A "How To" Guide to Creating a Patient-Centered Medical Home

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KEYWORDS

• Patient-centered medical home • PCMH • NCQA-certified PCMH
• Practice transformation • Primary care medical home • PCMH recognition

KEY POINTS

- Care provided in the patient-centered medical home (PCMH) has the potential to result in better health outcomes at lower cost.
- Primary care clinicians are feeling growing pressure to transform their practices and to be formally recognized as a PCMH by the National Committee for Quality Assurance or a comparable certifying organization.
- An ongoing process is developing the potential to function as a PCMH, earning formal recognition, and implementing a system of continuous quality improvement to enable the establishment of a mature, sustainable PCMH.

The concept of the patient-centered medical home (PCMH) has been widely embraced as a foundation for the transformation of health care delivery.[1] The central role for the PCMH emerges from the growing body of data demonstrating that systems of care based on a strong foundation of primary care outperform systems of care based on specialty practices.[2,3] Recent evaluations of PCMH pilots validate the initial hypothesis that care provided in the PCMH has the potential to result in better health outcomes at lower cost.[4] As the PCMH model gains momentum, primary care clinicians are feeling growing pressure to transform their practices, and to be formally recognized as a PCMH by the National Committee for Quality Assurance (NCQA) or a comparable certifying organization. However, earning recognition or certification as a PCMH can be a daunting task.

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This article discusses how a practice can lay the groundwork to become a PCMH from earning broad support within the practice, to creating teams and instituting new systems of care, to the application and recognition process, and finally to complete care transformation. The process of developing the potential to function as a PCMH, earning formal recognition, and finally ingraining a system of continuous quality improvement to enable the establishment of a mature, sustainable PCMH is discussed. References are provided to demonstrate successful implementation of each aspect of the PCMH model.

WHAT IS A PATIENT-CENTERED MEDICAL HOME?

The PCMH is a team-based approach to providing comprehensive primary care, involving multiple levels of medical providers, which may include medical assistants, nurses, physicians, physician extenders, social workers, pharmacists, and behavioral health providers. The PCMH facilitates and relies on partnerships between individual patients, their personal physicians, the health care team and, when appropriate, the patient's family.

According to the Agency for Healthcare Research and Quality (AHRQ), the medical home model holds promise as a way to improve health care in America by transforming how primary care is organized and delivered.[5] The medical home is not simply a place, but a model of health care that is designed to reliably and reproducibly implement the core functions of primary health care.

The medical home concept was first introduced in 1967 by the American Academy of Pediatrics (AAP) as the way to keep medical records in a central location for all medical specialists' visits.[6] The concept was expanded in 2002 by the AAP to include principles that all care be accessible, continuous, comprehensive, family centered, coordinated, compassionate, and culturally effective.[7]

In 2004, following a comprehensive strategic planning process called the Future of Family Medicine, the American Academy of Family Physicians (AAFP) released its own medical home model to improve patient care.[8] In 2006, the American College of Physicians (ACP) published and promoted the concept of the "advanced medical home."[9] The American Academy of Pediatrics (AAP), AAFP, and ACP joined with the American Osteopathic Association (AOA) to develop the Joint Principles of the Patient-Centered Medical Home. In 2007 these 4 organizations, representing approximately 333,000 physicians, released these joint principles to describe the characteristics of the PCMH[10]: These principles are listed in **Table 1**.

Several alternative names have been proposed as potential substitutes for the term PCMH, including terms such as "advanced primary care" and "comprehensive primary care." Although these alternative names do provide useful descriptors of the PCMH concept and may be used interchangeably, the term PCMH has been widely embraced by government, insurers, employers, and health care agencies.[11] The complementary concepts, such as the "medical neighborhood," have also been introduced to encompass a broader reconception of health care delivery, but PCMH remains the preferred term to describe the redesign of primary care practices to improve population health at a more affordable price.[12]

WHY SHOULD A PRACTICE BECOME A PCMH?

This question is often posited to both stimulate dialogue within a practice contemplating change and as a legitimate query: is the effort to become a PCMH worth the reward? Within practices, some individuals are likely to cite well-motivated reasons to not pursue PCMH transformation: change of any kind is very demanding; the

Table 1
Joint principles of a patient-centered medical home (PCMH)

Principle	Description	Example, Benefits
Personal physician	Each patient has an ongoing relationship with a personal physician trained to provide first contact, continuous and comprehensive care	Benefit of trusting, collaborative relationship with own physician
Physician-directed medical practice	Personal physician leads an interdisciplinary team of individuals responsible for the ongoing care of the patient	Comprehensive care is a team effort; involving all levels of medical professionals as physician extenders
Whole person orientation	Personal physician is responsible for providing all of the patient's health care needs or taking responsibility for appropriately arranging care with other qualified professionals	All stages of life included, acute care, chronic care, preventive services, end of life care
Care is coordinated and/or integrated	Personal physician ensures care is coordinated across all elements of the health care system and patient's community. Care is facilitated by registries, information technology, health information exchange	Subspecialty care, hospitals, home health agencies, nursing homes
Quality and safety are hallmarks	Practice advocate for their patients to support the attainment of optimal, patient-centered outcomes.	Evidence-based medicine and clinical decision support tools Physicians accept accountability for CQI Patients actively participate in decision making Feedback sought to ensure patient needs are being met IT used to support optimal patient care, performance measurement, education, communication Practices undergo a voluntary recognition process to ensure they have the elements to provide patient centered care Patients and families participate in QI activities at the practice level

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Table 1
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Principle	Description	Example, Benefits
Enhanced access to care	Practice seeks to create/implement options to improve access	Open access scheduling Expanded office hours New options for communication
Payment	Payment should appropriately recognize the added value of caring for patients in a PCMH	Values physician and team-based care management work that happens outside of face-to-face interactions Pays for services associated with coordination of care Supports adoption and use of HIT for quality improvement Supports provision of enhanced communication access through email and telephone Recognizes the value of physician work in remote monitoring of clinical data using technology Allows for separate fee-for-service payments for face-to-face visits Recognizes case-mix differences in patient population Allows physicians to share in savings from reduced hospitalizations Allows for additional payments for achieving measurable and continuous quality improvements

Abbreviations: CQI, continuous quality improvement; HIT, health information technology; IT, information technology; QI, quality improvement.

Adapted from American Academy of Family Physicians (AAFP), American Academy of Pediatrics (AAP), American College of Physicians (ACP), American Osteopathic Association (AOA). Joint principles of the patient-centered medical home. 2007. Available at: http://www.acponline.org/pressroom/pcmh.htm.

practice is already thriving so there is no need to improve it; patients are already well cared for; there is no time to undertake a major overhaul of the practice; human and financial resources are far too scant to support such a sweeping change.

In light of these commonly held spoken, and often unspoken, beliefs, practice leaders will often confront the need to "sell" the PCMH concept to their coworkers and external stakeholders. The fundamental argument derives from the unquestioned fact that our current health care delivery and payment system is unsustainable. New reimbursement models based on delivery and measurement of high-quality care are rapidly emerging. Virtually every practice needs to be ascertaining how to improve the care it is delivering to all of its enrolled patients, not only for the benefit of the population it serves, but to maximize reimbursement for its very survival. As noted previously, the benefits of transforming a practice into a PCMH have been well documented.[4] Many practices can claim that they are a PCMH; however, formal recognition by the NCQA, or similar a organization, is required to certify that the practice has the structure in place to function as a true PCMH.

WHY DOES SEEKING CERTIFICATION FOR YOUR PCMH MATTER?

Many practices have made the transformation and function as a PCMH; however, receiving certification from a national agency has additional benefits and implications.

PCMHs Improve Care and Efficiency and Reduce Costs

Numerous studies have demonstrated that medical homes improve care and access, and reduce unnecessary medical costs. A few studies also cited by the Patient-Centered Primary Care Collaborative (PCPCC) can be found in **Table 2**.[13–17]

PCMHs Receive Enhanced Payments

Because of improved care and lower cost, insurance companies are starting to increase payments for PCMH. Independence Blue Cross (IBC) in Philadelphia

Table 2
PCMHs improve care, efficiency, and access, and reduce cost

Health System	Specific Findings
Geisinger, Pennsylvania	1. 14% reduction in hospital admissions and "trend toward a 9% reduction in medical costs" 2. Statistically significant improvement in quality of preventive, coronary artery disease and diabetes care
Group Health Cooperative, Puget Sound	1. 29% reduction in ER visits and 11% reduction in ambulatory sensitive care admissions 2. 4% increase in patients achieving target levels on HEDIS quality measures
Genessee Health Plan, Michigan	1. 50% reduction in ER visits and 15% reduction in hospitalizations 2. 137% increase in mammogram screening rates 3. 36% reduction in smoking
Health Partners Medical Group, Minnesota	1. 39% reduction in ER visits and 24% reduction in hospitalizations 2. 129% increase in patients receiving optimal diabetes care 3. 48% increase in patients receiving optimal heart disease care

Abbreviations: ER, emergency room; HEDIS, Healthcare Effectiveness Data Information Set.

increased its per-member per-month payments to any of its primary care practices for receiving NCQA PCMH certification. As of spring of 2011, IBC boasts more than 100 primary care practices with more than 1000 physicians now qualifying for such a bonus.[18]

Other insurance companies are following this lead by providing monetary recognition as more and more states take the lead in helping primary care practices become PCMHs.

Many regions have embarked on PCMH pilot programs that link enhanced payment to implementation of some elements of the medical home.[4,13,19]

PCMHs are Good for Business

Work derived from Barbara Starfield and from the Dartmouth Atlas Project has proved that regions with a high concentration of primary care provide higher quality and more affordable health care, observations that have been validated by the PCMH experiments described.[2,3,20] The PCPCC has been the leader in encouraging organizations to develop businesses in areas where there is a high concentration of primary care to help control their health care costs and provide quality care.

Publications such as *The Patient-Centered Medical Home—A Purchaser Guide* helps businesses encourage their health care plans to support PCMH development.[13] *Patient Centered Medical Home: Performance Metrics for Employers* is a resource of health and productivity metrics that can be used by employers and their supplier partners to gain a comprehensive understanding of the value of health, and establish benchmarks to compare organizations' health and productivity with those of their peers, based on outcomes integral to the PCMH model of care. It includes a description of metric categories used by employers, a business-oriented timeline for understanding those metrics, and 8 detailed case studies that demonstrate the effective use of the medical home in benefit design.[19]

Health Care Reform, PCMH, and Accountable Care Organizations

The reform of the US health care system includes both insurance reform and delivery reform. Delivery reform includes new organizational structures such as accountable care organizations (ACOs), and PCMH's payment system reform includes pay for performance, shared savings models, and other quality incentives; PCMH is a vital route to thriving within new payment models.[21]

Prestige

Having PCMH certification is quickly becoming an important "seal of approval" as more and more institutions are recognizing the importance of PCMH. Practices may proudly display the NCQA seal of a Recognized Physician Practice Connection Patient-Centered Medical Home, and advertise the recognition.

Already Doing the Work

Many primary care practices already meet many of the criteria to be recognized as a PCMH. Such work is that which primary care practices do all the time, and reflects fundamental values of most primary care clinicians. However, doing the work to become formally recognized as a PCMH not only leads to changes that benefit the patients, practice, and staff, but also makes that practice more valuable in the eyes of payors and others. PCMH status will be recognized by affiliated hospitals that are looking for cornerstones of quality care to take the lead in new payment models, such as ACOs.

Education of Residents and Students

Practice sites that are participating in the education of residents and students should earn PCMH certification and should tackle the critical challenge of teaching the next generation of health professionals to function in interprofessional teams.[22] Government agency grants are available to help stimulate these educational endeavors.

BECOMING A PCMH: WHERE TO START?

As with any major undertaking, the process of transforming a practice must go through a series of critical steps: an idea must be proposed and must receive the support of leadership, a transformation plan must be designed and executed, priorities must be set, time must be allotted to the complex process of change, and both human and financial resources must be made available.

Leadership

Many levels of leaders are needed to create a PCMH but first and foremost, the head of a practice or organization, whether it is a Chair, managing partner, or administrator, must be fully engaged and set the tone and course, usually in the face of pushback. Other leaders include those who will organize teams for the day-to-day work: ensuring the practice meets recognition requirements and submitting the application, running quality improvement, executing Plan, Do, Study, Act (PDSA) cycles, retraining staff, performing data collection and analysis, troubleshooting, and cheerleading. The most important quality of these leaders is that they all share the vision of what a practice can and should be.

Time

Transformation takes time. Working groups need time to meet on a regular basis to think, plan, and work toward certification as a PCMH. Redesigning the practice to become a true medical home requires sustained commitment of time, a factor that cannot be emphasized enough. If becoming a PCMH is a priority it must be treated as such; this cannot be done on an ad hoc basis. The application process alone will take at least 6 months and each member can expect to put in easily 100 hours to complete the application process. For the practice redesign team, daily effort will be perpetually required. Many demonstration projects have shown this to be true: a 2-year or even a 3-year project may not allow enough time to change culture or ingrained habits, changes that must occur to improve a practice.[23]

Persistence

Frustration with complex change is inevitable, and change fatigue is a constant threat to progress. Everyone expects immediate results that most likely will not happen. Rather, progress will be slow and methodical, especially if a great deal of change is needed. Time should be dedicated to helping all members of the team understand the change process. Time should also be spent on celebrating each successful small improvement; this is a journey, not a day trip.

Resources

Transformation requires resources. Money may be needed to hire additional staff such as medical assistants, nurses, a case manager, and/or a quality assurance specialist. Investment in essential health information technology (HIT) and hardware is almost inevitably needed.

Loss of clinical income to permit individuals time to work on creating a PCMH is virtually always required. Unfortunately for most practices not involved in a demonstration project or grant, upfront funding is rarely present—yet! As in many quality incentive payment programs, increased revenue comes after making the changes and showing improvements in care. As more payors recognize the improved quality of care and decreased costs resulting from creating PCMH, more upfront investment should become the rule rather than the exception.

As with anything in life that is important, the work is hard but worth the effort. Participants are on a journey to improve their patients' lives as well as their own. The PCMH is the future of health care, and the team must take the lead.

A TEAM APPROACH

After the decision to become a PCMH has been made, the first step is to form a management team to guide strategy, planning, and execution.

The management team, at least for the strategic meetings, should involve the highest leadership available. This leader would be the Department Chair for an academic medical center, who may also want to keep the Dean and others updated. In other organizations, it should include those who are ultimately involved with the finances of the practice. Leaders from many aspects of the health care enterprise are recognizing the value of creating PCMHs and may be willing to provide upfront support for change. Creating more medical homes will ultimately benefit the whole organization, providing greater prestige as well as cost savings and quality care reimbursement.

The management team must include the people in the practice that know the practice well, such as the chief administrator, medical director, and practice and/or operations manager. It may include key nursing personnel and clinicians.

The management team must decide on goals and how to meet those goals, 2 of which are:

- PCMH recognition/certification
- Practice redesign and quality improvement.

Practice size and organization have a major impact on the process of change. An academic medical center with multiple residency programs, a community hospital–based primary care residency without many other residencies, a multigroup practice, or a 1- or 2-doctor practice will obviously have different resources and will confront different problems and issues. All, however, will have many challenges in common, including the most important: each must spend the time and do the work to be successful. Moreover, no matter what size a practice, outside help is virtually always needed, with support for HIT representing a clear priority.

WORKING GROUPS

The management team will also be involved with creating the working groups that will do the actual work of the certification and the transformation processes. It is crucial that both of these working groups must have time available to do their important work.

Certifying Working Group

For the certification working group (CWG), membership should be limited to only a few individuals, but it is absolutely necessary that it includes personnel who know all aspects of the practice and patients. The director of operations and medical director, or their equivalents, usually need to spearhead this work. An electronic medical record

(EMR) or practice management system superuser, as well as a "detail" person (ie, one who is good at doing the actual work of the application), are often vital members of this team. Others can be brought in as needed, such as the HIT or legal personnel, but the core members will need to do the "heavy lifting."

Practice Redesign Working Group

A larger number of individuals can and should be part of the practice redesign working group (RWG), the group that actually does the work of the PCMH. The RWG should be headed by the medical director and director of operations who will do double duty with the CWG. The personnel needed should include leaders in registration, billing, and phone reception, as well as selected nurses, medical assistants, medical recorders, and other clinical personnel. Activist clinicians, including postgraduate year 2 (PGY2) and PGY3 residents (in a residency practice) and HIT superusers, are a must. Again, ad hoc personnel, such as HIT support, can be brought in as needed.

The RWG must accept the commitment to keep abreast of literature and possibly be required to publish and/or present its work at various meetings. Defined regular meeting time, usually weekly, is required.

Focused Work Groups

Smaller groups may be spawned during the ensuing years as improvements are made in the practice. Implementing group visits or tackling a new quality improvement program often require dedicated groups. As improvements in the practice are realized, others may want to offer ideas or become more directly involved. This development is natural as the PCMH matures, and should be encouraged. The entire practice should be involved on some level.

Small practices face unique challenges, and evidence indicates that fewer small practices are engaging in broad practice change, such as introducing electronic records. Several strategies may be particularly important for the 1- or 2-clinician practice. Finding external partners, consultants, and collaborators will usually be needed. Change may need to proceed one step at a time. Finding an external entity such as an insurer, business, group practice, or hospital that is willing to help support change can substantially facilitate real change. Ultimately, any practice that is transforming must follow the same process, providing leadership, time, and resources.

WORKSPACE

Although not a necessity, dedicating a central space to serve as headquarters for transformation and certification efforts is a wise strategy. Necessary materials for the certification process, including application instructions, policies and procedure manuals, and screenshot downloads can be generated and stored in this space. Wall calendars with timelines that provide a visual documentation of needs and progress should be posted here. This headquarters will facilitate steps in this complex process. Careful attention must be given to the Health Insurance Portability and Accountability Act (HIPAA) and Health Information Technology for Economic and Clinical Health (HITECH) protected health information policies to ensure that the headquarters provides adequate protection, including locking the room. In addition, password-protected and/or encrypted computers and USB storage devices are a necessary requirement. A secure, shared drive, if available, makes file sharing safer, easier, and more convenient.

CERTIFYING BODY

Early in the transformation process, the management team will need to select a PCMH recognition or certification program to pursue. Certification is one way that practices can demonstrate that they have met standards for increased access to care, including coordinated and patient-centered care. Certification may result in increased reimbursement from payors, as well as other positive outcomes.

What Criteria Should be Selected to Choose a Certifying Organization?

Although practices may wish to consider ease of application and fit with practice strengths, frankly the chief consideration should be whether a practice payor recognizes a particular recognition program. For example, the NCQA was the first national organization to institute a PCMH recognition program, and several payors and organizations rely on the NCQA to conduct practice evaluation. Checking with insurers in the area to determine which organization they recognize must be done. **Box 1** shows a list of organizations currently providing PCMH certification.

Pay attention to prices/fees and timelines; in many cases, the certifying body will not disclose when things are due or when they are complete.

In February 2011 the 4 primary care physician societies, the AAFP, AAP, ACP, and AOA, provided the guidelines for PCMH recognition and accreditation programs. To help inform practices as to how the competing national programs meet the guidelines, the Medical Group Management Association (MGMA) developed an assessment tool. This document provides a neutral and transparent review of the alternative national programs. If an organization is interested in becoming a PCMH, this tool will help narrow one's assessment of the various programs and focus on the most important elements. This free tool can be found at the MGMA Web site.[24]

STEPS TO PCMH CERTIFICATION

The CWG should start on the application process as soon as possible. It is not necessary to reinvent the wheel; many practices and organizations have gone through the recognition process and have created tools to help organize data or create policies. For example, the PCPCC, ACP Medical Home Builder, Improving Performance in Practice (IPIP), the NCQA workbook, and the Colorado Collaborative workbook are valuable tools to help the practice get started and keep the progress moving.[25] In addition, many state and national PCMH collaboratives are under way. If dollars are available, practice coaches and consultants can be hired to help practices navigate their application.

Box 1
Organizations providing PCMH certification

1. The Accreditation Association for Ambulatory Health Care: 2011 Medical Home Standards
2. The Joint Commission: Primary Care Medical Home 2011 Standards and Elements of Performance (Available July 2011)
3. The National Committee for Quality Assurance: Patient-Centered Medical Home 2011 Standards
4. URAC: Patient Centered Health Care Home (PCHCH) Practice Achievement Version 1.0 (Available June 2011)
5. Blue Cross Blue Shield of Michigan has a program to designate more than 1000 physicians in its PCMH program

Specific steps are necessary to complete a recognition application. Because of its broad national reach, the NCQA application is used here as the template for discussion. This application assigns points to a set of criteria. Some of these are optional, but many are listed as "must haves." Paying attention to the must haves is vital, and reviewing these criteria first makes sense; one may have a tremendous all-around application, but if one misses out on the must haves, the application is negated.

The first item for the CWG to address is to create a timeline; being realistic makes sense, but sticking to the predefined deadlines is a fundamental commitment. An example of a personalized timeline can be found in **Fig. 1**.

The timeline allows the CWG to clearly track interim accomplishments and anticipate subsequent steps. The certification process begins by purchasing or downloading several copies of the certifying criteria and any application materials. Each member of the CWG must become totally familiar with the criteria and how the certifying body expects the practice to prove that the criteria are met.

When all CWG members are satisfied that they understand what is needed, each team member should be assigned a task for which they become the team expert. For example, someone may be assigned the task of creating screen shots of data, some may become expert on the submission process, and others may be assigned to create or update policies. Once the criteria are understood, the CWG must conduct a reasonably thorough practice assessment to determine which criteria are already being met and which need to be addressed. Some items may be met with minor modifications and others may need major practice overhaul. For example, practices that do not own an EMR may need to consider implementing one to attain a higher level of recognition. Practices that have an EMR need to pay attention to the HIT needs and recruit information technology (IT) support staff at the beginning of the process.

This process of taking stock of what a practice already performs well and what it needs to do to reach the application criteria is called a gap analysis; conducting this analysis is essentially a prerequisite to taking any further action. A CWG member is assigned to take the lead in analyzing items that need to be corrected. Close attention must be paid to the timelines: some items require that a policy, procedure, and/or data be in place and tracked for several months. Finding this out several months into the project can postpone the entire application process. An example of a gap-analysis form that one can create for the NCQA application is shown in **Table 3**.

Once the gap analysis has been completed, the CWG can proceed to address practice changes that must be implemented to achieve the target level of recognition. In fact, understanding levels of recognition and aiming for a specific level is the basis for further planning. If the practice will be satisfied in obtaining the lowest level of

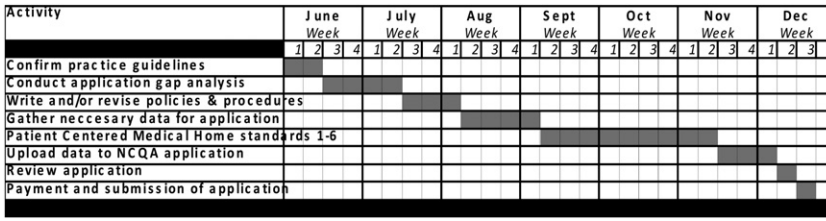

Fig. 1. Sample timeline for NCQA application. (*Data from* NCQA 2011 Application, available at: https://inetshop01.pub.ncqa.org/publications/product.asp?dept_id=2&pf_id=30002-150-11 and https://inetshop01.pub.ncqa.org/publications/deptCate.asp?dept_id=2&cateID=300&sortOrder=796&mscssid=+300796. Accessed March 10, 2012.)

Table 3
Example of a gap analysis of a primary care office

PCMH Gap Analysis	Criteria Met	Criteria Partially Met	Criteria Not Met	Comments
Standard 1: Enhance Access and Continuity				
Element A: Access during office hours				
Factor 1. Providing same-day appointments	X			
Factor 2. Providing timely clinical advice by telephone during office hours	X			
Factor 3. Providing timely clinical advice by secure electronic during office hours			X	Will not meet
Factor 4. Documenting clinical advice in the medical record		X		Must improve
Element B: After-hours access		X		
Element C: Electronic access		X		
Element D: Continuity		X		
Element E: Medical home responsibilities		X		
Element F: Culturally and linguistically appropriate services (CLAS)		X		
Element G: The practice team		X		
Standard 2: Identify and Manage Patient Populations				

Data from NCQA 2011 Application, available at: https://inetshop01.pub.ncqa.org/publications/product.asp?dept_id=2&pf_id=30002-150-11 and https://inetshop01.pub.ncqa.org/publications/deptCate.asp?dept_id=2&cateID=300&sortOrder=796&mscssid=+300796. Accessed March 10, 2012.

recognition by making just minor improvements, then that plan should be adhered to. If the practice aims for the highest level that will require a lot of work, this must be planned for accordingly. Again, close attention is paid to the "must haves"; assessing the practice against these criteria is the easiest way to ascertain what level is likely to be attainable. **Table 4** shows the requirements for each level of NCQA recognition.

The NCQA application places high value on having policies and procedures in place to satisfy various criteria, but the application always requires practices to "show their work" and to prove that they are following the policy and adhering to the criteria. For example:

- The NCQA requires that the practice have all specified policies and procedures in place for 3 months before submitting an application for PCMH recognition.

Table 4
Point requirements for each designation level according to NCQA regulations

Recognition Level	Points	Must-Pass Elements
Level 1	35–59	6 of 6
Level 2	60–84	6 of 6
Level 3	85–100	6 of 6

Data from NCQA 2011 Application, available at: https://inetshop01.pub.ncqa.org/publications/product.asp?dept_id=2&pf_id=30002-150-11 and https://inetshop01.pub.ncqa.org/publications/deptCate.asp?dept_id=2&cateID=300&sortOrder=796&mscssid=+300796. Accessed March 10, 2012.

- Policies and procedures should be written for the benefit of staff and/or patients at the practice/organization.
- Make policies and procedures specific and measurable. For example, when describing timeframes for response to requests from patients, "immediately" is not a specified timeframe. Replace vague terms with exact numbers of minutes, hours, or days.

The certifying body can ask for more material and may even choose to audit the practice. If an audit uncovers discrepancies from what a practice states it is doing to what they are actually doing, the certifying body may even revoke a decision. **Box 2** lists reasons for which the NCQA may revoke a decision:

Essentially no practice meets every NCQA criteria at the perfect level. Perfection is not required, even for the highest level of recognition. Certain measures can be partially met for 50% credit. Concentrating on the "must haves" is the correct focus.

Carefully label and catalog all data and drafts, and back up your work. You should label any documentation with the Standard, Element, and Factor to which it belongs along with a statement for quick reference. For example, if you document that your practice provides same-day appointments for the 2011 NCQA application, the item should be labeled: *NCQA 2011 PCMH 1 A 1 (provide same-day appointments)*. Start to upload data as soon as it is ready; as can be seen from the timeline, these tasks can

Box 2
Examples of reasons why NCQA may revoke a designation of PCMH

NCQA May Revoke a PCMH Decision If:

The practice submits false data

The practice misrepresents the credentials of any clinician

The practice misrepresents its PCMH status

Any of the practice's clinicians experiences suspension or revocation of professional licensure

The practice has been placed in receivership or rehabilitation and is being liquidated

State, federal, or other duly authorized regulatory or judicial action restricts or limits the practice's operations

NCQA identifies a significant threat to patient safety or care

Data from NCQA 2011 Application, available at: https://inetshop01.pub.ncqa.org/publications/product.asp?dept_id=2&pf_id=30002-150-11 and https://inetshop01.pub.ncqa.org/publications/deptCate.asp?dept_id=2&cateID=300&sortOrder=796&mscssid=+300796. Accessed March 10, 2012.

be done at the same time. This is hard, time-consuming work but it is worth it, as losing data can derail the entire endeavor. The NCQA and other certifying organizations will provide technical assistance. Do not be afraid to call for help. Take your time at the end for the group to review the application and make any final changes. Make sure all the fees are paid and do not be afraid to call for updates on your status.

PRACTICE REDESIGN

Although earning PCMH recognition is inherently important, recognition does not guarantee that the quality of care being provided is as good as it can be. Improving quality of care, patient experience, and staff satisfaction is the real work of the PCMH, and is far more difficult than the effort needed to become certified. Recognition shows that a practice has the proper systems and protocols in place to address a patient's needs above and beyond the usual way of conducting business. To become a true medical home—to have everyone practice at the top of his or her license and improve the patient quality of care—is more difficult because of the sheer amount of effort and energy involved. To move this needle takes leadership, time, and resources.

The RWG must work in tandem with the CWG throughout and beyond the application process. For small practices, where a few people must perform both functions, working in an iterative fashion to incrementally address care redesign as application sections are completed may be a realistic and sound approach. The RWG must spearhead efforts to redesign the practice and their work will be ongoing, lasting far beyond the certification process. Several programs and organizations can provide assistance with practice redesign, including the PCPCC, Institute for Healthcare Improvement (IHI), TransforMed, and private consultants. The Wagner Chronic Care model has served as the basis for practice redesign in several large learning collaboratives.[26–29]

Obviously, planning for and implementing changes needed to successfully attain PCMH recognition will catalyze practice change, but all successful medical home practices must nurture a culture that is receptive to constant reevaluation and change.

A key method to create change is to follow the PDSA model that is promoted by the IHI and other organizations.[30] A description of a PDSA model IS SHOWN IN **Box 3**. This model can be used to study and implement virtually any pilot into a practice. An example is included that can be implemented to ensure that all diabetic patients receive a yearly monofilament test. The details of the example are shown in italics.

Practice redesign demands constant engagement and education of the entire staff, and especially the physicians. Securing broad buy-in takes time but is critical to success. Everyone should be involved in the PDSA cycles and in how to improve the practice. Many often think of an office practice as having a front end of operations (registration, billing) and the back end (clinical office). A true PCMH functions as though there is no distinction; everyone is included and everyone has an integral role in patient care.

There is nothing without data collection. The old axiom that there is no movement without measurement is true. The most useful tool to support measurement of quality improvement efforts is a high-functioning EMR. IT support is crucial, and sponsoring organizations must accept quality measurement as a practice priority. If no EMR is available, stand-alone registries in which demographic and clinical data are entered are available to help with data collection and data mining. Examples and critiques of various EMRs, registries, and other health IT applications and vendors can be found in trade publications and specialty organizations.

Box 3
PDSA example

Plan:

1. Document the objective of the cycle: what is being improved?
   a. *Yearly monofilament examinations in diabetic patients*
2. State your predictions: what will be the result(s) if the improvement is effective?
   a. *All diabetic patients will have a yearly monofilament examination*
3. Document the initial plan
   a. Who will be doing the testing?
      i. *Medical assistants*
   b. What patients are being selected? (select a small subset)
      i. *All diabetic patients who arrive for a visit during the month will have a monofilament examination performed*
   c. Where will this be done?
      i. *In the examination room*
   d. When will the test occur: specific day or days?
      i. *Every day for 1 month*
   e. How and what will they do? Briefly state the change being implemented
      i. *All medical assistants will receive in-service training on the importance of diabetic foot examinations*
      ii. *All medical assistants will receive in-service training on how to properly perform the monofilament examination and document those results in the EMR*
      iii. *The medical assistants will perform the monofilament test when they room the patient. They will explain to the patient what they are doing, help the patient remove shoes and stockings, and document the results in real time for the clinician to review*
      iv. *A policy/procedure will be written to govern the above action and to be used as a standing order: medical assistants will perform monofilament testing on all diabetic patients and the clinician will review the documentation and attest that it was done*

Do:

1. Complete the test/test completed
   a. *Medical assistants will identify the patients and complete the test per policy/procedure*
2. Document any problems and/ or unexpected observations
   b. *Medical assistants and/or their supervisors will document any problems, including timing and work flow issues. For example: "I was unable to do the test because the clinician wanted to see the patient before I was able to do the monofilament examination"*
3. Begin to analyze your outcome data: essentially…what happened and /or how did the test flow?
   c. *The group will analyze the basic data (how many diabetic patients arrived, how many of those had monofilaments done?), as well as workflow and other issues that surfaced during the "Do" phase of the exercise.*

(*continued on next page*)

Box 3
(*continued*)

Study:

1. Complete the analysis of the test outcomes and data
2. Compare how things went: compare your predictions with the actual outcomes
3. Summarize learning

Act:

1. What changes will you make based on the outcomes of your first test of change?
   a. *For example, mandate that medical assistants complete their duties before clinicians see a patient and instruct all on that mandate.*
   b. *Start to refine patient population: do monofilament only on those diabetic patients who have not had one in the last year*
2. Develop/or revise the Plan for next cycle
   a. *Medical assistants will review the diabetic patients' charts to see if a monofilament test has been done within the last year: if not, they will perform the test and document the results, If the test was done, the medical assistant will make a notation in the EMR that it was done within the year and document the result, if known*
   b. *All clinicians will be advised that a monofilament test must be performed by the medical assistant before their own examination*

Several strategies can be used to select practice quality improvement priorities, beginning with determining if local insurers are providing quality incentive dollars and addressing quality items that are being measured. These additional dollars can then be reinvested in the practice to fuel further practice improvement. Many regional and national quality improvement initiatives define quality items that must be measured and reported. Some commonly used quality improvement measures are linked to diabetes care (eg, hemoglobin A_{1c} [HbA_{1c}] >9% or <7%, blood pressure [BP] <140/90 mm Hg or <130/80 mm Hg, low-density lipoprotein [LDL] <130 mg/dL or <100 mg/dL). Other diabetic measures include retinal examinations, foot examinations, and examinations for kidney disease.

Immunization rates and cancer screening rates are also important and commonly used measures. High-priority items that improve health and match the priorities of practice stakeholders should be chosen.

One must make sure that all data are vetted for accuracy; data integrity is a high priority both to improve patient care and for reporting purposes.

- Data integrity examples:
  - HbA_{1c}: if a patient has not had one in a year, it should be counted as >9
    - One way that data may reflect there is an issue is that process measures do not correspond to outcome measures, that is, you have 120 diabetic patients, 40 of whom have actual A_{1c} >9, and 100 A_{1c}s in the last year, which means that your data should reflect that 60/120 patients, or 50%, should be >9. If you are only counting the actual A_{1c} >9, your data will be 40/120 or 33%, much lower than it really is
  - LDL:
    - The percentage of patients whose LDL is <100 should not be greater than the percentage of patients whose LDL is <130
    - BP: both systolic and diastolic BP must be under ceiling

- If your EMR is a patient-centric, who did the last BP check and was it re-checked? Change to pick up only your BP check.
- BP: as in LDL above, you should not have more patients with a BP of <130/80 than patients with a BP of <140/90 mm Hg.

Other ways to improve the practice is to share data with all providers, including residents. Concentrate on those patients who are far away from the goal (HbA_{1c} >9, BP >140/90, and so forth).

Practice transformation and earning recognition as a PCMH can be a daunting task. The process is a long journey, requiring the support, dedication, and commitment of the entire practice team, and everyone has a vital role in improving the care of patients

Box 4
PCMH how-to checklist

1. Perform an SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis of your practice to determine pros and cons of seeking transformation and certification as a PCMH.
2. Organize a steering committee that includes key authority figures in your practice/institution to seek support, buy-in, and guidance.
3. Devote time and realistically plan for the ongoing commitment to practice transformation.
4. Create a management team, which will guide strategy, planning, and execution of the process and set goals.
5. Develop a CWG and a practice RWG. Arrange for group members to have protected time to fully participate.
6. Create a workspace dedicated to the certification process.
7. Research those agencies that provide certification and identify the one that best fits your practice needs and goals.
8. Organize all items that are necessary for the application process, thoroughly review the application requirements, and institute any changes that need to be in place before beginning the application process.
   a. Pay special attention to "must haves" required by your certifying organization of choice.
   b. Perform a gap analysis of your practice to see where you are and what you need to do to improve.
   c. Create a timeline for the entire application process, and stick to it!
9. Consider seeking grant opportunities or collaborative initiatives that may offer some financial and process support.
10. Consider hiring consultants to do a practice assessment before developing changes to your practice.
11. Get ready for the journey of change.
    a. Be ready for the pushback and change fatigue.
    b. Perform continuous quality improvement initiatives and PDSA models, and involve every member of the team.
    c. Seek constant feedback from patients, team members, learners, and community.
    d. Address the difficulties and barriers.
    e. Celebrate the victories and achievements.
12. Reap the benefits.

Table 5
Useful web sites and other resources

Resource	Link/Web Site Address
MacColl Institute: Chronic Care Model	http://www.improvingchroniccare.org/index.php?p=The_MacColl_Institute&s=93
American Diabetic Association: ADA	http://professional.diabetes.org/
Self Management Toolkit	http://www.selfmanagementtoolkit.ca/
ACP: Diabetes Portal	http://diabetes.acponline.org/clinician/index.html
NCQA	http://www.ncqa.org/
IPIP QI Teamspace	http://ipip.qiteamspace.com/
Pennsylvania Academy of Family Physicians	http://www.pafp.com/
American Academy of Family Physicians	http://www.aafp.org/online/en/home/membership/initiatives/pcmh.html?intcmp=10004-ca-20
IHI.org	
AHRQ PCMH Resource center	http://www.pcmh.ahrq.gov/portal/server.pt/community/pcmh__home/1483/what_is_pcmh_
American Academy of Pediatrics:	http://aappolicy.aappublications.org/policy_statement/index.dtl#M
American College of Physicians	http://www.acponline.org/advocacy/?hp
American Osteopathic Association	http://www.osteopathic.org
The Patient Centered Medical Home Guidelines: A Tool to Compare National Programs	http://www.mgma.com/Store/ProductDetails.aspx?id=1366580

and efficiency of the office. The work to become a formally recognized PCMH leads to changes that benefit patients, practice, and staff, and will lead to increased reimbursement for quality measures. Once a practice commits to venturing on the journey, it must be sure to have key elements in place: leadership, time, persistence, and resources. Setting clear goals and a strict timeline will help the practice move through the process more smoothly.

Box 4 and **Table 5** provides a summary checklist of the steps involved in the process, as well as several resources that may be helpful in developing and implementing changes in the practice.

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