The Minnesota Medical Home Learning Collaborative

A Step to Improving Care for Minnesota's Children with Special Health Care Needs

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ABSTRACT

Minnesota's Medical Home Learning Collaborative is now starting its third year of operation. This article discusses the concept of medical home, the rationale for its use, and the progress and challenges encountered so far in the 11 clinics that have participated in the collaborative since it began and the five that joined this past September.

Last fall, at a meeting of providers and parents who have participated in a pilot project on a new way of caring for children with multiple health needs known as "medical home," parents were talking about what the Minnesota Medical Home Learning Collaborative had meant to their families. One mother said to the group, "This is Christmas." Others in the room paused, and all heads turned toward her. The comment did not quite register. She went on to explain that because of the medical home project, the care that she is able to offer her daughter with special needs has dramatically improved—access to services is better, communication barriers have been brought down, and her ability to be a partner in the care of her child has increased tremendously. These were the best presents she had ever gotten, she said. For her child and her family, this was Christmas.

What is a Medical Home?

In 2002, the American Academy of Pediatrics (AAP) reaffirmed a policy calling for a "medical home" for all children. In that statement, 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.

The term "medical home" is hardly new. It first appeared in 1967 as part of the AAP's Standards of Child Health Care, a practice guideline for physicians. The term has since been used by the American Academy of Pediatrics and family advocacy groups to describe the best of primary care, including care coordination for chronic illness, care planning in partnership with families, and medical care integrated into community and school resources.

The concept also has been picked up by the U.S. Department of Health and Human Services, which included the term in its Healthy People 2010 goals. Last year, the Minnesota Medical Association in its landmark report addressing health care reform, Physicians' Plan for a Healthy Minnesota, adopted having a medical home as one of the cornerstones of a reformed health care system.

Despite the fact that the term is used by so many and in different ways, it is not widely understood. For that reason, it is perhaps useful to consider "medical home" as taking the principles of primary care a step further in order to improve care quality, patient satisfaction, and health outcomes.

Starfield and Shi described primary care as care that is accessible, focused on the patient for the long term, comprehensive, and coordinated when patients have to go to other providers.[1] The medical home concept adds to these characteristics, requiring that

- Patients (or, in the case of children, parents) are partners in care,
- Practice-based quality-improvement processes are continuous,
- Health care is linked to and coordinated with community resources such as schools, early childhood screening programs, public health agencies, and mental health providers, and
- Office systems track progress and measure outcomes.

In the Minnesota Medical Home Learning Collaborative, "medical home" is a model for caring for children with special needs in which the primary care provider's role is to make sure patients' care is coordinated and effective. It involves parents as partners in care, and it links medical and community resources.

Rationale for Medical Home for Children with Special Needs

Children with special health care needs have or are at increased risk for chronic physical, developmental, behavioral, or emotional conditions. Although they comprise 13% to 18% of children in the United States, children with special health care needs account for 80% of pediatric health care expenses.

In Minnesota, approximately 160,000 children younger than 18 years have special health care needs. More than 76% of those children require prescription medication, 18% are limited in their functional abilities, and nearly 15% require physical, occupational, or speech therapy. During the past 20 years, this population has grown by 30%, largely as a result of improved diagnostic abilities and better survival rates for many illnesses. [2]

A disproportionate number of these children and their families are on publicly supported programs through Medicaid or the State Children's Health Insurance Program. Their care is much more costly than that of their same-age peers. Some of those expenses, such as unplanned ICU stays, are preventable.[3]

Caring for children with special health care needs is a challenge. Care is often uncoordinated and unfocused, consisting of a series of individual encounters with providers. It is done using a "piece goods" approach rather than an integrated, planned one. For example, only 40% of parents of these children report that care is coordinated among providers and across disciplines. In addition, parents say they are rarely involved as partners in their child's care. [2]

One of the key factors contributing to this lack of care coordination is the fact that such work is not currently reimbursable by insurers. In one study, care coordination for patients with chronic illnesses produced savings in terms of inpatient stays, yet 44% of all patient care work was not considered billable.[4]

Recent studies have highlighted how inadequate reimbursement of providers affects outcomes in pediatric populations. A study by McInerny and colleagues of reimbursement and completion of immunizations in an insured population showed that inadequate compensation was directly related to decreased completion of childhood immunizations.[5] A second study showed that children with appendicitis who were on Medicaid or were uninsured had higher rates of rupture than a group with private insurance.[6] The estimated national hospital-charge savings associated with a reduction of the perforation rate of Medicaid-insured children to the rate of privately insured children would be $46,130,640.[7]

Better primary care reimbursement saves money downstream. In a study of medical home practices around the country, hospitalization of medically fragile children dropped from 58% to 43% as medical home principles were implemented, and the number of families reporting more than 20 days of missed work dropped from 26% to 14%.[8]

The Minnesota Medical Home Project

For decades, experts in the medical community and at the Minnesota Department of Health have been trying to improve care for medically fragile children. In 2001, leaders at the Minnesota Department of Health's Children with Special Health Care Needs Section decided to embark on a formal quality-improvement process to do so. The resulting Minnesota Medical Home Learning Collaborative, launched in March of 2004, is a state-coordinated effort to bring together teams from participating clinics to share problems, solutions, and strategies for better coordination of care for medically fragile children. The collaborative was made possible by a grant from the U.S. Department of Health and Human Services' Maternal Child Health Bureau. The Minnesota Chapter of the American Academy of Pediatrics and Family Voices, a family advocacy organization affiliated with the PACER Center in Minneapolis, the Department of Human Services, and a performance improvement advisor joined the effort two years ago to create a Minnesota Department of Health-led oversight steering committee for the project.

Each team taking part in the Minnesota Medical Home Learning Collaborative consists of a pediatrician, a care coordinator such as a nurse or a medical assistant, and two parents whose children are served by that clinic. At learning sessions facilitated by the Department of Health-led committee, participants hear presentations on topics related to care coordination and then the teams discuss problems and potential solutions. Using a learning collaborative model, teams come together to plan changes, implement those changes, then study the impact of the changes and refine the system. The refined system is then implemented and studied and refined again, creating a string of continuous improvements. Changes are measured after implementation to ensure that they represent an improvement.

Each of the teams completes a Medical Home Index, a validated self-assessment tool, at the beginning of the initiative and again after the first year of participation. Future measurement efforts will focus on utilization and outcomes data from the participating practices. Data on children seen at the clinics enrolled in the collaborative will be analyzed to understand utilization changes and differences in outcomes.

An example of an issue a team might tackle is communication of the result of specialty visits back to the primary care provider. A team might develop a short fax-back form that the parents give to the specialist with the expectation that this form will be completed and immediately faxed to the primary provider. To track the effectiveness of this strat-

egy, a team might assess frequency of use and discuss the quality of the form. After this analysis, improvements would be made to the form and process, and the process would repeat itself.

During the meetings, the teams are encouraged to take steps to make improvements in each of six "domains" at their clinic. These include:

- Organizational capacity—the practice's ability to accommodate children with special health care needs,
- Management of chronic conditions,
- Coordination of care,
- Community outreach,
- Data management, and
- Quality improvement—having ongoing processes that track and measure progress and outcomes and making those processes part of the practice's culture.

For example, clinics are asked to improve their patient registry systems and use a standard definition in order to identify children with special health care needs rather than a more casual process. They also are asked to use the registry to assign complexity levels to each child. They are encouraged to enhance or define practice activities such as appointment scheduling and developing patient-specific care plans. In addition, the practices are asked to regularly update the registry.

During the 3 to 5 months between meetings of the collaborative, individual teams do the hard work of improving their processes. They meet at regular intervals, ideally every two weeks, to work to improve systems within their practices. Department of Health staff maintain contact with the teams and work to create a sustainable statewide effort.

The Medical Home Learning Collaborative has created a system that supports innovation and sustainable change. Practice teams regularly share experiences, both successes and failures, and support each others' efforts to improve quality of care. Increasingly, the parent partners are showing signs that they feel empowered to participate in the teams and suggest changes.

Minnesota Medical Home Learning Collaborative Participants and Their Team Leaders

The original 11 practices

Alexandria Clinic - Pediatrics, Alexandria—Jean Fahey, M.D.
Brainerd Medical Center, Brainerd—Troy Couture, M.D.
CentraCare Women and Children's Clinic, St. Cloud—Marilyn Peitso, M.D.
Grand Itasca Clinic and Hospital, Grand Rapids—Jan Rourk, M.D.
Lakeview Clinic, Watertown—Kathleen Sweetman, M.D.
Mankato Clinic, Mankato—Angela Townsend, M.D.
New Ulm Medical Center, New Ulm—Clifford Wu, M.D.
North Point Health and Wellness Center, Minneapolis—David Thompson, M.D.
Owatonna Clinic, Owatonna—Mary Rahrick, M.D.
Park Nicollet Clinic - Pediatrics, Plymouth—Amy Burt, D.O.
Regina Medical Group, Cottage Grove—Angela Parsons, M.D.; and
Hastings—Janene Glyn, M.D.

Practices that joined in September

Cass Lake Indian Health Service—Cathy Morud, N.P.
HealthPartners White Bear Lake—Elsa Keeler, M.D.
Hennepin County Medical Center - Pediatrics, Minneapolis—Laurel Wills, M.D.
Olmstead Medical Center, Rochester—Denise Bonde, M.D.
South Lake Pediatrics, Eden Prairie—Theodore Jewett, M.D.

To learn more about participating in Minnesota's Medical Home Learning Collaborative, contact Ann Ricketts at aricketts@mnmed.org.

Measurable Progress

Since the 11 original teams began working with the medical home project 18 months ago, an additional 5 teams have joined the initiative. Each has made progress in its ability to care for children with special health care needs. Some of the changes they have made include developing and implementing care plans for children, changing scheduling systems, using fax-back forms to foster better communication between specialists and primary care providers, and improving the children's and families' access to providers by telephone and e-mail.

For example, at the Owatonna Clinic in Owatonna, families of children with special health care needs work with the pediatrician to maintain a comprehensive notebook detailing their child's care. At the Brainerd Medical Center in Brainerd, such families are directed to one person at the clinic who can provide triage services based on the child's care plan as well her knowledge of the children and their needs. At the CentraCare Women and Children's Clinic in St. Cloud, care plans for special-needs children are written and then given to parents and the schools so that in an emergency everyone has the same information. A nurse, who spends more than 20 hours per week as a care coordinator, is working with all 17 of the pediatricians in the prac-

tice to help develop care plans for their young patients. At the New Ulm Medical Center, parents of children needing treatment at distant medical centers now can get scheduling help, and as with the other medical home practices, specialists who treat these children are asked to fax forms documenting the treatment to the home clinic so it can be recorded in the care plan. New Ulm staff also have created a medical record on CD that is kept in the hospital's emergency department for each special-needs child that may be admitted.

Opportunities and Challenges

The goal of the Minnesota Medical Home Learning Collaborative is to create a new, more effective type of primary care for children with special health care needs. In this model, the provider's primary role is to make sure these patients' care is coordinated and effective. In so doing, the child experiences better health outcomes and a better quality of life. The model meets the Institute of Medicine's principles for transforming the health care system: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equitability of care.[9] And it closely involves parents and other family members in the care of their children.

This model has great potential to drive down the cost of medical care by reducing hospitalizations, emergency room visits, and duplication of tests and procedures. It also holds promise for medical practices that serve adults with chronic illnesses. To this end, the Minnesota Medical Association has begun to look at the medical home model for this population.

Although progress is being made by the practices participating in the Medical Home Learning Collaborative, this project is essentially demonstrating the effects of practice-based improvement on the care of children with special health care needs. The dedication of the practice teams, including the pediatricians, their office staff, and their parent partners, has sustained the initiative in the communities in which it is operating. In some instances, clinic administrators have offered support. But that has not been universal.

Data showing care improvements and/or lower health care costs will be the most effective way to expand the model, especially if they are provided at the state level. In order for the concept of the medical home to take root, spread, and flourish, providers will need to be compensated for their work. A study funded jointly by the Minnesota departments of Health and Human Services will assess quality and utilization by medical home patients.

The state's current grant funding provides for a council composed of pediatricians, parents, policymakers, and payers to explore mechanisms to adequately compensate practices for accomplishing measurable improvements in the care of children with special health care needs.

Conclusion

The concept of the medical home has a strong foothold in Minnesota. The Minnesota Medical Home Learning Collaborative is now a nationally recognized part of the medical home movement. Minnesota was recently awarded a President's New Freedom Initiative Grant to further work in this area. Teams taking part in the collaborative have been able to support practice-level improvements in care for children with special health care needs. But the medical home project is a work in progress. In order for the idea to further develop and become an accepted part of primary care practice, we must develop ways to monitor and quantify improvements, and we must have a mechanism that will pay providers for coordinating services that ultimately lead to lower costs and improved care for medically fragile children. **MM**

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