Journey toward a Patient-Centered Medical Home: Readiness for Change in Primary Care Practices

CHRISTOPHER G. WISE, JEFFREY A. ALEXANDER, LEE A. GREEN, GENNA R. COHEN, and CHRISTINA R. KOSTER

University of Michigan

Context: Information is limited regarding the readiness of primary care practices to make the transformational changes necessary to implement the patient-centered medical home (PCMH) model. Using comparative, qualitative data, we provide practical guidelines for assessing and increasing readiness for PCMH implementation.

Methods: We used a comparative case study design to assess primary care practices' readiness for PCMH implementation in sixteen practices from twelve different physician organizations in Michigan. Two major components of organizational readiness, motivation and capability, were assessed. We interviewed eight practice teams with higher PCMH scores and eight with lower PCMH scores, along with the leaders of the physician organizations of these practices, yielding sixty-six semistructured interviews.

Findings: The respondents from the higher and lower PCMH scoring practices reported different motivations and capabilities for pursuing PCMH. Their motivations pertained to the perceived value of PCMH, financial incentives, understanding of specific PCMH requirements, and overall commitment to change. Capabilities that were discussed included the time demands of implementation, the difficulty of changing patients' behavior, and the challenges of adopting health information technology. Enhancing the implementation of PCMH within practices included taking an incremental approach, using data,

Address correspondence to: Christopher Wise, 2301 Commonwealth Blvd, Ann Arbor, MI 48105 (email: cwise@umich.edu).

building a team and defining roles of its members, and meeting regularly to discuss the implementation. The respondents valued external organizational support, regardless of its source.

Conclusions: The respondents from the higher and lower PCMH scoring practices commented on similar aspects of readiness—motivation and capability—but offered very different views of them. Our findings suggest the importance of understanding practice perceptions of the motivations for PCMH and the capability to undertake change. While this study identified some initial approaches that physician organizations and practices have used to prepare for practice redesign, we need much more information about their effectiveness.

Keywords: PCMH, readiness, change factors, assessment.

MANY PEOPLE CONSIDER A ROBUST PRIMARY CARE infrastructure to be the foundation of a well-functioning health care system, yet the current model of primary care in the United States is poorly designed and in need of repair (Grol and Grimshaw 2003; IOM 2001; McGlynn et al. 2003; Rosenthal 2008). Because primary care is currently designed to service acute, episodic illness rather than providing proactive, consistent care over time, primary care clinicians face inherent limitations in applying the evidence-based medical interventions that have been demonstrated to offset or significantly delay more serious illnesses. The patient-centered medical home (PCMH) thus has become a widely proposed model to address this deficiency in primary care (Arrow et al. 2009; Berenson et al. 2008; Davis, Schoenbaum, and Audet 2005; Martin et al. 2004). It combines the core tenets of primary care with improvements such as using an electronic medical record to achieve better documentation and coordination of care; using registries to promote population-based disease management; and redesigning practice cultures and processes to improve quality, lower costs, and raise patients' satisfaction. The concept of PCMH promotes team-based care that enhances roles and responsibilities within the entire primary care practice, and also emphasizes active outreach to and engagement of patients, even beyond the four walls of the primary care practice site.

The patient-centered medical home (PCMH) is being implemented in a variety of practice settings across the country (Cohen et al. 2004; Fields, Leshen, and Patel 2010; Patient-Centered Primary Care Collaborative 2007), and the Patient Protection and Affordable Care Act (PPACA, Public Law 111–148) includes federal PCMH demonstration programs. Even though policymakers and national health care leaders are enthusiastic about the PCMH model, it is not clear whether primary care practices are prepared to undertake such transformational change. Because major changes like implementing the PCMH model are often accompanied by uncertainty, role ambiguity, and changes in power relationships and information overload among members of an organization (Weiner, Amick, and Lee 2008), we conducted this study to evaluate primary care practices' readiness for PCMH transformation.

In this article, we describe readiness for change using two separate but related dimensions: motivation and capability (Weiner, Amick, and Lee 2008). *Motivation* is the collective willingness and commitment of organizational members—in this case, a primary care practice team—to implement the designed organizational change. *Capability* is the practice team's perceived ability to institute change or, alternatively, the degree to which practice team members feel they can be effective in implementing the designed change. We expect readiness for change to be highest when practice team members want to implement an organizational change like PCMH (motivation), and feel confident that they can do so practically (capability).

We also assessed whether having a formal affiliation with a hospital or a health system affected a practice's readiness. Primary care practices that have contractual affiliations with a hospital or hospital system may have greater access to infrastructure support for information technology, process improvement, and capital outlays, but they may also need to negotiate approvals from the leaders of the hospital or health system before making the change.

Using comparative, qualitative data from sixteen primary care practices in Michigan, we attempt to provide practical guidelines for assessing and increasing readiness for PCMH change by identifying (1) common factors among primary care practices that represent the motivation and capability to implement PCMH, (2) differences in readiness for change across primary care practices at different stages

of PCMH implementations with different health system affiliations, and (3) potential approaches to increase readiness and implement PCMH.

Research Design and Methods

Study Setting

We collected the data for this study from primary care physicians' practices participating in both the Blue Cross / Blue Shield of Michigan's Physician Group Incentive Program (PGIP) and the Robert Wood Johnson Foundation's Aligning Forces for Quality (AF4Q) health care improvement initiative. The PGIP is a statewide initiative established in 2004 by Blue Cross / Blue Shield of Michigan (BCBSM) to help physician organizations and their primary care practices implement the infrastructure and processes of the PCMH. As of May 2009, thirty-four physician organizations throughout Michigan were participating in PGIP, representing 2,214 practices and 6,700 physicians providing care for 1.8 million members. Physician organizations receive incentive payments for advancing PCMH infrastructure, and those primary care practices with a PCMH designation status also receive a modest increase in reimbursement for evaluation and management fees.

The AF4Q represents the Robert Wood Johnson Foundation's targeted effort to improve health care in many communities in the United States. Two Michigan health care collaboratives are supported under the AF4Q program: the Greater Detroit Area Health Council (GDAHC) and the Alliance for Health in western Michigan. Both the GDAHC and the Alliance for Health are focused on quality improvement in their regions. The GDAHC is the organizational home of the AF4Q in Michigan, and it specializes in cost-effective allocation, management, and use of health care resources in the seven-county southeast Michigan region. The Alliance for Health, based in western Michigan, serves as the regional infrastructure to sustain the AF4Q's efforts by supporting physician organizations in improving the quality of ambulatory care, promoting evidence-based care, and helping physicians' practices meet or exceed the principles of patient-centered medical homes.

We used a multiple comparative case study design to examine the readiness for change in selected primary care practices. Our design compared physicians' practices with both higher and lower PCMH implementation scores, in combination with whether or not the practice had a formal hospital affiliation.

Assessing the Level of PCMH Implementation

We labeled practices as "higher" or "lower" scoring according to their responses to a BCBSM self-assessment. In 2007, the major primary care professional organizations approved the PCMH's Joint Principles (AAFP et al. 2007), and BCBSM created a tool to measure PCMH capability based on these principles. A comparison of various PCMH assessment instruments created by national and statewide organizations, including BCBSM, NCQA, and JCAHO, cited the BCBSM instrument as most suitable as both an assessment tool and a practice improvement tool (Burton, Devers, and Berenson 2011). As of 2009, each primary care practice participating in the PGIP had been asked to complete an extensive self-assessment report detailing its current PCMH capabilities in seven functional domains. The number of specific tasks included in each domain is as follows:

1. Both the patient and the provider have agreed to a medical home arrangement that has been documented in the medical record (three tasks).
2. Chronic disease registries have been created and are being utilized (fourteen tasks).
3. Performance is being reported (twelve tasks).
4. Individual care is being managed (fifteen tasks).
5. Patients have twenty-four-hour access to a clinical decision maker (nine tasks).
6. Test results are being tracked, and a follow-up procedure is in place (nine tasks).
7. Electronic prescriptions are being used (two tasks).

We scored the PCMH self-assessment responses from 2,214 practices. Because we were studying practice teams trying to implement at least part of the PCMH, we removed those practices reporting no PCMH implementation (score = 0) from the data set (198 practices). We then

TABLE 1
Comparative Case Design Framework

	Practices Affiliated with Hospital	Independent Practices (no formal hospital affiliation)
Higher PCMH Implementation	4 practices	4 practices
Lower PCMH Implementation	4 practices	4 practices

sorted the remaining PCMH scores by quartile, with the following distribution:

- Quartile 1: 1% to 22% PCMH implementation (509 practices).
- Quartile 2: 23% to 33% PCMH implementation (499 practices).
- Quartile 3: 34% to 56% PCMH implementation (504 practices).
- Quartile 4: 57% to 99% PCMH implementation (504 practices).

The top and bottom quartiles were then sorted into those with and without a hospital affiliation, resulting in four categories for practice selection. Within each of the four categories, we randomized the practices and chose four practices in each category to maximize the differences among physician organizations, regions of the state, and practice size (see table 1).

We selected the sixteen practices from twelve different physician organizations, located in eight counties across Michigan. The models of physician organizations vary widely, based on their mission and related contractual agreements (Alexander et al. 1996). Independent physician associations (IPAs) are structured so that the physicians practice independently of one another but have contracted together to negotiate payments from insurers. Physician-hospital organizations generally have some form of affiliation agreement that allows the physician and the hospital(s) to work cooperatively while retaining independent governance. Integrated health systems employ hospital clinicians and staff as well as physicians' practice teams under one overarching organizational umbrella, which may also include other health care services (e.g., hospice, home health). In our study, the physician organization models included six independent practice associations, five physician-hospital

TABLE 2
Interview Distribution by Role

Physicians	16
Nurses	8
Medical Assistants	12
Practice Managers	16
Physician Organization Leaders	14
Total	66

organizations, and three integrated health systems. Four of these practices were from the same, very large physician organization, which represents a majority of the smaller, often rural, independent practices throughout Michigan. The practice size ranged from one to ten primary care physicians, with a mean number of four physicians per practice. Thirteen of the practices were located in a metropolitan statistical area (as defined by the U.S. Census), and three were not.

Data Collection Procedures

We conducted sixty-six semistructured, face-to-face interviews at the sixteen study practices over an eight-month period during winter of 2009 through the summer of 2010. The interview protocol addressed the reasons for pursuing or not pursuing PCMH, as well as the methods used to support implementation of PCMH. On average, we interviewed four to five key informants at each practice and also the key leaders at the associated physician organization. The respondents represented a cross section of stakeholders in each practice, including key physicians, practice managers, nurses, and medical assistants (see table 2). Each interview lasted approximately thirty minutes and was tape-recorded, yielding approximately two hours of interviews per practice. Interviews were transcribed and then reviewed for data coding and analysis.

Data Coding and Analysis

Having defined readiness for change in terms of capability and motivation (Weiner, Amick, and Lee 2008), we used the existing literature to create a conceptual map of this construct. Accordingly, the research

team drew up a list of codes with detailed definitions reflecting issues related to the concepts of motivation and capability, PCMH implementation, and organizational change. The research team met several times to revise the codebook based on lessons learned by applying the codes to the transcribed interviews. This iterative process was intended to ensure that the investigators of the code definitions and their application to interview responses consistently agreed and also to test the codes' integrity. We then entered the coded transcripts into Atlas.ti® qualitative analysis software to facilitate selecting responses by specified codes.

Atlas.ti® produced reports with coded sections of transcripts for analysis. We assigned a "lead investigator" to be responsible for each of the four cells in the framework (i.e., lower-scoring / hospital-affiliated). Each lead investigator consulted with a second researcher, designated as a reviewer, for quality assurance in case any themes were inadvertently neglected or weighted more heavily than the data would support (e.g., due to a bias favoring memorable respondents). The research team met frequently to discuss emerging themes. This process yielded a consolidated set of themes that could be organized under the broader constructs of motivation, capability, and approaches used by practices to increase readiness (Lofland and Lofland 1995). The lead investigator then wrote a memo that more fully described each theme for each respondent category, for further review by all members of the research team.

Finally, we used the memos to compare and contrast our findings across the four cells of our framework, specifically assessing the commonalities and differences in each theme among practices with similar and different PCMH implementation scores and hospital affiliation.

Results

When reviewing the respondents' perceptions of PCMH, and the specific work in their practice, we identified several themes common to the different respondent categories (e.g., higher-scoring / no hospital, lower-scoring / hospital-affiliated). Within themes, the practices reported different perspectives that appeared to be aligned with varying levels of their PCMH implementation.

Whether or not a practice had a strong hospital affiliation did not appear to differentiate the practices on any of the relevant themes. Organizational support was an important factor, but whether this was provided by the physician organization, hospital, or an integrated health system mattered little among the practices we interviewed. For this reason, we restricted our discussion of the themes to practices with higher PCMH scores compared with those with lower PCMH scores.

Motivation

The four motivational themes we identified were (1) perceived value of PCMH, (2) an understanding of PCMH requirements, (3) financial incentives, and (4) commitment to change.

Perceived Value of PCMH.   Most of the respondents talked about the potential benefits and costs of PCMH for themselves, their practice, and their patients. The most noticeable difference among practices in the perceived value of the PCMH was whether the respondents felt the PCMH had an intrinsic value or viewed it as a set of extrinsically imposed requirements.

> "We all know that [PCMH is] going to help the patient. It's making it easier on the doctor, and eventually it's making it easier on us." (medical assistant, higher-scoring PCMH)

Higher-scoring practices had clearly internalized the value of PCMH as benefiting both their patients and their practice team. Many believed that the PCMH represented things they were already doing but that they wanted to do better. The respondents from these practices appreciated the opportunity to work on efficiency and standardization in a formalized fashion and had begun to notice improvements in their workflow, which in turn provided further motivation for sustaining their efforts. These practices viewed the PCMH journey as an opportunity to work together as a team and to enhance the roles and responsibilities of staff and nurses, while freeing time for physicians.

> "What's my perception? How will PCMH change what you've done? I would bet you that almost every office has said it's no different than what we've been doing." (physician, lower-scoring PCMH)

Lower-scoring practices viewed PCMH as an external imposition by payers and often viewed it as just one more set of hurdles to jump over. They viewed the multiple documentation requirements for PCMH as considerable extra work. While some lower-scoring practices suggested that PCMH was a good platform for improving their practice, few appeared to understand that moving to a PCMH model of care would involve systemic changes to the practice, and they used existing practice patterns as a reason for not making changes. The higher-scoring practices believed that they could improve their delivery of care by advancing their PCMH capability. But the lower-scoring practices were not convinced that the additional work requirements to achieve PCMH designation would greatly alter the fundamental processes of their practice, leaving them less inspired to put forth a great deal of time and effort into implementing PCMH. In a related vein, several respondents noted that (some) physicians lacked the ability or desire to envision how things could be better under PCMH. Instead, they focused mainly on the "here and now." Because the existing system of care was not considered "critically" dysfunctional, they sensed little need for change.

Understanding PCMH Domains and Tasks.   Practices need a clear understanding of the specific PCMH components and operational requirements when considering where to start their implementation and what steps to take. Both higher- and lower-scoring practices reported different perspectives on obtaining and using this information.

> "I did all these webinars—TransforMED, Medfusion—all of them, to find out what I could get for PCMH. I'm sure my staff is sick to death of all these webinars." (practice manager, higher-scoring PCMH)

Higher-scoring practices took a very active role in learning about the PCMH. In addition to webinars, the respondents reported attending "lunch and learns" at nearby hospitals and seeking further guidance from their physician organization or health system. In order to address the variable requirements of PCMH designation by different payers or agencies, the higher-scoring practices often made a table of the various requirements and identified areas of consistency. Rather than consider the complex PCMH requirements among external bodies as a barrier that could not be overcome, these practices took action.

> "[The PCMH] is a lot to take in, and I get lost with all of it, sometimes. I have to learn all of this, and then I have to teach the doctor." (practice manager, lower-scoring PCMH)

Lower-scoring practices regarded education for physicians and staff on the PCMH as a major need, but they were more passive in their learning, asking external groups to do more to help them. These practices had not initiated an active PCMH learning plan on their own. Instead, they were "waiting to hear more" before taking additional steps. Just as these practices considered the PCMH to be an external mandate, they also considered that ongoing education about the PCMH was a responsibility of those external agencies.

Financial Incentives. Several insurers in Michigan offer some form of financial incentives related to PCMH designation and related improvements in evidence-based quality outcomes. Yet these incentives had a different motivational impact on higher- and lower-scoring practices.

> "The physicians are realizing, 'I'm doing more medical care. I'm doing less paperwork because I have more helpers, and I'm making more money.' What's wrong with that picture?" (practice manager, higher-scoring PCMH)

Higher-scoring practices considered financial incentives as a necessary step to getting started on PCMH, but by no means the sole reason for their actions. For these practices, incentive payments for PCMH implementation were just one element in sustaining their efforts. Instead, they valued the potential for better patient care, improved workflow, enhanced roles, and pride in their teamwork more than the incentive payments. Many practices had used their PCMH incentive payments to hire new practice team members, such as additional nursing and pharmacy staff to support enhanced care coordination and education, and office management staff to assist with documentation.

> "They say we will get some more money for this [PCMH], but I'll believe it when I see it." (practice manager, lower-scoring PCMH)

Lower-scoring practices were more skeptical of PCMH incentive payments. The high cost of health information technology was a shock to them, so they often would not accept this expense unless they received

further financial incentives. In addition, many respondents from lower-scoring practices were not convinced that the payers would continue to offer the incentives.

Commitment to Change.   Organizational change can be a daunting prospect because it requires simultaneous multiple adjustments in work-flow, tools, roles, communication, and rewards (IOM 2001). Higher- and lower-scoring practices differed in how they viewed change in general and PCMH implementation in particular.

> "This is just the way we do things here. We're always the first one to raise our hand and say, 'We'll do it.'" (medical assistant, higher-scoring PCMH)

Higher-scoring practices did not appear to fear change. These practices had a strong culture of "team," most often promoted by the physician and the practice manager but then advanced by other members of the practice team. It was commonly mentioned that the practice staff worked well together, respected one another, and appreciated constructive criticism. The respondents noted that they were frequently early adopters of change and that working on practice improvements was routine. There was frequent mention of a "sparkplug" or "champion" who pursued change tenaciously.

> "The biggest frustration we have is physicians who, for whatever reason, don't even want to consider the concept. They're too busy, don't have time, can't afford it. We've had a lot of office staff who are saying, 'This is great. We'd love to do it, but our doc won't let us.'" (nurse, lower-scoring PCMH)

The respondents in lower-scoring practices indicated differing view-points within the practice on the need for change or a commitment to PCMH. Many cited specific individuals or groups of physicians or staff as the sources of resistance. The practices highlighted generational differences in receptivity for change and advances in information technology. Lower-scoring practices often reported being structured around individual physicians and their support staff, resulting in multiple cultures of practice within the same practice. Another reported concern was that PCMH would undermine the status or power of certain individuals.

The catalytic energy in higher-scoring practices generated from the physician/practice manager teams was noticeably absent in the lower-scoring practices. For lower-scoring practices affiliated with a hospital, the practices were waiting for signals and support from the organization; they did not consider the PCMH undertaking to be their decision to make. Practices not affiliated with a hospital were waiting for their physician leaders to make the decision. Staff stated that the practice was the physicians' personal business enterprise, which meant that the physicians were the bosses. This view limited any independent attempts by the practice manager or other staff to learn more about PCMH or to make a personal commitment to begin implementing PCMH.

Capability

The respondents' views of their capability to achieve PCMH functionality represent the practice team's belief as to whether they could actually do it. Capability was broken down into four themes: (1) time demands of PCMH implementation, (2) prospects of changing patients' behavior, (3) health information technology (HIT), and (4) implementation expectations.

Time Demands of PCMH Implementation. All practices regarded the time required to implement PCMH as a major challenge, regardless of their PCMH scores. Particular challenges included carrying out the additional documentation necessary to achieve PCMH designation, learning how to use information technology, and educating patients about PCMH. In addition, the time needed just to talk together about PCMH, develop work plans, and assess implementation progress were significant commitments to consider.

> "The biggest push-back is that the PCMH does require us to do some more things than what we were doing before, and where do we find the time and resources to do that? It's knowing the right people to pull in at the right time and then giving them that confidence to actually do it." (practice manager, higher-scoring PCMH)

While higher-scoring practices commented on the substantial time investment required to adopt PCMH, they did not use this as a reason not to pursue it. They recognized they were currently overburdened by the work requirements of primary care and wanted to invest the time to

work on changing to something better. They thus relied on a variety of team members, using their individual skill sets.

> "I'm sure you know, in primary care, all offices run on a string. There's no surplus. We literally run on no margin, and so it's just difficult whenever you add another burden of some kind of paperwork." (practice manager, lower-scoring PCMH)

In contrast, time demands and limited internal resources to support practice redesign left lower-scoring practices with the idea that the PCMH was unattainable. These practices believed that the time investment would cut into patient volume. Seeing patients and working on PCMH change were, to some extent, seen as mutually exclusive.

The practice managers of the lower-scoring practices typically assumed most of the responsibility for implementing PCMH rather than sharing tasks with others in the practice as a team. They stated that the clinicians needed to care for patients and could not afford to invest in implementing PMCH. However, because the PCMH requires changes in some of the roles and responsibilities of clinicians as well as staff, the clinicians' lack of participation often resulted in little progress and little emotional investment or energy for ongoing work.

Prospect of Changing Patient Behavior.   In order for patients to benefit from the PCMH model, they must also be responsible for aspects of their health such as following treatment plans and coordinating care through their designated primary care office. However, the opportunity to address this issue was viewed differently in higher- and lower-scoring practices.

> "One of the biggest opportunities is being able to ensure that what we are requesting a patient do, we can actually follow it up to make sure it has been done. It's still up to them to make it happen, but I feel much more confident that there are not things that are being forgotten or falling through the cracks." (physician, higher-scoring PCMH)

Several respondents from higher-scoring practices thought that PCMH was a good framework to inform their patients about mutual expectations and to define their own role as primary caregivers. They

looked forward to working together with their patients and defining their practice as the patient's home.

> "You can present all this stuff for doctors to do, but if you get noncompliant patients, what are you going to do?" (physician, lower-scoring PCMH)

The respondents from lower-scoring practices were skeptical that their patients would be accountable for assisting with their care in partnership with the practice, which in turn could undermine the practice's efforts to advance the PCMH's capabilities. These practices were not confident they would be able to affect their patients' compliance.

Health Information Technology (HIT). Obtaining and implementing HIT require significant investment of time and money. In addition to having access to the hardware and software necessary for these improvements, a practice also needs to believe that it has the capability to operate the HIT successfully.

> "With our new EMR, we have the ability to run a practice analytics report. That's huge!" (nurse, higher-scoring PCMH)

Higher-scoring PCMH practices were often further along in implementing information technology applications such as electronic disease registries and e-prescribing. The initial implementation was the most resource intensive due to the entry of historical data and a learning curve for using the technology. The higher-scoring practices reported that they were beyond initial implementation and were beginning to observe benefits in quality improvement and workflow efficiencies related to advancements in HIT.

> "HIT is a huge expense on the practice, and a gigantic piece of PCMH." (physician, lower-scoring PCMH)

Although lower-scoring practices also appreciated the potential value of improved HIT, they were generally challenged by both the expense and the time requirements for implementing and learning how to use it. These practices reported feeling they were "trapped between a rock and a hard place." They believed they needed HIT in order to save time

documenting and supporting the delivery of evidence-based care, but they were not yet ready to invest in implementing HIT, due to cost and time barriers.

Two common reflections in nearly all the practices regarding HIT were the relationship between the user's age and the concerns about HIT interfacing with other systems. Younger clinicians and staff have greater experience with HIT and thus can encourage others in the practice to adopt it. A clinical champion who also has experience with information technologies can also be a valuable asset.

Many respondents worried that their practice's HIT might not work well with the HIT of others, like hospital electronic medical records or the HIT in specialty offices. They were concerned that these issues might not be successfully addressed and would remain a barrier to implementing and sustaining HIT.

Setting Implementation Expectations.   Having reasonable expectations about the time and energy needed to implement PCMH was an important first step for those practices that believed they could actually do this, and these expectations provided a platform for sustaining efforts over time.

> "I know where we need to get to, and I also know we will fail several times before we get there." (physician, higher-scoring PCMH)

Higher-scoring practices appreciated that implementing PCMH was hard work and would take time; most expected it to take two or more years. Because they anticipated that the implementation would be iterative, with failures and successes along the way, they did not seem as frustrated by the challenges they encountered as the lower-scoring practices were.

> "I'm thinking we'll try it [PCMH implementation] and see, rather than stick with it." (physician, lower-scoring PCMH)

Lower-scoring practices considered the time and effort invested in PCMH to be too great to overcome. Instead, they wanted a standardized implementation approach and designated timelines and were considering acceptable timeframes of one or two months.

Approaches

We invited our respondents to comment on the approaches they used to prepare their practice teams to implement PCMH, for both the physician organization and the practice.

Leadership. The respondents highlighted the benefits of leadership in both the organization and the practice. Leaders in the physician organization offered insights into potential values of PCMH, educational instruction on PCMH, infrastructure support for purchasing and using HIT, and an interface with insurers. They also helped the practices find time to implement PCMH, such as modest financial support to offset lost clinical revenue, and assistance in making the change.

A physician and a practice manager were most often the leaders of PCMH in the practice and were a formidable team if both were actively engaged. They created a culture of commitment to PCMH change in several ways. Physician champions became known as "thought leaders" who could advocate the values of PCMH to the rest of the practice team, and practice managers often were identified as "implementation leaders," helping the practice team carry out the PCMH vision. Practice managers described their efforts to have all team members help implement PCMH to gain their commitment and develop a team atmosphere. Several mentioned the importance of celebrating even small successes. Practices without both leaders had more difficulty implementing PCMH.

Translating the Value of PCMH. Several of the physician leaders who work for physician organizations commented on the importance of having their physician peers talk about the values of the PCMH with those who were more skeptical. One physician organization created an advocacy team composed of practicing physician champions who understood the PCMH and could discuss it with their physician peers. Participants on that team received some financial compensation from the physician organizations for this work. Another physician organization created a brief survey inquiring about practices' interest in PCMH and then started working with the interested practices.

Within the practice itself, those further along in implementing PCMH emphasized the need to routinely hold team meetings to talk about PCMH and successes and failures during its implementation. Team members stated the importance of holding meetings at prearranged times without cancellation and holding accountable those individuals who did not attend. Having physician champions participate in these

meetings whenever possible helped other team members appreciate the overall purpose and encouraged the team's collaboration.

Understanding PCMH Domains and Tasks.   In order to help practices understand the specific components of the PCMH and related implementation tasks, some physician organizations and health systems designated one or more individuals to become "PCMH experts" who would meet with the practices to describe details of PCMH and how others were implementing it. These experts attended the PCMH education sessions and met with insurers to discuss aspects of PCMH implementation, designation, and financing and then brought this information back to the physician organizations and the practices.

Incrementalism.   Nearly all the key informants from the practices mentioned the need to implement PCMH incrementally. They recommended that a practice first understand the PCMH's components and required tasks and then review this information with the entire practice team and together decide what the practice would work on first. Not all the practices agreed on where to begin, but they did agree that the practice team should decide together where to start and to implement PCMH one step at a time, regardless of where the practice was in its implementation.

Using Data.   All the practices appreciated the value of using data to help them with implementing PCMH, especially evidence-based quality outcomes, pharmacy use, and patient satisfaction. There was a noticeable difference, however, in the practices' approaches to access data. Those practices further along in their implementation reported actively obtaining and reviewing data, regardless of whether the information came from outside sources such as insurers or from internal documentation. This active review of the practice's performance appeared to help reinforce the value of PCMH, since identifying the gaps in care motivated the teams to work on improving it. In addition, the practices were able to find out when the outcomes had improved, thereby leading to further improvement efforts.

Those practices not as far along in implementing PCMH used data much more passively. Several of these practices reported finding a few of the insurers' quality outcome reports to be helpful and were interested in getting similar information from other payers. Yet the practice team did little to obtain data from other sources or develop processes for internally documenting and reporting performance data.

Roles and Responsibilities. Practices further along in PCMH had tried hard to develop and document all the practice team members' roles in and responsibilities for PCMH functions. Interviewees at all levels stated that this approach was helpful in clarifying duties, getting the engagement of everyone in the practice, and standardizing the work. These practices also used their written roles and responsibilities to consider other areas to develop. The respondents emphasized that defined roles could change, and they made adjustments during the implementation, with a goal of having all practice team members working to the highest level of their training and experience. Some of these practices had begun to share their documented roles and responsibilities with colleagues in other practices.

Desire to Learn More from Others. When asked what they might do differently, all the practices reported a desire to learn from other practices. A few physician organizations had supported practice participation in locally sponsored PCMH learning collaboratives, but the approaches were still being developed and participation was limited.

Discussion

We found distinct contrasts in the perceptions of motivation and capability in practices scoring both higher and lower on the elements of PCMH implementation. In regard to motivation, the higher-scoring practices viewed the PCMH as intrinsically valuable for their patient care and quality goals, regarded the financial incentives for PCMH functions primarily as offsetting costs to enable them to provide desired functions, took an active role in learning about PCMH's concepts and functions, took the initiative themselves to promote change, and had most or all members of the practice invested in change efforts. The lower-scoring practices viewed the PCMH as an externally imposed program, regarded the financial incentives as generally an insufficient reward for meeting externally imposed requirements, felt a need for external teaching about the PCMH and for external direction in promoting change, tended to make one person responsible for the PCMH, and often had one or more influential individuals in the practice who were resistant to change.

A similar pattern of contrast emerged when considering the perceived capability for PCMH implementation. Both the higher- and

lower-scoring practices named the same barriers: time demands, pa-
tient behavior change, HIT requirements, and implementation expec-
tations. But they differed in how they viewed those barriers, with the
higher-scoring practices regarding them as challenges to be overcome
in their pursuit of their PCMH objectives, and the lower-scoring prac-
tices regarding them as obstacles that would have to be removed before
they could pursue "externally imposed" PCMH objectives. The higher-
scoring practices expected and accepted the likelihood of setbacks and
the need for a sustained effort, while the lower-scoring practices were
more readily deterred by these issues.

Viewing the transformation to a PCMH as intrinsically valuable,
rather than externally mandated, appears to be a fundamental factor in
the PCMH's success. It may be that efforts to advance PCMH work in
practices must first address this view. A practice is unlikely to do much
until the gains associated with implementing PCMH are translated into
clearly different work patterns that, in turn, lead to important outcomes
for the practice.

The physician organizations that participated in this study employed
several approaches to improve motivation and capability, including en-
gaging leaders in both the physician organization and the practice,
sponsoring peers to promote PCMH values, developing PCMH experts
to advise practices, creating a work plan with incremental action items,
using data to identify opportunities and assess progress, and refining
roles and responsibilities within the practice. At the time of this study,
not enough practices were far enough along to share their PCMH jour-
ney with others. However, those that are appear to have a strong interest
in learning from their colleagues.

These approaches were just being initiated at the time of this study, so
few details were available and methods were still being developed, and
it was not yet evident which approaches would be the most successful.
Further study of approaches to enhance primary care readiness for change
thus is warranted.

Finally, the PCMH construct calls for a practice's staff and clinicians
to work together as a team, allowing all to work to the highest level of
their education or license and coordinating their efforts for the benefit
of their patients. Those practices that have internalized this construct
have also used the same approach to working together on implementing
PCMH; they have organized teams and worked together during their
PCMH journey. Meanwhile, the practices that have not yet subscribed

to this particular PCMH value have often relegated the implementation of PCMH to the practice manager, who is often unable to do this alone.

Nutting and colleagues (2009) reported on the value of external assistance for motivated practices with improving models of care aligned with the PCMH. Our study confirmed the importance of a practice's perspective of readiness, both their motivation and capabilities, when considering a PCMH redesign. We found that higher-scoring practices agreed internally about goals and assigning responsibility for working toward those goals to all members of the team, whereas lower-scoring practices tended to be organized around their individual physicians' idiosyncratic preferences or practices. This finding echoes Suchman's (2010) organization-as-conversation perspective. Suchman contrasts two metaphors for organizations: conversations and machines. A "conversation" organization is organized around reflection and adaptation, relies on team input and novel ideas, and tends to be egalitarian. A "machine" organization, in contrast, is organized around reliably executing specific tasks, relies on a command-and-control model, and tends to be hierarchical. The conversation excels at change, while the machine excels at consistency and reliability. Those practices whose members all participate in the sense-making and collective implementation of PCMH appear to be better able to make change effectively than do those organized around executing the preferences of individual physicians and assigning PCMH change responsibility to one person. The former rely more on the conversation model, the latter on the machine model, and in the particular case of PCMH transformation, the premium is on the strengths of the conversation.

Limitations

This study, like others of similar transformation, was necessarily limited to volunteer practices. An advantage of this study in minimizing that limitation and improving external validity is the volunteer pool: BCBSM is the dominant payer in Michigan, and thus the PGIP program attracts a wide range of practices from around the state. The tool used to measure PCMH implementation was developed by BCBSM but has been shown to include standards similar to tools developed by others (Burton, Devers, and Berenson 2011).

Another limitation of this study is its geography, as all the practices are in Michigan. Michigan does, however, have substantial diversity in health care delivery, with major variations in practice and cost, cultural differences, and rural-urban contrasts (Alexander et al. 1999; Michigan Department of Community Health 2009; Udow-Phillips et al. 2010).

Our study did not look at true stand-alone, independent practices. All the non-hospital-affiliated practices were members of independent practice associations (IPAs), a form of physician organization to support independent practices. As with other physician organization models, IPAs provided a degree of logistical and capital resources not available to practices with no affiliation. These results cannot be confidently generalized, therefore, to unaffiliated private practices.

The measure of PCMH transformation was necessarily imperfect. We believe it to be adequate to describe practices for categorization in this study, but more interesting findings may well emerge with a measure capable of finer distinctions, particularly for specific aspects of the PCMH transformation.

Conclusion and Policy Implications

Multiple regional demonstration projects, as well as the recently enacted Patient Protection and Affordable Care Act (PPACA Public Law 111–148), promote delivery system reforms that support the implementation of PCMH. However, to enable true health care reform, the current processes of care delivery must be redesigned and implemented by the provider teams delivering this care. Much more information is needed regarding how best to motivate, facilitate, and sustain practice transformation by its providers. This study found the practice's level of readiness to be important to enhancing its transformation. Provider teams need to be motivated to accept change that, while difficult, will result in improved patient flow, better teamwork within the practice, more value-added time with patients, higher job satisfaction, and higher patient satisfaction. In addition, provider teams need to believe they also have the capability of undertaking and accomplishing the desired changes.

Moreover, while we were able to identify some of the initial approaches that physician organizations and their primary care practices have begun

to explore in order to advance the level of readiness to redesign the practice, much more information is needed about the effectiveness of such approaches. It is likely that the roles for clinical champions and other leaders, of both the physician organization and the primary care practice, will need to be further identified, refined, and supported to advance the approaches to enhancing readiness, especially when there is still limited evidence regarding the relationship between PCMH redesign and outcomes of cost and quality. Individuals who already sense intrinsic value for PCMH change and can effectively communicate this to others could be a valuable asset. More research is needed to explore evolving strategies for enhancing readiness for change in primary care.

Our results make it clear that while appropriate incentives are important to enabling PCMH change, incentives alone are not sufficient to bring about the necessary changes in primary care. Policymakers, payers, and providers need to anticipate issues of how best to assess and enhance readiness for change in primary care practices in order to transform the practice. The differences in perceived motivation and capability between practices with higher and lower PCMH scores are profound. Do these differences merely allow us to predict which practices will succeed in the PCMH transformation and which will have difficulties or even fail? Or can knowledge of these differences guide interventions that can help practices transform? Others have found transformation challenging even with intensive facilitation, sometimes including major organizational interventions from outside (Nutting et al. 2009). That level of support is not replicable on a statewide scale, however. The next challenge for PCMH transformation will be discovering economically and logistically feasible means of helping practices improve their readiness.

Finally, our findings suggest that the potential of PCMH for quality enhancement and cost reduction is mediated by a range of human, sociocultural, and organizational factors in the social context in which PCMH is introduced. In practical terms, this means that the fidelity with which PCMH is implemented and practiced by a particular provider or group of providers follows from interrelationships among a range of internal and external factors that constitute the social system surrounding the PCMH "intervention." Because the vast majority of health care in this country is provided in increasingly complex organizational settings— whether clinics, hospitals, health systems, physician groups, or federally qualified health centers—policymakers must recognize that broad health delivery reforms like PCMH are as much about change in social systems

(both planned and unplanned) as they are about rationalizing care. As our findings indicate, changes introduced in social contexts are problematic at best and subject to outright resistance at worst. Put simply, not all organizations or groups are equally good candidates for delivery system change. Despite policymakers' and national health care leaders' enthusiasm to rapidly try out and implement PCMH, they have paid relatively little attention to whether delivery organizations are prepared to take on such transformational change. Indeed, without an understanding of an organization's, team's, or system's readiness for change and knowledge of successful strategies to increase readiness, change implementation is likely to be hit-or-miss at best.

References

AAFP (American Academy of Family Physicians), AAP (American Academy of Pediatrics), ACP (American College of Physicians), and AOA (American Osteopathic Association). 2007. *Joint Principles of the Patient-Centered Medical Home*. Available at http://www.medicalhomeinfo.org/downloads/pdfs/jointstatement. pdf (accessed June 29, 2011).

Alexander, J.A., L.R. Burns, H.S. Zuckerman, T. Vaughn, R.M. Andersen, P. Torrens, and D. Hilberman. 1996. An Exploratory Analysis of Market-Based, Physician-Organization Arrangements. *Hospital and Health Services Administration* 41(3):311–29.

Alexander, J.A., D. Lee, J. Griffith, S. Mick, X. Lin, and J. Banaszak-Holl. 1999. Do Market-Level Hospital and Physician Resources Affect Small Area Variation in Hospital Use? *Medical Care Research and Review* 56(March):94–117.

Arrow, K., A. Auerbach, J. Bertko, S. Brownlee, L.P. Casalino, J. Cooper, F.J. Crosson, et al. 2009. Toward a 21st-Century Health Care System: Recommendations for Health Care Reform. *Annals of Internal Medicine* 150:493–95.

Berenson, R.A., T. Hammons, D.N. Gans, S. Zuckerman, K. Merrell, W.S. Underwood, and A.F. Williams. 2008. A House Is Not a Home: Keeping Patients at the Center of Practice Redesign. *Health Affairs* (Project Hope) 27:1219–30.

Burton, R.A., K.J. Devers, and R.A. Berenson. 2011. *Patient-Centered Medical Home Recognition Tools: A Comparison of Ten Surveys' Content and Operational Details*. Urban Institute, May.

Cohen, D., R.R. McDaniel Jr., B.F. Crabtree, M.C. Ruhe, S.M. Weyer, A. Tallia, W.L. Miller, et al. 2004. A Practice Change Model for

Quality Improvement in Primary Care Practice. *Journal of Healthcare Management* 49(3):155–68.

Davis, K., S.C. Schoenbaum, and A.M. Audet. 2005. A 2020 Vision of Patient-Centered Primary Care. *Journal of General Internal Medicine* 20:953–57.

Fields, D., E. Leshen, and K. Patel. 2010. Driving Quality Gains and Costs Savings through Adoption of Medical Homes. *Health Affairs* 29(5):819–26.

Grol, R., and J. Grimshaw. 2003. From Best Evidence to Best Practice: Effective Implementation of Change in Patients' Care. *The Lancet* 363:1225–30.

IOM (Institute of Medicine), Committee on Quality of Health Care in America. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academies Press.

Lofland, J., and L.H. Lofland. 1995. *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis*. 2nd ed. Belmont, CA: Wadsworth.

Martin, J.C., R.F. Avant, M.A. Bowman, J.R. Bucholtz, J.R. Dickinson, K.L. Evans, L.A. Green, et al. 2004. The Future of Family Medicine: A Collaborative Project of the Family Medicine Community. *Annals of Family Medicine* 2(suppl. 1):s3–s32.

McGlynn, E.A., S.M. Asch, J. Adams, J. Keesey, J. Hicks, A. DeCristofaro, and E.A. Kerr. 2003. The Quality of Health Care Delivered to Adults in the United States. *New England Journal of Medicine* 348:2635–45.

Michigan Department of Community Health. 2009. Michigan Department of Community Health Survey of Physicians, Survey Findings 2009. Prepared by Public Sector Consultants Inc.: Lansing, MI.

Nutting, P.A., W.L. Miller, B.F. Crabtree, C.R. Jaén, E.E. Stewart, and K.C. Stange. 2009. Initial Lessons from the First National Demonstration Project on Practice Transformation to a Patient-Centered Medical Home. *Annals of Family Medicine* 7:254–60. DOI: 10.1370/afm.1002.

Patient-Centered Primary Care Collaborative. 2007. *Joint Principles of the Patient Centered Medical Home*. Available at http://www.pcpcc.net/content/joint-principles-patient-centered-medical-home (accessed June 29, 2011).

Rosenthal, T.C. 2008. The Medical Home: Growing Evidence to Support a New Approach to Primary Care. *Journal of the American Board of Family Medicine* 21:427–40.

Suchman, A.L. 2010. Organizations as Machines, Organizations as Conversations: Two Core Metaphors and Their Consequences. *Medical Care* 48. DOI: 10.1097/MLR.0b013e3181d55a05 (published ahead of print).

Udow-Phillips, M., T. Ogundimu, E. Ehrlich, H. Kofke-Egger, and K. Stock. 2010. *CHRTBook: Health Care Variation in Michigan*. Ann Arbor, MI: Center for Healthcare Research & Transformation.

Weiner, B.J., H. Amick, and S.D. Lee. 2008. Review: Conceptualization and Measurement of Organizational Readiness for Change: A Review of the Literature in Health Services Research and Other Fields. *Medical Care Research and Review* 65(August):379–436.

Yin, R.K. 1994. *Case Study Research: Design and Methods*. Thousand Oaks, CA: Sage.