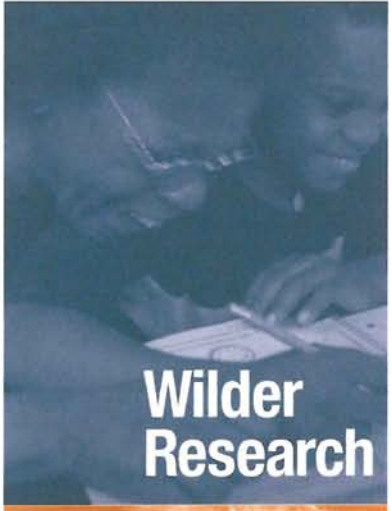

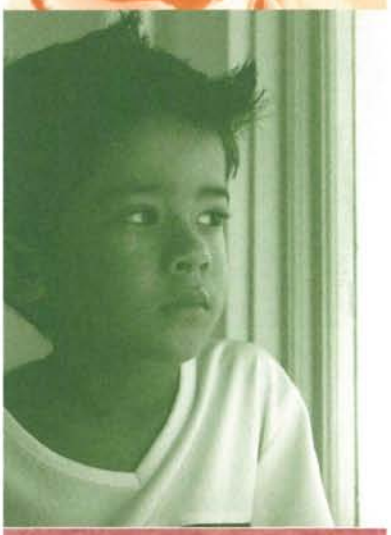

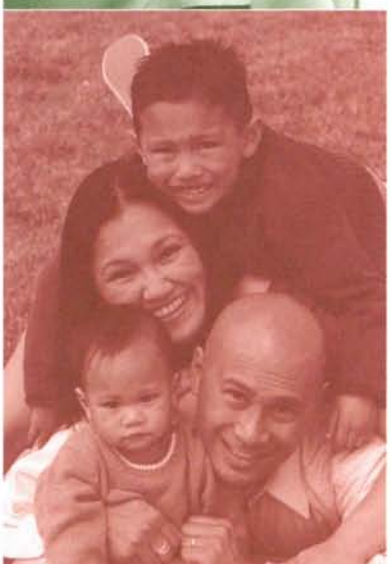

Integrating best practices into collaborative learning methods for Health Care Home providers

A summary of findings and recommendations for the Minnesota Departments of Health and Human Services

SEPTEMBER 2009

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September 2009

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Summary

In May 2009, the Minnesota Departments of Health and Human Services contracted with Wilder Research and two expert consultants in the field of quality improvement in health care settings to conduct a review of collaborative learning methods that incorporate quality improvement approaches that could be implemented statewide for initial ongoing clinical certification as a Health Care Home provider.

These researchers reviewed literature and interviewed 33 nationally recognized experts on Health Care Home implementation and collaborative learning in others settings in order to develop recommendations related to best practices related to collaborative learning of Health Care Home concepts.

Findings from review of literature

It is commonly reflected that quality improvement collaboratives are, by their nature, complex and applied in many different ways. Although there is limited evidence about which elements contribute most to effective learning and implementation, a set of themes from the literature emerges that offer *practice wisdom*: a set of perspectives and components for designing a successful Learning Collaborative model.

- *Value of preliminary work.* Many authors suggest that planners and facilitators take the following details into consideration: team-forming and team-building, data collection, performing audit work, analyzing the organization's infrastructure, developing baseline data, and planning future meetings.

- *Shared and common purpose.* The objectives should be clear, and there must be consistency among the aims.

- *Use of data and technology.* Learning Collaborative teams improve their information technology skills in order to support data collection during implementation and to improve efficiency in generating data reports necessary for a successful Learning Collaborative.

- *Sponsorship considerations.* Both Learning Collaboratives and sponsors assess priorities and establish harmony among one another.

- *Development of appropriate team composition and collaborative staffing.* A successful team is one that is interdisciplinary or multidisciplinary. Three essential roles of a Learning Collaborative include a clinician leader, data analyst, and project manager.

- *Fostering relationships and team motivation.* Social relationships established at the beginning of a collaborative can foster accountability, satisfaction with work, team unity, peer support within the collaborative, and opportunities to learn from others doing the same work.

- *Collaborative meetings.* To meet varied learning preferences, authors recommend meeting formats and activities that include facilitated discussions, sharing information, and problem solving.

- *Use of quality improvement theory and evidence based practices.* It is important for teams to both apply innovative quality improvement methods and incorporate evidence-based practices to improve care.

- *Maximize strong leadership support.* Learning Collaboratives need strong leadership – at the system's level, clinical level, and team level – to support their missions, act on organizational and cultural changes, and make resources available.

- *Plan for sustainability and purposeful spread.* Steps for successful quality improvement spread include preparation and defining of purpose, collaborative learning meetings, and post-collaborative transition.

- *Reliable measurements.* Previous Learning Collaboratives recommend including realistic and time specific targets, measures that track progress toward achieving goals, and measures that give feedback to teams and clinical administration.

- *Elevation of organizational culture.* Teams need assistance in implementing changes that impact organizational culture.

- *Varying approaches to collaborative learning.* Although some details may differ, most studies of quality improvement collaboratives describe approaches modeled after the Institute for Healthcare Improvement's Breakthrough Series. Enhancements may be made that include regional technical assistance and web-based supports.

Findings from key informant interviews

Experts interviewed recommended collaborative learning as a reliable vehicle to accomplish results. Most adhered to the Institute for Healthcare Improvement's model for a Learning Collaborative. The following summarizes key themes from key informant interviews related to collaborative learning:

Engaging participants and stakeholders

- *Patient and family involvement*. These respondents made a strong case for how patients and family members support teams with their focus on getting results and ensuring follow-through. Patients and family members help overcome political barriers in the practice setting, the larger health care system, and the community.

- *Leadership engagement*. Respondents felt it was important to engage administrative leaders such as the clinic administrator, at a large clinic or health system, or a lead physician, at smaller clinics or practices. In addition, experts commonly described the need to keep clinicians engaged in the process. Clinicians are key to supporting the testing of new ideas and innovation among the teams.

Selecting a learning method

- *Principles of adult learning.* Respondents almost uniformly reflected that the successful learning occurs when experts lecture less, and collaborative members have time to develop relationships. A key concept in collaborative learning is that participating teams become the experts and teach one another as the collaborative matures.

- *Framework for change (use of a change package).* Respondents who adhere more closely to the Institute for Healthcare Improvement's Breakthrough Series model use a change package as a way to organize and sequence changes for improvement.

- *Team membership and teamwork.* Nearly all respondents mentioned the value of multi-disciplinary team members. Team membership includes a clinician leader and front-line workers with experience in the topic.

- *Other vehicles for learning (web and telephone support).* Most respondents valued face-to-face meetings for optimal collaborative learning, especially if transformation in "business as usual" is required. They felt that virtual connections could be helpful if they were founded on relationships forged in face-to-face meetings. Nearly all respondents mentioned the use of periodic conference calls that occurred by phone,

through the web or through video conferencing. Conference calls were used to share monthly data and results, share learning, and present content.

- *Technical assistance to teams within the clinical practice.* Several respondents mentioned the usefulness of technical assistance, where a facilitator makes site visits to medical practices.

Other planning and logistical considerations

- *Implementation timeframe.* All respondents interviewed who were experienced with medical home reported that it takes time to implement – two to three years at a minimum – to ensure transformation.

- *Geographic considerations*. Respondents use a variety of strategies to convene groups from widespread geographical regions. Most interviewed suggested organizing the learning community into geographic locations to minimize travel, to combine learners who face similar problems, and to offer regional technical assistance.

Evaluation progress

- *Use of data*. Routine data submission was mentioned as part of every Learning Collaborative. Data was seen by several as essential in evaluating if improvement gains were sustained.

- *Culture change.* The shift to medical home requires true transformation. This includes changes in the roles of individuals as well as changes in the clinic's sense of identity and views about definition of patient care.

Recommendations

As multiple respondents mentioned, Minnesota is a national leader in developing Health Care Home approaches that center on the patient. We recommend that state leaders hold fast to Minnesota's principles of Health Care Homes in order to continue this leadership.

The development of Health Care Homes involves transforming complex systems. It is not a short-term commitment, but takes time to make incremental changes. Based on the literature scan, interviews with experts, and knowledge of the field, 11 key recommendations are made. The full report includes important detail about these recommendations which are summarized below.

1. Prioritize patient and family Involvement

It is important to stress that without patient and family involvement, there is no Health Care Home. Our research findings fully support Minnesota's Health Care Home legislation requiring patient and family involvement.

Patients and family members on teams accelerate the testing of innovative ideas and the implementation of improvements. In addition, patients and family members help overcome political barriers in the practice setting, the larger health care system, and the community.

- Prioritize patient and family involvement including core concepts such as those defined by the Institute for Family-Centered Care (2009);
- Offer guidance to teams on how to recruit, orient, and work with patient and family partners.

2. Ensure ongoing State leadership for the Health Care Home initiative

The Minnesota Departments of Health and Human Services should be the coordinating body for statewide and regional Health Care Home work to ensure that Minnesota's Health Care Homes adhere to the State's philosophy, principles and values.

3. Engage leadership

Experts agree that it is essential to develop and support Health Care Home leadership at the systems level, support clinic administrative leadership for Health Care Home implementation, and develop clinician leadership among Health Care Home teams.

- Form a Steering Committee among key constituents. This group reviews progress of teams involved in the Learning Collaborative as well as evaluation results. They inform their constituents about Health Care Home implementation and offer additional learning and sharing opportunities.
- Engage clinic or practice leadership. The focus is on three components: 1) ways in which Health Care Home implementation is strategic to the practice; 2) ways in which these administrative leaders help facilitate successful Health Care Home teams by dedicating adequate resources, and 3) ways in which administrative leaders can be engaged in the teams' progress by reviewing periodic results.
- Engage clinicians. Clinicians are key to supporting innovation among the teams. There is a need for specific training, support, and follow-up to help clinician's develop the skills to support their team's efforts and to best utilize the contributions made by patient and family partners.

4. Incorporate principles of successful adult learning

It is important to incorporate differing learning styles into the overall planning of the learning activities. Although face-to-face learning is regarded as the best approach for initiating Health Care Home implementation, this learning can involve many types of interactions. It is important to prepare a mix of expert training, appropriate curriculum, written materials, and allow for plenty of time for less structured peer-to-peer learning activities.

Learning styles are an essential consideration when designing other types of learning platforms such as conference calls, webinars, web-based curriculum modules, "how-to" guides, and website resources.

- Ensure that learning sessions include time for the teams to explore and adapt learning to their local context.
- Create generous opportunities for teams to learn from each other.
- Allow for customized learning so that team can access the resources and materials they need when they are ready for it (i.e., recording conference calls, webinars).

5. Use of a change package framework

Create a Health Care Home "change package" framework as a logical way to organize and sequence changes for improvement. This change package will provide a written step-by-step "how to" guide for teams to use to test practical changes.

6. Develop Learning Collaborative sessions based on lessons learned nationally and locally

- Staff a Health Care Home project group for the Learning Collaborative. This group is responsible for the Learning Collaborative and other training that supports certification for Health Care Home. This project group works with experts, as needed, to design the Learning Collaborative.

- Select Co-Chairs for Learning Collaborative Planning. One who represents patient and family partners and one who represents providers.

- Team membership. Team composition may include patients/family members, clinicians, and care coordinators, at a minimum, as well as nurses, office staff, and office managers.

- Meeting format. We recommend incorporating the traditional Institute for Healthcare Improvement style of Learning Collaborative. This includes face-to-face meetings for optimal collaborative learning and increasing their motivation to improve.

- Plan for mixed learning methods. While this research supports face-to-face learning sessions as a critical component, we believe that in some cases it will be important to examine benefits and limitations of self-directed learning, virtual learning methods, and conference calls. It is recommended that when other learning methods, such as on-line learning, are used, they are combined with at least one face-to-face meeting each year.

- Collect baseline information in order to measure team progress on Health Care Home implementation.

- Capitalize on the expertise of experienced team and existing infrastructures. The enthusiasm of experienced teams can help practices facing challenges to overcome barriers to Health Care Home implementation. In addition, existing expertise, infrastructure, and programs should be used to support the Learning Collaboratives.

- Recruit early successful Health Care Home teams as mentors to new teams and to be used as expert faculty at Collaborative Learning sessions.

7. Develop learning materials

- Create a "how to" guide that includes: the change package, practical examples of how to make changes, worksheets and sample documents used by experienced practices, and sample data collection and reporting forms.

- Build a website for housing materials including curriculum, educational sessions, resources, "how to" guides, sample forms, work products, stories, and lessons learned from practices.

- Develop on-line, self-directed learning modules for each component of Health Care Home implementation.

- Develop learning tracks for providers, care coordinators, patient partners, and clinical administrative leaders.

8. Provide technical assistance or team facilitation

- Seek out and develop regional technical assistance facilitators, such as those based on agricultural "extension" models, to use as improvement advisors. These regionally-based field agents can also serve as advisors to regional collaboratives, as needed.

9. Geographic considerations: regional offerings

- Decentralize Health Care Home learning communities to geographical regions. Develop a regional strategy for Health Care Home that includes face-to-face learning sessions and subsequent conference calls and webinars based on geographical location.
- Consider housing technical assistance facilitators in each geographic region.
- Take advantage of times when clinics and practices gather for other reasons to offer Health Care Home learning opportunities.

10. Use data

Data is an important component of Health Care Home as well as Learning Collaborative implementation. It allows teams, administrators, and planners to evaluate whether improvement gains are realistic and sustainable.

- Use the project group, Steering Committee, and other key systems leaders to help develop a practical and logical set of measures for Health Care Home teams.
- There should be a differentiation between data used by teams to measure progress and data used by the Steering Committee to evaluate outcomes.
- In working with teams, promote the benefits and usefulness of collecting data.
- Note the specific evaluation recommendations and potential methods that are included in the attached document.

11. Understand the important of culture change

- Be patient with culture change, it takes time. The shift in hierarchy between the patient and family and the provider and care team are part of transformative culture change.

Next steps

1) Form an initial planning team include advisors with experience with adult learning, particularly in health care
2) Based on the information learned in this review, design a model based on the particular needs of Minnesota's system
3) Develop a budget based on the scope of the initial implementation phase
4) Involve a larger group of stakeholders as a Steering Committee: include patients/ family members, practitioners, and payers
5) Conduct baseline assessments of practices involved

Introduction

> The Medical Home Learning Collaborative is a vital tool for networking and learning about how to improve our clinic and focus on family centered care. It's important because you become rejuvenated and see what other clinic's are doing. It's a lot of work going against the majority – pioneering for something you feel is important. It's great to go to the Collaborative and get so much support and so many ideas.
>
> -Clinical staff (member of a Medical Home team)
>
> So much [of the Learning Collaborative] has been a learning experience as a team – to make our clinic a more family-friendly environment. [It is] helping us to learn how to meet the needs and deal with all aspects of providing care for the children and their families.
>
> –Parent partner (member of a Medical Home team)

Background: Health Care Home in Minnesota

Health Care Homes, also nationally known as medical homes, are a cornerstone of the comprehensive, nation-leading reforms passed in Minnesota in 2008. Health Care Homes are an innovation in primary care in which primary care providers, families and patients work in partnership to improve the health and quality of life for individuals, especially those with chronic and complex conditions. Health care homes put the patient and family at the center of their care, develop proactive approaches through care plans and offer more continuity of care through increased care coordination.

The development of Health Care Homes in Minnesota is driven by the Institute for Healthcare Improvement's Triple Aim, an initiative to simultaneously achieve the following goals:

- Improve the individual experience of care.
- Improve the health of the population.
- Improve affordability by containing the per capita cost of providing care.

The interest in and momentum for Health Care Homes, or medical homes, has been building in Minnesota for the past five years. The initial Minnesota medical home project provided primary care coordination and family-centered care for children with complex/chronic conditions in 2004 as a federally funded health project.

Medical home legislation was first passed by the Minnesota legislature in 2007. The medical home legislation was identified as provider-directed care coordination for patients with complex illness in the Medicaid fee-for-service population (now called primary care coordination). This provider-directed care coordination model is patterned after other state and national health reform initiatives with proven cost-saving and quality-enhancing outcomes.

Also in 2007, Minnesota launched several initiatives to study and make recommendations related to health care reform. The Governor's Health Care Transformation Taskforce and the Legislative Commission on Health Care Access both met throughout the summer and fall of 2007. Both issued recommendations for health reform in Minnesota, including endorsements of medical homes. Those recommendations, in turn, lead to the passage in May 2008 of the state's nation-leading, comprehensive health reform law that included a variety of components aimed at improving the health of the population, the quality of care, the affordability of health care and the individual patient experience. The Governor's Health Care Transformation Taskforce and Legislature's Health Care Access Commission both endorse medical homes.

One of the main components of the 2008 health reform law is the Health Care Homes initiative. Minnesota has adopted the term "Health Care Homes" rather than "medical homes" in order to indicate a broader focus on improved health care coordination, community involvement and health promotion.

The 2008 law builds on the momentum of the Health Care Home concept-that this is an idea with the potential to transform primary care delivery and create more patient- and family-centered care. The law allows for providers to become Health Care Homes and for patients to go to Health Care Homes for their care. It also represents payment reform by creating a care coordination payment for Health Care Homes. Health care reform legislation requires "Health Care Homes" for all Medicaid, SCHIP, state employees and privately insured Minnesotans (statute 256B.0751). The Minnesota Departments of Health and Human Services are collaborating to implement the various aspects of Health Care Homes in Minnesota.

The design principles for Health Care Home in Minnesota focus broadly on the continuum of "health" and incorporate expectations for engagement of the patient, family and community. Fundamentally, Health Care Home is a change in the patient-provider relationship augmented by financial structures and measurement of results. Expectations for transformative change must be sufficient to achieve these results. Among these expectations are:

- **Patient- and family-centered care** will be foundational to the Minnesota Health Care Home program. Patients/families/consumers will be involved in all aspects of program development.

- **Clinical health care teams** where patients and families work in partnership with the clinical team to plan and coordinate their care. Clinical team members work as a team and members work at the "top of their license" in order to provide a coordinated efficient approach to care delivery.

- **Quality improvement teams** will be required at the practice level. A Health Care Home will have an active practice-based quality improvement team that includes patients/families as equal team members.

- Participation in a **learning collaborative** to support and foster practice-level change is required.

- **Financial structures** must be aligned to promote this transformation and must include adequate risk adjustment for medical and non-medical complexity.

- **Recertification** is based on outcomes. Minnesota will be moving to an outcomes-based system in its recertification of Health Care Homes. In the certification and recertification process, a balance will be sought between fidelity to the model (criteria) and flexibility for innovation. A goal of the program is to maximize clinic flexibility to achieve all of the outcomes.

Purpose of this report

In May 2009, the Minnesota Department of Health and the Minnesota Department of Human Services contracted with Wilder Research and two expert consultants in the field of quality improvement in health care settings: Jane Taylor, Ed. D, and Susanne Salem-Schatz, Sc.D., of HealthCare Quality Initiatives to conduct a review of collaborative learning methods that incorporate quality improvement approaches that could be implemented statewide for initial ongoing clinical certification as a Health Care Home provider.

This summary of current collaborative learning models in health care and other industries and subsequent recommendations were compiled through a combination of several methods including: an examination of existing literature, expert key informant interviews, and feedback from expert consultants on collaborative learning and theories of adult learning. These findings are intended to provide a foundation for key stakeholders to review, discuss, and adapt, as needed, based on local needs. Recommendations drawn from the findings will provide a rational underpinning for decisions about collaborative improvement strategies and the inevitable tradeoffs that will need to be made.

The terms *collaborative learning* and *Learning Collaborative* are not used interchangeably in this report. We use the term *Learning Collaborative* to refer to a set of approaches utilizing the Breakthrough Series model for improvement developed by the Institute for Healthcare Improvement (2003). The term collaborative learning includes these, but also encompasses a broader range of adult learning approaches.

This report summarizes: 1) the methods used to review the existing literature and the key informant interviews; 2) the findings from the literature and key informant interviews; and 3) the recommendations that surfaced based on the literature and interview findings.

Methods

Scan of existing literature

The purpose of this review was to gain better understanding, from a variety of perspectives, the current practices and models related to collaborative learning, and those that have shown to be effective in adult learning and system improvement. This was not an exhaustive literature review, but a targeted search for relevant information on strategies for successful collaborative improvement as well as barriers that were identified. The scan was designed to be succinct review of collaborative learning characteristics and promising practices.

The search included the CINAHL, PubMed, PsycINFO, ERIC databases, and a general Google search engine for literature published in the last 10 years (although the time frame of focus was articles published in the past three years). A set of recently published, relevant literature was used as a basis for a forward search to identify additional publications. The literature represents: non- controlled and controlled studies from one to multiple sites; statewide and national collaboratives; and quality improvement experts' summaries of lessons learned. As literature was scanned, research staff applied a label to each document summarizing the relevancy to this study. The search produced 71 documents. Of these, 46 had some relevance to collaborative learning involving quality improvement (see the Appendix for a list of articles).

Multiple articles were found describing quality improvement Learning Collaboratives, but the research is limited and shows inconsistent findings. These inconsistencies were echoed by researchers who have conducted meta-analyses of similar studies (Schouten et al., 2008). In addition, a limited variety of collaborative learning models were described in the literature. Many described a specific use of the Institute for Healthcare Improvement's Breakthrough Series collaborative model (BTS).

Key informant interviews

An initial set of individuals were identified who had broad experiences and expertise in models of collaborative learning, approaches that used facilitators to assist in organizational improvements, or approaches that integrated virtual technology into collaborative learning. From the initial list, a snowball sample was used to identify other respondents that were recommended. In addition, we interviewed individuals who use collaborative learning in industry and manufacturing. Thirty-eight individuals were identified for this study. Five persons were not available for an interview during the study time frame.

- In all, 33 key informant interviews were conducted in June 2009.

In addition, two individuals gave email feedback and answered specific questions related to the project.

A web-based survey was created to collect descriptive information about key informants. There was an average of 18 years experience in quality improvement, 10 years experience with Learning Collaboratives and 11 years experience in health care reform. Combined, our interviews took advantage of nearly 400 years experience in health care quality improvement (see the Appendix for a list of individuals who were interviewed for this report).

Findings from literature

Schouten and colleagues (2008) compiled a systematic review of empirical studies that assessed the effectiveness of quality improvement collaboratives. Their findings indicate that a paucity of evidence exists regarding the impact of quality improvement collaboratives. The authors reflect that quality improvement collaboratives are, by their nature, complex and applied in many different ways. Many reports of quality improvement collaboratives offer little detail about the collaborative features and analysis of what mechanisms or components might be responsible for the results (positive or negative) are most often lacking. Schouten offers that, in order to understand how and why a quality improvement collaborative works, it is necessary to look into the "black box" of the intervention to study the determinants of success or failure. Unfortunately, often times, the available literature gives us very little insight into the "black box." The deficiency of information about issues related to implementation – knowing the effectiveness of our methods – is an important lesson to consider for the evaluation of future work on Health Care Home in Minnesota.

The literature demonstrates that a definitive menu to predict success for Learning Collaboratives does not exist. A majority of the literature discusses lessons learned based on interviews with key stakeholders. There are also several comprehensive studies that discuss both implementation and valid outcome measures. A larger number of studies include clinical outcomes from Learning Collaboratives, but few measured outcomes of actual *learning* and *improvement* processes.

A set of themes from the literature does, however, emerge that offer *practice wisdom*: a set of perspectives and components for designing a successful Learning Collaborative model.

Practice wisdom: themes from the literature about Learning Collaboratives

Value of preliminary work. Preliminary work and preparation for a Learning Collaborative is essential for success. Many authors suggest that planners and facilitators take the following details into consideration: team-forming and team-building, data collection, performing audit work, analyzing the organization's infrastructure, developing baseline data, and planning future meetings (Ovretveit et al., 2002; Wilson, Berwick, & Cleary, 2003).

Shared or common purpose. The authors note the importance of being explicit about the purpose of a Learning Collaborative. Lessons from previous successful Learning Collaboratives recommend that discussion with the organization about the objectives and

aims of the collaborative are important. The objectives should be clear and there must be consistency among the aims (Ovretveit et al., 2002; Leape et al., 2000).

Use of technology and data. The use of technology and data is a pertinent part of a successful Learning Collaborative. Ayers and colleagues (2005) found that the "aligning of technological resources between collaboratives' members was key to establishing optimal databases." Including ways to incorporate technology and technology driven data into the Learning Collaborative processes is useful for a variety of reasons, such as, Ayers and others recommend that Learning Collaborative teams improve their information technology skills in order to support data collection during implementation and to improve efficiency in generating data reports necessary for a successful Learning Collaborative (McInnes et al., 2007; Grossman et al., 2008).

Sponsorship considerations. The relationship between a sponsor and Learning Collaborative is important to the success of a Health Care Home. Who or what organization sponsors the collaborative is also an important factor when examining implementation. Wilson et al. (2003) found that sponsorship is a critical component, particularly in securing financial support and other resources. For example, previous Learning Collaboratives in the United States and England received support from private organizations, research institutions, and government sources (Ayers et al., 2005). Wilson et al. (2003) recommend that both Learning Collaboratives and sponsors assess priorities and establish harmony among one another.

Development of appropriate team composition. Learning Collaborative teams accomplish performance improvement more quickly as compared to those working alone as a team (Ovretveit et al., 2002). Several authors described a successful team as one that is interdisciplinary or multidisciplinary, and always includes a clinician (Leape et al., 2000; Wilson et al., 2003; Ayers et al., 2005). A successful team is comprised of physician and other clinicians (nurses), as well as non-clinical (administer, improvement specialist) (Wilson et al., 2003; Leape et al., 2000). Ovretveit and colleagues (2002) report that little evidence exists demonstrating that collaboratives which have pre-selected teams are more successful than those with a more open and flexible format.

Motivation of teams. Highly motivated teams are found to be more effective at accomplishing their goals. Teams having support and independence to conduct projects tend to be more motivated and make more changes (Leape et al., 2000; Young, Glade, Stoddard, & Norlin, 2006; Chin et al., 2007). It is recommended that in order to maximize the team experience, team members should spend a great deal of time with their own team members, in order to foster a sense of unity among group members (Ovretveit et al., 2002).

Development of appropriate collaborative staffing. Collaborative team members were identified by Ayers and colleagues (2005); they indicated three essential roles of a Learning collaborative include a clinical leader, data analyst, and project manager. Nearly all Learning collaboratives had a few members represented at collaborative events, but more who participated within their organizations (Wilson et al., 2003).

Fostering relationships. The authors' findings describe the importance of fostering social colleague's relationships within the Learning Collaborative setting. Social relationships established at the beginning of a collaborative can foster accountability, satisfaction of work, peer support within collaborative and an opportunity to learn from others doing the same work (Ayers et al., 2005; Wilson et al., 2003). One author went as far as to report that social networking was a contributor of success (Horbar et al., 2004).

Collaborative meetings. The teams within a Learning Collaborative possess different learning needs and styles (Wilson et al., 2002). To meet the learning preferences, authors recommend appropriate meeting formats and activities, furthermore, include facilitated discussions and problem solving (Wilson et al., 2003; Ovretveit et al., 2002).

Use of quality improvement theory and evidence based practices. Evidence in the literature supports the importance and usefulness of teaching collaborative team members about quality improvement methods (Wilson et al., 2003). In general, it's important that teams apply quality improvement methods, as well as, incorporate evidence-based practices to improve quality of care simultaneously. Horbar et al. (2004) report implementing evidence-based medicine practices at their Learning Collaborative workshops. The authors describe the importance of and timing for application of teaching evidence-based practices. Another study shares the experiences of the Vermont statewide collaborative that used improvement partnerships that resulted in staff receiving individualized expertise, support, and knowledge of national practices (Shaw et al., 2006).

Maximize and maintain strong leadership. Many studies report the importance of strong leadership within a Learning Collaborative. Several authors identify strong leadership as: support from senior organizational leaders (chief executive officer, department director), leadership as a whole organization (CEO), team leadership, and internal support from organizational leadership (Wilson et al., 2003; Leape et al., 2000; Mills et al., 2004; Grossman et al., 2008). It's important that strong leadership is represented in Learning Collaboratives to support the collaborative mission, act on organizational and cultural changes, and make resources available (Ayers et al., 2005; Leape et al., 2000).

Plan for sustainability and purposeful spread. The current state of sustainability and spread of collaboratives were mentioned. Ovretveit et al. (2002) found that some improvements are sustained after a collaborative but few have shown evidence of long

term sustainability. The concept of spread suggests that participants maintain and use the skills that they learn in the collaborative, outside of the collaborative setting. Ovretveit et al. (2002) suggests that steps for successful quality improvement spread include, preparation and defining of purpose, collaborative learning meetings, and post-collaborative transition (Ovretveit et al., 2002).

Reliable measurements. The majority of the literature reviewed provided detail on clinical measures. While several articles highlighted the importance of process measures, there were very few that reported on these measures in detail. Previous Learning Collaboratives recommend including measurable and time specific targets, measures that track progress to accomplish a goal, and measures of monitor and feedback that are all important to the success of a Learning Collaborative (Ovretveit et al., 2002; Leape et al., 2000; Mills et al., 2004).

Elevation of Organizational Culture. The literature addresses broad aspects of organizational culture. Ovretveit et al. (2002) proclaim that to produce appropriate changes in a team's organizational culture they need assistance to know how to go about it. Insights from successful Learning Collaboratives showed that an open organizational culture was significantly related to the depth of attempted interventions, otherwise, the level of an organization's development and culture were similarly important (Deo et al., In Press; Ayers et al., 2005).

Varying Approaches to collaborative learning. Most studies of Quality Improvement Collaboratives (QICs) describe approaches modeled on the Institute for Healthcare Improvement's Breakthrough Series (BTS) (Schouten et al., 2008). In these QICs, teams come together for a limited period of time to work on a specific topic. Solberg (2005) describes other models of collaborative learning, including regional collaboratives and ongoing facilitated learning communities, such as the Institute for Clinical Systems Improvement (ICSI), or the Vermont Oxford Network (VON) for neonatal intensive units. ICSI has recently reported substantial improvements in depression treatment and outcomes (Bio-Medicine, 2009). VON has published on a successful Learning Collaborative targeting the use of surfactant in newborns (Horbar et al., 2004). Solberg (2005) notes that these ongoing initiatives "differ from the BTS approach in that they are in it for the long term, their efforts are led and supported by the leaders of individual member organizations, and they have a variety of ongoing communication and meeting efforts that go beyond particular quality initiatives."

Limitations identified in the literature about the success of collaborative learning in health care

As researchers and quality improvement professionals begin to reexamine their approaches to evaluating the effectiveness of a variety of quality improvement interventions, there is a growing recognition that some of the inconsistency in findings may be a function of the difficulty in doing research on complex interventions in complex settings (Institute of Healthcare Improvement, 2003). Thus the published literature may or may not actually reflect the real-life utility of Quality Improvement Collaboratives as part of an integrated approach to health care quality improvement.

There is no research to date comparing the effectiveness of varying types of collaborative learning structures and it is possible that a Hawthorne effect contributed to any successes, therefore, collaboratives need standard organizational process measures comparable to other collaboratives and long term evaluations (Wilson et al., 2003; McInnes et al., 2007; Ovretveit et al., 2002). Ayers et al. (2005) recommends that future studies of Learning Collaboratives should evaluate how a collaborative achieves success or not and promote information sharing to further success efforts.

There is little available research about the impact of virtual Learning Collaboratives. We found only one study published based on a Virtual Breakthrough Series (VBTS) that was considered a demonstration project. Boushon and colleagues (2006) found that the outcomes of the Virtual Breakthrough Series were "potentially comparable to those in a traditional collaborative, at a substantially lower cost [fewer] benefits." The preconditions for success included: senior leadership's involvement, team members' ability to participate, information technology support, as well as other factors including (Boushon et al., 2006):

- Senior leader oversight, commitment, and involvement
- High degree and attention to detail from the day-to-day manager of this work
- Diligent testing and implementation of a high percentage of the change concepts
- The ability to modify supply to balance demand during the collaborative's time frame
- Deliberate collection and analysis of data

Other Quality Improvement Models. The following quality improvement models were either developed in the United States or in other countries: the Qulturum's improvement strategy was developed in Sweden, the communities of practice (COP) in Ontario, the Solberg framework in the United States, and the team quality improvement sequence (TQIS) in Scandinavia. The Qulturum's improvement strategy adapted US improvement

concepts that incorporated these into a system-wide improvement strategy (Bodenheimer et al., 2007). The COP model is a supportive infrastructure for quality improvements (Funk-Kee-Fung et al., 2008). The Solberg (2007) framework provides a guide for care transformations. Lastly, Ovretveit (1999) presents the TQIS that attempts more complex problems than tests of small incremental, measurable changes of the "Plan-Do-Study-Act" (PDSA) cycles.

The figure below summarizes some of the key elements found in the review of the literature about Learning Collaborative methods. As mentioned previously, there is limited evidence about which elements contribute most to effective learning and implementation. However, there is consensus (backed up by interviews with nationally recognized experts) that these elements contribute to success although there is not yet an evidence base.

Elements of Learning Collaborative	Strategies	Citations
Value Preliminary Work	Team-form and team-build Decide on data collection and analysis methodology Prepare organizational leadership agreement, explain involvement and expectations Begin data collection (i.e., collect baseline data) Perform audit work Analyze organization infrastructure Teach Information Technology (IT) skills	McInnes et al. (2007) Ovretveit et al. (2002) Wilson et al. (2003)
Common purpose	Agree upon a clear and achievable mission Define a clear purpose and objectives Agree on a common set of measures which all teams will track Bring multiple stakeholders to the table (including patients) to agree upon targets to set	Ayers et al. (2005) Leape et al. (2000) Ovretveit et al. (2002)
Use of data and technology	Develop data management and communication systems across member organizations Incorporate information systems resources	Ayers et al. (2005) Grossman et al. (2008)
Sponsorship considerations	Evaluate agreements and priorities of both Learning Collaboratives and sponsors Select needed sources (i.e., tuition, dues)	Ayers et al. (2005) Wilson et al. (2003)

Elements of Learning Collaborative	Strategies	Citations
Team composition, development, and motivation	Consider creating a multidisciplinary and/or interdisciplinary team that includes both clinicians (physician, nurse, etc) and non-clinicians (administrators, pharmacists, patients etc.) Establish team communication, monitoring and feedback methods Clarify membership roles and an understanding of team work ethics Encourage the establishment of respectful relationships Build the confidence of participants in their ability to make improvements Ensure that teams and the organization have shared goals and a shared understanding of the project timeline	Ayers et al. (2005) Leape et al. (2000) Mills et al. (2004) Ovretveit et al (2002) Wilson et al. (2003)
Development of appropriate collaborative staffing	Select staff vigilantly Consider three essential roles: clinical director, project manager, data analyst	Ovretveit et al. (2002) Wilson et al. (2003)
Fostering relationships	Provide social networking opportunities, i.e., structure time for teams to network with teams from other clinics/organizations, social activities Identify strong and weak collaborative performers and encourage them to work together Cultivate mentorship opportunities (one group teaches the next)	Ayers et al. (2005) Horbar et al. (2004) Wilson et al. (2003)
Collaborative Meetings	Determine length, frequency, and format of meetings Make time available for team members to interact with one another Understand different learning needs and use a variety of teaching styles during meetings, i.e., facilitate discussions, share improvement strategies	Ovretveit et al. (2002) Ayers et al. (2005) Wilson et al. (2003)
Use of Quality Improvement and evidence based practices	Embed quality improvement theory and techniques into the Learning Collaborative curricula Employ a quality improvement expert with practical knowledge to present Choose practical interventions and move early into changing a process	Leape et al. (2000) Ovretveit et al. (2002) Wilson et al. (2003) Young et al. (2006)
Maximize leadership support	Consider the importance of leadership from the organization as whole (CEO) and the team leader Have strong internal support from organizational leadership Recognize the importance of the team leader and the need for continuity in this position Clarify leadership roles	Grossman et al. (2008) Leape et al. (2000) Mills et al. (2004) Ovretveit et al. (2002)

Elements of Learning Collaborative	Strategies	Citations
Plan for sustainability and purposeful spread	Maintain use of quality improvement methods and thinking after collaborative Continue relationships after collaborative and give each other support to resolve problems Consider three effective spread approaches: 1) Preparation and define purpose, 2) Collaborative learning meetings, and 3) Post-collaborative transition Teach basic quality improvement skills that are transferable to other clinical areas	Ovretveit et al. (2002) Shaw et al. (2006)
Reliable measurements	Engage measurable and time specified targets Link differences in processes to variations in outcomes Measure progress towards targets Regular progress reports from teams will assist in tracking progress Establish standardized organizational process measures that will allow for comparisons across collaboratives	Ayers et al (2005) Ovretveit et al (2002) McInnes et al. (2007)
Elevation of organizational culture	Ensure organizational support for technology Consider Improvement partnerships to provide expertise and support	Ayers et al (2005) Shaw et al. (2006)

Successful aspects of adult learning models

Adult learning theory has insights that may inform Minnesota's approach to collaborative learning. The most pertinent are action learning, action science, positive deviant theory, and experiential learning. The Learning Collaborative model used by Minnesota in its pediatric Medical Home Collaborative used these adult learning approaches. It will be important to incorporate these models into the Health Care Home collaborative learning implementation.

Action learning, action science and action research

Action learning occurs when, "a group of people come together more or less regularly to help each other to learn from their experience" (Dick, 1997); and to work on real problems (Revans, 1982). This occurs usually in small groups called "action sets" or "learning sets" (O'Neil & Marsick, 2007; Pedler 1996). Action science focuses on learning that deals with practical problems (Argyris, Putman, & Smith, 1985).

Action research methods include a combination of critical reflection and immediate feedback to improve a practice. Action learning is enhanced when the practical applications inherent in action science are combined with the feedback and reflection of

action research. This approach of reflecting on a previous action followed by planning the next step is similar to the Plan Do Study Act cycles defined by Deming (1993). Action learning appears a good fit, because it is so closely related to the fundamentals of improvement science in which: first, changes are attempted on a small scale; second, a prediction is then made about the change; third, after the change, the prediction is compared to the outcome; and finally, all information is used to understand what was learned. Both improvement science and action learning make use of the scientific method as a practical approach to achieve a desired action.

Experiential learning

Experiential learning is closely related to action learning. Again, experiential learning is an iterative process. In experiential learning, new learning is related to a previous experience (Kolb, 1984). Kolb outlined four steps in experiential learning and noted that the learner may start at any step: 1) concrete experience; 2) observation and reflection; 3) the formation of abstract concepts; and 4) testing in new situations. Much like Deming's learning and improving cycle (Plan Do Study Act), experiential learning often begins with an action, and reflection about its effect. Actions are repeated under different conditions to increase the degree of belief that they are robust enough to generalize to other situations.

Positive Deviance Theory

Positive Deviance theory holds that:

> In every community there are certain individuals or groups (the positive deviants) whose uncommon but successful behaviors or strategies enable them to find better solutions to a problem than their peers. These individuals or groups have access to exactly the same resources and face the same challenges and obstacles as their peers (Positive Deviance Initiative, 2009).

The Positive Deviance approach is "strength-based, problem-solving" that results in improvement. By taking advantage of positive deviance, learners "discover existing solutions to complex problems within the community" (Positive Deviance Initiative, 2009).

The published reflections on facilitators of successful quality improvement Learning Collaboratives were echoed and expanded on in our series of interviews with experts in health care quality improvement, Learning Collaboratives and medical homes. Presented in the next section, these expert insights provide a foundation for recommendations for successful Learning Collaboratives in the service of health care medical homes.

Findings from key informant interviews

Thirty-three experts in collaborative learning and/or quality improvement in health care and other industries participated in one-hour key informant interviews to give feedback about their perspectives of effective learning practices. About three-quarters of these expert respondents lived and served areas outside of Minnesota. On average, expert respondents had 18 years experience in quality improvement, 10 years experience with Learning Collaboratives, and 11 years experience in health care reform (see the Appendix for a list of individuals who were interviewed for this report).

Those interviewed recommended collaborative learning as a reliable vehicle to accomplish results. Most adhered to the Institute for Healthcare Improvement's model for a Learning Collaborative. No one interviewed suggested that this type of work can be accomplished solely using virtual or web-based approaches, without some face-to-face learning and sharing opportunities. Respondents felt that face-to-face communication was integral to supporting the transformative changes in the relationships between patients, providers, and care teams. In addition, we were struck by how the definition for medical home varies among these experts – from clinical office improvement to patient-centered care. When referring to medical home, many respondents interviewed define it somewhat differently from the proposed rules for Health Care Home in Minnesota. Few from outside of Minnesota share the vision and truly transformative approach Minnesota intends for its Health Care Home. Minnesota is unique because it focuses on the patient and family, not just on clinical operations, and because care coordination is at the heart of Minnesota's experience of Health Care Home.

It is important to note that although the literature scan was conducted separately, many of the same themes were described by expert key informants. It is clear that there is consensus from many experts that is reflected in this report.

It is also important to note that collaborative learning models that have been used in Minnesota may already integrate findings from the literature and key informant interviews. Minnesota's models were based on lessons learned from other sites and brought in expertise from nationally experienced quality improvement practitioners. One surprising finding from the key informant interviews was that several national experts recognized Minnesota as a leader in the area of quality improvement through collaborative learning as well as stating that Minnesota is leagues ahead of respondents' own efforts to implement medical home.

Finding from the expert key informant interviews were organized into themes under the following headings:

- Engaging participants and stakeholders
- Selecting a learning method
- Other planning and logistical considerations
- Evaluating progress

Engaging participants and stakeholders

Practice recruitment and readiness

Many respondents stated that because medical home is complex, practice readiness is essential. Readiness and will to do the work were assessed in various ways including: interviews with teams and or team leaders, completion of application processes, and assurances of administration/leadership support. Other factors that were found to impact readiness included whether or not the work was linked to an overall strategic initiative and whether or not there were competing projects (for example, the implementation of electronic medical records was a time and resource demand that competed with some of the respondents' medical home implementation work).

Patient and family involvement

With the exception of respondents with experience in the National Initiative for Children's Health care Quality Learning Collaboratives or the Minnesota Medical Home Learning Collaborative, only a few respondents had experience with including patients, consumers, or family members as members of a Learning Collaborative. Those who did were emphatic about the critical role of patient and family partners in learning. These respondents made a strong case for how patients and family members support teams with their focus on getting results and ensuring follow-through. Patients and family members help overcome political barriers in the practice setting, the larger health care system, and the community.

Respondents recommended working with improvement teams on how to integrate patient and family partners into improvement work and as members of the improvement team. They targeted learning opportunities for these partners so that they know what is expected of them, how to work with a health care team as well as providing practice teams with guidance on how to recruit and orient patient and family partners. Many interviewed did not have experience with patients and family partners, but on reflection during the interview thought it worthy of consideration.

Leadership engagement

Leadership at macro-level. Nearly every person interviewed had strong recommendations regarding leadership. The leadership group "sets the tone." Several respondents reported having a steering committee or advisory group that helps guide the overall project. Membership in these groups varied, but many represented a broad-based constituency such as: families and patients, payers, large clinics, public health, human services, medical societies and academies like American Academy of Pediatrics and the American Academy of Family Physicians, Minnesota Community Measurement (Schouten et al., 2008) academic leaders, and other government leaders. These leadership groups have several functions including planning, public kick-off of the effort, communicating progress and results to their constituents, focusing on overall implementation and outcomes, problem-solving challenges, and celebrating success.

Leadership within the clinical setting. All interviewed found leadership engagement within the practice or clinical setting a key to success. Respondents felt it was important to engage administrative leaders such as the clinic administrator, at a large clinic or health system, or a lead physician, at smaller clinics or practices.

Many respondents offered dedicated programming for leaders at the learning sessions and require teams to submit a report monthly or bi-monthly to keep clinical leadership informed and engaged in the process. One respondent said, senior leader involvement and engagement is the "single biggest thing" that makes a collaborative successful." If teams come without leadership support, they "don't have the ability to implement or spread when they go back home." Most mentioned the value of leaders who link the team's work to the strategic direction of the clinic or practice, who assure the teams have resources to make changes, and who are engaged in the results of the team.

These leaders need support from the Learning Collaborative. Most respondents recommend their attendance at a learning session as well as a separate session for leaders to develop basic competency in the topic and to learn what is required of them to support their team. Most recommend a half-day to full-day at the first learning session and subsequent phone calls to review data and results of the team. Another interim option suggested was shorter meetings where they can share information and learn from one another.

Clinician engagement. One of the strongest themes mentioned by experts was the need to keep clinicians engaged in the process. Clinicians are key to supporting testing new ideas and innovation among the teams. Their engagement is required to spread the changes within the practice setting. The consensus among respondents was that no Health Care Home team can succeed without engagement of clinicians. Respondents felt that it was necessary to have dedicated networking time for clinicians, face-to-face meetings, and leadership learning opportunities. Also, respondents emphasized the need for specific

training, support, and follow-up to help clinician's develop the skills to support their team's efforts and to best utilize the contributions made by patient and family partners.

Leadership for the Learning Collaborative. Most interviewed had a collaborative leadership team that is "well organized, stays on top of team reporting, provides logistical support and gets answers back to the learners." This group organizes the collaborative and includes a chair who should be "passionate about the work and who can relate to the group of learners," a director, a data person or improvement advisor, an administrator to oversee logistics, and a project coordinator who supports the planning group.

Selecting a learning method

Principles of adult learning

While few respondents reported purposefully integrating adult learning principles, many of the strategies reported as most successful were highly reflective of theories of adult learning. One respondent named the work of Paulo Friere and Miles Horton who engaged in large-scale social change. Respondents almost uniformly reflected that the successful learning occurs when experts lecture less and collaborative members have time and structure to learn from each other and develop relationships. One favored 15 minute lectures followed by 45 minutes of discussion and integration by learners.

Shared and collaborative learning was a strong theme. One respondent described a process in which they identified participating practices that had successfully implemented a disease registry, and asked these practices to lead the learning session topic on registry. She described this as a feature of the most successful collaborative that she had participated in. Another respondent integrated reflective learning into each learning module. The relationship between learning and doing was also mentioned among the non-health care informants.

Many mentioned how effective stories are in communicating experiences and results with medical home implementation. Some respondents stressed the value of providing learners with "getting started" kits, "how to" guides, and results from experienced teams. Two respondents shared examples of using reflection with teams to enhance learning.

Framework for change: use of a change package

Respondents who adhere more closely to the Institute for Healthcare Improvement's Breakthrough Series model use a change package as a way to organize and sequence changes for improvement. A "change package" is a set of changes or ideas organized around categories. The change package provides a written framework to test hypotheses to see what ideas generate the best results. In one example used by respondents, the change

package was organized around areas measured by the Medical Home Index: care partnership support, delivery system design, health system, community, decision support, and clinical information system. Under each of these domains, the care package included a list of tangible steps that could be tested and implemented by teams.

According to respondents, change packages are most helpful when they include practical and concrete changes and when they provide a sequence for testing and implementing these changes. Several respondents favored a graphic or a diagram that represented the step-by-step framework for implementing change. They reported that when teams have confidence in the change package framework, they have an easier time making progress and appear to be more self-directed.

In fact, three informants mentioned that they are working on Learning Collaboratives without face-to-face meetings, but that the practices have significant experience using the change package and the content is well known.

Two respondents did not use a formal change package when they run Learning Collaboratives. Instead, they felt that teams learn more when they determine exactly what they want to learn about, and then plan improvements based on what they learn from others, the literature, and other evidence.

The Learning Collaborative approach

> A Learning Collaborative is simply a group that is after more or less the same task… It is oriented to outside knowledge and ideas while generating inside understanding…[a Learning Collaborative is about] building trust to have those frank discussions.
>
> -Expert interviewed for study

Respondents interviewed defined collaborative learning as a group of individuals who work and learn together to accomplish shared, similar goals. A few respondents mention the use of Learning Collaboratives to do innovation work as well.

Team membership and teamwork. Nearly all respondents mentioned the value of multi-disciplinary team members. Team membership includes a clinician leader and front-line workers with experience in the topic. Respondents with experience partnering with patients and family members strongly supported their inclusion on improvement teams. In addition, several respondents incorporated teambuilding exercises as well as education about team development, roles, and the value of partnership into the collaborative curriculum.

In general, respondents felt that teams and team members who had experience in collaborative learning were reported to be more likely to get results in subsequent improvement collaboratives.

Meeting format. Most respondents valued face-to-face meetings for optimal collaborative learning, especially if transformation in "business as usual" is required. One respondent beginning a state-wide medical home collaborative said, "What I can't envision is how to do it without face-to-face learning sessions . . . this is a heart thing and you can't get it by reading a book." Other respondents highlighted the role of face-to-face meetings in building community and in increasing motivation or the *will* to improve.

Only two respondents had experience with using a purely virtual collaborative. One respondent just launched her first virtual Learning Collaborative and has completed one learning session and planning for the second. She admits that it is premature to draw conclusions about the differences in results between this strictly virtual collaborative and previous face-to-face collaboratives. The second respondent had good results with teams in the purely virtual collaborative, because the teams involved were highly motivated, well supported by leadership, and implemented a strong change package.

Some respondents used mixed methods in which face-to-face learning is limited to once per year, and all subsequent interactions are through webinars. Respondents identified advantages of virtual learning – such as a reduction in travel expenses and time away from family and job. The disadvantages included the risk of multi-tasking, while involved in virtual learning, disengagement of participants limiting learning, loss of time to reflect with others, conflict with demands of work, and lack of face-to-face community building. In addition, virtual learning requires highly motivated teams and well developed change packages. Many recommend a combination of face-to-face sessions, especially in the beginning of the process. They felt that virtual connections could be helpful if they were founded on relationships forged in face-to-face meetings.

Frequency of meetings. The number of learning session required to achieve results varied among those interviewed. All recommend at least one per year, some two per year and others met three times per year. Those with fewer learning sessions required additional web-based learning opportunities, and an increase in technical assistance or facilitation at the practice level.

Several mentioned the fewer the face-to-face learning sessions and the more reliant a team is on virtual and self-directed improvement, the greater the importance of self-direction or will to improve. If virtual learning is the sole vehicle, then a team's motivation to improve becomes paramount.

Structure. Respondents report that the structure and features of Learning Collaboratives vary. Many follow the approach taught by The Institute for Healthcare Improvement's Breakthrough Series College. These Learning Collaboratives use The Model for Improvement to set their aim, measure results, and test changes. This structure includes a planning group that creates a collaborative charter and works with an expert group to design the Learning Collaborative. Most use a change package framework (described above). The planning group also creates a set of progress measures and sets goals for the collaborative. A faculty of topic experts deliver content and provide support and learning for teams involved in the collaborative.

The most traditional Learning Collaboratives occur over a 12-month period with three face-to-face learning sessions, monthly submission of data including changes tested by the teams, periodic reporting of results, and monthly conference calls. Some use variations to this traditional format including fewer face-to-face learning sessions combined with virtual learning.

Some respondents follow this model less strictly. For example, some respondents added facilitators to their Learning Collaboratives. These facilitators made site visits and offered team consultation. Others used Learning Collaboratives on a longer term basis – with some lasting more than two years. One organization convenes teams and facilitates learning without expert faculty. Instead, they provide literature reviews and bring interview information from known experts to the collaborative.

Without exception, all respondents stressed the use of regular data collection and reporting related to the teams' goals as well as the importance of sharing successful changes. A key concept in collaborative learning is that participating teams become the experts and teach one another as the collaborative matures.

Other vehicles for learning: web and telephone support

Nearly all respondents mentioned the use of periodic conference calls that occurred by phone, through the web or through video conferencing. Conference calls were used to share monthly data and results, share learning, and present content. Sometimes these calls were recorded, the collateral learning materials were saved on a website so that providers could access them as they desired. Others supported their work with a list-serve and website for data entry and monthly reporting, Websites were used for as a repository for resources, links, and data management. However, one respondents mentioned that website learning resources were rarely used by the busy medical practices in her project.

On-line learning modules

Two respondents mentioned the use of on-line learning modules but were unable to link their use to collaborative results because the project results are not complete yet. One respondent recommended development of on-line learning modules like those at the Institute for Healthcare Improvement's open school, where materials are available for learning 24/7.

Technical Assistance to teams within the clinical practice

Additionally, several respondents mentioned the usefulness of technical assistance, where a facilitator makes site visits to medical practices. In particular, these facilitators help with practice teamwork. Respondents mentioned that facilitators work with 5 to 20 practices, depending on content maturity, practice readiness, and capacity to manage change. About half mentioned the value of using facilitators who can visit practices to support team development and assist teams experiencing dysfunction. Many use Tuckman's stages of forming, storming, norming, and performing to both describe team development and help teams understand and move through the developmental stages to become high performing teams (Tuckman et al., 1977).

One respondent indicated that she thought that while one-to-one coaching was a critical feature for success, it might be delivered by phone and would not necessarily require site visits. This respondent had experience with the tension between the cost of doing onsite coaching and the benefits. The balance between cost and benefit of facilitation was also weighed when a practice was "stuck" or where there is significant team dysfunction prohibiting progress on goals.

Two respondents are developing models, based on agricultural "extension" agencies, to provide support for practice improvement in rural areas. A few use their local Area Healthcare Education Councils to find staff with knowledge and skills to support teams as facilitators. Others hired new facilitators and trained them.

One respondent described their method of developing capacity by training two staff members at each clinic as onsite improvement advisors.

Finally, one respondent described his state's experience with two groups of practices implementing medical home. One group was matched with a facilitator, and the other was not. According to the respondent, outcomes between the two groups did not differ. He attributed this to three things: the power of face-to-face learning sessions (in which both groups participated), the significant motivation of the practices involved to implement medical home even without technical assistance, and the use of a "how to" guide developed for the collaborative.

Direct training of staff onsite at clinics

One organization did direct training of staff as "Health Navigators" onsite at clinics. Of all experts interviewed, this was the one learning model, besides Learning Collaboratives, that appeared to have promising results in redesigning primary care. In this model, Health Navigators on staff are trained and mentored to be "super-care coordinators." Health Navigators segment patients into groups based on a 1 to 5 risk scale using claims data. Patients who score a 4 or 5 receive support from the Health Navigator who calls them at home, works with home tele-health, and supports patients across the continuum of care. Disease management is a separate function in the practice with a dedicated disease manager who works with patients to help improve their health – particularly those who are lower risk (scores of 1 to 3 on the risk scale). There is learning support for communities of practice among Health Navigators, providers and leaders in monthly face-to-face meetings.

Other planning and logistical considerations

Implementation timeframe

All respondents interviewed who were experienced with medical home reported that it takes time to implement – two to three years at a minimum – to ensure transformation. All were emphatic that for more difficult topics like medical home, face-to-face learning sessions were vital, but they did not agree on the number per year or exact program duration. One respondent, without experience in medical home, felt that the learning process could take less time.

Geographic considerations

Respondents use a variety of strategies to convene groups from widespread geographical regions. Many mentioned organizing Learning Collaboratives by geographic region; in non-urban areas, respondents suggested offering collaborative in regional centers (one respondent recommended offering collaboratives in communities with populations of 25,000 or more). Follow-up webinars are offered regionally as "hubs" where a group might gather collectively for a virtual learning session. Some respondents reported offering virtual learning sessions or using video conferencing and/or combinations of both.

Several respondents provided technical assistance or facilitation regionally. Three respondents talked about the agricultural extension model in which onsite assistance is available in rural communities. These are housed in public health departments or other community agencies. This was also a strategy used among the respondents who did not represent health care. Some of these follow this model of regional support and region learning offerings.

In addition, one respondent explained their approach involved training improvement advisors to increase capacity of clinics to improve and another told of a network of practices that work together to improve clinical conditions. Most interviewed suggested organizing the learning community into geographic locations to minimize travel, and to combine minded learners who face similar problems. In some states, the geographical locations are supported with local technical advisors who are responsible for facilitating the learning among collaborative participants.

Evaluating progress

> Even if one person transforms" and becomes an advocate, a national leader as a result of the Learning Collaborative, I consider it a success."
>
> -Expert interviewed for study

Most of the discussion around results was about using data to measure whether teams met their goals. One respondent from industry and one from health care mentioned the value of building a business case to support improvement and offset the costs of Learning Collaboratives and large-scale change. A few mentioned measures of results were engagement in the project as evidenced by conference call attendance, returning to successive learning sessions, learning session evaluation forms.

Use of data

Routine data submission was mentioned as part of every Learning Collaborative or collaborative learning project with the exception of a group of countertop makers who met voluntarily to learn from each other. "Data should be timely and accurate," one respondent said. It was acknowledged that data "will be the hardest thing to do, but it is key for momentum and building will." Several mentioned the tension between the burden of data collection and how vital it is for team success. Respondents reported using qualitative data and story as well as quantitative data to measure results and compare them to the aim and goals. Some mentioned the value of sharing data monthly across the learning community on conference calls and reflecting on results.

The frequency of reporting varied from monthly to quarterly. The extent of data collected depended on who was collecting it and what information was available. One respondent reported that almost all data for the medical home project was gathered from claims data. Another reported that the teams did not do their own data collection but that the project facilitators collected and reported data.

Data was seen by several as essential in evaluating if improvement gains were sustained and data can act as a signal to the organization that progress is slipping.

Culture change

Many acknowledge that medical home requires a change in culture. As two respondents stated:

> Transformation is not a series of changes but a mental model change. The model of, I am the doctor and you are the patient [is over], and as the team lets others into the relationship, how they think about themselves as a doctor changes and the practice has to rethink. They are no longer a process that prepares patients to see the doctor.
>
> How do I judge results? Did anyone transform?

In that vein, another contact, said, "We had to work teambuilding, communication, change management, and leadership for the first year before we could do medical home work."

In a preview of the TransforMed evaluation, the authors note that the shift to medical home requires true transformation and not incremental changes. This includes changes in the roles of individuals as well as changes in the clinic's sense of identity and views about definition of patient care. Most current practice models are designed to enhance physician workflow. Instead, the primary care medical home is designed to enhance the patients' experiences – a transformational experience for clinicians involved.

Sustainability and spread

Sustainability. A few respondents discussed sustaining gains and the results of collaborative learning and they reported that ongoing reporting of data is the best signal of when gains are no longer held. In addition, three respondents mention the reunion or lifetime membership idea where teams continue to meet annually and share results. One described it as "Weight Watchers" for practices.

Spread. Many respondents view spread, and even willingness to spread as a measure of success. In particular spread is linked to senior leader support, and success with the changes and needs to be based on successful implementation, documentation and sequencing of changes and "how to" materials. One respondent admitted that their efforts are aimed at getting results and sustain them through implementation but don't have the wherewithal to follow-up on spread results. Another suggested that the State look at the IHI *100,000 Lives Campaign* as a model for spread. This may include making "how to" guides, teaching practices how to make simple changes or improvements, developing social networks, establishing regional hubs to support improvement, and sharing resources and lessons learned through a common website. Data reporting at the state level about changes in utilization, costs, and other outcomes were recommended.

One respondent described how practices hosted a post-collaborative outcomes congress to share results and learning. These participants were then selected to mentor others.

It should be noted that Minnesota's Health Care Homes legislation involves a Learning Collaborative, certification process, and payment methodology that will greatly impact sustainability and spread. Some of the lessons learned in previous efforts in other states may be helpful, but not necessarily applicable based on the specific rules laid out in Minnesota that will enhance sustainability and spread.

Experiences with collaborative learning models in industry

Formal structured collaborative learning in the form of Learning Collaboratives in industry is less common than in health care. As one respondent said, in industry, "there are management mandates for change, cooperation is discouraged by structural competition... health care is unique because of the ethical obligation to share."

There is a model to support small manufacturers in Ohio that is modeled after the agricultural extension program. They use a learning approach called, "Learn/Do." According to the respondent, there is commitment to the idea that "the richest learning is within the group and not what we bring. Our role is to help respondents draw out what they know, document and share it."

Learning sessions are held monthly for 15 teams who may have a variety of problems they work on, but they share a geographic location or a sometimes common problem. The teams are required to collect data and submit monthly reports about their progress to the convening organization. They participate in monthly conference calls and site visits. Each team receives a monthly technical assistance or consultant visit. Groups may also meet as a set of peer networks that solve problems together. A train-the-trainer model is used to build internal capacity at each manufacturing site.

Many younger members are attracted to on-line social networks and are drawn to on-line learning. Such learners may elect to complete on-line asynchronous training modules.

In addition, the "extension" service works with other groups that convene businesses and manufacturers for other purposes. They take advantage of local Chambers of Commerce, Small Business Development groups and the like by providing learning content, training and materials. They look for organizations that have access to manufacturers and often add-on to other's meetings or conventions. In addition, they cooperate with universities, technical colleges, community colleges to convene manufacturers.

Another respondent described a loose confederation of countertop makers who collaborate in a region of Wisconsin. They meet monthly and select a project. This self-directed group divides up work, tests improvements and shares results. They attack well defined problems and work together to solve them, without a website, without conference calls, or central reporting.

Among those interviewed, the usefulness of the business case to quantify for senior leaders the benefit of change was mentioned. It was reported as valuable in the continued investment in improvement resources. One health care respondent only corroborated the business case for improvement.

Critical components of adult learning

Most of those interviewed, when asked if they use adult learning principles in their collaborative learning work mentioned that they intentionally limit lecturing and give teams time to engage in dialog and to discuss, as a team, what they are learning. This singular response may relate to the wide adoption of the Institute for Healthcare Improvement's approach to Learning Collaboratives which is grounded in the principle, "All teach, all learn." Respondents mentioned the value of having collaborative participants teach each other – relying less on external experts and more on emerging knowledge among learners. There was little explicit mention of other adult learning theory.

We recommend broader integration of adult learning principles that include critical reflection and use of learning groups (Kolb, 1984; O'Neil & Marsick, 2007) to support the Minnesota Health Care Home Learning Collaborative.

Recommendations

Eleven recommendations are made using the same headings or themes as the Findings: **engaging participants and stakeholders**, **selecting a learning method**, **other planning and logistical considerations**, and **evaluating progress**.

We begin, however with guidance to hold fast to Minnesota's principles of Health Care Homes. Many medical home initiatives are shifting focus to office operations and systems improvement with little attention to what it means to provide patient-centered care. As multiple respondents mentioned, Minnesota is a national leader in developing Health Care Home approaches that center on the patient and has the opportunity to continue leading the way.

Hold fast to the principles and values of Health Care Homes

> Our early analysis raises concerns that current demonstration designs seriously underestimate the magnitude and time frame for the required changes, overestimate the readiness and expectations of information technology and are seriously undercapitalized. We fear that with current assumptions, many demonstrations place participating practices at substantial risk and may jeopardize the evolution of the primary care medical home as unrealistic expectations set up demonstrations and evaluations for failure (Nutting et al., 2009).

It is essential to note that experts agree: the development of Health Care Homes involves transforming complex systems. It is not a short-term commitment, but takes time to make incremental changes. There are a few key components that will serve as a foundation to integrating the essential principles and values of Health Care Homes:

- Assume the role of project integrator and create a common understanding and commitment among all contractors about the meaning, principles, and values of Minnesota Health Care Homes.
- Avoid Health Care Home creep that shifts the focus away from transforming the relationship between the healthcare team and patients and their families – avoid focusing solely on clinic system improvement.
- **Support transformation in relationships**: between patients and Health Care Home teams and between Health Care Home teams, and the overall practice system.

Engaging participants and stakeholders

1. Prioritize patient and family Involvement

It is important to stress that without patient and family involvement, there is no Health Care Home. Our research findings fully support Minnesota's Health Care Home legislation requiring patient and family involvement.

Patients and family members on teams accelerate the testing of innovative ideas and the implementation of improvements. As mentioned previously, patients and family members help to ensure follow-through. In addition, patients and family members help overcome political barriers in the practice setting, the larger health care system, and the community.

- Prioritize patient and family involvement including core concepts such as those defined by the Institute for Family-Centered Care (2009):

> **Dignity and Respect.** Health care practitioners listen to and honor patient and family perspectives and choices. Patient and family knowledge, values, beliefs and cultural backgrounds are incorporated into the planning and delivery of care.
>
> **Information Sharing.** Health care practitioners communicate and share complete and unbiased information with patients and families in ways that are affirming and useful. Patients and families receive timely, complete, and accurate information in order to effectively participate in care and decision-making.
>
> **Participation.** Patients and families are encouraged and supported in participating in care and decision-making at the level they choose.
>
> **Collaboration.** Patients and families are also included on an institution-wide basis. Health care leaders collaborate with patients and families in policy and program development, implementation, and evaluation; in health care facility design; and in professional education, as well as in the delivery of care.

- Offer guidance to teams on how to recruit, orient, and work with patient and family partners.
- Recommend or require at least two patient–family partners on each practice team. Set this expectation at every level of leadership related to the initiative.
- Ensure that patients or family members are prepared and supported in learning activities.
- Make public statements about the importance of patient partnership and related expectations.

Health Care Home changes the relationship between the patients, family members and the healthcare practice team. This partnership transforms not only those directly involved, but also influences improvements throughout the system.

> Patient- and family-centered care is an innovative approach to the planning, delivery, and evaluation of health care that is grounded in mutually beneficial partnerships among health care patients, families, and providers. Patient- and family-centered care applies to patients of all ages, and it may be practiced in any health care setting (Institute for Family-Centered Care, 2009).

2. Ensure ongoing State leadership for the Health Care Home initiative

The Minnesota Departments of Health and Human Services should be the coordinating body for statewide and regional Health Care Home work to ensure that Minnesota's Health Care Homes adhere to the State's philosophy, principles and values.

3. Engage leadership

Experts agree that it is essential to develop and support Health Care Home leadership at the systems level, support clinic administrative leadership for Health Care Home implementation, and develop clinician leadership among Health Care Home teams.

Form a Steering Committee among key constituents. This group stays abreast of national medical home progress, legislation, and related health care reform. This group reviews progress of teams involved in the Learning Collaborative as well as evaluation results on a quarterly basis. They offer suggestions for improvements based on results.

Steering Committee members keep their constituents current on Health Care Home implementation and results related to the Learning Collaborative. Steering Committee members offer additional learning and sharing opportunities to support their respective members who are involved in Health Care Home implementation.

Engage clinic or practice leadership. In engaging clinic administrative leadership, the focus is on three components: 1) ways in which Health Care Home implementation is strategic to the practice; 2) ways in which these administrative leaders help facilitate successful Health Care Home teams by dedicating adequate resources, and 3) ways in which administrative leaders can be engaged in the teams' progress by reviewing periodic results.

- Offer breakout sessions at Learning Collaborative meetings that are dedicated to administrative leadership. This helps them develop more extensive knowledge about Health Care Home implementation as well as learning aspects of their role that will help support their teams.

- Offer a learning community for administrative leaders that include either quarterly regional breakfast gatherings, or a series of conference calls for networking and shared learning that includes peer problem solving, case studies, reviewing results, and targeted training.

Engage clinicians. As mentioned previously, clinicians are key to supporting testing new ideas and innovation among the teams. Their engagement is required to spread the changes within the practice setting.

- Ensure dedicated networking time for clinicians and leadership learning opportunities. In addition, there is a need for specific training, support, and follow-up to help clinician's develop the skills to support their team's efforts and to best utilize the contributions made by patient and family partners. Include dedicated learning content at the learning session related to how to help the team overcome organizational resistance and change fatigue. Support clinicians with "facilitative leadership skills instead of the more common authoritarian ones" (Nutting, et al 2009).

Selecting a learning method

4. Incorporate principles of successful adult learning

It is important to incorporate differing learning styles into the overall planning of the learning activities. Although face-to-face learning is regarded as the best approach for initiating Health Care Home implementation, this learning can involve many types of interactions. It is important to prepare a mix of expert training, appropriate curriculum, written materials, and allow for plenty of time for less structured peer-to-peer learning activities.

- Ensure that learning sessions include time for the teams to explore and adapt learning to their local context.

- Create generous opportunities for teams to learn from each other. Design learning to "became important opportunities for practice leaders to reenergize through sharing experiences and providing support" (Nutting et al., 2009).

Learning styles are an essential consideration when designing other types of learning platforms such as conference calls, webinars, web-based curriculum modules, "how-to" guides, and website resources. These platforms can integrate components that allow for more individualized support, interaction, or follow-up technical support.

- Allow for customized learning so that team can access the resources and materials they need when they are ready for it. This includes recording and storing conference calls and webinars so that team members may access them at any time.

Learning activities should allow for time to practice, implement, and reflect on what is learned.

5. Use of a change package framework

Create a Health Care Home "change package" framework as a logical way to organize and sequence changes for improvement. This change package will provide a written framework for teams to use as a step-by-step "how to" guide for making practical changes. This change package should include tips and examples of tangible ideas for changes in several categories related to Health Care Home implementation.

6. Develop Learning Collaborative sessions based on lessons learned nationally and locally

> Face to face is critical, you can't do it without it. Webinars and conference calls and virtual things can be a useful adjunct – if people already know one another.
>
> -Expert interviewed for study

As evidenced in the literature review and key informant interviews, much has been learned about key elements that help to provide successful Learning Collaboratives. Minnesota, also, has experience with several previous projects that implemented Learning Collaboratives effectively. We recommend examining these key factors when designing the collaborative, and ensuring that there is regular review of this research and emerging research when implementing the collaboratives. The following are some key components related to this recommendation.

Staff a Health Care Home project group for the Learning Collaborative. This group is responsible for the Learning Collaborative and other training that supports certification for Health Care Home. This project group works with expert, as needed, to design the Learning Collaborative. This group also identifies a set of progress measures and sets goals for the collaborative. It is recommended that this project group include: a Project Director, responsible for overall planning and integration into other Health Care Home activities; a Project Manager, responsible for the logistics of running the Learning Collaborative; technical staff, responsible for web related activities; a data analyst, responsible for reporting team results regularly back to teams, the Learning Collaborative, and the Steering Committee. Other staff may be needed on an ad hoc basis. This project group may be staffed by State employees or contracted to another organization. However, as

mentioned previously, a State agency and dedicated staff person should provide overall leadership and be required as a member of the project group.

Select Co-Chairs for Learning Collaborative Planning. One who represents patient and family partners and one who represents providers. These chairs should have successful experience in implementing medical home. In the IHI Breakthrough Series model, one Co-Chairperson is usually a content expert – a physician if the topic involves physicians as key change agents. The other Co-Chair is usually a patient or family member with experience from prior Learning Collaboratives, understanding of the topic, and with the ability to engage patients and families.

Team membership. There is added value in creating multi-disciplinary teams. Team composition may include patients/family members, clinicians, care coordinators, nurses, office staff, and office manager. At minimum, the team should consist of patients/family members, providers, and care coordinators.

Meeting format. We recommend incorporating the traditional Institute for Healthcare Improvement style of Learning Collaborative with the understanding that many teams are working toward certification. This includes face-to-face meetings for optimal collaborative learning and increasing their motivation to improve.

- Offer Learning Collaboratives for the first cohorts for 18 months with three face-to-face learning sessions and support from monthly conference calls. Consider launching in geographic locations throughout the state. Integrate highly motivated, ready teams.

- Offer Community of Practice sessions so that groups of patient team members, care coordinators, clinicians, office staff, and other team members can learn from their same role peers in other teams. Take advantage of various other situations when communities of practice gather to offer learning opportunities.

Plan for mixed learning methods. While this research supports face-to-face learning sessions as a critical component, we believe that in some cases it will be important to examine benefits and limitations of self-directed learning, virtual learning methods, and conference calls. It is unknown if virtual collaboratives build enough will to support the transformation into a Health Care Home. If a virtual collaborative is attempted, it is important to select teams with high motivation to change. It is recommended that when other learning methods, such as on-line learning, are used, they are combined with at least one face-to-face meeting each year.

It will be important to customize methods based on geography and/or practice type and size. Practice teams can be grouped according to these factors to assist in planning.

Collect baseline information in order to measure team progress. As recommended in the evaluation recommendations, included in the Appendix, use a readiness assessment technique to collect baseline information on practice and team readiness and degree of implementation of Health Care Home concepts.

Capitalize on the expertise of experienced team and existing infrastructures. The enthusiasm of experienced teams can help practices facing challenges to overcome barriers to Health Care Home implementation. In addition, existing expertise, infrastructure, and programs should be used to support the Learning Collaboratives. Minnesota is well known for its innovative ideas and cutting edge programs. It will be important to use these individuals and experiences as resources.

- Recruit early successful Health Care Home teams as mentors to new teams and to be used as expert faculty at Collaborative Learning sessions.
- Build support throughout the system by spreading the stories and expertise of early adopters.
- At the end of each collaborative, host an outcomes congress for experienced teams to share their results and lessons learned.

7. Develop learning materials

- Create a "how to" guide that includes: the change package (described previously), sequence of changes, practical examples of how to make changes, worksheets and sample documents used by experienced practices, and sample data collection and reporting forms.
- Build a website for housing materials including curriculum, educational sessions, resources, "how to" guides, sample forms, work products, stories, and lessons learned from practices. Good examples of websites with similar purposes can be found on the website for TransforMed, American Academy of Pediatrics, Institute for Clinical Systems Improvement, and the Institute for Healthcare Improvement.
- Develop on-line, self-directed learning modules for each component of Health Care Home implementation, for example, care coordination, patient partnership, and community integration.
- Develop learning tracks for providers, care coordinators, patient partners, and clinical administrative leaders. Support with Communities of Practice networks and breakouts at face-to-face meetings.

8. Provide technical assistance or team facilitation

It is important to plan for when teams get stuck. This includes providing technical assistance and on-site facilitation as needed.

- Seek out and develop regional technical assistance facilitators, such as those based on agricultural "extension" models, to use as improvement advisors. These regionally-based field agents can also serve as advisors to regional collaboratives, as needed. Find other appropriate resources to use facilitators around the state. This may include staff from the Minnesota Department of Health and Department of Human Services.

- Use federal funds related to health care reform, if possible, and seek support in designing technical assistance capacity from University of Minnesota Center of Excellence in Primary Care in the Department of Family Practice and Community Health.

- Add a help-line that teams can access as needed when they face obstacles or have questions.

Other planning and logistical considerations

9. Geographic considerations: regional offerings

Decentralize Health Care Home learning communities to geographical regions. Develop a regional strategy for Health Care Home that includes face-to-face learning sessions and subsequent conference calls and webinars based on geographical location. Divide the state into logical regions, borrow the node concept from Institute for Healthcare Improvement's 100,000 Lives Campaign, where regional nodes offer the learning sessions and all regions meet annually.

Customize learning. Customize collaboratives based on need and Health Care Home experience. For example, some metro clinics have NCQA certification for medical home and have different learning needs than practices and clinics that are not.

Offer regional learning community gatherings. Offer regional opportunities to support learning and community building for care coordinators, family-patient partners, providers and office managers. Consider lunch and learns, or breakfast meetings. These are opportunities to learn from each other, explore and investigate areas of interest to the group. The earliest Learning Collaborative needs highly motivated teams who can be developed to work as faculty and provide mentoring to the second wave of collaborative members.

Consider housing technical assistance in each geographic region. Locally locate facilitators who can problem solve with clinics and practices, and host learning communities. Train Area Health Educators to do improvement advising, and local health department personnel. Train regional improvement advisors, using either an agricultural extension agent model, especially if Federal funding allows. Leverage the network developed by the Center for Excellence in Primary Care at the University of Minnesota Department of Family Medicine and Community Health.

Take advantage of times when clinics and practices gather for other reasons to offer Health Care Home learning opportunities. Leverage existing constituents ability to convene their respective groups and offer learning opportunities for medical home as part of a meeting, an extension of a meeting, for example – adding an evening, breakfast, break out or an extra day to a quarterly or annual meeting of the American Academy of Family Physicians and American Academy of Pediatrics.

Evaluating progress

10. Use data

Data is an important component of Health Care Home as well as Learning Collaborative implementation. It allows teams, administrators, and planners to evaluate whether improvement gains are realistic and sustainable. The evaluation recommendations, included in the Appendix, are useful steps in integrating data into this work. The following should also be considered:

- There should be a differentiation between data used by teams to measure progress and data used by the Steering Committee to evaluate outcomes.
- In working with teams, promote the benefits and usefulness of collecting data. Use practical data analysis and reporting so that teams can better balance the tension between data collection burdens and the benefits of data in building will and inspiring change.
- Use the Steering Committee as well as other key systems leaders to help develop a practical and logical set of measures for Health Care Home teams. Determine which aggregate data can be pulled quarterly from State databases. Segment the utilization outcome data based on certified teams, teams working on certification, and those doing no Health Care Home work.
- Use team assessment scores (as recommended in the evaluation recommendations in the Appendix) to track team progress and cohort progress.

11. Understand the important of culture change

Be patient with culture change, it takes time. The shift in hierarchy between the patient and family and the provider and care team are part of transformative culture change. If the relationships do not change between patients and the care team and among care team members themselves and if patients and families are not integrated in the improvement strategy, little culture change will ensue.

Nutting and his colleagues (2009) wrote, "Change is hard enough, transformation to a primary care medical home requires epic whole-practice reimagination and redesign. It is much more than a series of incremental changes." This includes changes in the roles of individuals as well as changes in the clinic's sense of identity and views about definition of patient care.

> Roles of individuals and the practices sense of identity and imagination about the meaning of patient care are changed. Most current practice models are designed to enhance physician workflow. The primary care medical home should be designed to enhance the patient experience. This shift requires a transformation, not an incremental change.

- This research, supported by the feedback from key informants, argues that the shift to medical home requires personal transformation of physicians.
- Many argue that in the face-to-face interactions and support provided by Learning Collaborative sessions are essential to this cultural transformation.
- Use the leadership group to help message the importance of this shift. "For most practices full transformation is likely to require more than the three years of the NCQA process. For most practices, this transformation is likely to require an ongoing process" (Nutting et al., 2009).
- Provide social networking opportunities with other states and medical home projects to provide on-going connections and learning among Health Care Home teams.

Key mistakes made or lessons learned from others implementing collaborative learning

- Lack of well articulated aim for the work, especially mixing levels of specificity
- Lack of connection and support from senior clinic leaders
- Not integrating data and formative evaluation; lack of attention to results

- Lack of focus on creating a strong administrative group to provide logistical planning and support to learning activities
- Avoid too much lecture in the learning session; ensure time to have learners teaching other learners
- Lack of resources so the team has time and place to meet as well as time to test changes to see if they should be implemented
- Lack of resources for spread – over reliance on the improvement team and not enough leadership support for full implementation
- Little focus on ensuring a competent, high functioning planning group to shepherd the Learning Collaborative

Study limitations

The relative immaturity of the medical home, especially for adults, as well as the variation in operational definitions and the current explosion of medical home projects are limitations to this study. One other concern is that qualitative data, such as interview data, relates to the respondents experience and is limited by those experiences as well. We can say that others in like situations will have similar but not identical experiences. Our key informant sample was a purposeful sample of those engaged in collaborative learning with some engaged in medical home implementation. Findings gleaned from key informant interviews are based on the questions we asked which may have limited the responses we received. In qualitative work, the researcher is a data collection instrument and is influenced by past experience and knowledge of the field (Yin, 1984). We believe this was an actual benefit and strength of our work.

In addition, the short timeframe of this study did not allow us to gather all of the feedback that would have been helpful. However, we feel that the overall responses represented the expert knowledge in the field.

Next steps

Based on the information gathered from the literature scan and the key informant interviews as well as discussion of previous experience with collaborative learning environments integrating health care, we identify the following next steps for considerations.

1) Form an initial planning team include advisors with experience with adult learning, particularly in health care

2) Based on the information learned in this review, design a model based on the particular needs of Minnesota's system

3) Develop a budget based on the scope of the initial implementation phase.

4) Involve a larger group of stakeholders as a Steering Committee: include consumers/family members, practitioners, and payers

5) Conduct baseline assessments of practices involved

The Appendix includes literature citations, a list of key informants who were interviewed for this project, a summary of key informants responses to a web survey, the full list of literature scanned as part of this study, and the companion report written as part of this study: *"Potential methods for evaluating a Collaborative Learning Model designed to support the implementation of Health Care Homes in Minnesota*."

Appendix

Citations

List of key informants

Summary of web survey of key informants

Considerations if working with contracted partners

Literature scanned for this study

Companion report: Potential methods for evaluating a Collaborative Learning Model designed to support the implementation of Health Care Homes in Minnesota

Citations

Argyris, C., Putman, R., & Smith, D. M. (1985). *Action Science: Concepts, Methods and Skills for Research and Intervention*. San Francisco, CA: Jossey-Bass.

Ayers, L. R., Beyea, S. C., Godfrey, M. M., Harper, D. C., Nelson, E. C., & Batalden, P. B. (2005). Quality improvement Learning Collaboratives. *Quality Management in Health Care, 14*(4), 234-247.

Bio-Medicine. (2009). *ICSI Plans Symposium on New Depression Treatment Program That Is Improving Patient Outcomes Five-Fold Over Typical Primary Care*. Retrieved June 30, 2009, from http://www.bio-medicine.org/medicine-news-1/ICSI-Plans-Symposium-on-New-Depression-Treatment-Program-That-Is-Improving-Patient-Outcomes-Five-Fold-Over-Typical-Primary-Care-50936-2/

Boson, B., Provost, L., Gagnon, J., & Carver, P. (2006). Using a virtual breakthrough series collaborative to improve access in primary care. *Joint Commission Journal on Quality and Safety, 32*(10), 573-584.

Chin, M. H., Drum, M. L., Guillen, M., Rimington, A., Levie, J. R., Kirchhoff, A. C., et al. (2007). Improving and sustaining diabetes care in community health centers with the health disparities collaboratives. *Medical Care, 45*(12), 1135-1143.

Deming, W. E. (1993). *The new economics for industry, government & education.* Cambridge: Massachusetts Institute of Technology Center for Advance Engineering Study.

Deo, S., McInnes, K., Corbett, C. J., Landon, B. E., Shapiro, M. F., Wilson, I. B., et al. (in press). Associations between organizational characteristics and intervention choices in quality improvement collaboratives. *Medical Care*.

Dick, B. (1997). *Action learning and action research*. Retrieved June 15, 2009, from http://www.scu.edu.au/schools/gcm/ar/arp/actlearn.html

Grossman, E., Keegan, T., Lessler, A. L., Ly, M. H., Huynh, L., O'Malley, A. J., et al. (2008). Inside the health disparities collaboratives: a detailed exploration of quality improvement at community health centers. *Medical Care, 46*(5), 489-496.

Horbar, J. D., Carpenter, J. H., Buzas, J., Soll, R. F., Suresh, G., Bracken, M. B., et al. (2004). Collaborative quality improvement to promote evidence based surfactant for preterm infants: a cluster randomized trial. *British Medical Journal, 329*(7473), 1004.

Institute for Family-Centered Care. (2009). *What is patient- and family-centered healthcare?* Retrieved August 6, 2009, from http://www.familycenteredcare.org/faq.html

Institute for Healthcare Improvement (2003). *The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper*. Boston, MA.

Kolb, D. A. (1984). *Experimental Learning: Experience as the Source of Learning and Development*. Upper Saddle River, NJ: Prentice Hall, Inc.

Leape, L. L., Kabcenell, A. I., Gandhi, T. K., Carver, P., Nolan, T. W., & Berwick, D. M. (2000). Reducing adverse drug events: lessons from a breakthrough series collaborative. *Joint Commission Journal on Quality and Safety, 26*(6), 321-331.

McInnes, D. K., Landon, B. E., Wilson, I. B., Hirschhorn, L. R., Marsden, P. V., Malitz, F., et al. (2007). The impact of a quality improvement program on systems, processes, and structures in medical clinics. *Medical Care, 45*(5), 463-471.

Mills, P. D., & Weeks, W. B. (2004). Characteristics of Successful Quality Improvement Teams. Lessons from Five Collaborative Projects in the VHA. *Joint Commission Journal on Quality and Safety, 30*(3), 152-162.

Nutting, P. A., Miller, W. L., Crabtree, B. F., Jaén, C. R., Stewart, E. E., & Stange, K. C. (2009). Initial lessons from the first national demonstration project on practice transformation to a patient-centered medical home. *Annals of Family Medicine, 7*(3), 254-260.

O'Neil, J., & Marsick, V. J. (2007). *Understanding action learning*. New York: AMACOM/American Management Association.

Ovretveit, J., Bate, P., Cleary, P., Cretin, S., Gustafson, D., McInnes, K., et al. (2002). Quality collaboratives: lessons from research. *Quality and Safety in Health Care, 11*(4), 345-351.

Pedler, M. (1996). *Action learning for managers.* London: Lemos and Crane.

Positive Deviance Initiative. (2009). *What is Positive Deviance?* Retrieved June 30, 2009, from http://www.positivedeviance.org/index.html

Revans, R. W. (1982). *The origin and growth of action learning*. Brickley, UK: Chartwell-Bratt.

Schouten, L. M., Hulscher, M. E., van Everdingen, J. J., Huijsman, R., & Grol, R. P. (2008). Evidence for the impact of quality improvement collaboratives: Systematic review, *British Medical Journal*, 336. doi:10.1136/bmj.39570.749884.BE

Solberg, L. I. (2005). If you've seen one quality improvement collaborative. *Annals of Family Medicine, 3*, 198-199.

Shaw, J. S., Wasserman, R. C., Barry, S., Delaney, T., Duncan, P., Davis, W., et al. (2006). Statewide quality improvement outreach improves preventive services for young children. *Pediatrics, 118*(4), 1039-1047.

Tuckman, B.W. & Jensen, M.A.C. (1977). Stages of small group development revisited. *Group and Organizational Studies*, 2, 419-427.

Wilson, T., Berwick, D. M., & Cleary, P. D. (2003). What do collaborative improvement projects do? Experience from seven countries. *Joint Commission Journal on Quality and Safety, 29*(2), 85-93.

Yin, R. (1984). *Case Study Research.* Thousand Oaks, CA: Sage Publications.

Young, P. C., Glade, G. B., Stoddard, G. J., & Norlin, C. (2006). Evaluation of a Learning Collaborative to improve the delivery of preventive services by pediatric practices. *Pediatrics, 117*(5), 1469-1476.

List of key informants

Key Informant	Title	Organization
Andre Kabcenell, RN, MPH	Vice President	Institute for Healthcare Improvement
Ben Crabtree, PhD	Professor & Director	Research Division, Department of Family Medicine, Robert Wood Johnson Medical School (University of Medicine and Dentistry of New Jersey)
Carolyn Allshouse	Senior Planner	Minnesota Department of Health
Charles Homer, MD, MPH	CEO	National Initiative for Children's Healthcare Quality
C.J. Peek	Associate Professor	Dept. of Family Medicine and Community Health University of Minnesota Medical School
Cliff Norman	Partner (API) Improvement Advisor (IHI)	Associates in Process Improvement and Institute for Healthcare Improvement
David Labby, MD	Medical Director	CareOregon
Deborah Cohen, PhD	Assistant Professor	Department of Family Medicine, UMDNJ-RWJMS
Doreen Salek RN	Director, Business Development	Geisinger Health Plan
Fatima Weathers, Ed.D.	Vice President	The Manufacturing Advocacy and Growth Network
Gordon Mosser, MD	Associate Professor	University of Minnesota School of Public Health
Greg Randolph, MD, MPH	Director NC Center for Public Health Quality, Co-Director, NC Children's Center for Clinical Excellence	Associate Professor, Department of Pediatrics; Adjunct Associate Professor, Public Health Leadership Program University of North Carolina, Chapel Hill
James W. Mold, MD, MPH	Professor	Department of Family and Preventive Medicine, University of Oklahoma Health Sciences Center
Jan Norman	Director, Chronic Disease Prevention Unit	State of Oregon (advises industry, manufacturing)
Jane Norman	Improvement Advisor	Austin Texas, Advises Care Oregon
Jane C. Pederson, MD	Director of Medical Affairs	Stratis Health
Janet Tomcavage, RN, MSN	Vice President Health Services	Geisinger Health Plan
Jed Weissberg, MD	Senior Vice President for Quality	Quality and Care Delivery Excellence Kaiser Permanente
Jeffery Horbar, MD	Chief Executive & Scientific Officer	Vermont Oxford Network
Judith Schaefer, MPH	Senior Research Associate	MacColl Institute for Healthcare Innovation Center for Health Studies Group Health Cooperative
Judith Shaw, RN, PhD	Executive Director and Associate Professor of Pediatrics	Vermont Child Health Improvement Program, University of Vermont, College of Medicine
Julie Schilz, BSN, MBA	Manager, IPIP and primary care medical home	Colorado Guidelines Program and Head of Multistakeholder subcommittee for the PCPCC
Kevin Peterson, MD with Carol Lang and Raymond Boyle	Director of Research	Department of Family and Community Medicine, University of Minnesota

Key Informant	Title	Organization
Laura Peterson, MPH	Health Care consultant and Collaborative Director	Visiting Nurse Service of New York
Leif Solberg, MD	Associate Medical Director for Research	Health Partners Research Foundation
Lloyd Provost	Improvement Advisor	Associates in Process Improvement - works on many IHI initiatives
Marley McMillen	Practice Facilitator	TransforMed
Nancy Jaeckels	Vice President, Member Relations and Strategic Initiatives	Initiatives Institute for Clinical Systems Improvement
Paul Nutting, MD, MSPH	Director of Research; Professor of Family Medicine	Center for Research Strategies; University of Colorado health Sciences Center; Associate Editor, Annals of Family Medicine
Sharon Fleischfresser, MD, MPH	Medical Director	Wisconsin CYSHCN (children and youth with special health needs) Program, Division of Public Health
Sue Butts Dion	Project Manager (Maine PCMH Pilot); Improvement Advisor (IHI); Project Leader (Maine Health Management Coalition)	Maine Aligning Forces for Quality, Institute for Healthcare Improvement and Maine Health Management Coalition

In addition, two persons provided information via email correspondence. These were:

- Charles Onefur, MD, former Director of Title V for State of Illinois and experienced in running medical home Learning Collaboratives
- Keith Kreycik, Chief Business Technology Consultant, Federal Reserve Bank, expert on contracting arrangements

Summary of web survey of key informants

In addition, to interviews with expert key informants, researchers asked informants to complete a web survey that collected some background information about respondents. The following is a summary of the results of the web survey that was completed by 22 of the 33 respondents.

Region served (N=22)	N	%
Minnesota	6	27%
North East US	6	27%
Western US	4	18%
Across US	3	14%
South or Southeast US	2	9%
International	2	9%

Have you ever used collaborative learning methods with participants in rural areas? (N=22)	N	%
Yes	15	71%
No	6	29%

How many years of experience do you have… (N=22)	N	<6 Years	6-10 Years	11-15 Years	>15 Years	Average Years	Sum Years	Missing
Working in quality improvement	22	5%	18%	36%	41%	18	392	0%
Working with Learning Collaboratives	22	18%	36%	36%	9%	10	230	0%
With other collaborative learning approaches	22	36%	23%	14%	27%	10	217	0%
With Health Care Homes/medical homes	22	59%	23%	5%	14%	7	165	0%

Which improvement model or learning framework do you generally use in Learning Collaboratives or cooperative learning experiences? (N=22)	N	%
PDSA (small tests of change)	19	91%
Model for improvement	17	81%
Breakthrough series	15	71%
Study groups	6	29%
Problem based learning	6	29%
Other	5	24%
Reliability Science	3	14%
Focus PDCA	2	10%
Learn or Toyota Production System	2	10%
Case design	2	10%
Action learning sets	1	5%
Action science	1	5%

Please indicate the types of collaborative learning experiences you have participated in: (N=22)	N	%
Break through series style Learning Collaboratives	21	96%
Learning collaborative and on site consulting or technical assistance	17	77%
Learning collaborative and virtual learning sessions	16	73%
Distance learning with synchronous learning	13	59%
Distance learning with asynchronous learning	8	36%
Virtual learning only collaborative	7	32%
Other	3	14%

When designing a Learning Collaborative or cooperative learning experience, which of the following design features would you try to include: (N=22)	N	Always	Sometimes	Never
Periodic submission of data to collaborative leaders	22	86%	14%	0%
Periodic submission of changes tested or implemented	21	81%	19%	0%
Periodic conference calls or webinars	22	77%	23%	0%
Face to face meetings	22	73%	27%	0%
Reports to organizations' senior leaders	22	64%	32%	5%
Periodic virtual learning sessions	22	32%	59%	9%

How frequently would you use or incorporate the following design features when designing a Learning Collaborative or cooperative learning process? (N=22)	N	Monthly	Quarterly	Annually	Never
Conference calls or webinars	20	80%	20%	0%	0%
Submission of changes tested or implemented	21	52%	43%	5%	0%
Submission of data to collaborative leaders	21	52%	43%	0%	5%
Reports to organizations' senior leaders	21	43%	29%	19%	10%
Virtual learning sessions	18	6%	56%	22%	17%
Face to face meetings	21	5%	76%	19%	0%

What are other features you would always include in a Learning Collaborative? (N=22)
Experiences that allow participating teams to learn from each other in small group or one to one sessions. These partnering exercises were not always successful, but were sometimes wildly so. Also I found that bringing together people from different teams who have the same role or job. Description was useful to participants.
Ability for collaborative participants to interact (e.g., listserv, online Forum, other virtual methodology).
Site visits or consultation with teams.
Engagement of Senior leaders to help them be effective sponsors, coaching with the early adopter teams.
A clear sense of the convening entity, the participants, any consultants, and the planning group drawn from these who design and facilitate each meeting or learning step along the way.
Working with people who actually care about the issue and want to be involved, in other words the internal commitment to see progress.
Coaching. Opportunity to exchange information.
Identification, description, and dissemination of most effective practices within the group or used by similar practices/positive deviants.
Clear mission/vision.
Expert Faculty with diverse experience.
Evidence based foundation or a model, guideline, template whenever possible: - Content experts - Mix of learning and team time - Mix of standardization for efficiencies and innovation for new ways to be more successful
Allowing members of the collaborative to have time at the face to face sessions to work as a team - leave with something they want to do. Also, having time for members to learn from each other.
Opportunity for participating teams/group to visit sites of other participating teams/sites.
We learned that having face-to-face is really important, especially for the first meeting. Virtual learning sessions between face-to-face worked well.

Considerations if working with contracted partners

It is important to create a high functioning group of committed contractors who work collaboratively and adhere to Minnesota's philosophy of Health Care Home. As one respondent reported:

> If the potential vendors are accustomed to collaborating on projects and they trust each other, then I recommend a going with a Grantee/sub-grantee agreements. Sub-grantees have all of the government Terms and Conditions passed on to them as are required of the Grantee. Everyone knows what's expected and they are agreeable to coming together periodically to test ideas and share best practices.
>
> If a power struggle is likely to ensue over who's in charge then I would go with the Prime Contractor and Sub-contractor model. It is a classic authoritative model but it can be put in place more quickly than trying to build a community. The contractor has the flexibility of going with a consensus building strategy for developing curriculum or the Contractor can select a small group to design the program and decree that all vendors adopt that model. The subs either go along with the model or a different vendor is selected.

Consider the advantages of retaining the role of project integrator to ensure influence and coordinate the aim of Health Care Home, its content and measurement. The project integrator will track the project and assure integration. Although a prime contractor as a project integrator who subcontracts with others to meet deliverables may reduce the burden of the state's involvement in medical home, it may reduce the sphere of influence over the execution of Health Care Home throughout the state. Recent reviews of prime contracts in the Iraqi war are not favorable due to overhead expenses and lack of control over sub contractor quality. The concept is less popular now than in the past where it worked well with complex manufacturing and assembly contracts.

Another respondent put it this way.

> It is critically important to define exactly the deliverables for any project. If there is clarity on deliverables, almost any contract structure will work. If you do not, you will have to make sure that there are contract managers and project managers to make sure the various contractors do their job and that everything gets orchestrated in time to meet the schedules of the project. Expect 5 to 10 percent of the cost of a contract should be dedicated to project management.

Because this work is transformational, takes a long time and is important to health care reform, the State is best served to retain a leadership role, especially in the early years of the work.

Literature scanned for this study

Systematic Reviews

Boonyasai, R. T., Windish, D. M., Chakraborti, C., Feldman, L. S., Rubin, H. R., & Bass, E. B. (2007). Effectiveness of teaching quality improvement to clinicians: a systematic review. *Journal of the American Medical Association, 298*(9), 1023-1037.

Ovretveit, J., Bate, P., Cleary, P., Cretin, S., Gustafson, D., McInnes, K., et al. (2002a). Quality collaboratives: lessons from research. *Quality and Safety in Health Care, 11*(4), 345

Schouten, L. M., Hulscher, M. E., van Everdingen, J. J., Huijsman, R., & Grol, R. P. (2008). Evidence for the impact of quality improvement collaboratives: Systematic review, *British Medical Journal*, 336. doi:10.1136/bmj.39570.749884.BE

Quality Improvement Learning Collaboratives using the Institute for Healthcare Improvement Breakthrough Series (BTS)

Asch, S. M., Baker, D. W., Keesey, J. W., Broder, M., Schonlau, M., Rosen, M., et al. (2005). Does the collaborative model improve care for chronic heart failure? *Medical Care, 43*(7), 667

Ayers, L. R., Beyea, S. C., Godfrey, M. M., Harper, D. C., Nelson, E. C., & Batalden, P. B. (2005). Quality improvement Learning Collaboratives. *Quality Management in Health Care, 14*(4), 234-247.

Brush, J. E., Jr., Rensing, E., Song, F., Cook, S., Lynch, J., Thacker, L., et al. (2009). A statewide collaborative initiative to improve the quality of care for patients with acute myocardial infarction and heart failure. *Circulation, 119*(12), 1609-1615.

Chin, M. H., Drum, M. L., Guillen, M., Rimington, A., Levie, J. R., Kirchhoff, A. C., et al. (2007). Improving and sustaining diabetes care in community health centers with the health disparities collaboratives. *Medical Care, 45*(12), 1135-1143.

Deo, S., McInnes, K., Corbett, C. J., Landon, B. E., Shapiro, M. F., Wilson, I. B., et al. (2009 *Forthcoming*). *Associations between organizational characteristics and intervention choices in quality improvement collaboratives*. Medical Care.

Grossman, E., Keegan, T., Lessler, A. L., Ly, M. H., Huynh, L., O'Malley, A. J., et al. (2008). Inside the health disparities collaboratives: a detailed exploration of quality improvement at community health centers. *Medical Care, 46*(5), 489-496.

Institute for Healthcare Improvement. (2003). *The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement. IHI Innovation Series white paper*. Boston, MA.

Leape, L. L., Kabcenell, A. I., Gandhi, T. K., Carver, P., Nolan, T. W., & Berwick, D. M. (2000). Reducing adverse drug events: lessons from a breakthrough series collaborative. *Joint Commission Journal on Quality and Safety, 26*(6), 321-331.

McInnes, D. K., Landon, B. E., Wilson, I. B., Hirschhorn, L. R., Marsden, P. V., Malitz, F., et al. (2007). The impact of a quality improvement program on systems, processes, and structures in medical clinics. *Medical Care, 45*(5), 463-471.

Mills, P. D., & Weeks, W. B. (2004). Characteristics of successful quality improvement teams: lessons from five collaborative projects in the VHA. *Joint Commission Journal on Quality and Safety, 30*(3), 152-162.

Nembhard, I. M. (2009). Learning and improving in quality improvement collaboratives: which collaborative features do participants value most? *Health Services Research, 44*(2 Pt 1), 359-378.

Quality Improvement Learning Collaboratives using the Institute for Healthcare Improvement Breakthrough Series (BTS) (continued)

Schonlau, M., Mangione-Smith, R., Chan, K. S., Keesey, J., Rosen, M., Louis, T. A., et al. (2005). Evaluation of a quality improvement collaborative in asthma care: does it improve processes and outcomes of care? *Annals of Family Medicine, 3*(3), 200-208.

Shaw, J. S., Wasserman, R. C., Barry, S., Delaney, T., Duncan, P., Davis, W., et al. (2006). Statewide quality improvement outreach improves preventive services for young children. *Pediatrics, 118*(4), 1039-1047.

Wilson, T., Berwick, D. M., & Cleary, P. D. (2003). What do collaborative improvement projects do? Experience from seven countries. *Joint Commission Journal on Quality and Safety, 29*(2), 85-93.

Young, P. C., Glade, G. B., Stoddard, G. J., & Norlin, C. (2006). Evaluation of a Learning Collaborative to improve the delivery of preventive services by pediatric practices. *Pediatrics, 117*(5), 1469-1476.

Quality Improvement Models/Frameworks

Auerbach, A. D., Landefeld, C. S., & Shojania, K. G. (2007). The tension between needing to improve care and knowing how to do it. *New England Journal of Medicine, 357*(6), 608.

Bodenheimer, T., Bojestig, M., & Henriks, G. (2007). Making systemwide improvements in health care: Lessons from Jonkoping County, Sweden. *Quality Management in Health Care, 16*(1), 10-15.

Colon-Emeric, C., Schenck, A., Gorospe, J., McArdle, J., Dobson, L., Deporter, C., et al. (2006). Translating evidence-based falls prevention into clinical practice in nursing facilities: Results and lessons from a quality improvement collaborative. *Journal of the American Geriatrics Society, 54*(9), 1414-1418.

Fung-Kee-Fung, M., Goubanova, E., Sequeira, K., Abdulla, A., Cook, R., Crossley, C., et al. (2008). Development of communities of practice to facilitate quality improvement initiatives in surgical oncology. *Quality Management in Health Care, 17*(2), 174-185.

Gold, M., Taylor, E. F., Segersten, K. G., Doreian, P., Coughlan, J., & Lipson, D. (2006). *Evaluation of a Learning Collaborative's Process and Effectiveness to Reduce Health Care Disparities Among Minority Populations*. Rockville, MD: Agency for Healthcare Research and Quality.

Horbar, J. D., Carpenter, J. H., Buzas, J., Soll, R. F., Suresh, G., Bracken, M. B., et al. (2004). Collaborative quality improvement to promote evidence based surfactant for preterm infants: a cluster randomized trial. *British Medical Journal, 329*(7473), 1004.

Kilbourne, A. M., Neumann, M. S., Pincus, H. A., Bauer, M. S., & Stall, R. (2007). Implementing evidence-based interventions in health care: application of the replicating effective programs framework. *Implementation Science, 2*, 42.

Lindenauer, P. K. (2008). Effects of quality improvement collaboratives. *British Medical Journal, 336*(7659), 1448-1449.

Mittman, B. S. (2004). Creating the evidence base for quality improvement collaboratives. *Annals of Internal Medicine, 140*(11), 897-901.

Nembhard, I. M., & Edmondson, A. C. (2006). Making it Safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care terms. *Journal of Organizational Behavior, 27*(7), 941-966.

Nutting, P. A., Miller, W. L., Crabtree, B. F., Jaén, C. R., Stewart, E. E., & Stange, K. C. (2009). Initial lessons from the first national demonstration project on practice transformation to a patient-centered medical home. *Annals of Family Medicine, 7*(3), 254-260.

Quality Improvement Models/Frameworks (continued)

Powell, A., Rushmer, R., & Davies, H. (2009). *A systematic narrative review of quality improvement models in health care*: Social Dimensions of Health Institute at The Universities of Dundee and St Andrews.

Pronovost, P., Berenholtz, S., & Needham, D. (2008). Translating evidence into practice: a model for large scale knowledge translation. *British Medical Journal, 337*(7676), 963.

Solberg, L. I. (2005). If you've seen one quality improvement collaborative... *Annals of Family Medicine, 3*, 198-199.

Solberg, L. I. (2007). Improving medical practice: a conceptual framework. *Annals of Family Medicine, 5*(3), 251-256.

Ovretveit, J. (1999). A team quality improvement sequence for complex problems. *Quality in Health Care, 8*(4), 239-246.

Other

Bodenheimer, T. (2008). Coordinating care - a perilous journey through the health care system. *New England Journal of Medicine, 358*(10), 1064-1071.

Cohen, D. J., Crabtree, B. F., Etz, R. S., Balasubramanian, B. A., Donahue, K. E., Leviton, L. C., et al. (2008). Fidelity versus flexibility: translating evidence-based research into practice. *American Journal of Preventive Medicine, 35*(5 Suppl), S381-389.

Quality Improvement Learning Collaborative Evaluation Tools

Duckers, M. L., Wagner, C., & Groenewegen, P. P. (2008). Developing and testing an instrument to measure the presence of conditions for successful implementation of quality improvement collaboratives. *BMC Health Services Research, 8*, 172.

Haas, L. J., Glazer, K., Houchins, J., & Terry, S. (2006). Improving the effectiveness of the medical visit: a brief visit-structuring workshop changes patients' perceptions of primary care visits. *Patient Education and Counseling, 62*(3), 374-378.

Metlay, J. P., Camargo, C. A., Jr., Bos, K., & Gonzales, R. (2005). Assessing the suitability of intervention sites for quality improvement studies in emergency departments. *Academic Emergency Medicine, 12*(7), 667-670.

Newton, P. J., Davidson, P. M., Halcomb, E. J., Denniss, A. R., & Westgarth, F. (2006). An introduction to the collaborative methodology and its potential use for the management of heart failure. *Journal of Cardiovascular Nursing, 21*(3), 161-168.

Ovretveit, J., & Gustafson, D. (2002b). Evaluation of quality improvement programmes. *Quality and Safety in Health Care, 11*(3), 270-275.

Adult Learning in health care

Filardo, G., Nicewander, D., Herrin, J., Edwards, J., Galimbertti, P., Tietze, M., et al. (2009). A hospital-randomized controlled trial of a formal quality improvement educational program in rural and small community Texas hospitals: one year results. *International Journal for Quality in Health Care*.

Gonzalez-Espada, W. J., Hall-Barrow, J., Hall, R. W., Burke, B. L., & Smith, C. E. (2009). Peds PLACE: quality continuing medical education in Arkansas. *Journal of the Arkansas Medical Society, 105*(9), 211-213.

Hugenholtz, N. I., de Croon, E. M., Smits, P. B., van Dijk, F. J., & Nieuwenhuijsen, K. (2008). Effectiveness of e-learning in continuing medical education for occupational physicians. *Occupational Medicine, 58*(5), 370-372.

Moore, B., & Tonniges, T. F. (2004). The "every child deserves a medical home" training program: more than a traditional continuing medical education course. *Pediatrics, 113*(5 Suppl), 1479-1484.

Adult Learning in health care (continued)

Shershneva, M. B., Mullikin, E. A., Loose, A. S., & Olson, C. A. (2008). Learning to collaborate: a case study of performance improvement CME. *Journal of Continuing Education in the Health Professions, 28*(3), 140-147.

Slotnick, H. B. (2001). How doctors learn: education and learning across the medical-school-to-practice trajectory. *Academic Medicine, 76*(10), 1013-1026.

Van Harrison, R. (2004). Systems-Based Framework for Continuing Medical Education and Improvements in Translating New Knowledge into Physicians' Practices. *Journal of Continuing Education in the Health Professions, 24*(1), S50.

Literature with limited relevancy for this study

Bratzler, D. W. (2005). Quality improvement organizations and hospital care. *Journal of the American Medical Association, 294*(16), 2028-2029.

Ciechanowski, P. S., Russo, J. E., Katon, W. J., Von Korff, M., Simon, G. E., Lin, E. H., et al. (2006). The Association of Patient Relationship Style and Outcomes in Collaborative Care Treatment for Depression in Patients With Diabetes. *Medical Care, 44*(3), 283-291.

Cohen, E., Neal, A., Dougherty, R., Clark, D. D., & Taylor, S. A. (2007). The intersection of transformation and quality in mental health treatment: Implementing the California Learning Collaborative. *International Journal of Mental Health, 36*(2), 21-35.

Colon-Emeric, C. S., Ammarell, N., Bailey, D., Corazzini, K., Lekan-Rutledge, D., Piven, M. L., et al. (2006). Patterns of medical and nursing staff communication in nursing homes: implications and insights from complexity science. *Quality Health Research, 16*(2), 173-188.

Elkhuizen, S. G., Limburg, M., Bakker, P. J., & Klazinga, N. S. (2006). Evidence-based re-engineering: re-engineering the evidence--a systematic review of the literature on business process redesign (BPR) in hospital care. *International Journal of Health Care Quality Assurance Incorporating Leadership in Health Services, 19*(6-7), 477-499.

Feldstein, A. C., & Glasgow, R. E. (2008). A practical, robust implementation and sustainability model (PRISM) for integrating research findings into practice. *Joint Commission Journal on Quality and Safety, 34*(4), 228

Goeschel, C. A., & Pronovost, P. J. (2008). Harnessing the Potential of Health Care Collaboratives: Lessons from the Keystone ICU Project (Advances in Patient Safety: New Directions and Alternative Approaches ed., Vol. 1-4). Rockville, MD: Agency for Healthcare Research and Quality.

Greenberg, M. D., Pincus, H. A., & Ghinassi, F. A. (2006). Of treatment systems and depression: an overview of quality-improvement opportunities in hospital-based psychiatric care. *Harvard Review of Psychiatry, 14*(4), 195-203.

Guan, J., Tregonning, S., & Keenan, L. (2008). Social interaction and participation: formative evaluation of online CME modules. *Journal of Continuing Education in the Health Professions, 28*(3), 172-179.

Kerr, E. A. (2004). Clinical management strategies and diabetes quality: what can we learn from observational studies? *Medical Care, 42*(9), 825-828.

LaBresh, K. A. (2006). Quality of acute stroke care improvement framework for the Paul Coverdell National Acute Stroke Registry: facilitating policy and system change at the hospital level. *American Journal of Preventive Medicine, 31*(6 Suppl 2), S246-250.

Learning Collaborative Information Packet. (2007). National Center for Child Traumatic Stress.

Llambi, L., Margolis, A., Toews, J., Dapueto, J., Esteves, E., Martinez, E., et al. (2008). Distance education for physicians: adaptation of a Canadian experience to Uruguay. *Journal of Continuing Education in the Health Professions, 28*(2), 79-85.

Literature with limited relevancy for this study (continued)
Mandel, K. E., & Kotagal, U. R. (2007). Pay for performance alone cannot drive quality. *Archives of Pediatrics and Adolescent Medicine, 161*(7), 650-655.
Mauksch, L. B., Reitz, R., Tucker, S., Hurd, S., Russo, J., & Katon, W. J. (2007). Improving quality of care for mental illness in an uninsured, low-income primary care population. *General Hospital Psychiatry, 29*(4), 302-309.
Mittman, B. S. (2006). Improving the quality of dementia care: the role of education. *Clinical Gerontologist, 29*(2), 61.
Mularski, R. A. (2006). Defining and measuring quality palliative and end-of-life care in the intensive care unit. *Critical Care Medicine, 34*(11 Suppl), S309-316.
Mularski, R. A., Curtis, J. R., Billings, J. A., Burt, R., Byock, I., Fuhrman, C., et al. (2006). Proposed quality measures for palliative care in the critically ill: a consensus from the Robert Wood Johnson Foundation Critical Care Workgroup. *Critical Care Medicine, 34*(11 Suppl), S404-411.
Myers, S., Blank, A. E., Blank, A. E., O'Mahony, S., & Selwyn, A. (2007). Palliative care and quality management: The core principles of quality improvement and their utility in designing clinical programs for end of life care and complex case management models. In *Choices in palliative care: Issues in health care delivery.* (pp. 198). New York, NY US: Springer Science Business Media.
Ramanujam, R., Keyser, D., Sirio, C., & Thompson, D. N. Inside the Black Box: The use of Voluntarily Reported Incident Data.
Runciman, W. B., Baker, G. R., Michel, P., Jauregui, I. L., Lilford, R. J., Andermann, A., et al. (2008). The epistemology of patient safety research. *International Journal of Evidence-Based Healthcare, 6*(4), 476.
Schouten, L. M., Hulscher, M. E., Akkermans, R., Van Everdingen, J. J., Grol, R. P., & Huijsman, R. (2008). Factors that influence the stroke care team's effectiveness in reducing the length of hospital stay. *Stroke, 39*(9), 2515-2521.
Stetler, C. B., Legro, M. W., Wallace, C. M., Bowman, C., Guihan, M., Hagedorn, H., et al. (2006). The role of formative evaluation in implementation research and the QUERI experience. *Journal of General Internal Medicine, 21 Suppl 2*, S1-8.
Sullivan, G., Blevins, D., & Kauth, M. R. (2008). Translating clinical training into practice in complex mental health systems: Toward opening the 'Black Box' of implementation. *Implementation Science, 3*, 33.
Yano, E. M., Rubenstein, L. V., Farmer, M. M., Chernof, B. A., Mittman, B. S., Lanto, A. B., et al. (2008). Targeting Primary Care Referrals to Smoking Cessation Clinics Does Not Improve Quit Rates: Implementing Evidence-Based Interventions into Practice. *Health Services Research*.

Companion report: Potential methods for evaluating a Collaborative Learning Model designed to support the implementation of Health Care Homes in Minnesota

Potential methods for evaluating a Collaborative Learning Model designed to support the implementation of Health Care Homes in Minnesota

A summary of findings and recommendations

SEPTEMBER 2009

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Prepared for the Minnesota Department of Health and the Minnesota Department of Health and Human Services

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Introduction

Background and purpose

In May 2009, the Minnesota Departments of Health and Human Services contracted with Wilder Research and two expert consultants in the field of quality improvement in health care settings: Jane Taylor, Ed. D, and Susanne Salem-Schatz, Sc.D., of HealthCare Quality Initiatives. They asked this team to conduct a review of collaborative learning methods that incorporate quality improvement approaches that could be implemented statewide for initial and ongoing clinical certification as a Health Care Home provider. This review and subsequent recommendations are included in the main body of this report. As a final component of the review, Wilder Research and consultants were asked to conduct an examination of evaluation methods that could be used in the recommended Learning Collaborative structure.

The goal of the literature review was to determine what methods have been used previously for assessing the success of collaborative learning models and other training related to Health Care Home implementation. This information was used to assist in the development of recommended methods that may be feasible to implement in Minnesota's Health Care Home collaborative learning activities.

A review of the literature was conducted in order to gather information about evaluation processes, measurement tools, and evaluation reports related to Learning Collaboratives – with some focus on those used in medical home implementation. Attention was paid to documenting which tools were validated or tested. In addition, we conducted a scan of measures related to medical home, patient activation, and patient outcomes. This review, combined with our review of other similar healthcare initiatives and web sites, the research literature, and our experience with evaluation, suggest four primary purposes of the evaluation design for Minnesota's Health Care Home Learning Collaborative activities:

1) Formative evaluation – with staged implementation: Gathering feedback from early Learning Collaborative activities in order to make adjustments and improvements to subsequent Learning Collaborative work

2) Process evaluation: Monitoring the development of the Health Care Home Team, including integration of patients and family members, based on information and support provided through the Learning Collaborative

3) Outcome evaluation: Measuring indicators/levels of Health Care Home at the practice level to assess the impact of Learning Collaborative activities

4) Outcome evaluation: Measuring indicators/levels of Health Care Home at the patient/consumer level to assess impact of Learning Collaborative activities

A fifth purpose related to "systems-level" evaluation is also recommended and reviewed in this report briefly. Although systems-level evaluation is integral to understanding long-term impact of Learning Collaborative activities, much of the systems-level evaluation elements are being reviewed and developed by Health Care Home workgroups at this time. Therefore, this report only briefly touches on this element.

In this report, we recommend specific tools and instruments based on the literature and prior experience that may be helpful as Minnesota develops its evaluation design for the use of the collaborative learning models related to Health Care Home implementation. The main emphasis is on tools specifically useful for evaluation of collaborative learning; however, we have also pointed out instances where the same tool can also be useful in assessing outcomes related to implementation of Health Care Home at the clinical and systems-level.

This report also provides a brief overview of measures used by the Minnesota Department of Health and Wilder Research in evaluating the *Minnesota Medical Home Initiative for children with special healthcare needs* from 2005-2009. Much was learned during this evaluation about what methods are most valuable and feasible to implement.

The terms "Medical Home" and "Health Care Home" are used throughout this report. "Medical Home" is used when referenced by the literature being discussed. Additionally, it is used when discussing the 2004-2009 *Minnesota Medical Home Initiative for children with special healthcare needs*. "Health Care Home" is used for all references related to the current project in Minnesota.

This report summarizes: 1) the methods used to review the existing literature; 2) the findings from the literature and evaluation experiences related to the *Minnesota Medical Home Initiative*; and 3) the evaluation components that are recommended, based on these findings.

Methods

Scan of existing literature

A literature review was conducted to gather information about evaluation processes, measurement tools, and evaluation reports related to Learning Collaboratives. Included in this review were reports on projects conducted by providers, health plans, professional organizations, state-wide initiatives, and academic researchers.

This was not an exhaustive literature review, but a targeted search for relevant information on a variety of academic research, pilot projects, initiatives, and instruments in development. The scan was designed to be a succinct review of literature outlining instruments and/or tools used in the measurement of Health Care Home and Learning Collaborative outcomes.

The search included the CINAHL, PubMed, PsycINFO, ERIC databases, and a general Google search engine for literature published in the last 10 years. The literature collected represents: non-controlled and controlled studies from one to multiple sites; statewide and national collaboratives; and quality improvement experts' summaries of lessons learned. As materials were scanned, research staff applied a label to each document summarizing the relevancy to this study. The search produced 45 documents. Of these, 23 had some direct relevance to our objectives (see the Appendix for a list of articles).

The search also included a review of relevant web sites. There are several web sites dedicated to the work of Medical Homes or Health Care Homes. Many offer toolkits and evaluation instruments. The following organizations' web sites were reviewed for evaluation materials: The Center for Medical Home Improvement (CMHI), The Institute for Healthcare Improvement (IHI), The Agency for Healthcare Quality and Research (AHRQ), The Patient-centered Primary Care Collaborative, The American Academy of Pediatrics, and National Initiative for Children's Healthcare Quality (NICHQ).

Limitations

While the Learning Collaborative approach to exposing providers and clinicians to Health Care Home is a method that is often used, the field is still quite young and there is a shortage of research describing and/or evaluating the implementation of Learning Collaboratives. There are very few tools that have been validated or tested related to the effectiveness of implementation. Much of the work in the field has centered around the use of a medical home for children with special health care needs. While tools developed within this context may not directly apply to the current work in adult medicine, many will serve as examples of measures and tools that might be modified and made more relevant for the upcoming Minnesota Health Care Home implementation.

Recommended components of an evaluation plan for a Learning Collaborative designed to support the implementation of Health Care Homes

It is recommended that the evaluation for the Health Care Home initiative should be rolled out in three stages. The first stage would center around ***formative evaluation***, using data for immediate feedback to make improvements on learning methods and implementation approaches. The second stage would be an ***evaluation pilot*** which would roll out all selected evaluation methods and instruments, and gather feedback about the value of the instruments, the ease of use and implementation, and the quality of the measures. The third stage would be full ***evaluation implementation***.

We recommend an Evaluation Advisory Board that includes some of the key stakeholders that are impacted by Health Care Home implementation. At the start of all three of the stages, described above, this Advisory Board would conduct a ***logic model*** process to ensure that all initiative activities are aligned with expected outcomes and that there is agreement about the feasibility of achieving short-term and long-term outcomes with the initiative activities.

Based on our review of other initiatives, we believe that there are four primary purposes of the evaluation design for the Health Care Home initiative:

- Formative evaluation: assessing the successes and challenges of implementing collaborative learning methods to roll out Health Care Home in Minnesota. This evaluation would provide immediate feedback in order to make improvements in the collaborative learning methods and approaches.

- Ongoing process evaluation: evaluating and monitoring the effectiveness of the Learning Collaborative through documentation of practice team implementation of critical components of Health Care Home.

- Outcome evaluation: collecting, measuring and analyzing information and indicators at the practice level to assess the impact of Learning Collaborative activities.

- Outcome evaluation: collecting and analyzing information related to the experience of patients and families receiving care and the impact of patient and families partnering in quality improvement activities.

As mentioned, a fifth purpose related to "systems-level" evaluation is also recommended and reviewed in this report briefly. Although systems-level evaluation is integral to understanding long-term impact of Learning Collaborative activities, much of the systems-level evaluation elements are being reviewed and developed by Health Care Home workgroups at this time. Therefore, this report only briefly touches on this element with additional information provided in the Appendix.

Formative evaluation

This component of the evaluation will help us understand the effectiveness of collaborative learning methods for teaching important components of the Health Care Home model. During this stage, the evaluation is focused on improving and refining project activities and strategies – including the evaluation itself. As part of this process, we recommend that key stakeholders and evaluators engage in the following four steps:

Step 1: Develop initial logic model related to the Learning Collaborative. This will ensure that all initiative activities are aligned with expected outcomes and that there is agreement about the feasibility of achieving short-term and long-term outcomes. The process of creating the logic model will help build consensus on key strategies and outcomes. It will also serve as a blue print for initial evaluation design work.

Step 2: Develop detailed plans about characteristics of successful implementation of Health Care Home. These plans would use the Health Care Home legislation and rules as a blue print, and may include additional detail about anticipated outcomes. It may include differing levels of successful implementation based on what stages practice teams are in their Health Care Home development and learning. This process and the subsequent documentation will assist researchers with understanding the validity of the outcomes that are achieved at later stages of the evaluation.

Step 3 Collecting data about early Learning Collaboratives to assist in making improvements in later Collaboratives. Because Minnesota is a diverse state, both geographically and in the diversity of clinical practices, it is important to gather feedback about the various components of the collaborative learning model that is implemented. This will allow project managers to identify specific needs or challenges that are important to address.

Step 4: Use data to make improvements and adjustments to Learning Collaborative strategies and approaches. This will be an essential element of the formative evaluation.

After these formative evaluation activities are implemented, the ongoing evaluation should include similar evaluation tools that continue to measure process and

implementation issues. The recommendations that follow describe the types of evaluation instruments that may be useful for this formative evaluation. These same instruments can be useful in measuring aspects of the ongoing process evaluation.

Recommendations related to formative and ongoing process evaluation tools

1) During this stage, we recommend the use of the following tools – many of which have additional purposes providing useful data for other evaluation activities such as practice-level, team-level, and patient/family member-level outcomes. **Evaluations of each face-to-face learning sessions** (*implemented after each session; to be developed*)

2) **Evaluations of webinars or other virtual learning methods** (*implemented after each session; to be developed*)

3) **A comprehensive web survey** assessing the effectiveness of the Learning Collaborative (*implemented at least annually; to be developed;* the Provider web survey developed by Wilder Research and the Minnesota Department of Health may serve as a useful guide or template).

   A second component to this web survey might be directed at the patients or family caregivers on a Health Care Home team. It will be valuable to gain information about their integral point of view on the Learning Collaborative model as well as their perception of the impact of collaborative activities.

4) **The IHI Collaborative Assessment Scale** *(implemented annually)*. This will allow for the documentation of process measures as Learning Collaborative teams work to provide a Health Care Home to their patients. The tool allows Collaborative Directors and Improvement Advisors to determine how well teams are meeting improvement goals and implementing changes, on a scale of 1 to 5.

Since there is no existing comprehensive tool designed to examine implementation as part of formative evaluation, such measures must be developed. It may be best to involve the managers and facilitators of the Learning Collaborative so that it is tailored to the curriculum, requirements, and subject matter for the Health Care Home project.

The following themes, derived from the literature review, should be considered when designing the evaluation tools for the formative evaluation of the Learning Collaborative:

- Test and use feedback to refine training materials and evaluation materials used at Learning Collaboratives

- Examine satisfaction with the content and presenters/expert faculty
- Examine perceptions of the facilitation of the Learning Collaborative (e.g., did participants feel included?)
- Gain understanding of a participant's views on the relative helpfulness of various features of the Learning Collaborative, and understand why each feature was helpful and which features participants viewed as most central to their success; including:
  - The change package (e.g., the Plan-Do-Study-Act cycles)
  - Learning session interactions
  - Monthly conference calls
  - Team-initiated phone calls
  - Listserv discussions
  - Site visits
  - Monthly report exchange
  - Solicitation of staff ideas
  - Literature reviews/expert information shared.
- Solicit ideas for future sessions
- Ask Health Care Home team members to self-evaluate their activities and progress at several time periods
- Ask Health Care Home team members to assess the impact of the team's actions on practice processes
- Assess buy-in and readiness at the practice level (administration), at the provider level, at the nurse/care manager level, at the clinical staff level, and at the patient/ family member level
- Consider what incentives encourage staff and patient involvement in the collaborative

Outcome evaluation (practice focus)

The third component of the evaluation is an examination of practice-level outcomes. It is anticipated that changes will take time to evolve, thus the outcomes can best be measured and understood by collecting baseline information and tracking progress over time.

Results from evaluating practice-level Health Care Home outcomes will provide valuable feedback to the Health Care Home team members about how well they are implementing the criteria for Health Care Home while also providing valuable information for Learning Collaborative staff regarding the efficacy of their model.

It is recommended that each participating practice complete an initial baseline assessment and periodic follow-up assessment that includes three components:

1) **The Medical Home Index** (or similar tool; *implemented annually*) to measure the level of medical home implementation at baseline and follow-up

2) **A baseline assessment** and periodic follow-up assessments (*implemented monthly or quarterly; to be developed*) of care coordination that includes the number of patients who have a comprehensive care plan and some other baseline measures related to the Health Care Home rules. This baseline assessment can be designed to be simple and easy to use (for example a simple web survey). One example of a tool that was used to measure practice-level implementation over time is the Monthly Team reports completed by the *Minnesota Medical Home Initiative*.

3) **The Institute for Healthcare Improvement Collaborative Assessment Scale** (*implemented annually*; also used as a measure in the formative evaluation described above)

Outcome evaluation (patient/family focus)

In addition to measuring the impact of their partnership in quality improvement activities on quality improvement, described in the section above, it will also be important for the evaluation component to collect feedback from patients and family members about their experiences with their providers' implementation of Health Care Home.

We recommend the following methods:

1) **Patient Activation Measure** (*implemented annually with adult patients*). The validated tool can help assess the extent to which patients are engaged, knowledgeable, and active in their own care. Several of the measures are in-line

with the outcomes of a Health Care Home in providing patient- and family-centered care. This measure would be applicable to adult (not pediatric) patients (Hibbard et al., 2004; Institute for Clinical Systems Improvement, 2008).

2) **Feedback from patients/family members** (*implemented annually; to be developed).* In line with the Parent Self-administered questionnaire designed for the Minnesota Medical Home Initiative and the Consumer Assessment of Health Plans Survey (CAHPS), we suggest a survey that measures patient or family member perceptions of Health Care Home implementation. The Parent Self-administered Questionnaire was designed to provide pediatric Medical Home teams with systematic feedback about family/consumer perceptions of the quality of care, care coordination, and changes they have noticed at the clinic related to Medical Home. The survey is comprehensive and measures perceptions about implementation of Medical Home as well as patient-related outcomes (Gerrard et al., 2009).

   The Consumer Assessment of Health Plans Survey (CAHPS) is a set of survey items designed to gather information about the health care experiences of health plan enrollees and patients regarding their experiences with health care delivered by health plans, medical groups, individual clinicians, and mental health providers. This set of survey questions, combined with the Parent Self-administered questionnaire, will assess Health Care Home patients' perceptions of the care they are receiving.

Systems-level outcomes evaluation (see Appendix)

One of the goals of the Health Care Home initiative in Minnesota is to shift practices within the overall system of care over time. The systems change goal is consistent with the "triple aim" described in the Institute for Healthcare Improvement: improve the patient's experience of care, improve health population-wide, and reduce costs.

Currently, there are several workgroups focused on identifying systems level outcomes, including measures related to the triple aim, and this was not the focus of this study. In addition, a review of the literature yielded very little on evaluation methods at the system level for Health Care Home outcomes. We are thus unable to offer a recommendation as specific as for the other three components. A summary of the findings from this component of the literature review is included in the Appendix, along with recommendations for a process to be followed in the development of the evaluation plan for systems-level outcomes.

Literature findings

Formative evaluation measures: evaluating implementation and processes of Learning Collaboratives

Formative evaluation measures assess the feasibility, successes, and challenges of implementing new strategies such as Learning Collaboratives. Collecting and using data that provides immediate feedback allows for prompt improvements in learning and implementation approaches.

The literature on effectiveness of various evaluation methods related to Learning Collaboratives is limited. Some studies refer to some tailored qualitative methods that were developed to assess individual Learning Collaborative models. Formative evaluation has proven helpful in making improvements and adjustments to the design and implementation of learning activities. The final report prepared for the *Minnesota Medical Home Initiative* utilized several formative measures that were helpful in implementing the Learning Collaborative (Gerrard, Hardeman, Pittman, & Heineman, 2009).

Feedback about the Learning Collaborative process

An effective formative evaluation approach was demonstrated by the Illinois Medical Home Project. The Illinois Medical Home Project is a practice-directed quality improvement intervention to promote the medical home model. They recommend implementing a formative evaluation of a Medical Home Learning Collaborative in two phases:

1) Test and refine the training materials and strategies for promoting quality improvement and for evaluating the measurement tools

2) Use refined methods for the intervention and evaluation (Rankin, Cooper, Sanabria, Binns, & Onufer, 2009)

By conducting the formative evaluation, the authors were able to measure the effectiveness of training and quality improvement team materials. This was done following each learning session, in which a questionnaire was collected from attendees to measure their: 1) satisfaction with the content and presenters; 2) effectiveness of the session; and 3) ideas for future sessions. Results of these surveys can inform the planning for subsequent Medical Home Learning Collaboratives (Rankin et al., 2009).

Additionally, Rankin and her colleagues suggest having the Medical Home Learning Collaborative team members self-evaluate their activities and progress at several time

periods. Rankin's survey assessed satisfaction with meeting content, facilitator's skills, progress made toward goals, and the impact of the team's actions on practice processes.

Nembhard (2009) authored an article aimed at understanding Learning Collaborative participants' views of the collaborative features they value most. Methods for this evaluation included self-administered surveys and semi-structured telephone interviews. The goals of these tools were to: 1) gain understanding of a participant's views on the relative helpfulness of various features of the Learning Collaborative; and 2) understand why each feature was helpful and which features participants viewed as most central to their success.

Measures from the Nembhard tool included measures of overall helpfulness and questions about: the change package,[1] collaborative faculty, learning session interactions, monthly conference calls, team-initiated phone calls, listserv discussions, site visits, monthly report exchange, collaborative extranet, Plan-Do-Study-Act (PDSA) cycles, solicitation of staff ideas, and literature reviews. After an overall assessment of each feature, survey respondents evaluated feature helpfulness for acquiring two types of knowledge that are obtained via collaboratives: general (know-what) and implementation knowledge (know-how), such as assessing how helpful a team found a particular feature for generating each type of information (Nembhard, 2009).

Participant satisfaction

Basic satisfaction surveys of Learning Collaborative material and other aspects of the learning sessions can also serve the purpose of assessing the implementation of methods surrounding Learning Collaborative and Health Care Home content. There was limited published literature targeted at assessing Medical Home Learning Collaborative implementation and participant satisfaction, mainly from the Illinois Medical Home Project (Rankin, 2009). A few articles suggested the use of a formative evaluation of aspects of their collaborative, but these authors did not provide detail about the formative evaluation results. Instead, they focused primarily on outcome results.

However, it should be noted that the *Minnesota Medical Home Initiative for children with special health care needs* did focus some efforts on evaluating the Medical Home Learning Collaborative including administering Learning Collaborative surveys and gathering immediate feedback. The Learning Collaborative used a hand-held voting system (Audience Polling System), interviews with parent partners, and a web survey with provider team members to assess their views of the Learning Collaborative process (Gerrard et al., 2009).

[1] A "change package" is a set of changes or ideas organized around categories. The change package provides a written framework to test hypotheses to see what ideas generate the best results.

Process and outcome evaluation: evaluating the effectiveness of the Learning Collaborative

The assessment of the effectiveness and impact of the Learning Collaborative model should include process measures that give perspective and feedback on how things are going as described in the formative evaluation section, and include information about practice-level outcomes that will provide information and data on a variety of topics and indicators related to Health Care Home. The evaluation of practice-level outcomes through the measurement of various indicators related to topics taught during the learning session will allow the Learning Collaborative facilitators to understand what the collaborative participants are retaining during the sessions and how they are using what they learn and implementing it in their clinics. Results might be used not only to assess a clinic or practice's level of health care "homeness" but also to better understand how the information delivered in the Learning Collaborative session is being translated into practice. Through such measures both Learning Collaborative faculty and Health Care Home teams will gain an understanding of their strengths and weaknesses.

Based on the scan of the literature, measuring practice level outcomes appears to be the area where much of the instrument development and focus has occurred. The majority of these instruments are created as self-evaluations in which the Health Care Home team, practice, or an individual provider completes the assessment about their practice, changes tested and other activities. The most often cited methods for this type of self-assessment include indices and checklists that address measures of quality improvement at the team and/or practice level.

Process: Monitoring the development of the Health Care Home Team

Institute for Healthcare Improvement Collaborative Assessment Scale. The Collaborative Assessment Scale was originally developed by the Institute for Healthcare Improvement (IHI) in order to assess teams participating in the IHI Breakthrough Series Learning Collaborative projects. This tool allows collaborative directors and improvement advisors to determine how well teams are doing with the implementation and goals of the Learning Collaborative.

This tool assesses team development using a numerical scale of 1.0 to 5.0 (Institute of Health Care Improvement). A team at the beginning stages of the process of creating a Health Care Home in their clinic or practice might earn a score of 1.0 (Forming team) while a more advanced team that has been testing changes and seen modest improvement might earn a score of 2.5. Not only does this assessment provide the teams with a realistic look at where they are in the process, it can provide collaborative faculty with feedback regarding the content and learning needs of collaborative participants.

Benchmark points in the scoring are as follows:

- Forming team (Score 1.0): Team is formed; target population and aim defined; measurement begun
- Planning for the project has begun (Score 1.5): Team meeting and discussion is occurring; project plans are developed
- Activity, but no changes (Score 2.0): Test changes have not occurred; team engages in development, research and discussions
- Changes tested, but no improvement (Score 2.5): No improvement in measures; components are being tested; data from key measures are reported
- Modest improvement (Score 3.0): Initial test cycles completed and implementation has occurred for several components; evidence of moderate improvement in process measures
- Improvement (Score 3.5): Some improvement in outcome measures, process measures continuing to improve, PDSA test cycles on all components of the Change Package; changes implemented for many components of the change package
- Significant improvement (Score 4.0): Most Change Package components are implemented; evidence of sustained improvement in outcome measures; 50 percent of goals are achieved; spread plans are in set
- Sustainable improvement (Score 4.5): Sustained improvement in most outcome measures; 75 percent of goals are achieved; spread to larger population has begun
- Outstanding sustainable results (Score 5.0): All components of the Change Package, goals, and aims are implemented and achieved; outcome measures at national benchmark levels; and spread to another facility has begun

Outcomes: Measuring indicators/levels of Health Care Home at the practice level

Medical Home Index. The Medical Home Index is a validated self-assessment tool developed by the Center for Medical Home Improvement (CMHI). The Index contains a total of 25 themes divided into six domains of practice activity that are critical to the quality of care in a Medical Home.

The six domains are:

- Organizational capacity
- Chronic condition management
- Care coordination
- Community outreach
- Data management
- 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" (see the Appendix for a copy of the Medical Home Index) (Cooley, McAllister, Sherrieb, & Clark, 2004; Homer, Klatka, Romm, Kuhlthau, Bloom, Newacheck, et al., 2008; Fleischfresser, 2004).

A national panel of experts on the Medical Home reviewed a prototype of the instrument in order to assess measures of reliability and validity. Pediatric primary care offices completed the MHI and participated in 90-minute on-site interviews. The study examined interrater reliability between the two project staff and between the practices and project staff, and also examined and the internal consistency of Medical Home Index domains and themes. In the sample of practices studied, the Medical Home Index was an internally consistent instrument with acceptable reliability and validity for pediatric primary care practices to assess their implementation of the Medical Home concept (Cooley et al., 2004).

Medical Home Practice Assessment Checklist. This instrument was developed for the Illinois Medical Home Project to measure outcomes at the practice level. It was administered prior to and after program implementation by an external evaluator to practice staff via face-to-face interviews. The checklist measures seven tenets of medical home in addition to quality improvement, physical accessibility, and environmental characteristics of the office. Rankin and colleagues reported using the Medical Home Practice Assessment Checklist to measure outcomes at the practice level (Rankin, 2009). It is their recommendation to administer this checklist via an external evaluator (someone outside of the practice) via a face-to-face interview with the lead physician and at least one staff member (Malouin, Starfield, & Sepulveda, 2009).

Medical Home IQ. In response to requests from practices for tools to assess where they may fall in the "model of care continuum," TransforMED developed the Medical Home IQ. Medical Home IQ is a self-assessment tool that can be used to help a practice learn more about the medical home model. It also provides a gauge for where the practice falls within the personal medical home continuum. While the result of the Medical Home IQ self-assessment tool serves only as a guide, it can provide a comprehensive indicator of the practice's current implementation of medical home (Malouin et al., 2009).

Measures of Patient-Centered Medical Home Components: Physician-Directed Medical Practice Component and Care Coordination Component (PCMH Index). Diane Rittenhouse and colleagues (2008) examined methods for measuring the medical home infrastructure in large medical groups. Based on the Patient-Centered Medical Home (PCMH) model of comprehensive health care delivery, Rittenhouse's findings discuss measurements of principal components such as physician-directed medical practice, measures of care coordination/integration and measures of quality and safety. Each of these components is measured via indices with a variety of domains ranging in number from 5 to 11 (Rittenhouse, Casalino, Gillies, Shortell, & Lau, 2008).

Monthly Team Report. This tool was developed by evaluators at Wilder Research to help medical home teams report on monthly progress. Completed monthly by participating clinical teams, this report includes estimates of the number of children identified with special health care needs. There is also a narrative about changes tested by the clinics (PDSA cycles). This report provides information about system changes and quality improvement within the clinical practice. In September 2008, the Monthly Team report was revised Wilder Research evaluators to better capture information about changes being tested and implemented by teams (Gerrard et al., 2009).

Outcomes: Measuring indicators/levels of Health Care Home at the patient/consumer level

A scan of the literature suggests that in order to assess the consumer/patient experience in a Health Care Home, their perspective must be taken into account. Instruments such as the Patient Activation Measure, Family Perception of Medical Home, Family Caregiver Survey, Consumer Assessment of Health Plans Study, and The Components of Primary Care Index were cited in many studies as ways to assess the patient perspective and measure his or her satisfaction with the care they receive.

The literature and web sites discuss tools such as the Family Perceptions of Medical Home survey and the Family Caregiver Survey as useful methods for measuring the experience of patients and families receiving care. The National Initiative for Children's Healthcare Quality (NICHQ) reports that regular administration of the Family Perception

of Medical Home survey will allow parents to report on processes of care that have been shown to predict the presence of a Medical Home while simultaneously yielding information about parents/caregivers perceptions and experiences with their medical home provider (National Initiative for Children's Healthcare Quality, 2005).

The Family Caregiver Survey (developed by the Center for Medical Home Improvement) asks respondents to answer questions about the care they receive. Author and developer of the tool Carl Cooley describes the tool as a 26-question survey about the child, the family, and the primary care practice or medical home (Cooley, McAllister, Sherrieb, & Kuhlthau, 2009). The Illinois Medical Home Project reported using a shortened version of the Family Caregiver Survey to measure both change in child outcomes and family satisfaction with care (Rankin et al., 2009).

Indicators of Health Care Home are also measured by assessing the patient and caregiver perspective. By collecting information about the consumers' perceptions of the care they receive, not only do Health Care Home teams receive feedback about how they are doing with respect to the care they provide their patients, but also Learning Collaborative facilitators and faculty are able to better understand from an external perspective what they need to know to guide their implementation, such as where the areas of strength for the practice might be.

Family Perceptions of Medical Home. The Family Perceptions of Medical Home is a measurement tool designed to measure a provider's or Health Care Home'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 (Center for Medical Home Improvement, n.d.; Gerrard et al., 2009).

Family Caregiver Survey. The survey includes demographic information, usual source of care, experiences with planned and coordinated care and levels of satisfaction related to practice access, coordination and communication. Family burden of care, parental lost days of work, and lost employment opportunities are also addressed. In Cooley and colleagues' study related to improved outcomes for children in a medical home, the Family Caregiver Survey was administered to a random selection of practice families within a health plan. These families were stratified according to diagnoses (i.e., ADHD, asthma, autism, diabetes, etc.) (Cooley et al., 2009).

The Components of Primary Care Index (CPCI). The CPCI is an instrument developed to measure seven key aspects of the delivery of primary care from the perspective of patients visiting their family physician, and to report the association of these aspects with patient satisfaction. CPCI is a 20-item research tool, created to measure the domains of

primary care based on the new Institute of Medicine definition and on additional domains based on the literature. Patient satisfaction is measured with the Medical Outcomes Study 9-item visit rating form. The usual provider continuity (UPC) index is calculated as the proportion of visits to the index physician with relation to all physician visits for the past year. The CPCI is a validated instrument. It provides a brief and reliable measure of four important aspects of the delivery of primary care. These components of primary care are associated with patient satisfaction with visits to family physicians. The CPCI could be used with other outcomes and to assess the effect of interventions and systems changes on the delivery of critical aspects of primary care (Malouin et al., 2009).

Medical Home Family Index. The Medical Home Family Index (MHFI) was developed by the Center for Medical Home Improvement as a companion piece to the Medical Home Index. This instrument was developed on the premise that Medical Home activities cannot be fully measured and/or evaluated without including the family perspective. The Medical Home Family Index allows parents to rate care coordination, quality of care, communication with providers, the extent to which the provider includes family members and consumers in decision making, and other aspects of quality. It provides the practices with the consumer perspective of how the practice is progressing in achieving a medical home (Cooley, 2009; Center for Medical Home Improvement).

Patient Activation Measure. The Patient Activation Measure (PAM) is a validated tool used to assess patient activation in line with the Institute of Medicine's (IOM) quality measurements that allow care providers to learn their patients' level of knowledge, skill and activation. The PAM is a valid, highly reliable, one-dimensional, probabilistic Guttman-like scale that reflects a developmental model of activation. Activation appears to involve four stages: 1) believing the patient role is important; 2) having the confidence and knowledge necessary to take action; 3) actually taking action to maintain and improve one's health; and 4) staying the course even under stress. The measure has good psychometric properties indicating that it can be used at the individual patient level to tailor intervention and assess changes (Hibbard, Stockard, Mahoney, & Tusler, 2004; Institute for Clinical Systems Improvement, 2008).

The Parent Self-administered Questionnaire. The Parent Self-administered Questionnaire was developed by Wilder Research and the Minnesota Department of Health. Because of the difficulty of ongoing collection of the Family Perceptions of Medical Home survey, the Parent Self-administered Questionnaire was designed for less frequent data collection (once or twice annually), but still to provide systematic feedback from a large sample of families/consumers to Medical Home teams about family/ consumer perceptions of the quality of care, care coordination, and changes they have noticed at the clinic related to Medical Home. The survey is comprehensive and measures perceptions about implementation of Medical Home as well as patient-related outcomes (Gerrard et al., 2009).

Consumer Assessment of Health Plans Survey (CAHPS). The CAHPS is the most widely used survey for assessing the quality of health care in the United States (Agency for Healthcare Quality and Research, n.d.). Over the past 10 years, the CAHPS Consortium has established a set of principles to guide the development of CAHPS surveys and related tools. These principles include identifying and supporting the consumer's or patient's information needs, conducting thorough scientific testing, ensuring comparability of data, maintaining an open development process, and keeping products in the public domain. Users of CAHPS surveys include quality monitors and regulators, purchasers, provider organizations, and health plans. These individuals and organizations use the data to inform and improve the quality of health care services delivered (Schonlau, Mangione-Smith, Chan, Keesey, Rosen, Louis, et al., 2005; Solomon, Hays, Zaslavsky, Ding, & Cleary, 2005).

Family Perceptions of Medical Home. The Family Perceptions of Medical Home is a measurement tool designed to measure a provider or Health Care Home'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 (Center for Medical Home Improvement, n.d.; Gerrard et al., 2009).

The Minnesota experience: A summary of the evaluation plan for the Medical Home Initiative for children with special health care needs

This section summarizes the evaluation methods and tools used in a recently-completed Minnesota Medical Home initiative. It provides an illustration of the incorporation of evaluation tools into a health care home initiative, including how different measures can be combined to maximize the value of the data collected, and how those can thereby satisfy multiple evaluation purposes.

The *Medical Home Initiative for children with special health care needs* built upon previous MDH Minnesota Children with Special Health Needs (MCSHN) medical home activities. The Minnesota Medical Home Learning Collaborative, one piece of this initiative, was modeled after the national medical home Learning Collaborative conducted by the National Initiative for Child Health Quality (NICHQ) The Medical Home Initiative involved the coordination of a Leadership team comprised of representatives from healthcare, state government agencies, research, and family consumers.

It is the goal of the State Title V programs for Children with Special Health Care Needs to provide and promote family-centered, community-based, coordinated care for children

with special health care needs and to facilitate the development of community-based systems of services for such children and their families.

In order to do so, the Maternal and Child Health Bureau along with its partners identified six Core Outcomes to promote the community-based system of services managed for all children with special health care needs under Title V, Healthy People 2010 and the New Freedom Initiative (NFI).

1) Families of children and youth with special health care needs partner in decision making at all levels and are satisfied with the services they receive

2) Children and youth with special health care needs receive coordinated ongoing comprehensive care within a Medical Home

3) Families of children with special health care needs have adequate private and/or public insurance to pay for the services they need

4) Children are screened early and continuously for special health care needs

5) Community-based services for children and youth with special health care needs are organized so families can use them easily

6) Youth with special health care needs receive the services necessary to make transitions to all aspects of adult life, including adult health care, work and independence

In 2005, Wilder Research worked with staff from the Minnesota Department of Health and others involved in initiative oversight to develop the evaluation of the *Medical Home Initiative for children with special health care needs*. The evaluation was designed to collect information about:

- The Six Core Outcomes outlined under the New Freedom Initiative
- Process information about the implementation of Medical Home for children with special health care needs in Minnesota
- Process information about the Learning Collaborative method for learning about Medical Home and initiating quality improvements around Medical Home for children with special health care needs
- The experience of patients and families receiving care and the impact of families partnering in quality improvement initiatives

Evaluation methods

1. Baseline parent-leader surveys and follow-up parent-leader interviews

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.

2. Family Perceptions of Medical Home

Participating clinics were asked to administer at least 10 to 15 surveys each month with parents of children with special health care needs. A few clinics were successful at integrating the completion of the monthly surveys into their practices, but several clinics had difficulty getting surveys completed. This was mostly due to the busy schedules of the clinics and not having a systematic way of integrating this component for the families who were eligible. Researchers and MDH staff worked with teams to strategize ways to increase the number of forms completed by parents.

Medical Home clinics began administering the Family Perceptions survey in November 2005. During each subsequent quarterly period, between 69 and 371 forms were returned with an average of 156 per quarter for all teams participating.

Because of the variability in response rates by clinics, a one-time self-administered questionnaire was designed and tested in January 2008 (described below). In September 2008, Wilder Research and MDH staff made the decision to discontinue use of the Family Perceptions of Medical Home survey in favor of the annual self-administered survey to a larger group of parents. Most questions formerly asked on the Family Perceptions survey were integrated into the new instrument.

3. Monthly Team Report

Teams were asked to report on progress monthly via the Monthly Team Report. This report, completed monthly by participating clinical teams, 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.

4. Medical Home Provider Index

Each Medical Home team completes a MHI annually (each January at the Learning Collaborative session). Wilder Research staff analyze the data and report scores to each clinic at the subsequent Learning Collaborative session. During these follow-up Learning Collaborative meetings, the teams are encouraged to take steps to make improvements in each of the six domains at their clinic.

5. Medical Home Family Index

At least one parent from each team is asked to complete a Medical Home Family Index each January.

6. Parent Self-administered Questionnaire

In January 2008 and again in February 2009, each clinic provider was given a packet with 50 sealed envelopes containing: a parent survey (designed for parents to complete themselves); a business reply envelope to Wilder Research; and a $1 bill – as a thank you to parents for taking the time to complete the survey. The providers were asked to distribute the surveys to parents of children/youth with special health care needs who receive care from them or another doctor in their clinic who is involved with the Medical Home project between January 26 and February 29, 2008 and in March and April 2009.

In 2008, a total of 850 surveys were distributed to 17 clinics. In all, Wilder Research received 265 completed surveys (31%). In 2009, a total of 1,144 surveys were distributed to 24 clinics with Wilder Research receiving 390 surveys (34%). The precise response rate is not known, because clinics did not systematically return surveys that were not distributed. Future administrations of the survey will include follow-up with clinics to find out the total number of surveys administered.

7. Medical Home provider web survey

In February 2009, Wilder Research conducted a web survey of providers (primary care providers, nurses, care coordinators) involved in Medical Home teams. The purpose of the survey was to gather opinions of the Medical Home improvement process, the Learning Collaborative, and their involvement in the initiative. This survey was voluntary and confidential. Email invitations were sent to 80 clinical staff from 23 teams, and returned by 46 (57.5%).

8. The State and Local Area Integrated Telephone Survey (SLAITS): National Survey of Children with Special Health Care Needs

Administered in 2001 (baseline year for this study) and 2005/06, the primary goal of the SLAITS survey is to assess special health care needs among children across the United States. This survey explores the extent to which children with special health care needs (CSHCN) have medical homes, adequate health insurance, and access to needed services. Other topics include care coordination and satisfaction with care. More than 3,000 households with children were screened in order to identify 750 children with special needs in each state. Interviews were conducted with parents. The SLAITS data allows us to better understand how Minnesota's population of children with special health care needs and their families compare to those nationwide.

9. Feedback to Medical home teams

At each Learning Collaborative, beginning in early 2006, each clinical team involved in the Medical Home Learning Collaborative received a brief report summarizing the results of Family Perceptions of Medical Home surveys completed at their clinic as well as their Medical Home Index scores over time. This was done by analyzing the completing Family Perception surveys quarterly and providing each clinic with a trend line that showed the average responses over time. Clinics were also able to compare their scores with the overall scores of all clinics participating in the *Medical Home Initiative*. For each new data collection tool that was implemented, results were shared with the teams at the subsequent Learning Collaborative.

A summary of findings from the evaluation of the Medical Home Initiative for children with special health care needs shows:

- 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. For example, the MHI score for organizational capacity went from 3.4 in the first administration to 7.1 in the sixth. The community outreach and quality improvement domains demonstrated even greater improvement over the six administrations of the MHI.

- 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, including those not involved in Medical Home teams, noticed improvements in services provided to their families and children with special health care needs.

Appendix

List of references

Description of instruments

Systems level outcomes evaluation

List of references

Agency for Healthcare Quality and Research. (n.d.). Retrieved July 25, 2009, from https://www.cahps.ahrq.gov/default.asp

Antonelli, R. C., & Antonelli, D.M. (2004). Providing a Medical Home: The Cost of Care Coordination Services in a Community-Based, General Pediatric Practice. *Pediatrics, 113* (5), 1522-1528.

Center for Medical Home Improvement. (n.d.). Retrieved July 24, 2009, from http://www.medicalhomeimprovement.org/

Cooley W.C., McAllister, J.W., Sherrieb, K., & Clark, R.E. (2004). The Medical Home Index: development and validation of a new practice-level measure of implementation of the Medical Home model. *Ambulatory Pediatrics, 4* (2), 192.

Cooley, W. C., McAllister, J.W., Sherrieb, K., & Kuhlthau, K. (2009). Improved Outcomes Associated With Medical Home Implementation in Pediatric Primary Care. *Pediatrics, 124*, 358-364.

Fleischfresser, S. M. (2004). Wisconsin Medical Home Learning Collaborative: A model for implementing practice change. *Wisconsin Medical Journal, 103* (5), 25-27.

Gerrard, M. D., Hardeman, R., Pittman, B., & Heineman, J. (2009). *Collaborating to create Medical Homes for children with special health care needs in Minnesota.*

Hibbard, J. H., Stockard, J., Mahoney, E.R., & Tusler, M. (2004). Development of the Patient Activation Measure (PAM): Conceptualizing and Measuring Activation in Patients and Consumer. *Health Services Research, 39* (4), 1005–1026.

Homer, C. J., Klatka, K., Romm, D., Kuhlthau, K., Bloom, S., Newacheck, P., et al. (2008). A Review of the Evidence for the Medical Home for Children With Special Health Care Needs. *Pediatrics, 122*;e922-e937. doi: 10.1542/peds.2007-3762

Institute for Clinical Systems Improvement. (2008). *Task 1 Recommendations of Health Care System and Patient Outcomes to Consider in the Evaluation of Health Care Homes.* (Version 1). Bloomington, MN.

Institute for HealthCare Improvement. (n.d.). Retrieved July 24, 2009, from http://www.ihi.org/ihi

Malouin, R. A., Starfield, B., & Sepulveda, M.J. (2009). Evaluating the Tools Used To Assess the Medical Home. *Managed Care, 18* (6), 44-48.

National Initiative for Children's Healthcare Quality. (2005). *Spread of the Medical Home Concept.* Cambridge, MA.

Nembhard, I. M. (2009). Learning and Improving in Quality Improvement Collaboratives: Which Collaborative Features Do Participants Value Most? *Health Services Research, 44* (2), 359-378.

Rankin, K. A., Cooper, A., Sanabria, K., Binns, H.J., & Onufer, C. (2009). Illinois Medical Home Project: Pilot Intervention and Evaluation. *American Journal of Medical Quality, 24* (4), 302-309.

Rittenhouse, D. R., Casalino, L.P., Gillies, R.R., Shortell, S.M., & Lau, B. (2008). Measuring The Medical Home Infrastructure in Large Medical Groups. *Health Affairs, 27* (5), 1246-1258.

Schonlau, M. P., Mangione-Smith, R., Chan, K.S., Keesey, J., Rosen, M., Louis, T.A., et al. (2005). Evalutation of a Quality Improvement Collaborative in Asthma Care: Does it Improve Processes and Outcomes of Care. *Annals of Family Medicine, 3* (3), 200-208.

Solomon, L. S., Hays, R.D., Zaslavsky, A.M., Ding, L., & Cleary, P.D. (2005). Psychometric Properties of a Group-Level Consumer Assessment of Health Plans Study (CAHPS) Instrument. *Medical Care, 43* (1), 53-60.

Other sources consulted:

Berenson, R.A., Hammons, T., Gans, D.N., Zuckerman, K.M., Underwood, W.S., & Williams, A.F. (2008). A House Is Not A Home: Keeping Patients At the Center Of Practice Redesign. *Health Affairs, 27*(5), 1219-1230. doi:10.1377/hlthaff.27.5.1219

Brachlow, A.F., Ness, K.K., McPheeters, M.L., & Gurney, J.G. (2007). Comparison of Indicators for a Primary care Medical Home Between Children With Autism or Asthma and Other Special Health Care Needs. Achieves of Pediatric & Adolescent Medicine, 161, 399-405.

Carey, R.G., & Seibert, J.H. (1993). A Patient Survey Systems to Measure Quality Improvement Questionnaire Reliability and Validity. *Medical Care, 31*(9), 834-845.

Dentzer, S. (2008). Innovations: 'Medical Home' Or Medical Motel 6? *Health Affairs, 27*(5), 1216-17.

Djuricich, A.M., Ciccarelli, M., & Swigonski, N.L. (2004). A Continuous Quality Improvement Curriculum for Residents: Addressing Core Competency, Improving Systems. *Academic Medicine, 79*(10), S65-S67.

Duckers, M. L., Wagner C., & Groenewegen, P.P. (2008). Developing and testing an instrument to measure the presence of conditions for successful implementation of quality improvement collaboratives. *Health Services Research, 8*, 172.

Gould, B.E., Grey, M.R., & Huntington, C.G., et al. (2002). Improving Patient Care Outcomes by Teaching Quality Improvement to Medical Students in Community-based Practices. *Academic Medicine, 77*(10), 1011-1018.

Kyrkejebo, J., Hanssen, T., & Haugland, B. (2001). Introducing quality improvement to pre-qualification nursing students: evaluation of an experiential programme. *Quality in Health Care, 10*, 204-210.

Malouin, R.A., & Turner, J. (2009). A Review of the Evidence for Medical Home for Children With Special Health Care Needs. Pediatrics, 123, e329. doi: 10.1542/peds.2008-3250

Mills, P.D., & Weeks, W.B. (2004). Characteristics of successful quality improvement teams: lessons from five collaborative projects in the VHA. *Joint Commission Journal on Quality and Safety, 30*(3), 152-162.

Nutting, P.A., Miller, W.L., Crabtree, B.F., Jaen, C.R., Stewart, E.E., & Stange, K.C. (2009). Initial Lessons from the First National Demonstration Project on Practice Transformation to a Patient-Centered Medical Home. *Annals of Family Medicine, 7*(3), 254-260.

Ovretveit, J., & Gustafson, D. (2002). Evaluation of quality improvement programmes. *Quality of Safety and Health Care, 11*, 270-275.

Peek, C.J. (2008). *Task 2 Report on the Current "State of the Art" for Medical/Health Care Home.* Minneapolis, MN: University of Minnesota, Medical School.

Peters, A.S., Ladden, M.D., Kotch, J.B., & Fletcher, R.H. (2002). Evaluation of Faculty Development Program in Managing Care. *Academic Medicine, 77*(11), 1121-1127.

Rittenhouse, D.R., & Shortell, S.M. (2009). The Patient-Centered Medical Home: Will It Stand the Test of Health Reform? *Journal of American Medical Association, 301* (19), 2038-2040. doi:10.1001/jama.2009.691

Soman, M. (2008). A primary-care pilot: the medical home passes a test in the West. *Health Services Administration, 38*(22), 25.

Description of instruments

- The Medical Home Index
- The IHI Collaborative Assessment Scale
- Wilder Research Monthly Team Report
- The Patient Activation Measure
- Wilder Research Parent Self-administered Questionnaire
- The Consumer Assessment for Healthcare Providers and Systems

Measuring the Medical Home in Adult Primary Care

This tool defines, describes, and quantifies activities related to the organization and delivery of primary care. *You* will be asked to assess the level of your practice in six domains: organizational capacity, chronic condition management, care coordination, community outreach, data management and quality improvement/change. Most practices may not function at many of the higher levels (Levels 3 and 4). However, these levels do represent care matched to the kinds of services and supports that patients and families report that they need. A frank assessment of your current practice is desirable; this will best define practice strengths and needs as well as help to identify the kinds of tangible supports needed by primary care practices to better serve *their patients.*

Name:_____Title/Position/Role:_____

Address/phone/e-mail/fax:_____

Describe your practice type/model:_____Number of clinicians: MDs_____ARNPs_____PA's_____Other_____

Is there a care coordinator working at your practice who supports *patients/families?* ❒ Yes ❒ No {See glossary for description.}

What is the estimated number of patients that your practice cares for?_____What is the number per clinician?_____

Can you estimate the percentage (Total should = 100%) of patents that you care for who have:

1)_____% Public insurance only (Medicaid/Medicare) 2)_____% Private & Medicaid/Medicare
3)_____% Self/No pay 4)_____% Private insurance only 5)_____% Other

How familiar/knowledgeable are you about the concepts of a medical home as defined by the American Academy of Pediatrics, American Academy of Family Physicians, American College of Physicians, and American Osteopathic Association (www.medicalhomeinfo.org; www.pcpcc.net)?

1) ❒ No knowledge of the concepts 2) ❒ Some knowledge/not applied
3) ❒ Knowledgeable/concepts sometimes applied in practice 4) ❒ Knowledgeable/concepts regularly applied in practice

Is there anything else you would like us to know about your practice and its unique characteristics?

Measuring the Medical Home in Adult Primary Care

INSTRUCTIONS:

This instrument is organized under six domains:

1) Organizational Capacity	2) Chronic Condition Management	3) Care Coordination
4) Community Outreach	5) Data Management	6) Quality Improvement

Each domain has anywhere from 2 -7 themes, these themes are represented with progressively comprehensive care processes and are expressed as a continuum from Level 1 through Level 4. For each theme please do the following:

First: Read each theme across its progressive continuum from Levels 1 to Level 4.
Second: Select the LEVEL (1, 2, 3 or 4) which best describes how your *practice* currently provides care for patients with chronic health conditions.
Third: When you have selected your Level, please indicate whether *practice* performance within that level is: **"*PARTIAL*"** (some activity within level) or **"*COMPLETE*"** (all activity within that level).

For the example below, **"Domain 1: Organizational Capacity, Theme 1. 1 "The Mission..."** the score for the *practice* is: **"Level 3", "PARTIAL".**

Domain 1: Organizational Capacity: EXAMPLE

THEME:	Level 1	Level 2	Level 3	Level 4
#1.1 The Mission of the Practice	Primary care providers (PCPs) at the practice have individual ways of delivering care to patients with chronic health conditions; their own education, experiences and interests drive care quality.	Approaches to the care of patients with chronic health conditions at the practice are more disease than patient-centered; office needs drive the implementation of care (e.g. carrying out processes of care).	**The *practice* uses a patient and family-centered approach to care, staff assess patients with chronic health conditions and the needs of their families in accordance with their practice mission; feedback is solicited from patients and families/caregivers and influences *office policie*s (e.g. the way things are done).**	In addition to Level 3, a patient/consumer "advisory group" promotes patient-centered strategies, practices, and policies (e.g. enhanced communication methods or systematic inquiry of patient concerns/priorities); a written, visible mission statement reflects practice commitment to quality care for all patients and their families.
	❒ PARTIAL ❒ COMPLETE	❒ PARTIAL ❒ COMPLETE	❒X PARTIAL ❒ COMPLETE	❒ PARTIAL ❒ COMPLETE

Domain 1: Organizational Capacity:

THEME:	Level 1	Level 2	Level 3	Level 4
#1.1 The Mission of the *Practice*	Primary care providers *(PCPs)* at the *practice* have individual ways of delivering care to patients with chronic health conditions; their own education, experiences and interests drive care *quality*. ❒ PARTIAL ❒ COMPLETE	Approaches to the care of patients with chronic health conditions at the *practice* are more disease than *patient-centered*; office needs drive the implementation of care (e.g. carrying out processes of care). ❒ PARTIAL ❒ COMPLETE	The *practice* uses a patient and family-centered approach to care, staff assess patients with chronic health conditions and the needs of their families in accordance with their *practice* mission; feedback is solicited from patients and families/caregivers and influences *office policies* (e.g. the way things are done). ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, a patient/ consumer "advisory group" promotes *patient-centered* strategies, *practices*, and policies (e.g. enhanced communication methods or systematic inquiry of patient concerns/priorities); a written, visible mission statement reflects practice commitment to *quality* care for all patients and their families. ❒ PARTIAL ❒ COMPLETE
#1.2 Communication/ Access	Communication between the patient and the *PCP* occurs as a result of patient inquiry; *PCP* contacts with the patient are for test result delivery or planned medical follow-up. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, standardized office communication methods are identified to the patient by the *practice* (e.g. call-in hours, phone triage for questions, or provider call back hours). ❒ PARTIAL ❒ COMPLETE	*Practice* and patient communicate at agreed upon intervals and both agree on "best time and way to contact me"; individual needs prompt week- end or other special appointments. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, office activities encourage individual requests for flexible access; access and communication preferences are documented in the care plan and used by other *practice* staff (e.g. fax, e-mail or web messages, home, work or residential care visits). ❒ PARTIAL ❒ COMPLETE
#1.3 Access to the Medical Record **Requires both *MD & key non-MD staff person's perspective.***	A policy of access to medical records is not routinely discussed with patients; records are provided only upon request. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, it is established among staff that patients can review their own record (but this fact is not explicitly shared with patients). ❒ PARTIAL ❒ COMPLETE	All patients are informed that they have access to their record; staff facilitates access within 24-48 hours. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, *practice* orientation materials include information on record access; staff locates space for patients to read their records and make themselves available to answer questions. ❒ PARTIAL ❒ COMPLETE

Domain 1: Organizational Capacity (continued):				
THEME:	**Level 1**	**Level 2**	**Level 3**	**Level 4**
#1.4 Office Environment ***Requires both MD & key non-MD staff person's perspective.***	Special needs concerning physical access and other visit accommodations are considered at the time of the appointment and are met if possible. ❒ PARTIAL ❒ COMPLETE	Assessments are made during the visit of patients with chronic health conditions; any physical access & other visit accommodation needs are addressed at the visit and are documented for future encounters. ❒ PARTIAL ❒ COMPLETE	In addition to Level 2, staff ask about any new or pre-existing physical and social needs when scheduling appointments, chart documentation is updated and staff are informed/prepared ahead of time ensuring continuity of care. ❒ PARTIAL ❒ COMPLETE	In addition to Level 2, staff ask about any new or pre-existing physical and social needs when scheduling appointments, chart documentation is updated and staff are informed/prepared ahead of time ensuring continuity of care. ❒ PARTIAL ❒ COMPLETE
#1.5 Patient/Family Feedback ***Requires both MD & key non-MD staff person's perspective.***	Patient feedback to the *practice* occurs through external mechanisms such as satisfaction surveys issued by a health plan; this information is not always shared with *practice* staff. ❒ PARTIAL ❒ COMPLETE	Feedback from patients with chronic health conditions is elicited sporadically by individual *practice* providers or by a suggestion box; this feedback is shared informally with other providers and staff. ❒ PARTIAL ❒ COMPLETE	Feedback from patients with chronic health conditions regarding their perception/experience of care is gathered through systematic methods (e.g. surveys, focus groups, or interviews); there is a process for staff to review this feedback and to begin problem solving. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, an advisory process is in place for patients with chronic health conditions which helps to identify needs and implement creative solutions; there are tangible supports to enable patients and families/caregivers to participate in this process (e.g. after hours events, transportation, stipends, etc). ❒ PARTIAL ❒ COMPLETE
#1.6 Cultural Competence	Primary care provider *(PCP)* attempts to overcome obstacles of language, literacy, or personal preferences on a case by case basis when confronted with barriers to care. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, resources and information are available for patients with chronic health conditions of the most common cultural backgrounds; others are assisted individually through efforts to obtain translators or to access information from outside sources. ❒ PARTIAL ❒ COMPLETE	In addition to Level 2, translation services and materials are available and appropriate for non-English speaking patients with chronic health conditions and/or those with limited literacy; these materials are appropriate to the reading level of the patient and their family or caregiver. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, patient assessments include pertinent cultural information, particularly about health beliefs; this information is incorporated into care plans; the *practice* uses these encounters to assess patient and community cultural needs. ❒ PARTIAL ❒ COMPLETE

Domain 1: Organizational Capacity (continued):				
THEME:	**Level 1**	**Level 2**	**Level 3**	**Level 4**
#1.7 Staff Education ***Requires both MD & key non-MD staff person's perspective.***	For all staff, an orientation to internal office *practices*, procedures and policies is provided. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, the *practice* supports (paid time/ tuition support) continuing education for all staff in *quality* care for patients with chronic health conditions. ❒ PARTIAL ❒ COMPLETE	In addition to Level 2, educational information on community-based resources for patients with chronic health conditions, including diagnosis specific resource information, is available for all staff. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, patients with chronic health conditions are integrated into office staff orientations and educational opportunities as teachers or "patient faculty"; tangible supports for patients and families and caregivers are provided to enable them to take on this role. ❒ PARTIAL ❒ COMPLETE
Domain 2: *Chronic Condition Management (CCM)*:				
THEME:	**Level 1**	**Level 2**	**Level 3**	**Level 4**
#2.1 Identification of Populations of Patients with Chronic Health Conditions	Patients with chronic health conditions can be counted informally (e.g. by memory or from recent acute encounter); comprehensive identification can be done through individual chart review only. ❒ PARTIAL ❒ COMPLETE	Lists of patients with chronic health conditions are extracted electronically by diagnostic code. ❒ PARTIAL ❒ COMPLETE	A population of patients with chronic health conditions is generated by using a set group of diagnoses; the list is used to enhance care and/or define *practice* activities (e.g. to flag charts and computer databases for special attention or identify a population and its subgroups). ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, patients with chronic health conditions are identified and documented, problem lists are current, and complexity levels are assigned to each patient; this information creates an accessible *practice* database/patient registry. ❒ PARTIAL ❒ COMPLETE
#2.2 Care Continuity	Visits occur with the patients' own primary care provider (*PCP*) for annual preventive visits or as a result of acute problems; the patient determines when follow up occurs. ❒ PARTIAL ❒ COMPLETE	Non-acute visits occur with patients and their *PCP* to address chronic condition care; the *PCP* determines appropriate visit intervals; follow-up includes communication of tasks to staff and of lab and medical test results to the patient. ❒ PARTIAL ❒ COMPLETE	The team (*PCP*, patient, and staff) develops a plan of care following evidence-based *practices* for patients with chronic health conditions, the plan details visit schedules and communication strategies; home, work and community concerns are addressed in this plan and cross coverage providers are so informed. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the *practice*/teams use chronic condition protocols which include goals, services, interventions and referral contacts. A designated care coordinator uses these tools and other standardized office processes to support and engage patients and their families and/or caregivers. ❒ PARTIAL ❒ COMPLETE

Domain 2: *Chronic Condition Management (continued)*:

THEME:	Level 1	Level 2	Level 3	Level 4
#2.3 Continuity Across Settings	Communication among the *PCP*, specialists, therapists, and health care agencies happen as needs arise for patients with chronic health conditions. ❒ PARTIAL ❒ COMPLETE	A *PCP* makes requests and/or responds to requests from agencies or employers on behalf of patients with chronic health conditions (e.g. specific needs for accommodations, medical orders or approval of plans, or for a particular workplace support); all communication is documented. ❒ PARTIAL ❒ COMPLETE	Systematic *practice* activities foster communication among the *practice*, patient, and external providers such as specialists, therapists, and other community professionals supporting patients with chronic health conditions in their self-management; these methods are documented and may include e-mail, conference calls, information exchange forms, or ad hoc meetings with external providers. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, a method is used to convene the patient (and family/caregiver as appropriate) and key professionals on behalf of patients with chronic health conditions; specific issues are brought to this group and they all share and use a written plan of care. ❒ PARTIAL ❒ COMPLETE
#2.4 Cooperative Management Between Primary Care Provider *(PCP)* and Specialists	Specialty referrals occur in response to specific diagnostic and therapeutic needs; patients are the main initiators of communication between specialists and their primary care provider *(PCP)*. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, specialty referrals use phone, written and/ or electronic communications; the *PCP* waits for or relies upon the specialists to communicate back their recommendations. ❒ PARTIAL ❒ COMPLETE	The *PCP* and patient set goals for referrals and communicate these to specialists; together they clarify co-management roles among patient, *PCP* and specialists and determine how specialty feedback to the patient and *PCP* supports self management and is explicitly shared. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the patient has the option of using the *practice* in a strong coordinating role; patients as partners with the *practice* manage their care using specialists for consultations and information (unless they decide it is prudent for the specialist to manage the majority of their care). ❒ PARTIAL ❒ COMPLETE

Instructions:

A) Please select and circle one level from Levels 1, 2 3, or 4 for each theme above (circle one).

B) Then indicate whether you place your *practice* at a PARTIAL or COMPLETE ranking within that level (circle one).

Domain 2: *Chronic Condition Management (continued)*:

THEME:	Level 1	Level 2	Level 3	Level 4
#2.5 Transitions of care: From home to hospital; hospital to hospital; hospital to home, nursing home, or rehab; from ER to primary care or home; from one primary care setting to another, etc).	The *practice* learns of any emergency room use, hospitalizations, rehabilitation care, or other access to and transition points along the health care continuum - after they occur through discharge summaries or directly from patients at subsequent office visits. ❒ PARTIAL ❒ COMPLETE	The *practice* provides patients who have chronic health conditions with explicit information and tools (e.g. fax back forms or information about the role of their primary care *medical home*); the patient is solely responsible for timely communications about transitions back to primary care. ❒ PARTIAL ❒ COMPLETE	Patients with chronic health conditions have a portable written plan of care which includes *practice* contact information and a request for timely updates about any care transitions. The *practice-based care coordinator* communicates with hospital and rehabilitation discharge planners and referring clinics prior to transitions to insure needed resources are in place and follow-up plans are clear. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3: Electronic health information systems are in place to identify and receive real time information about patient access to the health care system and related transitions of care; the *practice* team receives timely transfer of patient information and integrates this knowledge into a full and continuous plan of care (in partnership with the patient and family or care giver). ❒ PARTIAL ❒ COMPLETE
#2.6 Patient/Family Support ***Requires both MD & key non-MD staff person's perspective.***	Patients are responsible for carrying out recommendations made to them by their *PCP* when they specifically ask for support or help. ❒ PARTIAL ❒ COMPLETE	The *practice* responds to the clinical needs of the patient; broader social and family needs are addressed and referrals to support services facilitated. ❒ PARTIAL ❒ COMPLETE	The *practice* actively takes into account the overall impact when an individual has a chronic health condition by considering all family members in care; when patients make requests, staff will assist them to set up supportive connections. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the *practice* sponsors patient support and self management activities (e.g. group appointments, condition related support groups, and patient education); staff have current knowledge of community or state support organizations and work with patients/families to make connections. ❒ PARTIAL ❒ COMPLETE

Domain 3: Care Coordination:

THEME:	Level 1	Level 2	Level 3	Level 4
#3.1 Care Coordination/ Role Definition	Patients coordinate their care without specific support; they integrate office recommendations into care. ❒ PARTIAL ❒ COMPLETE	The primary care provider *(PCP)* or a staff member engages in care support activities as needed; involvement with the patient is variable. ❒ PARTIAL ❒ COMPLETE	Care coordination activities are based upon ongoing assessments of patient/family needs; the *practice* partners with the patient to accomplish care coordination goals. ❒ PARTIAL ❒ COMPLETE	*Practice* staff offers a set of care coordination activities (*see page 14), their level of involvement fluctuates according to patient wishes. A designated care coordinator ensures the availability of these activities including written care plans with ongoing monitoring. ❒ PARTIAL ❒ COMPLETE
#3.2 Patient/Family Involvement	The *PCP* makes medical recommendations and defines care coordination needs, the patient carries these out. ❒ PARTIAL ❒ COMPLETE	Patients are regularly asked what care supports they need; treatment decisions are made jointly with their *PCP*. ❒ PARTIAL ❒ COMPLETE	In addition to Level 2, patients (and families/caregivers) are given the option of centralizing care coordination activities at and in partnership with the *practice*. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, patients/families contribute to a description of needed care coordination activities; a care coordinator specifically develops and implements this *practice* capacity which is evaluated by patients and families and designated supervisors. ❒ PARTIAL ❒ COMPLETE
#3.3 Patient Family/ Caregiver Education ***Requires both MD & key non-MD staff person's perspective.***	Generic and specific reading materials and brochures are available from the *practice* upon request. ❒ PARTIAL ❒ COMPLETE	Basic information relevant to patients with chronic health conditions is offered in one on one interactions; these encounters use supportive written condition and resource information. ❒ PARTIAL ❒ COMPLETE	General information regarding managing one's chronic health condition and evidence-based diagnosis specific information is offered by the *practice* in a standardized manner; education anticipates potential issues and problems and refers patients to additional educational resources. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, diverse materials and teaching methods are used to address individual learning styles and needs; education is broad in scope and learning outcomes are measured. ❒ PARTIAL ❒ COMPLETE

Domain 3: Care Coordination (continued):

THEME:	Level 1	Level 2	Level 3	Level 4
#3.4 Assessment of Needs/Plans of Care	Presentation of patients with acute problems determines how needs are addressed. ❒ PARTIAL ❒ COMPLETE	*PCPs* identify specific needs of patients; follow-up tasks are arranged for or are assigned to available staff. ❒ PARTIAL ❒ COMPLETE	Patients with a chronic health condition, family, and *PCP* review current health status and anticipated problems or needs; they create/revise action plans and allocate shared responsibilities at least 2 times per year or at individualized intervals. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the *PCP*/staff and patients create a written plan of care that is monitored at every visit; the office care coordinator is available to the patients and family to implement, update and evaluate the care plan. ❒ PARTIAL ❒ COMPLETE
#3.5 Resource Information and Referrals ***Requires both MD & key non-MD staff person's perspective.***	Information about resource needs and insurance coverage is gathered during regular patient visit intakes; the *practice* addresses immediate patient information and resource needs. ❒ PARTIAL ❒ COMPLETE	Using a listing of community, state, and national resources which cover physical, developmental, social and financial needs the *practice* responds to patient requests for information; the patient seeks out additional information & may share lessons learned with the *practice*. ❒ PARTIAL ❒ COMPLETE	Significant office knowledge about medical resources and insurance options is available; assessment of patient needs leads to supported use of resources and information to solve specific problems. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, *practice* staff work with patients helping to solve resource problems; a designated care coordinator provides follow up, researches additional information, seeks and provides feedback and assists the patient to integrate new information into their care plans. ❒ PARTIAL ❒ COMPLETE
#3.6 Advocacy	The *PCP* suggests that the patient find support services & resources outside of the *practice* when specific needs arise (e.g. diagnosis specific support groups, disability rights organizations, or patient support centers). ❒ PARTIAL ❒ COMPLETE	All patients/families/caregivers are routinely provided with basic information about patient and family support groups and advocacy resources during scheduled *practice* visits. ❒ PARTIAL ❒ COMPLETE	The *practice* team identifies resources to the patient for support and advocacy, facilitates the connections, and advocates on a patient's behalf to solve specific problems pertinent to their conditions and needs. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the team advocates on behalf of all patients with chronic health conditions and their families as a population and helps to create opportunities for community forums, discussions or support groups which address specific health and wellness concerns. ❒ PARTIAL ❒ COMPLETE

Domain 4: Community Outreach:

THEME:	Level 1	Level 2	Level 3	Level 4
#4.1 Community Assessment of Health Needs	Primary care provider *(PCP)* awareness of the population of patients with chronic health conditions in their community is directly related to the number of patients for whom the provider cares. ❒ PARTIAL ❒ COMPLETE	The *practice* learns about issues and needs related to patients with chronic health conditions from key community informants; providers blend this input with their own personal observations to make an informal and personal assessment of the needs of patients in their community. ❒ PARTIAL ❒ COMPLETE	In addition to Level 2, providers raise their own questions regarding the population of patients with chronic health condition in their *practice* communities; they seek pertinent data and information from patients and local/state sources and use data to inform *practice* care activities. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, at least one clinical *practice* provider participates in a community-based public health needs assessment about patients with chronic health conditions, integrates results into *practice* policies, and shares conclusions about population needs with community & state agencies. ❒ PARTIAL ❒ COMPLETE
#4.2 Outreach to Community Based Agencies	When the patient, family, employer or agency request interactions with the primary care provider *(PCP)* on behalf of a patient's community needs, the provider responds, thereby establishing the *practice* as a resource. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, when a community agency or employer requests technical assistance or education from the *practice* about patients with chronic health conditions, the *practice* communicates, collaborates, and educates based upon availability and interest. ❒ PARTIAL ❒ COMPLETE	The *practice* initiates outreach to community agencies and employers that directly serve patients with chronic health conditions (e.g. through representation on one or more advisory boards or committees); the *practice* advocates for preventive care and self management support with inter-organizational collaboration and communication. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the *practice* identifies needs of patients and their families; they work with patients to sponsor activities that raise community awareness of resource and support needs (e.g. home care, respite, exercise/fitness and recreation opportunities, or improving home, provider, and employer communications). ❒ PARTIAL ❒ COMPLETE

Instructions:

A) Please select and circle one level from Levels 1, 2 3, or 4 for each theme above (circle one).

B) Then indicate whether you place your *practice* at a PARTIAL or COMPLETE ranking within that level (circle one).

Domain 5: Data Management:

THEME:	Level 1	Level 2	Level 3	Level 4
#5.1 Electronic Data Support	Primary care providers *(PCPs)* retrieve information/data by individual chart review; electronic data are available and retrievable from payer sources only. ❒ PARTIAL ❒ COMPLETE	Electronic recording of data is limited to billing & scheduling; data are retrieved according to diagnostic codes in relation to billing and scheduling; these data are used to identify specific patient groupings. ❒ PARTIAL ❒ COMPLETE	An electronic data system includes identifiers and utilization data about patients with chronic health conditions; these data are used for monitoring, tracking, and for indicating levels of care complexity. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, an electronic data system is used to support the documentation of need, monitoring of clinical care, following of evidence-based *practices*, care plan development and related coordination and the determination of outcomes (e.g. clinical, functional, satisfaction and cost outcomes). ❒ PARTIAL ❒ COMPLETE
#5.2 Data Retrieval Capacity	*PCP* retrieves patient data from paper records in response to outside agency requirements (e.g. *quality* standards, special projects, or *practice* improvements). ❒ PARTIAL ❒ COMPLETE	The *practice* retrieves data from paper records and electronic billing and scheduling for the support of significant office changes (e.g. staffing, or allocation of resources). ❒ PARTIAL ❒ COMPLETE	Data are retrieved from electronic records to identify and quantify populations and to track selected health indicators & outcomes. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, electronic reports are produced and used to drive *practice* improvements and to measure *quality* against benchmarks; (those producing and using data *practice* patient confidentiality). ❒ PARTIAL ❒ COMPLETE

Domain 6: Quality Improvement/Change:

THEME:	Level 1	Level 2	Level 3	Level 4
#6.1 *Quality* Standards (structures)	*Quality* standards for patients with chronic health conditions are imposed upon the *practice* by internal or external organizations. ❒ PARTIAL ❒ COMPLETE	In addition to Level 1, an individual staff member participates on a *practice* committee for improving processes of care for patients with chronic health conditions. This person communicates and promotes improvement goals to the entire *practice*. ❒ PARTIAL ❒ COMPLETE	The *practice* has its own systematic *quality* improvement structures for patients with chronic health conditions; regular provider and staff meetings are used for input and discussions on how to improve care and treatment for these populations of patients. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the *practice* actively utilizes *quality* improvement (QI) processes; staff and patients are supported to participate in these QI activities; resulting *quality* standards are integrated into the operations of the *practice*. ❒ PARTIAL ❒ COMPLETE
#6.2 *Quality* Activities (processes)	Primary care providers *(PCPs)* have completed courses or have had an adequate orientation to continuous *quality* improvement methods. ❒ PARTIAL ❒ COMPLETE	Corporate owners, administrators or payers identify *practice* deficits and set goals for improvements; *practice* providers and staff are identified to fix problems without having prior/or limited participation in the process. ❒ PARTIAL ❒ COMPLETE	Periodic formal and informal *quality* improvement activities gather staff input about *practice* improvement ideas and opportunities for patients with chronic health conditions; efforts are made toward related changes and improvements for this population. ❒ PARTIAL ❒ COMPLETE	In addition to Level 3, the *practice* systematically learns about patients with chronic health conditions and draws upon patient, family and caregiver input; together the *practice* and patient design and implement office changes that address needs and gaps; they then study outcomes and act accordingly. ❒ PARTIAL ❒ COMPLETE

Please make certain you have chosen a Level (1-4).
Also indicate whether your *practice* performance within that level is "partial" (some activity within that level) or "complete" (all activity within the level).
Thank You

Instructions:

A) Please select and circle one level from Levels 1, 2 3, or 4 for each theme above (circle one).

B) Then indicate whether you place your *practice* at a PARTIAL or COMPLETE ranking within that level (circle one).

Measuring the *Medical Home* in Adult Primary Care
Definitions and Concepts

(Words in *italics* throughout the document are defined below).

Medical Home

A *medical home* is a community-based primary care setting which provides and coordinates high *quality*, planned, patient/family-centered: health promotion (acute, preventive) and *chronic condition management* (© CMHI, 2006).

Achieving a high *quality medical home* requires:
a) macrosystem support for infrastructure (health systems policy level) and
b) microsystem support for (primary care) *practice* improvement

Joint Principles of the Patient Centered Primary Care *Medical Home*

Use this link (http://www.pcpcc.net/) to go to the Patient Centered Primary Care Collaborative website to download the consensus document: The Joint Principles of the Patient Centered *Medical Home* (click on patient centered *medical home*) , endorsed by:

The American Academy of Family Physicians (AAFP)
The American Academy of Pediatrics (AAP)
The American College of Physicians (ACP), and
The American Osteopathic Association (AOA)

Measuring the *Medical Home* in Adult Primary Care
Definitions and Concepts

(Words in *italics* throughout the document are defined below).

Practice-Based Care Coordination

Care and services performed in partnership with the patient, family, & caregiver by health professionals to:

1) Establish *patient-centered* community-based "*Medical Homes*" for patients with chronic health conditions and their families.
   - -Make assessments and monitor needs
   - -Participate in patient/professional *practice* improvement activities

2) Facilitate timely access to the Primary Care Provider (*PCP*), services and resources
   - -Offer supportive services including counseling, education and listening
   - -Facilitate communication among *PCP*, patients and others

3) Build bridges among patients and health, education, social services and employer; promotes continuity of care
   - -Develop, monitor, update and follow-up with care planning and care plans
   - -Organize team meetings; support meeting recommendations and follow-up

4) Supply/provide access to referrals, information and education for patients and caregivers across systems.
   - -Coordinate inter-organizationally
   - -Advocate with and for the patient and family (e.g. at work or with health care settings)

5) Maximize effective, efficient, and innovative use of existing resources
   - -Find, coordinate and promote effective and efficient use of current resources
   - -Monitor outcomes for patient and *practice*

Measuring the *Medical Home* in Adult Primary Care
Definitions and Concepts

(Words in *italics* throughout the document are defined below).

Chronic Condition Management (CCM):
CCM involves explicit changes in the roles of providers and office staff aimed at improving:

1) Access to needed services
2) Communication with specialists, employers, and other resource supports, and
3) Outcomes for patients, families, *practices*, employers and payers.

Quality:
Quality is best determined or judged by those who need or who use the services being offered. *Quality* in the *medical home* is best achieved when one learns what patients with chronic health conditions need and their families require for care and what they need for support. Health care teams in partnership with patients then work together in ways which enhance the capacity of the patient and the *practice* to meet these needs. Responsive care is designed in ways which incorporate patients needs and suggestions. Those making *practice* improvements must hold a commitment to doing what needs to be done and agree to accomplish these goals in essential partnerships with patients.

Office Policies:
Definite courses of action adopted for expediency; "the way we do things"; these are clearly articulated to and understood by all who work in the office environment.

Patient –centered care:
Patient-centered, defined by the Institute of Medicine, is providing care that is respectful of and responsive to individual patient preferences, needs and values and ensuring that patient values guide all clinical decisions.

Family-Centered care:
Recognizes that the family is essential to the patient/child's care and is constant in the patient/child's life.

The medical provider acknowledges who the key family members are
The medical provider asks families what they value
Decision-making is shared

Measuring the *Medical Home* in Adult Primary Care
Definitions and Concepts

(Words in *italics* throughout the document are defined below).

Practice:
The place, providers, and staff where the *PCP* offers care

Primary Care Provider (PCP):
Physician or nurse practitioner who is considered the main provider of health care for the patient

***Requires both MD and key non-MD staff person's perspective* - y**ou will see this declaration before select themes; CMHI has determined that these questions require the input of both MD and non MD staff to best capture *practice* activity.

Notes, comments and questions:

Comments:

Questions:

Confusing themes:

What do you want to be asked that this measurement tool does not address?

What would you like us to know about the quality of care that you provide?

Assessment Scale for Collaboratives

This scale gives information on how to assess a team's progress throughout a Collaborative Improvement Project.

This tool contains:

- Collaborative Assessment Scale

Institute for Healthcare Improvement
Boston, Massachusetts, USA

Assessment Scale for Collaboratives

Assessment/Description	Definition
1.0 Forming team	Team has been formed; target population identified; aim determined and baseline measurement begun.
1.5 Planning for the project has begun	Team is meeting, discussion is occurring. Plans for the project have been made.
2.0 Activity, but no changes	Team actively engaged in development, research, discussion but no changes have been tested.
2.5 Changes tested, but no improvement	Components of the model being tested but no improvement in measures. Data on key measures are reported.
3.0 Modest improvement	Initial test cycles have been completed and implementation begun for several components. Evidence of moderate improvement in process measures.
3.5 Improvement	Some improvement in outcome measures, process measures continuing to improve, PDSA test cycles on all components of the Change Package, changes implemented for many components of the Change Package.
4.0 Significant improvement	Most components of the Change Package are implemented for the population of focus. Evidence of sustained improvement in outcome measures, halfway toward accomplishing all of the goals. Plans for spread the improvement are in place.
4.5 Sustainable improvement	Sustained improvement in most outcomes measures, 75% of goals achieved, spread to a larger population has begun.
5.0 Outstanding sustainable results	All components of the Change Package implemented, all goals of the aim have been accomplished, outcome measures at national benchmark levels, and spread to another facility is underway.

Institute for Healthcare Improvement
Boston, Massachusetts, USA

MN Medical Home Initiatives for Children with Special Health Needs

Monthly Team Report Form: REVISED September 9, 2008

Practice or clinic: _____

Month/Year: _____/_____ **Reported by:** _____

1. Number of CSHCN identified this month? _____ (*please give a whole number estimate*)
2. Cumulative number of CSHCN identified to date? _____ (*please give a whole number estimate*)
3. Number of Care Plans developed with families this month? _____
4. How many times has the team met this month? _____ (*If zero team meetings, skip to question 7*)
5. What are the dates of those meetings? _____ _____ _____ _____
6. Who attended? (check all that apply) ❑ Physician ❑ Care Coordinator ❑ Parents ❑ Nurse ❑ Clinic administrator ❑ Other _____
7. Number of Planned Care Visits this month? _____
8. Number of children for whom you have contributed to a School Plan (e.g., IEP, IIIP, IHP, IFSP) this month? _____
9. What tests of change (PDSA cycles) have you done this month?

   _____

   _____

   _____
10. What have you done to measure these improvements (how have you determined whether or not this test of change was an improvement)?

    _____

    _____

    _____
11. Are there any areas that your team is struggling with that you would like advice or assistance from MDH, its partners, or the other care teams?

    _____

    _____

    _____

Patient Activation Measure

Below are some statements that people sometimes make when they talk about their health. Please indicate how much you agree or disagree with each statement as it applies to you personally by circling your answer. *Your answers should be what is true for you and not just what you think the doctor wants you to say.*

If the statement does not apply to you, circle N/A.

When all is said and done, I am the person who is responsible for managing my health condition(s).	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
Taking an active role in my own health care is the most important factor in determining my health and ability to function.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I am confident that I can take actions that will help prevent or minimize some symptoms or problems associated with my health condition(s).	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I know what each of my prescribed medications does.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I am confident that I can tell when I need to go get medical care and when I can handle a health problem myself.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I am confident I can tell a doctor concerns I have even when he or she does not ask.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I am confident that I can follow through on medical treatments I need to do at home.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I understand the nature and causes of my health condition(s).	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I know the different medical treatment options available for my health condition(s).	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I have been able to maintain the lifestyle changes for my health condition(s) that I have made.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I know how to prevent further problems with my health condition(s).	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I am confident I can figure out solutions when new situations or problems arise with my health condition(s).	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A
I am confident that I can maintain lifestyle changes, like diet and exercise, even during times of stress.	Disagree Strongly	Disagree	Agree	Agree Strongly	N/A

Medical Home Parent Survey

Your child's primary health care provider, as part of an initiative with the Minnesota Department of Health, is asking you to take part in this brief confidential survey.

We are interested in learning more about the needs and health care experiences of families who have a child with special health care needs. This includes children with chronic health conditions or disabilities. If you have more than one child who fits this description, please refer to the child with the most severe special health care needs when completing this survey.

Answers will be collected and reported by Wilder Research. Wilder Research is the research division of the Wilder Foundation, a non-profit human services organization located in Saint Paul, Minnesota. You do not have to participate if you do not want to. Your decision to participate or not will not affect your relationship with your health care provider in any way. All information will be kept completely confidential, and no reports will be made that allow an individual completing the survey to be identified.

Please complete the survey and **return it in the addressed stamped envelope attached**. Please accept the **$1** attached as a small token of appreciation for your time.

Your participation in this study is extremely helpful. If you have any questions, please call Michelle Gerrard at Wilder Research Center at: 651-280-2695 or 1-800-328-2972. **Thanks**!

A. This survey is being conducted every 6 months. Have you filled out this survey before?
❒[1] Yes ❒[2] No ❒[8] Don't know

1. What clinic did you receive this survey from?

❒[1] Alexandria Clinic
❒[2] Allina Clinic-Coon Rapids
❒[3] CentraCare-Family Medicine
❒[4] CentraCare Women and Children's Clinic
❒[5] Children's Hospitals & Clinic-Minneapolis
❒[6] Children's Hospitals & Clinic-St. Paul
❒[7] FamilyHealth Medical Clinic- Farmington
❒[8] Fairview Maple Grove Medical Center
❒[9] Fairview & University Children's Clinic
❒[10] Grand Itasca Clinic
❒[11] HealthPartners-White Bear Lake
❒[12] Mankato Clinic
❒[13] MeritCare Children's Clinic
❒[14] North Point Health and Wellness Center
❒[15] Owatonna Clinic
❒[16] Park Nicollet Medical Center- Family Practice-St. Louis Park
❒[17] Park Nicollet Medical Center Pediatrics-Minneapolis
❒[18] Park Nicollet Medical Center Pediatrics-St. Louis Park
❒[19] South Lake Pediatrics
❒[20] St. Cloud Medical Group
❒[21] St. Luke's Pediatric Associates, Duluth
❒[22] St. Mary's Duluth Clinic (SMDC)
❒[23] United District Hospital Clinics-Faribault County

2. Is this the clinic that your child regularly receives care from?

❒[1] Yes→ 2a. How long has your child been a patient at this clinic?

- ❒[1] Less than 6 months
- ❒[2] 6 months-1 year
- ❒[3] 1-5 years
- ❒[4] 5 years or longer

❒[2] No → **(GO TO QUESTION 3)**

3. Please indicate your child's age range (if more than one child with special health needs, please choose the child with the most severe needs to focus on for all child-related questions in this survey).

- ❒[1] 0-2
- ❒[2] 3-5
- ❒[3] 6-8
- ❒[4] 9-12
- ❒[5] 13-15
- ❒[6] 16-18
- ❒[7] 19-21
- ❒[8] over 21

4. Which of the following statements best describes your child's health care needs?

- ❒[1] My child's health care needs change all the time
- ❒[2] My child's health care needs change only once in awhile
- ❒[3] My child's health care needs are usually stable
- ❒[4] None of the above
- ❒[8] Don't know

5. During the past six months, has your child missed any school due to his/her needed special health care needs?

❒[1] Yes ❒[2] No ❒[9] Not applicable: child not in school

6. During the past six months have you missed any work due to your child's special health care needs?

❒[1] Yes ❒[2] No ❒[9] Not applicable: do not work

7. Does your child have health insurance?

❒[1] Yes → 7a. Is your child covered by private insurance? ❒[1] Yes ❒[2] No

7b. Is your child covered by Medical Assistance/ TEFRA or MNCare? ❒[1] Yes ❒[2] No

7c. In the past year, was there a time when your child was not covered by ANY health insurance? ❒[1] Yes ❒[2] No

❒[2] No → **(GO TO QUESTION 8)**

8. During the past six months, how many times was your child seen by his or her primary care provider?

❒1 None at all ❒2 1-3 times ❒3 4-10 ❒4 More than 10

9. During the past six months, how many times did your child require care in the Emergency Department?

❒1 None at all ❒2 1-3 times ❒3 4-10 ❒4 More than 10

10. In the past 6 months, have you had to delay care for your child because…

	Yes	No
a. you couldn't get through to your child's health care clinic on the telephone?	❒1	❒2
b. you couldn't get an appointment at their clinic soon enough?	❒1	❒2
c. once you arrived at the clinic, you had to wait too long to see the provider?	❒1	❒2
d. there were language, communication, or cultural barriers at the clinic?	❒1	❒2
e. you had problems with health insurance?	❒1	❒2

f. Do you have any additional comments about the series of questions above (10a-e)?

_____

_____

_____

Please think about your child's primary health care provider

11. In the past 6 months, when your child was seen by his or her primary health care provider, how often…

	Never	Sometimes	Usually	Always	Don't know
a. did your child's primary health care provider spend enough time with your child?	❒1	❒2	❒3	❒4	❒8
b. did your primary health care provider help you feel like a partner in your child's care?	❒1	❒2	❒3	❒4	❒8
c. did your primary health care provider provide you with the information that you needed?	❒1	❒2	❒3	❒4	❒8
d. did your child's primary health care provider listen carefully to you?	❒1	❒2	❒3	❒4	❒8
e. was your child's primary health care provider sensitive to your family's values or customs?	❒1	❒2	❒3	❒4	❒8

12. During the past six months, if you contacted your child's doctor or nurse for help or advice, how often were you able to get the help or advice you needed?

❒1 Never ❒2 Sometimes ❒3 Usually ❒4 Always

13. During the past six months, how often did your child's doctor or nurse explain things in a way that you and/or your child could understand?

❒1 Never ❒2 Sometimes ❒3 Usually ❒4 Always

14. Tell us what you think about the following…

	Yes	No
a. I know the different medical treatment options available for my child's health condition	❒1	❒2
b. I feel comfortable disagreeing with my child's primary health care provider	❒1	❒2
c. I feel supported by my child's primary health care provider and clinic staff	❒1	❒2
d. There is someone in the clinic that helps me arrange or coordinate my child's care among the different doctors or services that he/she uses.	❒1	❒2

15. During the past six months, did your child receive care from a specialist (for example, a cardiologist, neurologist, or GI doctor)?

❒1 Yes → 15a. Did your child's primary care provider, nurse or someone from the clinic do anything to help you receive the care from the specialist?

❒1 Yes ❒2 No

15b. Does your child's primary care provider or nurse follow-up with you after your child visits a specialist?

❒1 Yes ❒2 No

❒2 No → **(GO TO QUESTION 16)**

16. Children sometimes need other special medical equipment like a wheelchair, nebulizer, or G-tube. During the past 6 months, did your child use or need special equipment?

❒1 Yes → 16a. During the past 6 months, did your child's doctor, nurse or someone from the clinic do anything to help you receive the special equipment?

❒1 Yes ❒2 No

16b. During the past 6 months, how much of a problem was it to get needed specialty equipment?

❒1 A big problem ❒3 A small problem ❒8 Don't know
❒2 A moderate problem ❒4 No problem at all

16c. During the past 6 months, how often did your child's doctor or nurse talk with you about the special services or equipment that your child needed?

❒1 Never ❒3 Usually ❒8 Don't know
❒2 Sometimes ❒4 Always

❒2 No **(GO TO QUESTION 17)**

17. Over the past 6 months, how satisfied were you with…

	Very satisfied	Satisfied	Dis-satisfied	Very dis-satisfied	Not applicable
a. the way your child's primary health care provider and other health care providers communicate with each other about your child's care?	❒1	❒2	❒3	❒4	❒9
b. the way your child's primary health care provider and other health care providers communicate with his or her school?	❒1	❒2	❒3	❒4	❒9

18. Do you have a written Care Plan/Asthma Action Plan/Emergency Care Plan for your child?

❒1 Yes ❒2 No → **(SKIP TO QUESTION 21)** ❒8 Don't know → **(SKIP TO QUESTION 20)**

19. IF YES, Please rate the following the statements…

	Never	Sometimes	Usually	Always	Don't know
a. My primary care provider and clinic staff work with my family to create a written Care Plan/ Asthma Action Plan/ Emergency Care Plan for my child	❒1	❒2	❒3	❒4	❒8
b. My primary health care provider and clinic staff help me to understand how to use my child's written Care Plan/Asthma Action Plan/ Emergency Care Plan	❒1	❒2	❒3	❒4	❒8
c. I or my child use the written Care Plan/Asthma Action Plan/Emergency Care Plan	❒1	❒2	❒3	❒4	❒8

20. I receive information from my clinic about community and financial resources for children with special health care needs

❒1 Never ❒3 Usually

❒2 Sometimes ❒4 Always

21. In the past 6 months, I've seen changes at this clinic that are helpful to families of children with special health care needs.

❒1 Yes ❒2 No **(SKIP TO QUESTION 23)** ❒8 Don't know **(SKIP TO QUESTION 23)**

22. Please describe the types of changes you have noticed.

_____

_____

_____

_____

23. I would recommend this clinic to other families seeking care for a child with special health care needs.

❒1 Yes ❒2 No

Your child's primary care provider has been involved in a quality improvement effort called Medical Home. The goal of Medical Home is for families and their child's primary care providers to work together to improve coordination of care, health outcomes, and quality of life for children and youth with special health care needs and their families.

24. Has Medical Home benefitted your family in any of the following ways?

	Yes	No	Don't know
a. Time savings?	❒1	❒2	❒8
b. Communication?	❒1	❒2	❒8
c. Number of health related visits?	❒1	❒2	❒8
d. Financially?	❒1	❒2	❒8
e. Emotionally?	❒1	❒2	❒8

f. Do you have any additional comments about the series of questions (24a-e) above?

_____

_____

_____

25. Is there anything else you would like to tell us that we have not asked?

_____

_____

_____

_____

Please answer a few questions about yourself to help Wilder Research generally describe participants. No individual information will be shared.

These last questions are just to help us understand more about the people completing this survey. Remember, your answers are confidential and will not be connected to you in any report.

26. How far away from your clinic do you live?

❒1 Less than 25 miles

❒2 25 to 50 miles

❒3 51 to 100

❒4 More than 100 miles

27. What is your child's racial/ethnic background? (Check all that apply)

	Yes	No
a. African American	❒1	❒2
b. American Indian	❒1	❒2
c. Asian	❒1	❒2
d. Hispanic/Latino	❒1	❒2
e. White/Caucasian	❒1	❒2
f. Other (please specify)	❒1	❒2

28. Last year, was your annual household income

❒1 Under $25,000
❒2 $25,000 to less than $50,000
❒3 $50,000 to less than $75,000
❒4 $75,000 to less than $100,000
❒5 $100,000 or more
❒8 Don't know

Questions?
Call Michelle Gerrard at Wilder Research
651-280-2695 or 1-800-328-2972 or
email: mich@wilder.org
THANKS!

CAHPS® Clinician & Group Survey

Version: Adult Primary Care Questionnaire 1.0

Language: English

Response Scale: 6 points

Note regarding the Never-to-Always response scale: This questionnaire employs a six-point response scale: "Never/Almost never/Sometimes/Usually/Almost always/Always." A version of the questionnaire with the six-point scale has been used by several early adopters of the survey; it is also the version that was endorsed by the National Quality Forum.

An alternative four-point scale, which is the standard scale for CAHPS surveys, omits "Almost never" and "Almost always" from the response options. Questionnaires with the four-point scale are available for downloading at https://www.cahps.ahrq.gov/cahpskit/CG/CGChooseQX4p.asp. The CAHPS Consortium is examining the performance of the two response scales in the context of this survey.

File name: 351a-6_AdultPrim_Eng_6pt_V1.doc
Last updated: October 6, 2008

Instructions for Front Cover

- Replace the cover of this document with your own front cover. Include a user-friendly title and your own logo.
- Include this text regarding the confidentiality of survey responses:

  Your Privacy is Protected. All information that would let someone identify you or your family will be kept private. {VENDOR NAME} will not share your personal information with anyone without your OK. Your responses to this survey are also completely **confidential**. You may notice a number on the cover of the survey. This number is used **only** to let us know if you returned your survey so we don't have to send you reminders.

  Your Participation is Voluntary. You may choose to answer this survey or not. If you choose not to, this will not affect the health care you get.

  What To Do When You're Done. Once you complete the survey, place it in the envelope that was provided, seal the envelope, and return the envelope to [INSERT VENDOR ADDRESS].

If you want to know more about this study, please call XXX-XXX-XXXX.

Instructions for Format of Questionnaire

Proper formatting of a questionnaire improves response rates, the ease of completion, and the accuracy of responses. The CAHPS team's recommendations include the following:

- If feasible, insert blank pages as needed so that the survey instructions (see next page) and the first page of questions start on the right-hand side of the questionnaire booklet.
- Maximize readability by using two columns, serif fonts for the questions, and ample white space.
- Number the pages of your document, but remove the headers and footers inserted to help sponsors and vendors distinguish among questionnaire versions.

Additional guidance is available in **Preparing a Questionnaire Using the CAHPS Clinician & Group Survey**:
https://www.cahps.ahrq.gov/cahpskit/files/32_CG_Preparing_a_Questionnaire.pdf

Survey Instructions

Answer each question by marking the box to the left of your answer.

You are sometimes told to skip over some questions in this survey. When this happens you will see an arrow with a note that tells you what question to answer next, like this:

☒ Yes → **If Yes, go to #1 on page 1**
☐ No

Your Doctor

1. Our records show that you got care from the doctor named below in the last 12 months.

Name of doctor label goes here

Is that right?
[1]☐ Yes
[2]☐ No → **If No, go to #26 on page 5**

The questions in this survey booklet will refer to the doctor named in Question 1 as "this doctor." Please think of that doctor as you answer the survey.

2. Is this the doctor you usually see if you need a check-up, want advice about a health problem, or get sick or hurt?
[1]☐ Yes
[2]☐ No

3. How long have you been going to this doctor?
[1]☐ Less than 6 months
[2]☐ At least 6 months but less than 1 year
[3]☐ At least 1 year but less than 3 years
[4]☐ At least 3 years but less than 5 years
[5]☐ 5 years or more

Your Care From This Doctor in the Last 12 Months

These questions ask about **your own** health care. Do **not** include care you got when you stayed overnight in a hospital. Do **not** include the times you went for dental care visits.

4. In the last 12 months, how many times did you visit this doctor to get care for yourself?
[1]☐ None → **If None, go to #26 on page 5**
[2]☐ 1 time
[3]☐ 2
[4]☐ 3
[5]☐ 4
[6]☐ 5 to 9
[7]☐ 10 or more times

5. In the last 12 months, did you phone this doctor's office to get an appointment for an illness, injury or condition that **needed care right away**?
[1]☐ Yes
[2]☐ No → **If No, go to #7**

6. In the last 12 months, when you phoned this doctor's office to get an appointment for **care you needed right away**, how often did you get an appointment as soon as you thought you needed?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

7. In the last 12 months, did you make any appointments for a **check-up or routine care** with this doctor?

[1] ☐ Yes
[2] ☐ No → **If No, go to #9**

8. In the last 12 months, when you made an appointment for a **check-up or routine care** with this doctor, how often did you get an appointment as soon as you thought you needed?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

9. In the last 12 months, did you phone this doctor's office with a medical question during regular office hours?

[1] ☐ Yes
[2] ☐ No → **If No, go to #11**

10. In the last 12 months, when you phoned this doctor's office during regular office hours, how often did you get an answer to your medical question that same day?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

11. In the last 12 months, did you phone this doctor's office with a medical question **after** regular office hours?

[1] ☐ Yes
[2] ☐ No → **If No, go to #13**

12. In the last 12 months, when you phoned this doctor's office **after** regular office hours, how often did you get an answer to your medical question as soon as you needed?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

13. Wait time includes time spent in the waiting room and exam room. In the last 12 months, how often did you see this doctor **within 15 minutes** of your appointment time?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

14. In the last 12 months, how often did this doctor explain things in a way that was easy to understand?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

15. In the last 12 months, how often did this doctor listen carefully to you?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

16. In the last 12 months, did you talk with this doctor about any health problems or concerns?
[1]☐ Yes
[2]☐ No → **If No, go to #18**

17. In the last 12 months, how often did this doctor give you easy to understand instructions about taking care of these health problems or concerns?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

18. In the last 12 months, how often did this doctor seem to know the important information about your medical history?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

19. In the last 12 months, how often did this doctor show respect for what you had to say?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

20. In the last 12 months, how often did this doctor spend enough time with you?
[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

21. In the last 12 months, did this doctor order a blood test, x-ray or other test for you?
[1]☐ Yes
[2]☐ No → **If No, go to #23**

22. In the last 12 months, when this doctor ordered a blood test, x-ray or other test for you, how often did someone from this doctor's office follow up to give you those results?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

23. Using any number from 0 to 10, where 0 is the worst doctor possible and 10 is the best doctor possible, what number would you use to rate this doctor?

☐ 0 Worst doctor possible
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10 Best doctor possible

Clerks and Receptionists at This Doctor's Office

24. In the last 12 months, how often were clerks and receptionists at this doctor's office as helpful as you thought they should be?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

25. In the last 12 months, how often did clerks and receptionists at this doctor's office treat you with courtesy and respect?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

About You

26. In general, how would you rate your overall health?

[1]☐ Excellent
[2]☐ Very good
[3]☐ Good
[4]☐ Fair
[5]☐ Poor

27. A health provider is a doctor, nurse or anyone else you would see for health care. In the past 12 months, have you seen a doctor or other health provider 3 or more times for the same condition or problem?

[1]☐ Yes
[2]☐ No → **If No, go to #29**

28. Is this a condition or problem that has lasted for at least 3 months? Do **not** include pregnancy or menopause.

[1]☐ Yes
[2]☐ No

29. Do you now need or take medicine prescribed by a doctor? Do **not** include birth control.

[1]☐ Yes
[2]☐ No → **If No, go to #31**

30. Is this medicine to treat a condition that has lasted for at least 3 months? Do **not** include pregnancy or menopause.

[1]☐ Yes
[2]☐ No

31. What is your age?

[1]☐ 18 to 24
[2]☐ 25 to 34
[3]☐ 35 to 44
[4]☐ 45 to 54
[5]☐ 55 to 64
[6]☐ 65 to 74
[7]☐ 75 or older

32. Are you male or female?

[1]☐ Male
[2]☐ Female

33. What is the highest grade or level of school that you have completed?

[1]☐ 8th grade or less
[2]☐ Some high school, but did not graduate
[3]☐ High school graduate or GED
[4]☐ Some college or 2-year degree
[5]☐ 4-year college graduate
[6]☐ More than 4-year college degree

34. Are you of Hispanic or Latino origin or descent?

[1]☐ Yes, Hispanic or Latino
[2]☐ No, not Hispanic or Latino

35. What is your race? Please mark one or more.
    - [1] ☐ White
    - [2] ☐ Black or African American
    - [3] ☐ Asian
    - [4] ☐ Native Hawaiian or Other Pacific Islander
    - [5] ☐ American Indian or Alaskan Native
    - [6] ☐ Other

36. Did someone help you complete this survey?
- [1] ☐ Yes
- [2] ☐ No → **Thank you. Please return the completed survey in the postage-paid envelope.**

37. How did that person help you? Mark all that apply.
- [1] ☐ Read the questions to me
- [2] ☐ Wrote down the answers I gave
- [3] ☐ Answered the questions for me
- [4] ☐ Translated the questions into my language
- [5] ☐ Helped in some other way

*Please print:*_____

_____

_____

Thank you.
Please return the completed survey in the postage-paid envelope.

CAHPS® Clinician & Group Survey

Supplemental Items for the Adult Primary Care Questionnaire 1.0

Language: English

Response Scale: 6 points

File name: 351a-6_AdultPrim_Eng_6pt_V1.doc
Last updated: October 6, 2008

TABLE OF CONTENTS

Important instructions

Placing Supplemental Items in the Core Questionnaires. After you copy one or more supplemental items into the core questionnaire:

- **Fix the formatting** of the items as needed to fit into the two-column format.
- **Renumber** the supplemental item and **ALL** subsequent items so that they are consecutive.
- **Revise ALL skip instructions** in the questionnaire to make sure they point the respondent to the correct item number.

Definition of Specialist. If you choose to use one or more supplemental items that refer to specialists, please insert this definition before the first of these items: "Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care."

After Hours E-mail

Insert AE1 – AE2 after core question 12.

AE1. In the last 12 months, did you e-mail this doctor's office with a medical question?

[1] ☐ Yes
[2] ☐ No → **If No, go to core question 13**

AE2. In the last 12 months, when you e-mailed this doctor's office, how often did you get an answer to your medical question as soon as you needed?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

Being Kept Informed About Appointment Start

Insert KI1 after core question 13. In core question 13, add instruction at the "Always" and "Almost always" responses to skip over KI1 to core question 14.

KI1. In the last 12 months, after you checked in for your appointment at this doctor's office, were you ever kept

[1] ☐ Yes
[2] ☐ No

Cost of Care (Prescriptions)

Insert COC1 – COC3 after core question 20.

COC1. In the last 12 months, did you take any prescription medicine?

[1] ☐ Yes
[2] ☐ No → **If No, go to core question 21**

COC2. In the last 12 months, were you ever worried or concerned about the cost of your prescription medicine?

[1] ☐ Yes
[2] ☐ No

COC3. n the last 12 months, did you and this doctor talk about the cost of your prescription medicine?

[1] ☐ Yes
[2] ☐ No

Cost of Care (Tests)

Insert COC4 – COC5 after core question 22.

COC4. In the last 12 months, were you ever worried or concerned about the cost of your blood tests, x-rays or other tests?

[1] ☐ Yes
[2] ☐ No

COC5. In the last 12 months, did you and this doctor talk about the cost of your blood tests, x-rays or other tests?

[1] ☐ Yes
[2] ☐ No

Doctor Role

Insert DR1 after core question 2.

DR1. Specialists are doctors like surgeons, heart doctors, allergy doctors, skin doctors, and other doctors who specialize in one area of health care. Is this doctor a specialist?

[1] ☐ Yes
[2] ☐ No

Doctor Thoroughness

Insert DT1 – DT2 before core question 21.

DT1. In the last 12 months did this doctor ever examine you?

[1]☐ Yes
[2]☐ No→ **If No, go to core question 21**

DT2. In the last 12 months, how often was this doctor as thorough as you thought you needed?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

Health Improvement

(Use only if sample will include elderly or individuals with chronic conditions.)

Insert HI1 after core question 17.

HI1. In the last 12 months, did you and this doctor talk about specific things you could do to prevent illness?

[1]☐ Yes
[2]☐ No

Health Promotion and Education

Insert HP1 – HP6 after core question 17. If HP1 – HP6 are used, patients who did not talk with their doctor about any health problems or concerns should skip to HP1; this requires a change in the skip instructions for core question 16. Note: If "Health Improvement" is included, HP1 – 6 follow HI1.

HP1. In the last 12 months, did you need this doctor's help in making changes to prevent illness?

[1] ☐ Yes
[2] ☐ No → **If No, go to question HP3**

HP2. In the last 12 months, did this doctor give you the help you needed to make changes to prevent illness?

[1] ☐ Yes
[2] ☐ No

HP3. In the last 12 months, did you and this doctor talk about a healthy diet and healthy eating habits?

[1] ☐ Yes
[2] ☐ No

HP4. In the last 12 months, did you and this doctor talk about the exercise or physical activity you get?

[1] ☐ Yes
[2] ☐ No

HP5. In the last 12 months, did you and this doctor talk about things in your life that worry you or cause you stress?

[1] ☐ Yes
[2] ☐ No

HP6. In the last 12 months, did this doctor ever ask you whether there was a period of time when you felt sad, empty or depressed?

[1] ☐ Yes
[2] ☐ No

Help With Problems or Concerns

Insert HPC1 after core question 16.

HPC1. Did this doctor help you with these problems or concerns?

[1]☐ Yes
[2]☐ No

Other Doctors and Providers at Your Doctor's Office

Insert OD1 – OD9 after core question 25. If this section is used, patients who had no visits with the sampled doctor should skip to OD1; this requires a change in the skip instructions for core question 4.

These questions ask about your experiences with other doctors and providers at this doctor's office. Please answer only for your own health care. Do not include dental care visits.

OD1. Sometimes when you go to this doctor's office, you might get care from another provider – for example, another doctor in the practice, a nurse, a nurse practitioner or a physician assistant.

In the last 12 months, were any of your appointments at this doctor's office with another doctor or other provider?

[1]☐ Yes
[2]☐ No → **If No, go to core question 26**

Please answer the following questions for the other doctors or providers you visited at this doctor's office.

OD2. In the last 12 months, how often did the other doctors or providers explain things in a way that was easy to understand?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

OD3. In the last 12 months, how often did the other doctors or providers listen carefully to you?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

OD4. In the last 12 months, did you talk with the other doctors or providers about any health problems or concerns?

[1]☐ Yes
[2]☐ No → **If No, go to question OD6**

OD5. In the last 12 months, how often did the other doctors or providers give you easy to understand instructions about what to do to take care of these health problems or concerns?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

OD6. In the last 12 months, how often did the other doctors or providers show respect for what you had to say?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

OD7. In the last 12 months, how often did the other doctors or providers spend enough time with you?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

OD8. In the last 12 months, how often did you feel that the other doctors or providers had all the information they needed to provide your care?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

OD9. Using any number from 0 to 10, where 0 is the worst care possible and 10 is the best care possible, what number would you use to rate all your health care from the other doctors or providers you visited at this doctor's office in the last 12 months?

☐ 0 Worst care possible
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10 Best care possible

Provider Communication

Insert C1 after core question 20. Note: If "Health Promotion and Education" is included, C1 should follow HP2.

C1. In the last 12 months, did this doctor encourage you to talk about all your health concerns?

[1]☐ Yes
[2]☐ No

Insert C2 after core question 14. In core question 14, add instruction at the "Usually," "Almost always," and "Always" responses to skip over C2 to core question 15.

C2 was designed for and tested with a commercial health plan population using primarily a self-administered format. Item wording and format may not be appropriate for other modes of administration or other populations (e.g., Medicaid, Medicare, low literacy).

C2. In the last 12 months, were the explanations this doctor gave you about each of the following hard to understand?

		Yes	No	Does Not Apply
a)	What was wrong with you	[1]☐	[2]☐	[3]☐
b)	The reason for a treatment	[1]☐	[2]☐	[3]☐
c)	What a medicine was for	[1]☐	[2]☐	[3]☐
d)	How to take a medicine	[1]☐	[2]☐	[3]☐
e)	Results of a blood test, x-ray or other test	[1]☐	[2]☐	[3]☐
f)	What to do if a condition got worse or came back	[1]☐	[2]☐	[3]☐
g)	Something else	[1]☐	[2]☐	[3]☐

*Please specify:*_____
_____

Insert C3 after core question 14. In core question 14, add instruction at the "Usually," "Almost always," and "Always" responses to skip over C3 to core question 15. If item C2 is used, C3 should follow C2.

C3. In the last 12 months, were any of the explanations this doctor gave you hard to understand because of an accent or the way the doctor spoke English?

[1] ☐ Yes
[2] ☐ No

Insert C4 – C7 after core question 20.

C4. In the last 12 months, did you feel this doctor really cared about you as a person?

[1] ☐ Yes
[2] ☐ No

C5. In the last 12 months, did this doctor ignore what you told him or her?

[1] ☐ Yes
[2] ☐ No

C6. In the last 12 months, did this doctor use a condescending, sarcastic, or rude tone or manner with you?

[1] ☐ Yes
[2] ☐ No

C7. In the last 12 months, did this doctor show interest in your questions and concerns?

[1] ☐ Yes
[2] ☐ No

Insert C8 before core question 21. If items SD1 – SD3 are used, C8 should follow SD3.

C8 and C9 were designed for and tested with a commercial health plan population using primarily a self-administered format. Item wording and format may not be appropriate for other modes of administration or other populations (e.g., Medicaid, Medicare, low literacy).

C8. In the last 12 months, during any of your visits, did this doctor:

		Yes	No	Does Not Apply
a)	Listen to your reasons for the visit?	1☐	2☐	3☐
b)	Show concern for your physical comfort?	1☐	2☐	3☐
c)	Describe his or her physical findings?	1☐	2☐	3☐
d)	Explain the reason for any additional tests?	1☐	2☐	3☐
e)	Describe the next steps for your care or treatment?	1☐	2☐	3☐

Insert C9 before core question 21. If items SD1 – SD3 are used, C9 should follow SD3. If item C8 is used, C9 should follow C8.

C9. In the last 12 months, did this doctor give you complete and accurate information about:

		Yes	No	Does Not Apply
a)	Tests?	1☐	2☐	3☐
b)	Choices for your care?	1☐	2☐	3☐
c)	Treatment?	1☐	2☐	3☐
d)	Plan for your care?	1☐	2☐	3☐
e)	Medications?	1☐	2☐	3☐
f)	Follow-up care?	1☐	2☐	3☐

Provider Knowledge of Specialist Care

Insert PK1 – PK2 after core question 20.

Note: These items are recommended for use only if the sampled provider is not a specialist.

If C1 is included, insert PK1 – PK2 after C1.

Please refer to instructions at the front of this document about defining "specialists."

PK1. In the last 12 months, did this doctor suggest you see a specialist for a particular health problem?

[1]☐ Yes
[2]☐ No → **If No, go to core question 21**

PK2. In the last 12 months, how often did the doctor named in Question 1 seem informed and up-to-date about the care you got from specialists?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

Recommend Doctor

Insert RC1 – RC2 after core question 23.

RC1. Would you recommend this doctor to your family and friends?

[1]☐ Definitely yes
[2]☐ Somewhat yes
[3]☐ Somewhat no
[4]☐ Definitely no

RC2. Please tell us how this doctor's office could have improved the care and services you received in the last 12 months.

_____

Shared Decisionmaking

Insert SD1 – SD3 before core question 21.

SD1. Choices for your treatment or health care can include choices about medicine, surgery, or other treatment. In the last 12 months, did this doctor tell you there was more than one choice for your treatment or health care?

[1] ☐ Yes
[2] ☐ No → **If No, go to core question 21**

SD2. In the last 12 months, did this doctor talk with you about the pros and cons of each choice for your treatment or health care?

[1] ☐ Yes
[2] ☐ No

SD3. In the last 12 months, when there was more than one choice for your treatment or health care, did this doctor ask which choice you thought was best for you?

[1] ☐ Yes
[2] ☐ No

Wait Time for Urgent Care

Insert WU1 after core question 6.

WU1. In the last 12 months, when you contacted this doctor's office to get an appointment for care you needed right away, how long did you usually have to wait between trying to get an appointment and actually seeing someone?

[1] ☐ Same day
[2] ☐ 1 day
[3] ☐ 2-3 days
[4] ☐ 4-7 days
[5] ☐ 8-14 days
[6] ☐ 15 days or longer

Your Care From Specialists in the Last 12 Months

Insert SC1 – SC8 after question 25. If this section is used, patients who have no visits with the sampled doctor should skip to SC1; this requires a change in the skip instructions at question 4.

Note: If "Other Doctors and Providers at Your Doctor's Office" items are included, change the skip at OD1 to SC1.

Please refer to instructions at the front of this document about defining "specialists."

These questions ask about **your own** health care. Do **not** include care you got when you stayed overnight in a hospital. Do **not** include the times you went for dental care visits.

SC1. In the last 12 months, did you try to make any appointments to see a specialist?

[1] ☐ Yes
[2] ☐ No → **If No, go to core question 26**

SC2. In the last 12 months, how often was it easy to get appointments with specialists?

[1] ☐ Never
[2] ☐ Almost never
[3] ☐ Sometimes
[4] ☐ Usually
[5] ☐ Almost always
[6] ☐ Always

SC3. In the last 12 months, did you and this doctor talk about the cost of seeing a specialist?

[1] ☐ Yes
[2] ☐ No

SC4. In the last 12 months, were you ever worried or concerned about the cost of seeing a specialist?

[1] ☐ Yes
[2] ☐ No

SC5. How many specialists have you seen in the last 12 months?

[1]☐ None → **If None, go to core question 26**
[2]☐ 1 specialist
[3]☐ 2
[4]☐ 3
[5]☐ 4
[6]☐ 5 or more specialists

SC6. In the last 12 months, how often did the specialists you saw seem to know the important information about your medical history?

[1]☐ Never
[2]☐ Almost never
[3]☐ Sometimes
[4]☐ Usually
[5]☐ Almost always
[6]☐ Always

SC7. We want to know your rating of the specialist you saw most often in the last 12 months. Using any number from 0 to 10, where 0 is the worst specialist possible and 10 is the best specialist possible, what number would you use to rate that specialist?

☐ 0 Worst specialist possible
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10 Best specialist possible

SC8. Was the specialist you saw most often in the last 12 months the doctor named in Question 1?

[1]☐ Yes
[2]☐ No

Your Most Recent Visit

Insert RV1 – RV11 after core question 25.

These questions ask about your most recent visit with this doctor. Please answer only for your own health care.

RV1. During your most recent visit with this doctor, were you kept informed about how long you would need to wait for your appointment to start?

[1]☐ Yes
[2]☐ No

RV2. Wait time includes time spent in the waiting room and exam room. During your most recent visit with this doctor, did you see this doctor **within 15 minutes** of your appointment time?

[1]☐ Yes
[2]☐ No

RV3. During your most recent visit, did this doctor explain things in a way that was easy to understand?

[1]☐ Yes
[2]☐ No

RV4. During your most recent visit, did you talk with this doctor about any health problems or concerns?

[1]☐ Yes
[2]☐ No → **If No, go to question RV6**

RV5. During your most recent visit, did this doctor give you easy to understand instructions about what to do to take care of these health problems or concerns?

[1]☐ Yes
[2]☐ No

RV6. During your most recent visit, did this doctor seem to know the important information about your medical history?

[1]☐ Yes
[2]☐ No

RV7. During your most recent visit, did this doctor show concern about your health and how you were feeling?

[1] ☐ Yes
[2] ☐ No

RV8. During your most recent visit, did this doctor spend enough time with you?

[1] ☐ Yes
[2] ☐ No

RV9. During your most recent visit, did clerks and receptionists at this doctor's office treat you with courtesy and respect?

[1] ☐ Yes
[2] ☐ No

RV10. Using any number from 0 to 10, where 0 is the worst medical care possible and 10 is the best medical care possible, what number would you use to rate the medical care you received during your most recent visit with this doctor?

☐ 0 Worst medical care possible
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10 Best medical care possible

RV11. Please tell us how this doctor's office could have improved the care and services you received at your most recent visit.

_____

Systems level outcomes evaluation

A system level outcomes evaluation will allow for measurement of the successes and challenges related to the overall implementation of Health Care Home in Minnesota and progress on measures related to the Institute for Healthcare Improvement triple aim (improve experience of care, improve health population-wide, reduce costs) (Institute for HealthCare Improvement). What follows summarizes the limited literature available on evaluation methods at the system level for Health Care Home outcomes.

In a study conducted by Cooley and colleagues on outcomes associated with medical home implementation in pediatric primary care, the authors supplemented their Medical Home Index outcomes data with data provided by health plans. This included utilization data for emergency departments, hospitalization, and primary and specialty care. They referred to this as a "utilization review" (Cooley et al., 2009). When the Medical Home Index data were collected from all of the practices, the health plan extracted the previous year's utilization data for six specific chronic conditions identified via ICD-9 codes.

A utilization review might provide information on progress for measures related to the Institute for Healthcare Improvement triple aim: improve experience of care, improve health population-wide, and reduce costs. In this respect it may be useful to examine claims data related to hospitalizations and rehospitalizations, inpatient stays, emergency department visits, specialty and primary care encounters, and the diagnoses associated with these visits (Cooley et al., 2009).

A measurement tool was developed by R.C. Antonelli and D.M. Antonelli (2004) to quantify the precise activities involved in providing comprehensive, coordinated care for children with special healthcare needs. Costs of providing this care were calculated on the basis of time spent multiplied by the average salary of the office personnel performing the care coordination service. In addition, data were collected regarding the complexity level of the patient requiring the service, the type of service provided, and the outcome (Antonelli R.C & Antonelli D.M., 2004).

The Minnesota Departments of Health and Human Services also conducted this type of analysis utilizing information obtained from participating Minnesota Medical Home teams.

Systems level outcomes evaluation: initial recommendation based on literature scan

Currently, there are several workgroups focused on identifying systems level outcomes, including measures related to the triple aim. Before designing the systems level outcome evaluation, we recommend initiating a logic model with the Evaluation Advisory Board. For this design, it will be necessary to examine closely how Health Care Home activities align with systems outcomes.

Previous projects have worked with the State Medicaid Office to generate claims data on hospitalizations, rehospitalizations, emergency department visits, primary care visits, dental visits, and drug utilization. Studies have also aligned these variables with patients' health severity levels.

It may be helpful to streamline the collection of claims data by collecting these data for specific conditions or severity levels. Additionally, we recommend that the analysis of the utilization outcome data be segmented (reported separately) based on certified teams, teams working on certification, and those doing no Health Care Home work.