmentspending.com/spending\\_chart\\_2001\\_2017USr\\_13s1li111cn\\_10t](http://www.usgovernmentspending.com/spending_chart_2001_2017USr_13s1li111cn_10t)
2. Behavioral Risk Factor Surveillance System (BRFSS)
3. Centers for Disease Control and Prevention. Data and Statistics: Obesity and extreme obesity rates decline among low-income preschool children <http://www.cdc.gov/obesity/data/childhood.html>
4. Minnesota Adult Tobacco Survey (MATS) <http://www.health.state.mn.us/divs/chs/tobacco/adult.html>
5. 2011 Minnesota Youth Tobacco Survey <http://www.health.state.mn.us/divs/chs/tobacco/youth.html>
6. Taken from <http://www.americashealthrankings.org/MN>
7. Schroeder S. The New England Journal of Medicine. 2007 Sep 20;357(12):1221-8.
8. Mokdad et al, JAMA 2004;291 (10) 1238-45
9. 15 Cohen, D.A., Shribner R. A., and Farly T. A. "A structural model of health behavior: a pragmatic approach to explain and influence health behaviors at the population level," Preventive Medicine 30, no. 2 (2000): 146-154.
10. Blue Cross and Blue Shield of Minnesota. "Obesity and Future Health Care Costs: A Portrait of Two Minnesotas," [http://www.preventionminnesota.com/objects/pdfs/TwoMNsExecSum\\_spreads.pdf](http://www.preventionminnesota.com/objects/pdfs/TwoMNsExecSum_spreads.pdf) (accessed January 18, 2012).
11. Blue Cross and Blue Shield of Minnesota. (2010). Health Care Costs and Smoking in Minnesota," [http://www.preventionminnesota.com/objects/pdfs/X18121\\_A\\_HCC\\_and\\_Smoking.pdf](http://www.preventionminnesota.com/objects/pdfs/X18121_A_HCC_and_Smoking.pdf) (accessed January 18, 2012).
12. Blue Cross and Blue Shield of Minnesota. (2010). Health Care Costs and Smoking in Minnesota," [http://www.preventionminnesota.com/objects/pdfs/X18121\\_A\\_HCC\\_and\\_Smoking.pdf](http://www.preventionminnesota.com/objects/pdfs/X18121_A_HCC_and_Smoking.pdf) (accessed January 18, 2012)
13. Maciosek MV, Coffield AB, Flottemesch TJ, Edwards NM, Solberg LI. Greater use of preventive services in U.S. health care could save lives at little or no cost. Health Aff (Millwood). 2010 Sep;29(9):1656-60.
14. Making the Business Case for Smoking Cessation Programs: 2012 Update" A report by Leif Associates.
15. Rumberger, J., Hollenbeak, C., Kline, D. "Potential Costs and Benefits of Smoking Cessation for Minnesota." Penn State University (2010).
16. Armour BS, Finkelstein EA, Fiebelkorn IC. State-level Medicaid expenditures attributable to smoking. Prev Chronic Dis 2009;6(3). [http://www.cdc.gov/pcd/issues/2009/jul/08\\_0153.htm](http://www.cdc.gov/pcd/issues/2009/jul/08_0153.htm).
17. Pronk N.P., Goodman M.J., O'Connor P.J. and Martinson B.C. "Relationship between modifiable health risks and short-term health care charges," Journal of American Medical Association 282, no. 23(1999): 2235-9. <http://jama.jamanetwork.com/article.aspx?articleid=192207>
18. Anderson D.R., Whitmer R.W., Goetzel R.Z., Ozminkowski R.J., Dunn R.L., Wasserman J. and Serxner S. "The relationship between modifiable health risks and group-level health care expenditures," American Journal of Health Promotion 15, no.1(2000):45-52.
19. Thorpe, Kenneth. "Factors accounting for the rise in health-care spending in the United States: the role of rising disease prevalence and treatment intensity," Public Health 120, no. 1(2006):1002-7.
20. Bending the Obesity Cost Curve in Minnesota: Trust for America's Health and Robert Wood Johnson Foundation. [http://www.healthyamericans.org/assets/files/obesity2012/TFAHSept2012\\_MN\\_ObesityBrief02.pdf](http://www.healthyamericans.org/assets/files/obesity2012/TFAHSept2012_MN_ObesityBrief02.pdf) (accessed November 21, 2012)
21. Pronk N.P., Goodman M.J., O'Connor P.J. and Martinson B.C. "Relationship between modifiable health risks and short-term health care charges," Journal of American Medical Association 282, no. 23(1999): 2235-9. <http://jama.jamanetwork.com/article.aspx?articleid=192207>
22. Martinson B.C., Crain A.L., Pronk N.P., O'Connor P.J., Maciosek M.V., "Changes in physical activity and short-term changes in health care charges: a prospective cohort study of older adults", Preventive Medicine 37 (2003) 319-326.
23. County Health Rankings & Roadmaps: What Works for Health <http://www.countyhealthrankings.org/what-works-for-health> (accessed November 21, 2012)
24. County Health Rankings & Roadmaps: What Works for Health <http://www.countyhealthrankings.org/what-works-for-health> (accessed November 21, 2012)
25. Taken from [http://www.cdc.gov/policy/resources/Investingin\\_ReducesEmployerCosts.pdf](http://www.cdc.gov/policy/resources/Investingin_ReducesEmployerCosts.pdf)
26. Smoke-free policies could save landlords up to \$18 million a year in cleaning costs. August 18, 2011 UCLA News Room. Taken from <http://newsroom.ucla.edu/porta/ucla/smoke-free-policies-could-save-213648.aspx>
27. The Community Guide Branch, Epidemiology Analysis Program Office (EAPO), Office of Surveillance, Epidemiology, and Laboratory Services (OSELS), Centers for Disease Control and Prevention, 1600 Clifton Rd NE, Mailstop E-69, Atlanta, GA 30333, U.S.A.
28. Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs—2007. Atlanta: 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; October 2007.

29. Cohen, D.A., Shribner R. A., and Farly T. A. "A structural model of health behavior: a pragmatic approach to explain and influence health behaviors at the population level," *Preventive Medicine* 30, no. 2 (2000): 146-154.
30. McCormack LA, Laska MN, Larson NI, Story M. Review of the nutritional implications of farmers' markets and community gardens: A call for evaluation and research efforts. *Journal of the American Dietetic Association*. 2010;110(3):399-408.
31. Young C, Karpyn A, Uy N, Wich K, Glyn J. Farmers' markets in low income communities: Impact of community environment, food programs and public policy. *Community Development*. 2011;42(2):208-20.
32. Dena R. Herman, Gail G. Harrison, Abdelmonem A. Affi, and Eloise Jenks. Effect of a Targeted Subsidy on Intake of Fruits and Vegetables Among Low-Income Women in the Special Supplemental Nutrition Program for Women, Infants, and Children. *American Journal of Public Health*: January 2008, Vol. 98, No. 1, pp. 98-105.
33. Crowe, Francesca L. et. al. 2011. Fruit and vegetable intake and mortality from ischaemic heart disease: results from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Heart study. *European Heart Journal*. 32:1235-1243
34. McCormack LA, Laska MN, Larson NI, Story M. Review of the nutritional implications of farmers' markets and community gardens: A call for evaluation and research efforts. *Journal of the American Dietetic Association*. 2010;110(3):399-408.
35. Young C, Karpyn A, Uy N, Wich K, Glyn J. Farmers' markets in low income communities: Impact of community environment, food programs and public policy. *Community Development*. 2011;42(2):208-20.
36. Dena R. Herman, Gail G. Harrison, Abdelmonem A. Affi, and Eloise Jenks. Effect of a Targeted Subsidy on Intake of Fruits and Vegetables Among Low-Income Women in the Special Supplemental Nutrition Program for Women, Infants, and Children. *American Journal of Public Health*: January 2008, Vol. 98, No. 1, pp. 98-105.
37. Crowe, Francesca L. et. al. 2011. Fruit and vegetable intake and mortality from ischaemic heart disease: results from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Heart study. *European Heart Journal*. 32:1235-1243
38. Marla R. Orenstein, Nicolas Gutierrez, Thomas M. Rice, Jill F. Cooper, and David R. Ragland, "Safe Routes to School Safety and Mobility Analysis" (April 1, 2007). UC Berkeley Traffic Safety Center. Paper UCB-TSC-RR-2007-1. <http://repositories.cdlib.org/its/tsc/UCB-TSC-RR-2007-1>
39. Centers for Disease Control and Prevention (CDC). "Healthy Youth! Student Health and Academic Achievement," [http://www.cdc.gov/HealthyYouth/health\\_and\\_academics](http://www.cdc.gov/HealthyYouth/health_and_academics) (accessed January 5, 2012).
40. Berry L, Mirabito A, Baun W. What's the Hard Return On Employee Wellness Programs?. *Harvard Business Review* [serial online]. December 2010;88(12):104-112.
41. Crespo, Noe C, et.al., 2011, Worksite Physical Activity Policies and Environments in Relation to Employee Physical Activity, *American Journal of Health Promotion*, 25(4) 264-271
42. Taylor, Natalie, et.al., 2010, The impact of theory on the effectiveness of worksite physical activity interventions: a meta-analysis and meta-regression, *Health Psychology Review* 6(1)
43. Renata K. Martins, Daniel W. McNeil, 2009, Review of Motivational Interviewing in promoting health behaviors, *Clinical Psychology Review* Volume 29, Issue 4, June 2009, Pages 283–293
44. The National Women's Health Information Center. Breastfeeding: Why Breastfeeding is Important. Department of Health and Human Services Office on Women's Health. <http://www.womenshealth.gov/breastfeeding/why-breastfeeding-isimportant/> (accessed January 21, 2012).
45. Crowe, Francesca L. et. al. 2011. Fruit and vegetable intake and mortality from ischaemic heart disease: results from the European Prospective Investigation into Cancer and Nutrition (EPIC)-Heart study. *European Heart Journal*. 32:1235-1243
46. Source: Minnesota Adult Tobacco Survey: Tobacco Use in Minnesota 1999-2010 <http://mnadulthoodsurvey.net/>





**SHIP**

Creating a better state of health.