The goal of the Safety Net Medical Home Initiative (SNMHI) is to help practices redesign their clinical and administrative systems to improve patient health by supporting effective and continuous relationships between patients and their care teams. In addition, SNMHI seeks to sustain practice transformation by helping practices coordinate community resources and build capacity to advocate for improved reimbursement. The SNMHI is sponsored by The Commonwealth Fund and is administered by Qualis Health and the MacColl Institute for Healthcare Innovation at the Group Health Research Institute.

To understand what it means to be a medical home, it is important to recognize the three major ideas that came together in the joint principles articulated by the professional societies in 2007.¹ The PCMH is a combination of the pediatric medical home model, first articulated in 1967; first contact, continuous, and comprehensive primary care; and redesigned systems of care purposely constructed to support productive interactions between providers and patients.¹ In this guide we will examine how system supports can aid providers to improve care for all patients.
Over the past 12 years, the Chronic Care Model (CCM) has served as a guide to systems who wish to improve their care for the patients who have ongoing health needs including physical illnesses, mental health disorders, and behavioral issues such as substance abuse. It is frequently utilized as a care model for all patients in a system, although the benefits are most clearly apparent to those with ongoing health concerns. Thousands of primary care practices of all sizes and types have taken on the work of becoming more organized and incorporating evidence-based care in their interactions, and their experiences can help others reshape how they provide care. This implementation guide begins by introducing the CCM and examining the connections between it and the PCMH, and then focuses on critical aspects of the CCM not included in other PCMH change concepts (planned care, decision support, and clinical care management). Throughout, the guide directs readers to tools that have been developed to aid in practice transformation.

Change Concepts

The following eight Change Concepts for Practice Transformation (Change Concepts) comprise the operational definition of a Patient-centered Medical Home for the “Transforming Safety Net Clinics into Patient-Centered Medical Homes” Initiative.

1. Empanelment
2. Continuous and Team-based Healing Relationships
3. Patient-centered Interactions
4. Engaged Leadership
5. Quality Improvement (QI) Strategy
6. Enhanced Access
7. Care Coordination
8. Organized, Evidence-based Care

They were derived from reviews of the literature and also from discussions with leaders in primary care and quality improvement. Over the course of the “Transforming Safety Net Clinics into Patient-Centered Medical Homes” Initiative, we will cover each of these change concepts in turn. An implementation guide will be prepared and made available for each concept. This implementation guide is focused on the change concept Organized, Evidence-based Care.

Elements of Organized, Evidence-Based Care

PCMH practices will introduce these key changes:
- Use planned care according to patient need.
- Use point-of-care reminders based on clinical guidelines.
- Enable planned interactions with patients by making up-to-date information available to providers and the care team at the time of the visit.

In addition, we have chosen to discuss the following Care Coordination key change—provide care management services for high risk patients—in this implementation guide because recent evidence suggests it must be an integral component of organized PCMH care.

Message to Readers

SNMHII Implementation Guides are living documents. Updates will be issues as additional tools, resources, and best-practices are identified. This implementation guide provides information and guidance on all elements of the Change Concept “Organized, Evidence-based Care”:
- Use planned care according to patient need.
- Use point-of-care reminders based on clinical guidelines.
- Enable planned interactions with patients by making up-to-date information available to providers and the care team at the time of the visit.

Transformative change relies upon knowledge sharing and transfer. The partner clinics and Regional Coordinating Centers participating in the SNMHII are members of a learning community working towards the shared goal of PCMH transformation. This learning community produces and tests ideas and actions for change. The Initiative celebrated the contributions and accomplishments of all its partner clinics and Regional Coordinating Centers and, in the spirit of collaborative learning, implementation guides often highlight their work. This guide includes resources from: ISU Family Medicine Residency in Idaho and Old Town Clinic in Portland. Editorial support was provided by CareOregon and the Pittsburgh Regional Health Initiative.
Background

The Chronic Care Model as a Guide to System Change

Developed at Group Health Cooperative in the mid-1990s, the Chronic Care Model lays out the essential features of a healthcare system designed to care for chronically ill individuals and populations. The CCM emphasizes the central role of patients as full partners in their care, and it serves as a visual guide to the supports required to assure productive interactions between patients and their care teams to achieve optimal outcomes.

Figure 1: Chronic Care Model

The six elements of the CCM are each important on their own, but they also interact with and augment each other.

<table>
<thead>
<tr>
<th>Model Element</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health care organization</td>
<td>Create a culture, organization, and mechanisms that promote safe, high quality care.</td>
</tr>
<tr>
<td>Self-management support</td>
<td>Empower and prepare patients to manage their health and health care.</td>
</tr>
<tr>
<td>Delivery system design</td>
<td>Assure the delivery of effective, efficient clinical care and self-management support.</td>
</tr>
<tr>
<td>Decision support</td>
<td>Promote clinical care that is consistent with scientific evidence and patient preferences.</td>
</tr>
<tr>
<td>Clinical information system</td>
<td>Organize patient and population data to facilitate efficient and effective care.</td>
</tr>
<tr>
<td>Community</td>
<td>Mobilize community resources to meet needs of patients</td>
</tr>
</tbody>
</table>
Today the CCM is a widely adopted approach to system improvement both nationally and globally, and evidence has grown supporting the importance of multi-component models like the CCM to improve care delivery and patient outcomes.² Thousands of practices have utilized the CCM to guide their clinical improvement efforts since 1999. One of the most ambitious programs to spread the CCM was the Bureau for Primary Health Care’s Health Disparities Collaboratives (HDC), which involved hundreds of community health centers. A great deal of information is available on both the evidence base surrounding the CCM and the specific tools and strategies that have been developed by health systems here and abroad to recast reactive delivery systems in the CCM mold. A good starting place for more information about the Model can be found on Improving Chronic Illness Care’s (ICIC’s) website, where you can access not only slideshows and scholarly articles describing the CCM in detail but also videos in which providers describe their journey to incorporate the Model in their settings.

The CCM and the Patient-Centered Medical Home
As noted, the PCMH Model enunciated in the Joint Principles statement of the major primary care professional societies was based on two pre-existing models—the Chronic Care Model and the Pediatric Medical Home Model, as well as an understanding of the importance of good primary care. Thus, the features of the Chronic Care Model are all present in the PCMH Model.³,⁴ In addition, the PCMH Model addresses some fundamental elements of high quality primary care areas that the CCM does not, especially accessibility, continuity, and care coordination. But the links between the two models are readily apparent in the elements of the PCMH:

- **Empanelment** links each patient to a provider and care team who assume responsibility for a defined panel of patients.
- **Continuous and Team-based Healing Relationships** emphasizes the critical role of the practice team and continuity in care delivery.
- **Patient-centered Interactions** help ensure that care is consistent with patient needs and preferences, and supports self-management.
- **Engaged Leadership** and a robust **Quality Improvement (QI) Strategy** are necessary for most practices to make organized, evidence-based care a reality.

Many elements of the CCM such as team care, population management, or self-management support have been discussed in other implementation guides. In this guide we will examine three areas critical to the delivery of care that is well organized and evidence-based. We will then introduce a comprehensive toolkit developed specifically to assist practices with implementing the CCM in their setting.
Located in downtown Portland, Oregon, The Central City Concern’s Old Town Clinic is a safety net clinic and a Federally-Qualified Health Center (FQHC) that treats mostly low income patients, about 40% of whom are uninsured.

Currently, the clinic does not use an electronic medical record (EMR) but was able to work with their external laboratory service to import all lab results into their internally developed patient database. Vitals are also captured electronically by medical assistants after each visit. From this information, the clinic developed a health assessment form that summarizes a patient’s most recent lab work, vitals at last clinic visit, and results focused on prevention. Prior to a patient’s visit, the summary form is attached to the chart, giving the provider a quick snapshot of the patient’s health at their last visit and their most recent lab results. Providers have reported that the form helps them manage their time more efficiently.

Krista Collins is a data analyst at the clinic who explains how they were able to address a care need until the clinic installs an EMR, expected in 2011. “This came about because while we don’t have an EMR, we do have a patient database that contains lab reports. We knew that providers needed a quick, conclusive look at the patient’s last visit, and it takes an immense amount of time to look through a paper chart sometimes.” Every morning right before huddle prep when the clinic staff are preparing for patients, a summary form is attached on top of every chart offering a snapshot of the most important labs blood pressure, date of last visit, and other information.

Collins said they came up with the idea of looking up the different string codes associated with the lab reports, and had the IT department create a health summary based on the imported codes.

“Other clinics that use imported labs could create their own form because every lab result has a unique identifier,” says Collins. Collins advises that a clinic dedicate a person to something like this, which she says works with the medical home model. “For us, having someone who can oversee the development of this health summary improves our quality of care. It’s a matter of organizing positions for quality improvement, and dedicating time to become really familiar with every process behind the scenes,” she says. The clinic went through some modifications as the form has evolved, but Collins says the end result has helped improve care.

“We have improved on our pay for performance measures. This has helped with the capturing of each patient’s last HbA1c results for example,” she says. “It’s been a wonderful tool for making the jobs of our providers much easier.”
Three Key Areas To Improve Care

1. Planned Care

Two of the specific changes under the Organized, Evidence-based Care Change Concept are meant to ensure that the practice knows what services patients need, and encounters are organized to deliver those services.

- Use planned care according to patient need.
- Enable planned interactions with patients by making up-to-date information available to providers and the care team at the time of the visit.

Planned care is simply care that is deliberately designed to assure that patient needs are met.

What are planned care and planned interactions?

While medical care is often reactive—a patient calls or comes with new symptoms or an injury—preventive care and much of chronic illness care are predictable. Patients need assessments at intervals, preventive interventions on schedule, regular support for self-management, and adjustment of medications to reach clinical targets. Patient outcomes correlate with a practice’s success at meeting these needs.

Planned care is simply care that is deliberately designed to assure that patient needs are met. Patients receive recommended services only one-half the time largely because predictable services have to be delivered in the context of often rushed, reactive encounters where the focus is on the new symptom or injury. Planned care creates an agenda for an encounter that includes the services that patients need. Although we are unaware of randomized trials testing planned care, quality improvement experience suggests that planning and organizing visits are major contributors to performance improvement.

Planned preventive or chronic illness care can be delivered either in reactive, patient-initiated visits or practice-initiated chronic illness or preventive visits. In either case the steps in planned care are the same.

1. Identify the key clinical tasks associated with evidence-based care (e.g., performing a diabetic foot exam, administering a PHQ-9, giving a flu shot);
2. Decide who on the team should perform the task (see Continuous, Team-based Care Implementation Guide);
3. Review patient data prior to the encounter to identify needed services; and
4. Structure the encounter so that the relevant members of the team can deliver all needed services. Standing orders facilitate the process.

Practice-initiated Planned Visits

To meet the needs of all members of a patient population, a practice must reach out to patients needing care (see Empanelment Implementation Guide). Stand-alone registries or EMRs with registry functionality make it possible to quickly review key data on groups of patients with common characteristics—e.g., women over 50, diabetics, patients treated for depression. The review identifies individual patients needing more attention—e.g., diabetics with HbA1c >9% that haven’t been seen in the last 6 months. These patients are contacted to set up an appointment that will focus on their diabetes. Such appointments are often longer than the usual 15-20 minute visit and lab work may be done in advance. Planned visits generally involve multiple members of the practice team whose respective efforts need to be coordinated. Some practices arrange these visits to allow for involvement of specialized staff such as dieticians or wound care nurses. Since practice-initiated planned visits generally target patients with higher disease severity and/or problematic patterns of clinic utilization, patients need to leave the planned visit with all their needs met, AND a collaboratively developed plan for future care. A video illustrating a practice-initiated planned diabetes visit is available on the Improving Chronic Illness Care website here.
Patient-initiated Planned Visits

Ensuring that all needs are met in patient-initiated visits is more challenging since the team may be unaware that the patient is coming in until the day of the appointment, important lab results may be unavailable, and patients generally have new complaints that need attention. To deal with these challenges, practice teams need to compress the processes of identifying patients, reviewing patient data, and organizing visits. The mechanism that seems to work best is the practice team huddle. Huddles are brief (usually 10-20 minutes) meetings of staff involved in patient care before clinic sessions. The schedule for that session or day is scanned for patients with chronic illness or other priority issues along with summary data on those patients from registries or the EMR. Each patient’s needs are identified and tasks are assigned and coordinated. Some teams huddle briefly following a clinic session to plan follow-up. Health Team Works, formerly the Colorado Clinical Guidelines Coalition, has an excellent presentation on huddles on its website. It includes a link to a YouTube demonstration of a huddle. More information on huddles can be found in the Team-based Care Implementation Guide.

More detailed information on planned visits is available on the Improving Chronic Illness Care website.

2. Decision Support

Another key change under the Organized, Evidence-based Care Change Concept relates to interventions that increase the likelihood that care adheres to evidence-based guidelines.

- Use point-of-care reminders based on clinical guidelines.

Decision support refers to interventions, most often based in computer technology, that assist healthcare providers make appropriate clinical decisions. They generally take the form of informational alerts or reminders triggered by an interaction with a patient or with ordering a clinical service for a patient (computerized order entry). Decision support interventions have been among the most frequently studied interventions to improve the quality of healthcare. What has this large body of research found? Computerized decision support by itself leads to small to modest improvements in process measures. This means that a PCMH cannot rely solely upon the decision support activities of its EMR to ensure that it provides evidence-based care.

The modesty of the effect found in trials shouldn’t be interpreted to mean that decision support isn’t an important element in a comprehensive effort to improve clinical care. Whethercomputerized or on paper, whether linked to orders or visits, decision support increases the visibility of evidence-based clinical guidelines and, in some cases, makes it easier to follow them. Basing care on an explicit set of evidence-based guidelines is critical for PCMHs because:

1. Evidence-based guidelines influence the critical data maintained in registries and patient summaries that determine service needs in planning care.
2. Performance measures that may affect recognition or payment are increasingly evidence-based and may include use of guidelines (See Element 3A of NCQA’s 2011 PCMH™ recognition criteria).
3. The use of protocols derived from evidence-based guidelines enables non-clinicians to play large roles in clinical care—e.g., adjusting medication doses by protocol.
4. The availability of explicit guidelines and measurement based on guidelines may reduce provider to provider variation.

Decision support interventions have been among the most frequently studied interventions to improve the quality of healthcare.

Decision support is increasingly built into commercially available EMRs. The problem has been the variation in the content and quality from system to system. The federal Meaningful Use (MU) program that financially rewards providers for having EMRs that can meet 20 of 25 criteria should help improve EMR quality and reduce variation. Meaningful Use core criteria include considerable emphasis on decision support—computerized physician order entry for medication orders, drug-drug and drug-allergy interaction checks, and “clinical decision support.” For lots of reasons, safety net practices should leap at the opportunity to either upgrade their EMRs or implement an EMR that meet MU criteria.
3. Care Management

The key change, provide care management services for high risk patients, is actually included as part of the Care Coordination Change Concept. We have decided to discuss its implementation here because it relates so closely to how a PCMH organizes itself and its team to deliver clinical care.

Care managers should be considered members of the primary care team working together with the clinician on a collaboratively developed treatment plan.

An increasingly important part of modern primary care practice is the care of patients with multiple chronic conditions. One in five Americans has multiple chronic conditions including more than 60% of individuals over 65. In fact, nearly one-fourth of Medicare recipients suffer from five or more chronic conditions. Since we now have effective pharmacologic, behavioral, and supportive treatments for many chronic conditions, management has become more complex for patients and providers alike. Mounting evidence, discussed below, suggests that patients with multiple and/or complex conditions benefit from more intensive clinical management enabled by the availability of clinical care manager. Care management (or case management*) generally refers to clinical, behavioral, supportive, and care coordination services delivered by a nurse or other clinically-trained professional (e.g., clinical pharmacist, respiratory therapist, or mental health professional) to patients viewed as being at higher risk of morbidity and mortality. Care managers should be considered members of the primary care team working together with the clinician on a collaboratively developed treatment plan. The integration of care management into the PCMH is a product of the generally negative experience with nurse case managers working outside of and often quite independently from primary care.

*We prefer “care” rather than “case” management because the latter is frequently used to describe the activities of social workers whose patient support activities are not health-related.

What kinds of services do care managers provide?

Services tend to fall into five major categories:

- Follow-up – monitoring and assessing patients at regular intervals;
- Self-management support – providing information and counseling to help patients set goals and develop action plans to more effectively self-manage their health and illness;
- Medication management – performing medication reconciliation, evaluating medication adherence, effectiveness and toxicity, and recommending or making guideline directed changes in regimen;
- Emotional support – monitoring patient’s psychosocial state and recommending appropriate mental health or supportive interventions when necessary; and
- Care coordination – helping to integrate care when patients need services from other providers, institutions or agencies.

While most programs have a single “care manager” deliver most of these services, some can be delivered by practice team members with less training and lower salaries than a nurse or pharmacist. Which of these services is most critical? While all five service categories are important, evidence suggests that care managers are most effective when they can help optimize medication management by assuring that patients are treated in accord with protocols and take their drugs.

Does integrated care management work?

Many studies conducted over the past 15 years indicate that intensive management of patients with single chronic conditions (usually by a nurse with additional training or experience with the condition) improves disease control. But, disease specific care management may often fail to meet the needs of those with multiple conditions, and is impractical and unaffordable for most PCMHs. This has led many organizations to evaluate the effectiveness of care managers with responsibility for a more heterogeneous population of patients with multiple conditions.
The strongest evidence that a single nurse care manager on the primary care team can be effective with multi-condition patients recently appeared in the New England Journal of Medicine. This randomized trial showed that an experienced nurse with some limited extra training could effectively improve disease control in patients with depression and diabetes and/or heart disease. Other related nurse care management programs have also shown improved care and reduced costs among geriatric and high-risk Medicare patients.

Steps in Implementing Care Management in Practice

1. Decide which segments of the practice population are to be managed.

Care management is time consuming, so care manager case loads cannot be large—e.g., 50-150 patients at any one time in most programs. Therefore, practices need to thoughtfully decide which small percentage of their patients will most benefit from the involvement of a clinical care manager such as a nurse. They also need to decide when patients should be discharged from care management. A care management program will have very limited reach if patients who have received maximum benefit continue to be cared for by the nurse care manager. Care management appears to be most effective when there are clear targets to be achieved and specific care plans to achieve them (e.g., Reduce HbA1c to a certain level or assure that patients understand and are adherent to their medications). Purchasers and payers are most interested in patients most likely to incur high costs—chronically-ill patients at risk of hospitalization because of utilization patterns (e.g., high ED use) or severe illness—and use risk prediction methods to identify patients (see below).

2. Decide which of the five service types described above are required for each segment.

A practice may decide that a segment of their population would benefit from one or two of the five services listed above, which could be provided by another less highly trained practice team member. For example, with a little training clerical staff can help patients with care coordination (see Care Coordination Implementation Guide), and medical assistants can monitor and assess patients between office visits.

3. Develop or "steal" a data-based case identification strategy and use it.

Practices that try to decide who needs care management on a case by case basis waste considerable time and end up with excessive case loads. Pick a standardized approach and let it decide (until you can find something better). For example, the investigators in the Team Care study looked for patients with either blood pressure above 140/90 mm Hg, LDL cholesterol level above 130 mg per deciliter, or a glycated hemoglobin level of 8.5% or higher, and then administered the PHQ depression screening tools to find those with significant depression. Most risk prediction models focus on past utilization and diseases. Safety net practices would be wise to include other factors that influence morbidity and cost in low income populations. The Indiana Medicaid Program used a brief patient interview to capture behavioral issues such as non-adherence or fragmented care to help select patients for care management. The Center for Healthcare Strategies website has a useful guide to Medicaid predictive models here.

4. Identify and train a clinical care manager.

Most care managers in ambulatory practice are nurses. Practices with nurses on staff may want to designate and train one for the care manager role. Practices that don't have an appropriate nurse on staff will have to be creative in trying to access this critical resource. Many payers, including Medicaid in some states, see nurse care management as a critical cost reduction intervention and are making both nurses and funding available. Experience suggests that even the best, most highly trained ambulatory nurses benefit from specific training relative to the care management role. Training programs vary depending on the clinical focus. For example, programs that target frail seniors will emphasize recognition and management of geriatric syndromes, while programs that focus on chronic disease control will focus on achieving disease control through drug management and self-management support.
5. Create a support structure for the care manager.
While care managers clearly receive clinical support from the patients’ PCPs, regular (e.g., weekly) reviews of the care manager’s caseload with a designated physician are an important component of most successful programs. The physician can be a specialist, e.g., a geriatrician, if the program has a clinical focus, but most programs use a superb generalist physician for this role. The reviews assure that the program’s goals are being met, and care managers are performing safely and well.

Considering the Role of Clinical Information Systems
All of the clinical improvements above rely on trustworthy, actionable information. If the heart of the Chronic Care Model, and the PCMH itself, is the relationship between providers and patients, then information is the life-blood that sustains that relationship. But it is important to remember that information technology is simply a tool, and its worth is only realized when it provides value in guiding the work of the care team.
As practices consider how to improve in the areas of the CCM, it is critical to think about how the personnel in a practice perform specific tasks, such as verifying medications lists at the start of a visit, or monitoring the health of a panel’s patients with diabetes. Each of these workflows has multiple steps, and in each multiple staff members have a role. For each of these workflows there is also a corresponding information flow, data that must be current, complete, and accessible. Information is critical, but its collection and use is a means to an end, not an end in itself.

Guidance on how to develop and interpret workflows is available on HRSA’s “Health IT Adoption Toolbox” site here, as well as an extensive set of sample workflows for common clinical processes.
Two recorded SNMHI webinars can aid in understanding the uses and limits of information technology in improving clinical care. The first examines common clinical workflows and their corresponding information flows, and can be found at the bottom of the page here. The second presents Meaningful Use (MU) standards, and the high degree of overlap between the information needed to power the PCMH, and the criteria MU has put in place. It can be found here.
A Toolkit To Assist Practices Deliver Organized, Evidence-Based Care

Fortunately, a resource already exists that can help clinical teams with improvements in the areas discussed above, along with many others related to the implementation of the Chronic Care Model and the PCMH. A toolkit, commissioned by the Agency for Healthcare Research and Quality and titled "Integrating Chronic Care and Business Strategies in the Safety Net" (11 MB total size) was the result of a partnership of Group Health Cooperative’s MacColl Institute, RAND and the California Safety Net Institute. The toolkit provides a sequence for the specific practice changes necessary for CCM implementations. It also integrates business strategies with the clinical changes discussed, so that financial and operational barriers to implementation can be addressed. A companion coaching guide is also available.

Many of the approaches and the specific tools to help not only with the changes described in this Guide, but in other areas of the PCMH such as improving team function or developing performance measurement capabilities. Because of how the toolkit is structured, which sequences the practice changes and places them in an overall context, this section will briefly orient users to the entire toolkit rather than extract specific tools among the more than 60 aids found within. Every user should find content that will assist them in organizing their practices.

The practice changes described in the toolkit are divided into four main phases:
1. Getting started;
2. Assessing data and setting priorities for improvement;
3. Redesigning care and business systems; and
4. Continuously improving performance and work to make changes sustainable.

Within each phase there are several “key changes” to understand and implement. Specific action steps are suggested, and relevant tools are available for each section. The authors recognized that each site may be at a different point in their work, so the toolkit can be easily scanned for materials that will be of the greatest help at that time.

The size of the toolkit is necessitated by the desire to have each of the 60 tools accessible even to practices that may not have continuous access to the internet. Each tool was reviewed or created by the staff of MacColl Institute and represents one of the best examples of a given tool in the public domain. Additional resources are also frequently listed or linked to, although they are not included in the core document due to copyright issues or the necessity for specific technology, such as a DVD player.

As an example of the specific areas covered in this toolkit that will be of use in tackling the Organized, Evidence-based Care Change Concept, here are the key changes for Phase 3: Redesign Care and Business Systems:

3.1 Organize your care team
3.2 Clearly define patient panels
3.3 Create infrastructure to support patients at every visit
3.4 Plan care
3.5 Assure support for self-management

Fifteen tools are provided for the Planned Care section alone, and we are confident that everyone who is looking for help in implementing Organized Care, or tackling other portions of the PCMH change concepts will find assistance in this toolkit.
Organized, Evidence-Based Care: Case Study
ISU Family Medicine Residency Uses Diabetes Care Template to Treat Diabetics

ISU Family Medicine Residency in Idaho uses a comprehensive, EMR-based diabetes template to assist care teams with treating chronic diabetes patients, and trains all staff and new residents in the program to use the template.

Using the facility’s EMR program, which provided a basic template for diabetes care, the IT department took input from faculty and caregivers to develop a customized format with much more detail. When a nurse opens a patient visit, a diabetes template button on the IT system is highlighted. Clicking on the button shows patient history, and prompts questions about changes in medications and blood sugar levels, foot exams and eye exams.

A diabetes self education section again prompts doctors to record most recent influenza and immunization dates, and then notifies when those tests are due, providing guidelines on which protocols to follow.

Dr. Kelli Christensen, who is an Assistant Clinical Professor at the residency program, was a resident here before she came on staff. Christensen has seen more efficiency because of the templates. “We’re able to cover more issues in a visit in a shorter time,” she says. “I’ve seen better monitoring and education. We may forget to ask about all the vaccines, but this makes it almost impossible to miss. There are also diabetes education pieces built right into the system that is very handy to print and hand out.”

Christensen says the diabetes template has helped with quality improvement through the documentation of lab tests, and allows providers to track their own efficiency much more effectively. “If we see a drop in eye exam rates we can do a quality intervention to try to improve that. It also helps us to track our own performance along with clinic-wide performance, and with P4P it helps us better document our performance. With a click of button we can confirm that we discussed flu shots or eye exams or exercise,” Christensen says.

John Holmes, PharmD, is the lead for the SNMHI team at ISU. He says training the new residents each year on using the template has had some surprising challenges. “Our template is so advanced that as far as training, they worry that the template does the thinking for them. However, once they get familiar with it, they really do like the template because it offers so much, decreases error and makes documentation easier.”

“It’s educational for the provider and also helps with billing. It prompts you to do certain exams like monofilament, so it provides for more appropriate reimbursement,” adds Christensen.

“Our templates are nice because they provide a concise overview of the guidelines and pull in patient specific information to help decision making. The more you use it the more you probably will learn,” says Holmes.

Idaho State University Family Medicine Residency (Idaho)
Conclusion

Access to well-organized primary care measurably improves the health of populations; this positive effect is magnified in areas of high income inequality, and reduces differences in both self-reported health and mortality. The finding that good care reduces inequality was reinforced by a 2007 Commonwealth Fund survey that found that if indicators for a well-organized and accessible Medical Home were in place, racial and ethnic disparities in access and quality are reduced or even eliminated.

If the PCMH Model is to make a difference in the lives of all patients it will be because care is better planned, more effective, and results in better outcomes for individuals and populations. The PCMH, like the Chronic Care Model before it, addresses changes in not only the structure and efficiency of a practice, but also in how every clinical encounter is an opportunity to create a truly productive interaction between a patient and their provider. Over a decade of experience has proven that the work is challenging, but possible.

Additional Resources

Workbooks and Tools
Coaching Guide
In addition to “Integrating Chronic Care and Business Strategies in the Safety Net” described above, a companion coaching guide providing instructions and materials to help teams effectively and efficiently improve clinical quality in ambulatory settings.

Meaningful Connections
Additional assistance in understanding the role of health information technology (HIT) in improving care via the PCMH can be found in the Patient-Centered Primary Care Collaborative’s resource guide, “Meaningful Connections”.

Optimizing Health Information Technology for Patient-Centered Medical Homes
The Safety Net Medical Home Initiative published an implementation guide on HIT and the PCMH which describes how clinics can optimize health information technology to power medical home workflows.

Presentations and Media
The ICIC website, contains a wealth of materials on implementing changes based on the Chronic Care Model. A good starting point is the section, “Tackling the Chronic Care Crisis, which can be found here. The content was prepared for a CD-Rom distributed by ICIC, but almost all of the materials are mirrored online, including presentations and videos.

Literature

Related Change Concepts

The concepts of Continuous and Team-based Healing Relationships, with its emphasis on delivery system design factors, Patient-centered Interactions and Care Coordination are closely related to Organized, Evidence-based care.
References


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