Pediatric Medical Home Learning Collaborative Initiative

Report to the Minnesota Legislature 2010

Minnesota Department of Health

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

The 2007 Legislature made a one-time appropriation of $500,000 in state fiscal year 2008 and $500,000 in state fiscal year 2009 from the Health Care Access Fund to expand the pediatric medical home learning collaborative initiative (Laws of Minnesota, Chapter 147, H.F. 1078). The 2007 legislation directed that "(s)ervices provided under this funding must support a medical home model for children with special health care needs."

The 2008 Legislature enacted far-reaching health care reform legislation including statewide development and implementation of health care homes. This legislation required that health care homes be available to all Minnesotans covered by Medicaid, SCHIP, the state employee health plan and private insurance plans. The fiscal note for health care home legislation included the fiscal year 2009 medical home learning collaborative appropriation as an offset in estimating the costs to implement health care home legislation. A separate report on Health Care Homes, entitled "Health Care Homes: Annual Report on Implementation" was submitted to the Legislature in December of 2009.

The pediatric medical home initiative for children with special health needs began, in part, as a result of a series of federal grants awarded as early as 1999 to the Minnesota Department of Health from the Title V Maternal and Child Health Bureau. The learning collaborative itself began in the spring of 2004 with eleven (11) pediatric clinic teams and ended in May of 2009. Thirty-six (36) pediatric and family practice clinic teams participated in the learning collaborative over the life of the collaborative.

The learning collaborative was intended as a quality improvement effort to implement medical home as a standard of care for children with special health care needs (CSHCN) and ultimately a standard of care for all children.

> "This collaborative was the single most effective tool I have used to enhance my medical practice in the last 17 years. I would strongly encourage all who want to practice the art and science of preventative medicine to adopt a model of care that uses collaboration with patients and families as the quality improvement vehicle."
>
> clinician member of a medical home team

Legislative funding received in state fiscal year 2008 allowed the collaborative to almost double the number of participating clinics and to extend the life of the collaborative through June of 2009.

BACKGROUND

What is a Medical Home?

The American Academy of Pediatrics defines medical home as "a model for caring for children with special health care needs in which the primary care provider's role is to make sure patients' care is coordinated and effective." A medical home involves patients and their families as partners in care and in clinic quality improvement. It links medical and community resources while striving to take the principles of primary care (care that is accessible and focused on the patient for the long term) a step further in order to improve care quality, patient experience, and health outcomes. The pediatric medical home concept adds, to the aforementioned characteristics, practice-based quality improvement processes that are continuous, health care that is linked to and coordinated with community resources (schools, early childhood screening programs, mental health providers, etc.) and office systems that track progress and measure outcomes.

This approach improves the way individual clinicians and clinic systems work with and meet the needs of children and youth with chronic, complex health conditions or disabilities using the following tools and strategies:

- Developing trusting relationships with patients and families
- Partnering with and learning from patients and families
- Using a team approach for the care of chronic conditions, which includes planned, proactive visits
- Coordinating care
- Co-managing with patients/families and specialists
- Assisting with transitions
- Providing connections with community organizations
- Ensuring and measuring that patients/families, providers and clinic staff are satisfied with the care provided
- Working continuously on quality improvement

Who are children with special health care needs in Minnesota?

According to the American Academy of Pediatrics and the federal Title V Maternal and Child Health Bureau, children and youth with special health needs:

- Have, or are at increased risk for, a chronic physical, developmental, behavioral or emotional condition
- Have a condition that has lasted or is expected to last for more than one year

- Require health and related services of a type or amount beyond that required by children generally

Thus, providers normally identify these children and youth based on the health care *condition*, *duration*, and *impact*.

According to the 2005/06 National Survey of Children with Special Health Care Needs:

- There are slightly more than 175,000 children with special health care needs under age 18 in Minnesota (14.4 percent of children)
- 22.6 percent (~152,600) of all Minnesota families with children have at least one child with special health care needs
- Of the children with special health care needs, 34,000 (19.2 percent) have a functional limitation

HISTORY OF MEDICAL HOME IN MINNESOTA

The American Academy of Pediatrics (AAP) introduced the medical home concept in 1967, further describing it in 2002 as a model of delivering primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective[1]. The AAP endorsed a seamless system of health care services that fosters collaboration and cooperation among all members of the community in which a child and family live, including schools, day care providers and others that provide services to children and their families.

In March 2007, the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physician, and the American Osteopathic Association developed and jointly endorsed a consensus statement on medical home principles. This statement described the Patient-Centered Medical Home as "an approach to providing comprehensive primary care for children, youth and adults."

The Minnesota Children with Special Health Needs (MCSHN) section in the Community and Family Health Division at the Minnesota Department of Health has been involved in the development of medical home in Minnesota since the early 1990's. An important factor in the success of medical home in Minnesota has been collaboration and partnership among state and local agencies and programs including the American Academy of Pediatrics, the department of human services, the university and parent groups such as PACER and Family Voices.

[1] American Academy of Pediatrics, Committee on Medical Home Initiatives for Children with Special Needs Project Advisory Committee: Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children. *Pediatrics* 2002; 110: 184-186

TIMELINE

- 1967 – The American Academy of Pediatrics (AAP) introduced the medical home concept
- The AAP further defined the concept in 2002 as a model of delivering primary care that is accessible, continuous, comprehensive, family-centered, coordinated, compassionate, and culturally effective care
- Early 1990's – partnership between Minnesota Department of Health, AAP, and family leaders
- 1999 – Safe at Home Partnership, a federal Maternal and Child Health Bureau grant received by the Minnesota Department of Health to develop protocols for practices to identify CSHCN
- 2001 – participation in the AAP National Medical Home Conference
- 2002-2005 – Medical Home Development Project, a federal Maternal and Child Health Bureau grant received by the Minnesota Department of Health to increase pediatric provider understanding of the benefits of a medical home and the provider role in it
- 2004 – pediatric medical home learning collaborative begins with eleven (11) clinics participating
- 2005-2008 – Systems Integration of Care for CYSHCN, a federal Maternal and Child Health Bureau grant received by the Minnesota Department of Health to integrate systems of care for CYSHCN and to expand medical home in practices across the state
- 2007 – Minnesota legislative interest results in funding to continue and expand the medical home learning collaborative
- 2008 – Health Care Home legislation passed in Minnesota

WHAT IS THE MINNESOTA MEDICAL HOME LEARNING COLLABORATIVE?

The Minnesota Medical Home Learning Collaborative began in 2004 as a quality improvement effort bringing together eleven (11) medical home teams from around the state of Minnesota. Each team included a primary provider, a person from the primary provider's clinic who served as a care coordinator and two parents who have children with special health care needs or adults with chronic, complex health needs or disabilities.

The learning collaborative involved these teams and other health professionals in a series of meetings to learn about best practices and to share experiences of making changes in their own practices and communities.

Modeled after other initiatives

Implementation of this quality improvement project was achieved by building upon the previous experience of the Minnesota Children with Special Health Needs Section (MCSHN) at the Minnesota Department of Health. The Minnesota Medical Home Learning Collaborative was designed as a quality improvement project utilizing the Breakthrough Series Model for Improvement developed by the Institute for Healthcare Improvement. It was modeled after the National Initiative for Children's Healthcare Quality (NICHQ) Medical Home Learning Collaborative and utilized curriculum and materials developed by the Center for Medical Home Improvement and the American Academy of Pediatrics. In addition, the Minnesota Collaborative had a broader focus of addressing the six achievable goals for children with special health care needs that were developed as performance measures by the Maternal Child Health Bureau.

Planned by a Leadership Team

After the initial project planning activities were completed, a state medical home leadership team was established. It included representatives from the Minnesota Chapter of the American Academy of Pediatrics, the University of Minnesota (Schools of Nursing and Public Health and the department of Pediatrics), the Healthy and Ready to Work National Center, Family Voices, and Wilder Research. It also included a physician and parent partner from the Learning Collaborative, the program improvement advisor, staff from the Minnesota Department of Human Services, and the lead staff from Minnesota Department of Health's MCSHN section. This leadership team assisted in planning and problem solving all aspects of implementation, including planning Medical Home Collaborative Learning Sessions; recruitment of providers, assistance with articles, and connections with local and national experts and speakers.

Planning for each Learning Session included examining previous Learning Session evaluations, looking at gaps evident in the results of the Medical Home Indices completed by teams each year, and incorporating components of the chronic care model and the Maternal and Child Health Bureau six performance measures. Connections were made with national experts to serve as faculty for the various topics addressed at each Learning Session.

Collaborative Learning Sessions

The Collaborative brought teams from multiple practices across Minnesota for three face-to-face Learning Sessions annually. These sessions, normally lasting two days, encouraged teams to share problems, solutions, and strategies for better coordination of care for children with special health care needs. Learning Collaborative sessions included tools and instruction from experts in the field as well as working sessions in which the teams worked on quality improvement activities.

The first Medical Home Learning Session occurred in March 2004. Every Medical Home Learning Session included an orientation for new team members about medical home and using the Model for Improvement, as well as, presentations about family-centered care and lessons learned that were shared by the more experienced teams. Planning for each learning session was ongoing so that teams could have advance notice for scheduling purposes.

Initially, there were eleven (11) teams participating in the Learning Collaborative. Over the life of the collaborative thirty-six (36) teams participated. Twelve teams were added in 2008-09 as a result of legislative funding. At the conclusion of the collaborative, twenty-five (25) teams across Minnesota were participating. Each team includes, at minimum, a primary care physician (either a pediatrician or family practice physician), a care coordinator and two parents. Often teams had others involved on their teams including nurses and administrative staff.

Follow-up and technical assistance through monthly contact. Technical assistance was provided to medical home teams through monthly team conference calls. These monthly conference calls were opportunities for the teams to ask questions, talk about issues, and share new information.

Enhancing parent leadership throughout the state. In addition to the Medical Home Learning Sessions, annual family leadership conferences were held to strengthen parents' skills in a variety of leadership roles and establish family leadership networks throughout the state

Data incorporated into each Learning Session. Fifteen (15) learning sessions took place. Wilder Research staff gave each team results of their team-level evaluation data at each session. In addition, Wilder Research collected feedback through the use of a handheld instant polling system (the Audience Polling System). This data gave immediate feedback about the focus topics of the sessions as well as progress on topics from previous sessions. In addition, Wilder Research conducted focused discussion groups with physicians, nurses and care coordinators, and parent team members.

PARTICIPATING TEAMS/CLINICS

Practice teams were identified and recruited by staff from the Minnesota Department of Health through collaboration with the Minnesota Chapter of the American Academy of Pediatrics. The project coordinator provided written information about the project, received potential referrals from participating clinics, and spoke to interested physicians.

Medical Home teams were recruited using a variety of methods. Letters were sent on an annual basis to primary providers across Minnesota inviting their participation. In addition, articles about medical home and the Minnesota Medical Home Collaborative were included in several publications including the Minnesota AAP Chapter newsletter and website, the Office of Primary Care and Rural Health newsletter, the Minnesota Medical Association newsletter and the Minnesota Association of Family Physicians newsletter.

Primary providers were asked to put together a quality improvement team that would include a primary care practitioner, a staff person from their clinic who could serve in the role of a care coordinator and a minimum of two parents who had children with special health needs.

Clinics participating in the Minnesota Learning Collaborative 2004-2009

Clinic name (N=36)	Years participating in Learning Collaborative
Practices currently participating (N=25)	
Alexandria Clinic	2004-2009
Allina Clinic-Coon Rapids	2004-2009
CentraCare Women and Children's Clinic-St. Cloud	2004-2009
Grand Itasca Clinic	2004-2009
Mankato Clinic	2004-2009
North Point Medical Center-Minneapolis	2004-2009
Owatonna Clinic	2004-2009
HealthPartners-White Bear Lake	2005-2009
South Lake Pediatrics	2005-2009
St. Mary's Duluth Clinic	2006-2009
St. Cloud Medical Group	2006-2009
Fairview-Maple Grove Medical Center (formerly Bass Lake Clinic)	2007-2009
FamilyHealth Medical Clinic-Farmington	2007-2009
United District Hospital Clinics (formerly United Clinics of Faribault County)	2007-2009
CentraCare Family Medicine-St. Cloud	2008-2009
Children's Clinic-Minneapolis	2008-2009
Children's Clinic-St. Paul	2008-2009
Fairview & University Children's Clinic	2008-2009
Grand Itasca Clinic (second team)	2008-2009
MeritCare Children's Clinic	2008-2009
Park Nicollet Medical Center-Minneapolis	2008-2009
Park Nicollet Medical Center-St. Louis Park	2008-2009
St. Luke's Pediatric Associates	2008-2009
St. Mary's Duluth Clinic (second team)	2008-2009
Park Nicollet Medical Center-Family Practice	2009
Past participants (N=12)	
Brainerd Medical Center	2005-2006
Cass Lake Indian Health Service	2004-2005
Dakota Pediatrics	2006-2007
Hennepin County Medical Center Pediatrics	2005-2006

Lakeview Clinic-Waconia	2004-2005
New Ulm Medical Center	2004-2007
Olmsted Medical Center	2005-2006
Park Nicollet Medical Center-Plymouth	2004-2005
Regina Medical Center- Hastings	2004-2005
Southdale Pediatrics-Edina	2005-2006
St. Joseph's Home for Children-Minneapolis	2006-2008

Source: Medical Home Provider Index

EVALUATION METHODS

Baseline parent-leader surveys and follow-up parent-leader interviews
Wilder research Center was an active part of the leadership team from the beginning of the project and served as the evaluator for the project. In April 2006, Wilder Research staff developed a baseline self-administered questionnaire to be completed by parent leaders attending the parent leadership conference as well as parent leaders participating on the Medical Home teams. Baseline surveys were completed by parents in April 2006. At that time, parents were also asked to complete consent and contact forms to participate in a follow-up telephone interview. Follow-up interviews took place in the spring and summer of 2007. The complete Wilder evaluation ("Collaborating to create Medical Homes for children with special health care needs in Minnesota") can be found on the MCSHN website at www.health.state.mn.us/divs/fh/mcshn/medhm/publication.

Family Perceptions of Medical Home
The Family Perceptions of Medical Home survey was developed by Christina Bethell, the Director of The Child and Adolescent Health Measurement Initiative at Oregon Health & Science University. Some of the survey questions were adapted by Dr. Jane Taylor, a quality improvement advisor with her work in the NICHQ National Learning Collaborative. In early 2006, Wilder Research, MDH staff and Dr. Taylor made some additional modifications to the tool to make it more useful for this project.

The Family Perceptions of Medical Home is a measurement tool designed to measure a team's integration of some successful components of medical home into their clinical practice. The instrument was designed to assess parents' perceptions of the practice in a few key areas that were shown by previous research to be highly correlated with successful medical homes. Data were analyzed three times each year so that teams could get feedback about the changes they were implementing at the practice.

Monthly Team Report
Teams were asked to report on progress monthly via the Monthly Team Report. This report completed by participating clinical teams, monthly, includes estimates of the number of children assessed with special health care needs. There is also a narrative about changes tested by the clinics. This report provides information about system changes and quality improvement within the clinical practice. In September 2008, the

Monthly Team report was revised to better capture information about changes being tested and implemented by teams.

Medical Home Provider Index

The Medical Home Index (MHI) is a validated, self-assessment tool developed by the Center for Medical Home Improvement (CMHI). The Medical Home Index contains a total of 25 themes divided into six domains of practice activity critical to the quality of care in a medical home. The six domains include organizational capacity, chronic condition management, care coordination, community outreach, data management, and quality improvement. The number of themes varies across the domains. The organizational capacity domain includes seven themes and chronic condition management and care coordination contain six. Two themes each are included in the domains of community outreach, data management, and quality improvement. Each theme is scored across four levels of achievement. Each level of achievement can be scored as partial or complete, depending on whether performance meets "some activity within the level" or "all activity within the level." This index tool can be found at www.medicalhomeimprovement.org.

Each medical home team completed a MHI annually. Research staff analyzed the data and report scores to each clinic at the subsequent Learning Collaborative session. During the Learning Collaborative meetings, the teams are encouraged to take steps to make improvements in each of the six domains at their clinic.

CONCLUSIONS AND ISSUES TO CONSIDER

Findings from the evaluation of the *Medical Home Initiative for children with special health care needs* show:

- Providers were able to develop and implement a method of identifying children with special health care needs within their practices. Over 7,500 children were identified through the Initiative.
- Providers were able to improve the quality of various aspects of their practices. Changes were statistically significant in nearly every area measured by the Medical Home Index.
- Providers felt that parent participation on their teams was a critical component to implementing effective Quality Improvement strategies.
- There was strong consensus among medical home team members (provider staff and parents) that the Learning Collaborative was an effective way of educating, promoting, and encouraging implementation of medical home concepts.
- 81 percent of providers who had been involved in other Quality Improvement efforts felt that the Medical Home Learning Collaborative was more effective (the remaining 19 percent felt it was equally effective).

- Parents, even those not involved in medical home teams, noticed improvements in services provided to their families and children with special health care needs.

The overall results of the *Medical Home Initiative* strongly support the value of using a team-based approach in implementing multiple improvements to clinic services and infrastructure. It also supports the value of learning collaboratively with and from other teams who are working on quality improvement activities.

Parents who participated on Medical Home teams reported an increased ability to advocate for their child and issues related to children with special health care needs in their schools and communities.

Although the overall results of the *Medical Home Initiative* are strong, nearly all providers who participated in the *Medical Home Initiative* identified barriers or challenges to their clinics' implementation of Medical Home. These challenges often involved a lack of buy-in or support from other staff or administration, lack of available staff or dedicated time to do additional activities, issues related to funding or billing for additional activities, and logistical issues.

Issues to consider

> I just think that it has made such a big difference in the lives of so many that I truly hope we can continue to move forward and make great strides for the future and the ongoing improvement of medical care for those we serve. Keep the Learning Collaborative going. They are such a great place for networking and "stealing ideas" from those who have made great strides in their practice, and it also gives us as care providers a chance to network with all of the parents.
>
> Clinician member of a medical home team

As the Medical Home/Health Care Home concept moves forward toward broader implementation in Minnesota, the following are some issues to consider based on lessons learned from the *Medical Home Initiative for children with special health care needs*:

Continue focused efforts on outreach, recruitment and promotion of Medical Home
Those involved with the Medical Home Initiative felt that outreach and promotion were key to systematic spread of medical home principles. In focus groups and at Learning Collaborative sessions, team members expressed trepidation about the watering down of the Medical Home model. They worried that many clinics think that they are a "Medical Home" before learning more about the key components of medical home, involving parents, and implementing changes within their practices. Thus, many voiced the importance of continued outreach and recruitment of new champions, while concurrently promoting best practices in medical home implementation.

Continue efforts at promoting collaborative learning
Primary care providers and their staff valued the collaborative learning process. Many felt that it provided the momentum, in a busy clinical setting, to continue the implementation of quality improvement efforts. The sharing of ideas between practice teams was often cited

as vital to the progress of practice teams – particularly those who had less experience with Medical Home.

Use experienced Medical Home teams as mentors to others new to Medical Home
Multiple providers recommended that future efforts should involve experienced Medical Home teams as mentors to practices new to Medical Home. They valued the sharing of ideas and lessons learned.

Issues related to payment and compensation should be discussed further and addressed
An underlying issue for all clinical staff involved in Medical Home was payment and compensation for additional activities. Staff report that there were important benefits for patients and families as well as clinic staff when quality improvement activities were implemented. However, there were resource barriers including the staff time required and the financial costs associated with implementation.

As Minnesota moves forward toward health care reform, the Medical Home Initiative can provide helpful lessons about effective use of Collaborative Learning to implement quality improvement activities. Much can be learned from the team-level efforts to make practice improvements and the great contributions of parent consumers on the Medical Home teams.