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Patient-centered medical home

What, why and how?

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Patient-centered medical home

What, why and how?

By Jim Adams, Paul Grundy, MD, Martin S. Kohn, MD and Edgar L. Mounib

The patient-centered medical home (PCMH) can serve as a foundation for transformation of the U.S. healthcare system – if appropriately conceived and properly implemented. But it can also suffer from unfettered expectations. This study makes the realistic case for why and how stakeholders can participate in PCMH initiatives, identifies critical issues and makes recommendations for best practices to increase the likelihood of initial success and sustainability.

Replacing poorly coordinated, acute-focused, episodic care with coordinated, proactive, preventive, acute, chronic, long-term and end-of-life care is foundational to the transformation of the U.S. healthcare system. Many believe this can be best accomplished by strengthening primary care and having primary care provider-led (PCP) care delivery teams working at the "top of their licenses" – at the level for which they are qualified and licensed. One approach to transforming primary care is the patient-centered medical home (PCMH), or the "medical home" – an enhanced primary-care model that provides comprehensive and timely care with appropriate reimbursement, emphasizing the central role of teamwork and engagement by those receiving care.

A set of principles guide the development and implementation of the medical home. At the core of the medical home is the patient's active, personal, comprehensive, long-term relationship with a PCP. This PCP is often a physician specializing in primary care, but also could be a physician specialist for the dominant condition affecting the patient or, in jurisdictions where they are allowed to practice independently, a nurse practitioner. Another key principle of the PCMH is the team approach to care. Quality and safety, combined with care coordination, whole-person orientation and appropriate reimbursement, represent additional principles of the PCMH. Further, patients benefit from enhanced access such as more flexible scheduling and communication channels.

While medical homes can be a cornerstone of transformation, they are not a "silver bullet." They hold a great deal of promise, but many more supportive measures need to be undertaken to fully realize the benefits. For example, steps needed for full implementation include improved access to patient information and clinical knowledge to improve prevention, diagnosis and treatment; changes on the part of other stakeholders (consumers, other physicians, hospitals, health plans, employers, governments and such life sciences as pharmaceuticals); and a robust infrastructure to support comprehensive, coordinated care.

Benefits, however, may come at a cost. All stakeholders face possibly difficult changes and might have to make significant compromises. Even so, the alternatives could be even less desirable. *Status quo* is not an option, so stakeholders should actively participate in collaboratively shaping a more affordable, sustainable, high-valued healthcare system.

A significant transformation of the U.S. healthcare system appears imminent, including investments in prevention – which should be a basis of primary care and the PCMH. Medical homes can be created *now* as part of this transformation. Early medical home pilots have demonstrated success in key areas such as improved quality, greater patient compliance and more effective use of healthcare services. Plus, interest and support are growing for the medical home model across the healthcare and life sciences landscape. From a financial perspective, incentives are in place to help PCPs transform their practices.

Medical homes hold great promise – and many initiatives are currently in progress. Even so, attempts with even the purest motives can fail because of unrealistic expectations, poor planning or poor implementations. Fortunately, best practices are emerging that help to deal with these issues. Appropriately applying these practices can help increase the likelihood of success for an initial rollout and a sustainable model. To help frame discussions and provide guidance in utilizing current best practices when implementing a medical home, we offer observations and recommendations to guide current and future initiatives.

Patient-centered medical home

What, why and how?

The current emphasis in U.S. healthcare is on reactive care, not prevention, wellness or coordination of chronic conditions.

Cost, quality and access issues take toll on U.S. healthcare system

The United States is struggling to address increasing costs, poor or inconsistent quality and inaccessibility to timely care.[1] Healthcare expenditures per capita are 2.4 times higher than that of other developed countries and are projected to increase 67.9 percent over the next ten years.[2] Access concerns, such as the 45.7 million uninsured U.S citizens (15.3 percent of total population) are taking a toll on the healthcare system.[3] Moreover, these challenges are exacerbated by forces that are challenging the *status quo*: globalization, consumerism, changing demographics and lifestyles, diseases that are more expensive to treat (for example, the rising incidence of chronic disease) and the proliferation of medical technologies and treatments. The current state is unsustainable.[4] As U.S. President Barack Obama stated, "…the cost of our healthcare has weighed down our economy and the conscience of our nation long enough. So let there be no doubt: healthcare reform cannot wait, it must not wait, and it will not wait another year."[5]

U.S. healthcare is geared to treating and rewarding acute, episodic interventions. As a result, the emphasis is on reactive care, not on prevention and wellness or care coordination for chronic conditions or serious acute conditions. Poor communication exists among providers, as well as inadequate activation of individuals in ownership for their own health through education and self management. Providers have also been slow to implement evidence-based medicine in their practice workflows, in part because of the lack of evidence and the tools and support necessary to easily incorporate existing evidence into practice (for example, electronic health records with robust decision support capabilities). The challenges entailed in resolving these issues are daunting. Many believe success will be fully achieved only through a fundamental transformation of healthcare.[6] This transformation will require that high-value, affordable health promotion and healthcare be delivered comprehensively to, and collaboratively with, activated consumers through new delivery models.[7]

Key to this transformation is strengthening the primary care system by replacing poorly coordinated episodic care with a PCP-led care delivery team working at the "top of their licenses" and providing coordinated engagement of individuals in their preventive, acute, chronic, long-term and end-of-life care. There is ample evidence demonstrating the importance of primary care. Residents in U.S. states with higher ratios of PCPs report better health and better outcomes. For example, they experience decreased mortality from cancer, heart disease and stroke than persons in states with lower PCP ratios. Increasing the number of PCPs is also associated with a longer life expectancy and fewer premature deaths.[8]

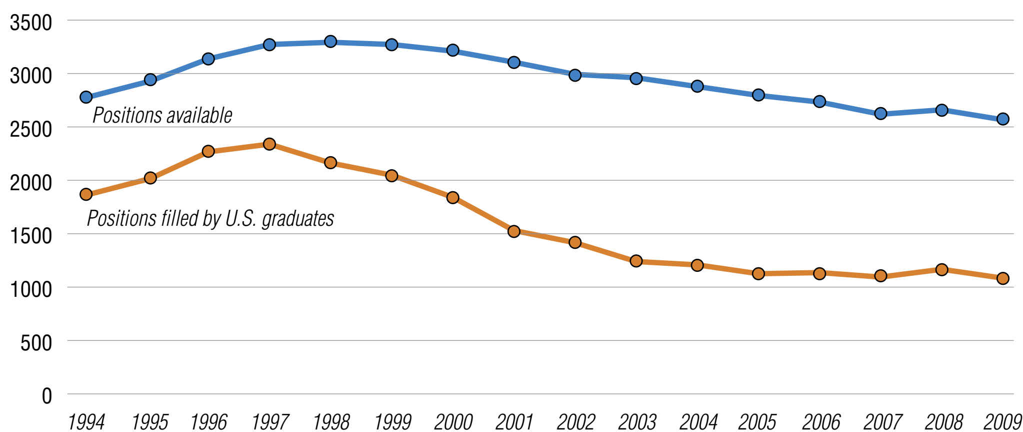
Although a majority of patients prefer to seek their initial care from a PCP rather than a specialist, there is growing dissatisfaction with the healthcare system, access to primary care and the quality of healthcare services received.[9] In a national evaluation of primary care and specialist physician performance for 30 medical conditions plus preventive care, patients received recommended care only 55 percent of the time.[10] And a growing number of patients report difficulties in scheduling timely appointments with their PCPs.

In turn, many PCPs are also growing frustrated with the type of care they provide, as they are faced with a payment structure that rewards acute, episodic and procedure-based care with insufficient reimbursement for coordination and proactive, planned care. They are typically overburdened by large numbers of short patient visits for acute problems without the organization and staff needed to proactively manage the health needs of a defined population of persons. One study estimates that a typical primary care physician would need 18 hours per day, using the current acute care visit model, to provide all recommended preventive and chronic care services to a typical panel.[11] Forty-one percent of the primary care workload (arranging referrals, patient communication, emotional support and encouragement, etc.) is not reimbursed by a procedure/examination-oriented fee-for-service methodology.[12] Furthermore, the median income for primary care physicians is about half that of specialists.[13]

The growing level of frustration and reimbursement discrepancy is contributing to a widening shortage of primary care providers in the United States. From 1999 to 2009, 46 percent fewer U.S. medical school graduates entered family practice residencies (see Figure 1).[14] And the estimated overall primary care physician shortage is expected to reach 35,000-44,000 by 2025.[15] Moreover, many nurses and nurse practitioners are electing to work at wealthier specialty practices, further straining the primary care system.

Other stakeholders are becoming increasingly aware of the pitfalls in the primary care system. U.S. employers, which provide health insurance to 60.9 percent of the nonelderly population, are increasingly dissatisfied with the cost and quality of healthcare services they purchase and view the shortcomings in the primary care system as key reasons why they cannot buy comprehensive care for their employees.[16] The cost of healthcare negatively

FIGURE 1.
Family medicine residency positions and number filled by U.S. medical school graduates.



Source: American Academy of Family Physicians, based on data from the National Resident Matching Program.

The cost of healthcare is increasingly pushed onto the patient through higher premium contributions, co-pays and deductibles to the point that even well-insured patients are financially threatened by serious illness.

impacts the global competitiveness of American companies. Poorly managed chronic disease affects productivity, due in part to the absence of strong primary care resources and coordination. The cost of healthcare is increasingly pushed onto the patient through higher premium contributions, co-pays and deductibles to the point that even well-insured patients are financially threatened by serious illness. Health expense debt has become a leading cause of personal bankruptcy.[17] The cost of healthcare compromises the ability of governments at all levels to provide service. Employers are also increasingly concerned about the effects of healthcare costs and are eliminating or reducing health benefits. And there is growing recognition that insured Americans might not have an established source of access to basic primary care services.[18]

"Primary care, the backbone of the nation's healthcare system, is at grave risk of collapse due to a dysfunctional financing and delivery system."
– American College of Physicians[19]

In summary, we believe the U.S. healthcare system is broken and unsustainable. Primary care, a critical piece of any healthcare system, is "the most broken." The purpose of this study is to analyze the patient-centered medical home, or the "medical home" – an enhanced care model that provides comprehensive and timely care with appropriate reimbursement, emphasizing the central role of primary care. In particular, we explore if and why various stakeholders should consider investment in PCMH initiatives. Based on knowledge gained from current PCMH efforts to date, we also offer considerations on how to effectively define and implement a medical home initiative. Observations and recommendations on this topic are particularly timely to help avoid unfettered expectations about its immediate potential – as the model is in its infancy in the United States.[20]

The medical home: What is it? What isn't it?

In broad terms, the PCMH provides care that is "accessible, continuous, comprehensive and coordinated and delivered in the context of family and community."[21] The American Academy of Pediatrics (AAP) introduced the medical home concept in 1967 to improve healthcare for children with special needs. In 2007, the American Academy of Family Physicians, the AAP, the American College of Physicians and the American Osteopathic Association issued principles defining their vision of a PCMH (see sidebar, Principles of PCMH).[22] This represents a fundamental change from how healthcare is being delivered today (see Figure 2).

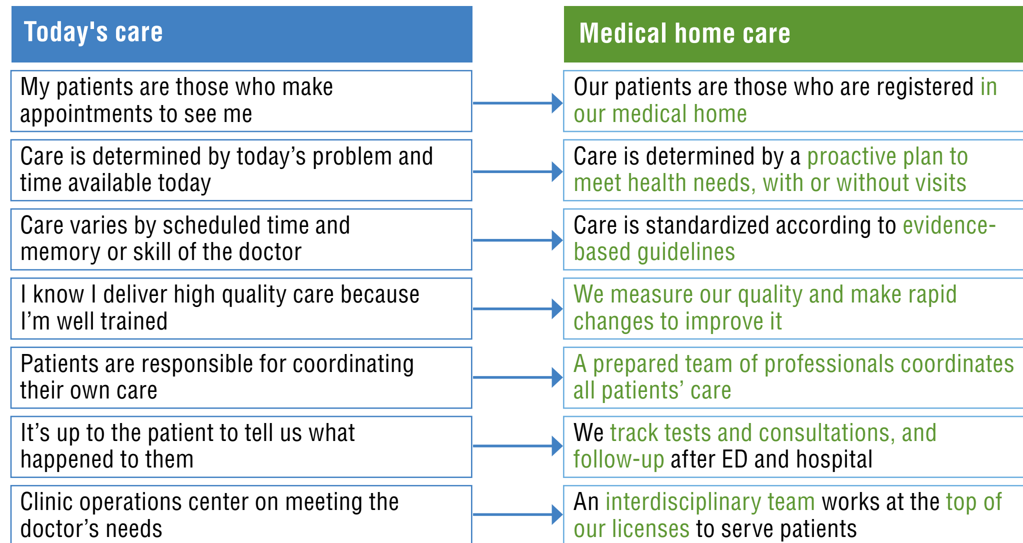


FIGURE 2.

The PCMH concept advocates enhanced access to comprehensive, coordinated, evidence-based, interdisciplinary care.

Today's care	Medical home care
My patients are those who make appointments to see me	Our patients are those who are registered in our medical home
Care is determined by today's problem and time available today	Care is determined by a proactive plan to meet health needs, with or without visits
Care varies by scheduled time and memory or skill of the doctor	Care is standardized according to evidence-based guidelines
I know I deliver high quality care because I'm well trained	We measure our quality and make rapid changes to improve it
Patients are responsible for coordinating their own care	A prepared team of professionals coordinates all patients' care
It's up to the patient to tell us what happened to them	We track tests and consultations, and follow-up after ED and hospital
Clinic operations center on meeting the doctor's needs	An interdisciplinary team works at the top of our licenses to serve patients

Source: Adapted with permission from F. Daniel Duffy, MD, MACP, Senior Associate Dean for Academics, University of Oklahoma School of Community Medicine.

Principles of PCMH

- Patient-centric/personal PCP
- PCP-directed medical team
- Whole person orientation
- Care is coordinated and integrated
- Emphasis on quality and safety
- Enhanced access
- Appropriate reimbursement.

Source: American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home. February 2007.

At the core of the medical home is the patient's personal, comprehensive, long-term relationship with the PCP. Patients who have a PCP will incur about a third less healthcare expenditure and will have 19 percent lower mortality.[23] They are 7 percent more likely to stop smoking and 12 percent less likely to be obese.[24] Yet today, 75 percent of recently surveyed hospitalized patients were unable to name a single doctor assigned to their care – and among the 25 percent who did respond, only 40 percent were correct.[25]

Another key component of the PCMH is the team approach to care. Under this model, the patient is at the center of the healthcare experience, supported by a team of healthcare professionals who are practicing at the "top of their licenses." The physician, nurse, nurse practitioner, patient educator, pharmacist, as well as other caregivers, have new roles to play in a team-based approach to care that incorporates a shared sense of responsibility for the patient's health. Rather than being just a resource for episodic care, the PCP-led care team assumes proactive prevention, wellness, and chronic illness care, becoming the patient's confidant, coordinator and advisor for all aspects of healthcare.

Quality and safety are hallmarks of the medical home. Where evidence-based guidelines are available and implemented,

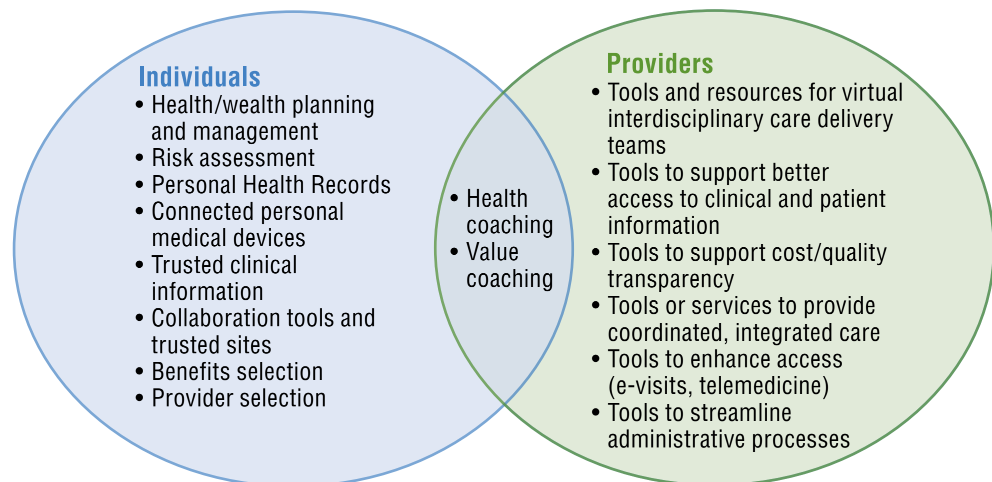
While PCMHs can be foundational to transformation, they are not a cure-all.

often with the support of IT tools, PCPs will be able to deliver both more personalized and safer care. It is also about enhanced access, such as flexible scheduling, group visits and use of multiple channels of communication, such as e-mail, phone, or a Web-based portal where patients can manage their personal health record, monitor their own issues or make appointments.

While PCMHs can be foundational to U.S. healthcare transformation, they are not a cure-all. Much needs to be done to support PCMHs in order to implement them and fully realize the benefits. First, PCPs must have better clinical information at the point of service. For example, they need better access to relevant patient information and clinical knowledge to more accurately and completely diagnose problems and deliver effective, evidence-based, personalized healthcare. Information technology help make needed clinical information and knowledge readily available.

Second, broad support and changes are needed from other stakeholders. Consumers must be willing to take more responsibility for their health and healthcare, including changing unhealthy behaviors with appropriate help.[26] Care delivered by the medical home team must be aligned, integrated and coordinated with care delivered by other caregivers, such as specialists, in other venues such as ambulatory surgery centers or hospitals. To encourage clinicians to collaborate and operate effectively, policy or legislative changes will be needed in areas such as insurance coverage, reimbursement (such as payment for inter-specialist communication needed for care coordination), and roles and responsibilities of caregivers. Additionally, changes in education and training for clinicians will be needed to better cover critical topics such as team-based care, use of IT for access to information and communication, quality improvement and how to incorporate evidence into practice in non-hospital settings. Finally, the underlying infrastructure to support the PCMH model, such as IT and other services, will need to be much more robust (see Figure 3).

FIGURE 3.
Multiple entities, such as care delivery organizations or health plans, could help support the PCMH.



Source: IBM Global Business Services and IBM Institute for Business Value.

We have learned valuable lessons from previous approaches to address healthcare cost, quality and access problems. However, none of these approaches was as comprehensive as PCMH (see Figure 4). Today, these approaches continue to evolve and sometimes cause confusion by being equated with PCMHs. For example, "disease management" frequently operates independently from, rather than integrated with, the primary care practice. The Chronic Care Model, which has strong theoretical validity, originally focused on chronic patients, but is now being adapted to address prevention and other issues, such as access and reimbursement.[27]

Pay-for-performance (P4P) efforts have not necessarily been more successful in improving quality of care compared to non-P4P practices.[28] Nor does P4P restructure or emphasize changes in primary care. Some experts are concerned that P4P may be toxic – that providers will chase the improvement in measures that provide more money, ignoring or de-emphasizing important improvement activities that do not enhance income.[29]

Non-integrated managed care, when applied as a cost-controlling measure, placed the primary care physician in the role of a "gatekeeper" to control access to more expensive specialty care." Financial incentives

FIGURE 4.
While other approaches have addressed some PCMH Principles, none has addressed them all.

Factor/Principle	PCMH	Non-integrated managed care*	Pay for performance	Disease management	Chronic care model
Purpose/focus	Facilitate partnership between PCP and patient	Ideally: cost, quality; Actually: control utilization	Meet operational goals with financial incentives	Meet specific management targets for chronic disease	Org. framework for chronic care mgt and practice improvement
Patient centric/ personal PCP	Yes	No	No	Maybe, often led by actors independent of primary care	Yes, for chronic illness
PCP directed medical "team"	Yes	No	No	No	Yes
Whole person orientation	Yes	No	No	No	Yes
Care is coordinated and/ or integrated	Yes	No incentive for coordination	No incentive for coordination	Maybe	Yes
Emphasis on quality and safety	Yes, evidence-based and best practice; improved outcomes rewarded	No, reduced utilization rewarded	Indirectly; process targets rather than outcome ones	Yes, particularly for diseases	Yes, for chronic illnesses
Enhanced access	Yes	No, reduced access	No	Maybe	No
Appropriate reimbursement	Yes for PCPs, unclear for others	Potential conflict in motivation	No, still volume driven	Partially, if evidence-base used	No

Alignment with PCMH principle: *Aligned* *Mixed alignment* *Not aligned*

**Note: By "non-integrated managed care," we refer to the form of managed care practiced in the 1980s and early 1990s that emphasized a "gatekeeper model" with cost controls, rather than a more patient-centered focus on primary care. Most surviving forms of managed care are more integrated and incorporate more elements of the PCMH model.*
Source: IBM Global Business Services and IBM Institute for Business Value.

Healthcare stakeholders have a unique opportunity to either engage in the healthcare transformation initiatives, including those based on the medical home, or risk being left behind.

encouraged PCPs (or a "distant" decision maker with limited knowledge of the patient's personal situation and little-to-no focus on quality or satisfaction metrics) to underutilize services. As a result, patients perceived managed care as restricting access. As James Robinson notes in the *Journal of the American Medical Association*, "The strategy of giving with one hand while taking away with the other, of offering consumers comprehensive benefits while restricting access through utilization review, obfuscates the workings of the system, undermines trust between patients and PCPs, and has infuriated everyone involved."[30]

PCMH, in contrast, incorporates the full range of care, encompassing prevention, wellness, acute, chronic and long-term care within a framework of strengthened primary care and provides coordination and collaboration to provide appropriate care. PCMH aligns reimbursement and practice incentives to support the provider-patient relationship. Decisions will be made using best evidence of appropriate and cost-effective care. Access will be enhanced rather than restricted, and quality and satisfaction will be measured and reported.

Why should PCMH be done now?

A significant transformation of the U.S. healthcare system appears imminent. The current administration has stated it will press for "comprehensive" healthcare reform legislation in 2009.[31] Included in his 2010 budget proposal, President Barack Obama has proposed the largest investment ever in preventive care.[32]

Other governmental initiatives are also underway. In the Tax Relief and Healthcare Act of 2006 and the Medicare Improvements for Patients and Providers Act of 2008, Congress directed the Centers for Medicare and Medicaid Services (CMS) to "redesign the healthcare delivery system to provide targeted, accessible, continuous and coordinated, family-centered care to high-need populations."[33] In January 2010, CMS will launch a three-year demonstration program that will operate in rural, urban and underserved areas in up to eight states. The American Recovery and Reinvestment Act of 2009 emphasizes health IT and primary care, among other healthcare efforts.[34]

Healthcare stakeholders have a unique opportunity to either engage in the healthcare transformation initiatives, including those based on the medical home, or risk being left behind. As American Academy of Family Physicians President Ted Epperly, MD, said: "[AAFP members] must step forward now in everything we do to try to be part of the solution in transforming our healthcare system."[35] And Karen Ignagni, President and CEO of America's Health Insurance Plans, made a similar call: "All stakeholders must rise to the challenge the President has put forth to develop a uniquely American solution that gets everyone covered, restrains healthcare cost growth and aligns patient care with medical best practices. [Health plans] are committed to doing our share to achieve this goal and will work closely with other stakeholders."[36] In short, there is a growing consensus that transformation is needed and that the PCMH offers potential benefits to key healthcare stakeholders (see Figure 5).

FIGURE 5.
The medical home offers potential benefits to stakeholders across the healthcare ecosystem.

Stakeholder	Potential benefits of the medical home
Patient/family	• Help from a trusted resource to navigate healthcare system • Empowered to make better-informed healthcare decisions • Receive safe, effective care with compassion • Achieve healthier outcomes collaboratively with extended care delivery team • Improved relationship with PCP, health plan.
Primary care provider	• Redefine patient relationship to deliver more comprehensive, coordinated care • Fair compensation for PCMH services, as well as rewards for improved clinical outcomes • Through a shift in incentives, able to more effectively provide wellness and preventative care • Better supported to deliver quality care to patients.
Specialist	• Receive higher quality referrals, with more complete documentation • Improved focus on area of expertise without having to assume management of patient's primary care • Opportunity to offset income losses by participating in financial incentives for coordination and quality (for example, telephone consultations).
Nurse	• Develop better relationship with patients • More involvement with patient care and support (for example, patient education, behavioral change, preventive care, proactive care planning).
Pharmacist	• Participate fully in team-based care (for example, help determine medication and reasonable formularies).
Social worker	• More integrated role to address key patient needs (for example, Medicaid).
Hospital	• Serve PCMH patients whose conditions may not be as severe as non-PCMH patients • Potentially reduce admissions from patients who cannot pay • Potentially reduce number of re-admissions, for which there may be no or reduced payment.
Health plan	• Improved member and employer satisfaction • Expend healthcare resources with less waste and greater effectiveness though coordinated, evidence-based care.
Employer	• Purchase healthcare based on value and potentially see medical cost savings • Maintaining more present and productive workforce, in part, through improved wellness and prevention.
Pharmaceuticals and other life sciences	• Improved appropriateness of and compliance with therapeutics • Enhanced pharmacovigilance of products, post clinical trials.
Government	• Potential to improve care quality, reduce wasteful healthcare expenditures • Address frustration with the current uncoordinated and impersonal system.
Communities and society	• Potential for a healthier, more productive citizenry • Potential to allocate dollars so that they have greater return.

Source: IBM Global Business Services and IBM Institute for Business Value.

Even though changes in the healthcare system are difficult to implement, PCMH is an initiative that can be successfully implemented now.

"If the U.S. is serious about closing the quality chasm, it will need a strong primary care system, which requires fundamentally reforming provider payment, encouraging all patients to enroll in a patient-centered medical home, and supporting physician practices that serve as medical homes with the information technology and technical assistance for redesigning care processes."

– Karen Davis, President, Commonwealth Fund[37]

Why can PCMH be done now?

Despite the difficulties in making significant changes to the healthcare system, the PCMH model can be implemented now. Pilots have demonstrated success in key areas such as improved quality, greater patient compliance and more effective use of healthcare services, such as reductions in unnecessary or avoidable hospitalizations and use of emergency rooms for primary care. And some programs report cost savings. For example, the Voice of Detroit Initiative (VODI) was medically and financially successful.[38] From 1999-2004, it enrolled 25,000 uninsured individuals in Detroit.[39] Patients were enrolled from primary care sites, mainly emergency departments (EDs).[40] VODI reduced ED use by over 60 percent and costs by 42 percent (from $51.2 million in uncompensated care costs to $29.7 million).[41]

Community Care of North Carolina (CCNC) has also been successful. CCNC was formed to reduce healthcare costs and increase access and quality of the state's under- and uninsured population. It includes case managers to target high-cost, high-risk enrollees. In January 2009, CCNC managed the care of 874,000 Medicaid enrollees and 95,000 children on NC Health Choice – a free or reduced-cost health insurance program for uninsured children from birth through age 18.[42] Both external and internal evaluations of the program have documented positive results. A recent study reported that CCNC produced cost savings of at least $160 million per year.[43] And internal analyses have also shown improvements. An asthma program reduced hospital admission rates by 40 percent and a diabetes program improved quality of care by 15 percent.[44]

Moreover, this medical home-type approach is working outside of the United States in countries such as Denmark, Ireland and Spain, which have had programs in place longer.

Additionally, there is growing and broad interest in revamping primary care and the medical home model in the United States. PCPs, hospitals, health plans, large employers, consumer groups, patient quality organizations, labor unions and other groups have formed the Patient-Centered Primary Care Collaborative to advance primary care and the medical home model for the 100 million people they represent.[45] And many of these organizations have directly invested in individual medical home initiatives. In addition, 44 states

and the District of Columbia have passed or introduced at least 330 laws to define or demonstrate the medical home concept.[46] Minnesota, for example, has passed legislation requiring all health plans to have medical home offerings by 2011.

Further, the financial incentives now exist for PCPs to transform their practices. New payment mechanisms are being used to compensate primary care providers for important activities, such as those related to chronic disease management and monitoring, that were not previously reimbursable. Also, the recently enacted American Recovery and Reinvestment Act will pay physicians up to $44,000 and more for meaningful use of an electronic health record (EHR).[47]

Finally, the technology is now "good enough" to get initiatives started and, done correctly, will likely scale to support larger implementations. For example, disease registries, portals, e-prescribing capabilities and EHRs are robust enough today to get started.

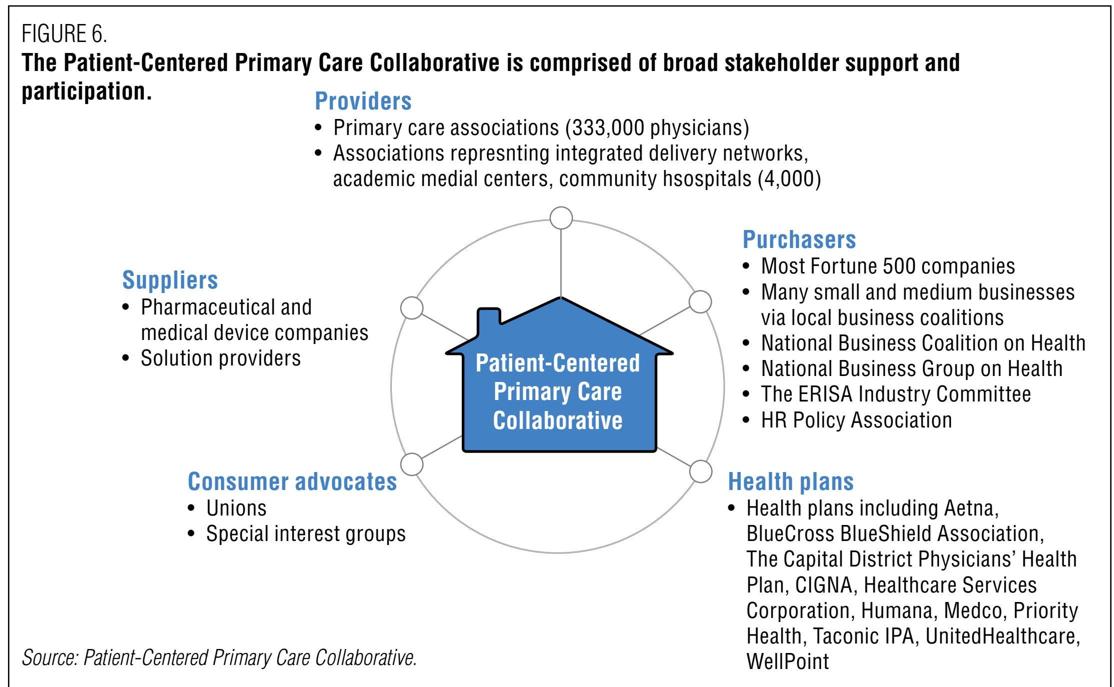
In short, with growing support from key stakeholders, examples of success from which to learn, and adequate financial incentives for PCPs to transform practices, the PCMH can and should be done now.

How should PCMH be done?

Keys to the success of medical home initiatives are strong leadership and a clear vision. These must be supported by strong guiding principles and standards, as well as relevant, realistic, and flexible strategic plans and processes to help provide effective direction, structure and operations. Such strategic plans and processes have, at times in the past, been lacking. And as one industry leader mentioned, "if you implement the medical home wrong, you can make it more difficult to transform healthcare system and even make the practice worse."[48]

Leaders also observed that PCPs have played a prominent role where PCMH has worked. That is, PCPs need to decide that the medical home is how they want to practice medicine.

FIGURE 6.
The Patient-Centered Primary Care Collaborative is comprised of broad stakeholder support and participation.



Source: Patient-Centered Primary Care Collaborative.

Today, there is simultaneous underutilization of proven preventive and protective care with overutilization of expensive diagnostics and interventions.

Then, other stakeholders, including local hospital systems, physician associations, local employers and business coalitions, must also come together in support of the PCMH. PCPs must commit to making it "their" practice and affecting the necessary transformation. It rarely works when non-PCP stakeholders are the initiators.

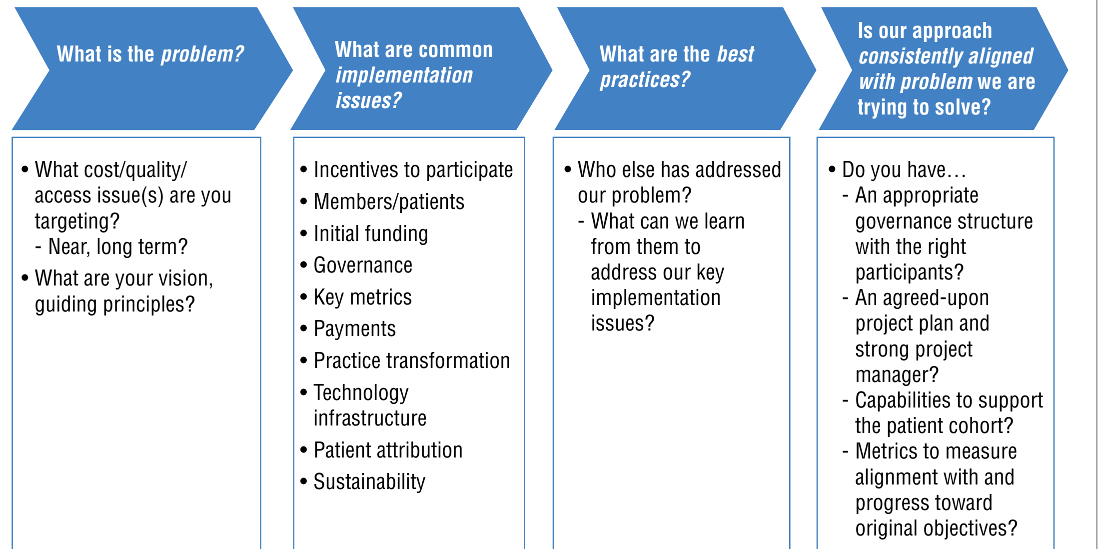
The National Committee for Quality Assurance (NCQA) Standards and Guidelines for Physician Practice Connections – Patient-Centered Medical Home (PPC-PCMH) was frequently used as a guide for PCMH discussions and planning. While not perfect and subject to further revision, many initiatives have decided that the PPC-PCMH is "good enough to get us going." The NCQA is reviewing criticism of, and suggestions for, its guidelines, as well as results of PCMH pilots. The organization plans to issue revisions in 2010.[49]

In this section, we offer considerations to current and future medical home initiatives, to help frame discussions and provide guidance in utilizing current best practices when implementing a medical home, based on the framework presented in Figure 7.

What is the problem to be addressed by PCMH implementation?

The U.S. healthcare system is ripe with opportunities to improve quality, improve access or reduce costs. For example, there is underutilization of proven preventive and proactive care. This is typically caused by lack of access to primary care for many patients and, in some cases, lack of incentives for, or awareness of, best practices on the part of some physicians. Moreover, failure to use less costly interviewing and physical examination and relying of imaging and laboratory testing results in overutilization of expensive diagnostics and

FIGURE 7:
When implementing a PCMH initiative, the problem at hand helps determine the best practices for common implementation issues.



Source: IBM Global Business Services and IBM Institute for Business Value.

interventions. The former produces poor outcomes and high cost associated with frequent and avoidable specialist referrals, ED visits and hospitalizations. The latter results in high cost from unnecessary, redundant or, even, harmful interventions that add no value to healthcare outcomes. Both groups can benefit from the PCMH concept.

Deciding what problem to solve is sometimes obvious, depending on which group initiates the discussion. For example, a dominant payer may want to create an initiative to address a specific health-related problem. If the potential problems to be addressed are numerous, then discussions to prioritize them must include key PCPs, health plans and purchasers (e.g. employers). Err on the side of being inclusive rather than exclusive. Sample evaluation questions include:

- Can we establish meaningful, measurable goals for the implementation?
- Can the potential solution be implemented in a reasonable amount of time, given likely resources available?
- Is the implementation likely to accomplish the meaningful goals and achieve key metrics for success?
- Is the implementation scalable? In other words, can the solution realistically be extended beyond those participating in the initial roll-out?
- Is the implementation sustainable after the pilot project ends?

The process of identifying the exact problem to be addressed and scope of the implementation will likely be iterative and must address several implementation issues.

What are common implementation issues and associated best practices?

All medical homes initiatives face common implementation issues, despite differences in approach and focus. Our discussion will examine the most common issues for which best practices exist in order to help guide new or existing medical home initiatives.

Incentives to participate

If the environment seems like a “burning platform,” or legislative mandate exists to implement the PCMH model, the incentives are clear. Frequently, that is not the case, so key participants such as PCPs, care delivery organizations, public and private health insurers, employers and consumers must have adequate incentive to participate – particularly in public and private partnerships – in driving major change to the broken healthcare system.

As described in Figure 5 (see page 10), a number of potential benefits exist for all key stakeholders. But these may come at a cost – these key stakeholders may undergo difficult changes and may have to make significant compromises for “the greater good.” Even so, these changes and compromises may be the best alternative at this point. More experts and decision-makers – including President Obama – are acknowledging that the current

Successful PCMH implementation requires both key participants that want to collaboratively shape the future of medical care and naysayers to make sure that the key concerns are voiced and addressed early in the initiative.

U.S. healthcare system is unsustainable and that *status quo* is not an option. Also, since the healthcare system is badly broken, successful transformation will likely significantly impact all stakeholders.

In summary, potential key participants have three choices: they can participate and help collaboratively shape the future; they can participate to "protect their turf" so that the U.S. healthcare system continues down an unsustainable path, likely bringing changes that no one will want; or they can decide not to participate and let the future be shaped for them by others. A successful implementation must include enough participants that want to collaboratively shape the future. But, as well, it must also include "turf protectors" and naysayers to make sure that key concerns are voiced and addressed early in the initiative.

Members/patients

The patient-centered medical home serves patients (the sick or those with complaints) and members (those who seek participation in a service that provides proactive, collaborative and coordinated care). Decisions about which members or patients to include in the initial implementation are driven in large part by the key stakeholders participating – which PCPs, which payers or which major employers – and the ultimate goals of the initial implementation. Early initiatives have centered on one of three patient (member) populations.

First, initiatives may focus on underserved populations (for example, Medicaid or the uninsured) who are typically high utilizers of uncoordinated, reactive and expensive services, such as emergency or inpatient care. Thus, they offer a large potential opportunity for quality improvements and cost reductions. The challenge is that this patient population could be difficult to manage and may have to rely on social workers to a greater extent than is typically available in today's primary care.

Second, initiatives may focus on patients with multiple chronic conditions as these patients represent significant opportunities for quality improvements or cost reduction through proactive, participatory care. If these potential benefits are realized, then challenges may occur in sustaining the level of benefits when scaling to larger populations.

Patients in vertically integrated financing and delivery systems represent a third population for piloting. For example, Geisinger Health System, which has the advantage of being both provider and payer, included a broader base of patients, most of whom were covered by the Geisinger plan for both payment and care.[50] Even so, most of the initial reported improvements in outcomes and costs resulted from patients with chronic diseases.

The focus on chronic or high-utilization patients is not surprising. Most of the current PCMH projects are relatively new, so insufficient time has elapsed to demonstrate benefit in asymptomatic individuals other than in the provision of immunizations or appropriate assessments. The cost-effectiveness of secondary prevention measures, such as screenings, counseling for weight loss or for smoking cessation, is less clear. There is a point of diminishing return in performing widespread screenings for healthy or asymptomatic people. But where that point is remains unclear. Even the evidence of cost-effectiveness or the ability to reduce costs for chronic disease management is inconclusive; studies frequently haven't included costs, and chronic disease management covers a broad range of activities.

As a result, some experts voice concern that PCMH may not be scalable to widespread implementation. However, PCMH has shown its value in smaller countries, such as Denmark, that have instituted PCMH on a national basis. It is reasonable that the ultimate goal of PCMH should be widespread implementation. If it is limited to only Medicaid/uninsured and/or chronic disease patients, at least three adverse effects can occur:

1. A large fraction of patients will be denied the advantages of PCMH. The potential benefit of involving patients before they have established chronic disease and disability will be lost.
2. The true value of prevention may never be known.
3. The benefit of practice transformation will be blunted.
   a) Practices may be confined to one group or type of patient.
   b) Practices may be divided – part PCMH, part acute-care-based, leading to unnecessary complication and confusion.
   c) The costs of practice transformation (for example, care coordinators, 24-hour access, etc.) will not be evenly distributed. It will be reminiscent of the conflicts between HMO patients and indemnity patients in the early managed-care environment.

Because of the ethical and operational challenges of having a divided practice – with part of the patients under the medical home and part not – most provider practices participating in medical home initiatives that we surveyed transform their practices for all patients, not just for patients formally participating in the initiative.

Initial funding

In today's increasingly unaffordable healthcare system, funding is always an issue, and creating a medical home or a PCMH initiative requires substantial investment. Properly implemented, all stakeholders will benefit. The major payers – governments, insurers and employers – could see consequential reductions in expenditures or improvements in value over time. Under some circumstances, hospitals or healthcare systems can benefit both by providing improved care and saving money. For example, hospitals that treat Medicaid or the uninsured may benefit financially from the reduced utilization associated with medical home by avoiding unnecessary unreimbursed or poorly reimbursed care. Organizations that are both a payer and provider should see financial benefits. Thus, all these groups have incentives to provide initial funding for creating medical homes.

In fact, members of each of these groups have funded the development of PCMH programs. CMS provided initial funding for medical homes and provides additional funds for initiatives. North Carolina has developed a medical home for approximately 874,000 Medicaid patients and 95,000 children on NC Health Choice.[51] Pennsylvania has developed a state program oriented to chronic care patients. Among many others, the Blues in Michigan, Horizon in New Jersey and all the health plans in Vermont have funded medical home projects. IBM, as an example of one employer's support, provides an additional $12 per member per month to fund the care management services of a medical home.[52] Geisinger Health System implemented and funded a patient-centered medical home with preliminary results showing a 7 percent reduction in costs and a 20 percent reduction in all-cause hospital admissions.[53]

The governance structure should be inclusive of all relevant stakeholders across the public and private sectors.

Some pharmaceutical firms also support medical home initiatives as the PCMH model may result in improved appropriateness of and long-term compliance with medicines by persons with chronic illness, for example. The model also offers promises for enhanced prevention, so there are opportunities for improved use of vaccines.

Governance

A sound governance structure and process are needed to align and sustain the medical home initiative's strategies and objectives. The goals and approach should be documented in a charter, and the process of transformation should enable collective learning across participating stakeholders. Without this, as one healthcare leader noted, the "messages get blurred because everyone needs to understand what we're doing and why?"[54]

This structure should be inclusive of all relevant stakeholders across the public and private sectors, including PCPs, physician organizations or affiliations, consumers, major employers, health plans and key government representatives, such as those from Medicaid and the state insurance commission. Such widespread participation offers great advantages (greater buy-in, for example) and challenges (delays in reaching consensus) – but will require flexibility, as expectations and standards will likely evolve over time. Additionally, attorneys may need to attend governance meetings to help discussions stay within the bounds of prevailing laws, or guide actions for changing or requesting exceptions to current regulations. It is also important to include both zealots and the naysayers to allow all perspectives to be considered.

Medical home governance should focus on strategic alignment of goals and outcomes ("What is the problem we are trying to address?", see page 13); value delivery ("How will each stakeholder contribute to deliver the benefits promised at the beginning of a project or investment?"); resource management (How will we manage our resources and ourselves more efficiently to meet our goals?"); risk management ("How will we measure, accept and manage risk?"); and key metrics ("What are the qualitative and quantitative measures needed to assess our performance towards reaching our goals?").

Key metrics

Measurement and evaluation processes are critical because of their effects on the rewards for information sharing, the motivation for risk taking, incentives for desired behaviors, the resulting organizational learning and other factors. Educating the medical home stakeholders on the metrics and why they may vary across functions is crucial for maintaining morale and cooperation. To date, medical home efforts have used a combination of the following types of key metrics:

- *Costs:* Targeted cost metrics are impacted by things such as the types of patients, the number of patients and the duration of the PCMH initiative.
- *Process of care:* Appropriate screening for traditional conditions such as breast, colorectal, and prostate cancers, for example. Some have aligned these metrics with NCQA accreditation measures, thereby incenting health plans to participate and to offer pay-for-for-performance reimbursement. Other groups have also focused on targeted conditions that are more endemic to their population.

- *Outcomes of care:* Measurements of the change in health for a patient or a cohort. Since there is no definitive health index, outcome measures have focused on individual conditions and patient compliance (for example, tracking change in glycosylated hemoglobin (HbA1c) levels in diabetics or blood pressure for hypertension) or utilization (for example, hospital admissions or emergency department visits).
- *Service:* Service metrics have focused on operational aspects, such as the time to answer the telephone and the wait until the next appointment.
- *Patient and caregiver satisfaction:* A key way a medical home can demonstrate its commitment to quality and in improvements is to assess the satisfaction of its patients and the clinicians providing care. There are numerous existing surveys to choose from, such as Consumer Assessment of Healthcare Providers and Systems (CAHPS), which enables groups to compare their results with national ones.
- *Coordination of care:* These metrics are more innovative, but more difficult, since they require a sophisticated tracking system. With its consultation and referral tracking system, the University of Oklahoma is developing a set of measures that accounts for the rapidity of referrals and getting the referral, from initiation to completion, and includes quality and process measures.[55] So "what proportion of patients with certain kinds of problems is seen by the specialist and was handled in this e-mail exchange?" is an example of a novel measure, tied to the ability to track that kind of information.

Reimbursement

Medical homes initiatives are experimenting with different payment structures, as groups find the right balance for stakeholders and program objectives. Today, initiatives use combinations of four basic reimbursement elements: fee-for-service payments with new service codes (for example, e-visits); care management fees; bonus payments for meeting certain criteria (for example, NCQA certification); and quality or performance incentives.[56] By far the most common approach is a traditional fee-for-service payment and additional payment for meeting certain quality metrics.

However, concerns exist about some of these proposals. For example, some argue that retaining volume-based elements risks inhibiting the necessary transformation to proactive, preventive, and non-visit coordination of care delivery and the practice. So, while there is no perfect model, a blended model, such as the three-part payment methodology recommended by the Patient-Centered Primary Care Collaborative – which includes components for services rendered, care management and performance – may be the best compromise.[57]

In Colorado, for example, the Colorado Multi-Stakeholder Pilot has implemented the three-tier reimbursement model of fee-for-service, per-patient-per-month and pay-for-performance that aligns with the Joint Principles and the PCPCC recommendations.[58] This model mitigates the unintended consequences present when implementation is in a siloed fashion. Nevertheless, experimentation is key and should be directed by

PCPs should view the medical home as a practice transformation that affects all of their patients.

a set of guiding principles, such as the ones provided by the AAFP (see sidebar, AAFP's Recommendations for Medical Home Payment).

AAFP's Recommendations for Medical Home Payment

According to the AAFP, the medical home payment structure should:

- Reflect the value of PCP and non-PCP staff work that falls outside of the face-to-face visit associated with patient-centered care management
- Pay for services associated with coordination of care both within a given practice and between consultants, ancillary providers and community resources
- Support adoption and use of health information technology for quality improvement
- Support provision of enhanced communication access, such as secure e-mail and telephone consultations
- Recognize the value of PCP work associated with remote monitoring of clinical data using technology
- Allow for separate fee-for-service payments for face-to-face visits, but payments for care-management services that fall outside of the face-to-face visit, as described above, should not result in a reduction in payments for face-to-face visits
- Recognize case mix differences in the patient population being treated within the practice
- Allow PCPs to share in savings from reduced hospitalizations associated with PCP-guided care management in the office setting
- Allow for additional payments for achieving measurable and continuous quality improvements.

Practice transformation

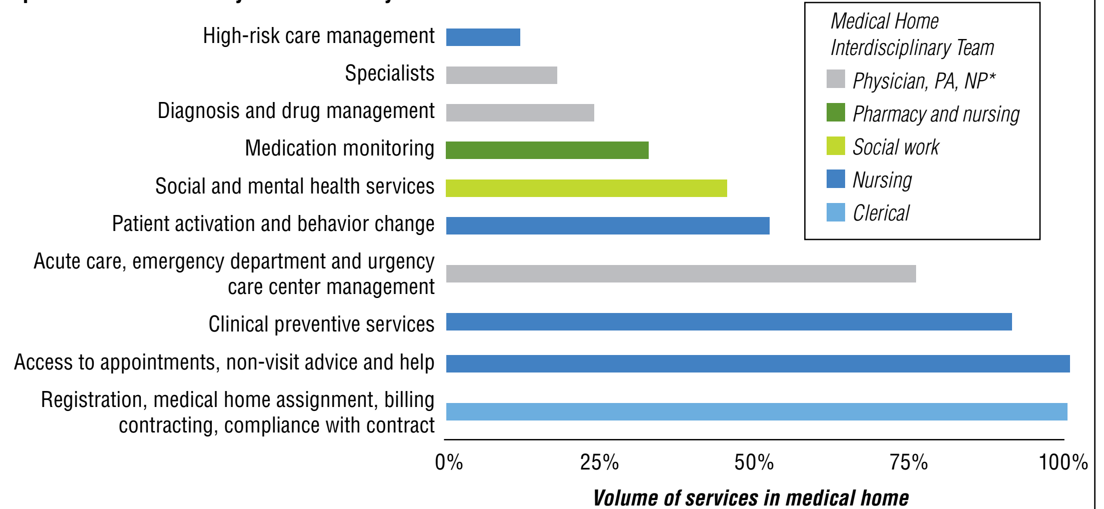
PCPs that participate in the medical home should view it as a transformation of their practice that affects all of their patients, not simply those active in the medical home initiative. If implemented only for a few patients, it will require old and new processes to co-exist, creating operational complexities for the practices.

Successful transformations require a focused, tightly coupled approach that incorporates systematic change management, including the redesign of key processes and capabilities across the practice, as well as changes in roles and responsibilities. This helps the medical home team to achieve the desired goals of providing more coordinated, integrated and ongoing care, and represents an overall change in the culture or value system of the practice.

Figure 8 gives an example of the possible impact of this transformation. The horizontal axis represents the percentage of patients in this hypothetical practice needing the various services listed. The bars are color-coded to represent which medical home team member could be assigned primary responsibility for that service. Obviously, these assignments could vary from practice to practice depending on factors such as the demographics of the medical home population and the numbers and types of resources and skill sets available. Additionally, resources outside the practice would be available and should be used appropriately. Also, since this would be a PCP-led interdisciplinary team, other team members – including the PCP – would likely assist or support the person(s) with primary responsi-

FIGURE 8.

All team members collaboratively contribute at the "top of their licenses," helping the overall practice operate more efficiently and effectively.



Source: Adapted with permission from F. Daniel Duffy, MD, MACP, Senior Associate Dean for Academics, University of Oklahoma School of Community Medicine.

**Note: PA = physician assistant, NP = nurse practitioner.*

bility, as needed and appropriate. For example, with behavior changes, a PCP might initially counsel the patient. Then the patient, PCP, nurse and social worker might collaborate to develop a tailored program, with ongoing monitoring provided primarily by a nurse with an expanded role. Similarly, a physician assistant could work with appropriate PCP support and guidance to provide certain diagnostic or therapeutic services.

The general consensus from our research was that cultural change is the most difficult, yet most important consideration when transforming a practice. And as one leader noted, in addition to organizational change capabilities, two additional important skill sets focused on specializations work flow processes and health information technology. In the case of the former, someone needs to help the organization create order out of the "chaos." With the latter, the focus should be on effective deployment and tool utilization.

"I've heard too many too many stories of practices buying electronic medical record systems that wind up making the practice worse. What's needed is change management and leadership training before implementing systems."

– Terry McGeeney MD, MBA, President and CEO, TransforMED[59]

IT capabilities are essential to manage the information-intensive nature of high-quality, proactive, coordinated, evidence-based care.

Technology infrastructure

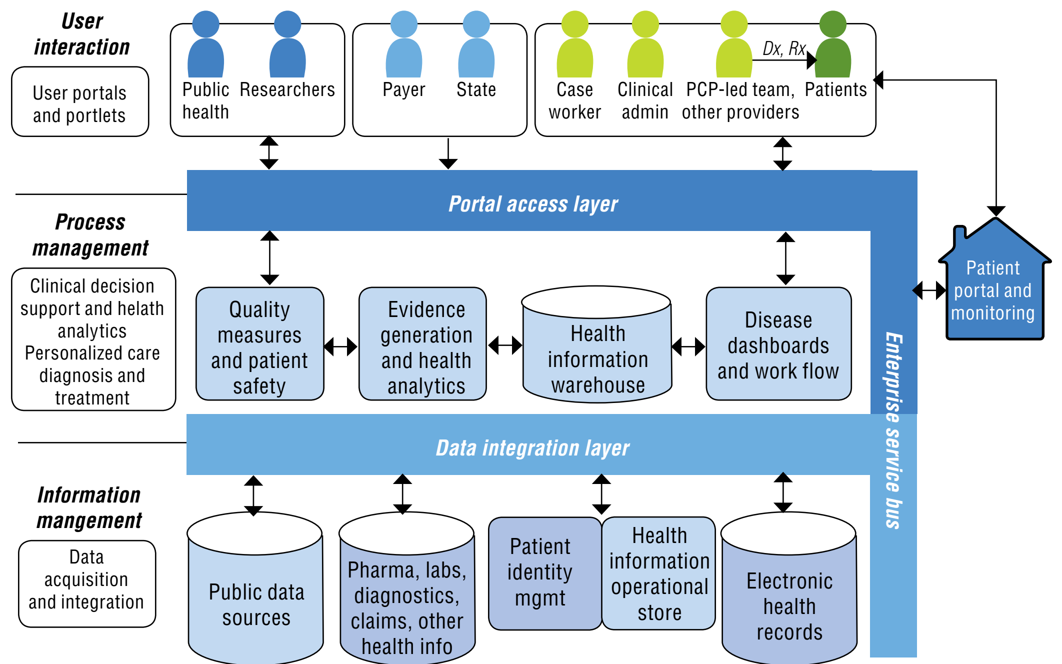
One of the factors preventing comprehensive, coordinated, integrated, evidence-based, high-quality care is the lack of a sufficiently robust and integrated information technology infrastructure. There are many sources of relevant health information for each patient, and each is stored where it is collected and shared with great difficulty. For example, patients with multiple chronic diseases may see 14 or more different physicians, have 38 physician visits and may receive 50 prescriptions in a year.[60] With multiple laboratory tests, imaging studies, consultations reports, hospital reports and other information for a single patient, the amount of data can be overwhelming.

Ideally, medical homes should leverage fully functioning, secure interoperable EHRs, with robust decision support capabilities, connected to their own practice management system and other information sources (PCP's EHRs and consumer personal health records) through robust health information exchanges (HIEs). Unfortunately, to date, many PCP practices participating in medical home initiatives may not have EHR systems with robust functionality and interoperability. Also, information exchanges are still in early stages in most parts of the country, and consumer personal health records (PHRs) are not widely used. Fortunately, neither fully functioning EHRs and PHRs, nor a robust HIE, is required to begin a medical home implementation. Practices must typically be able to track population outcomes and provide proactive outreach to individuals who need services (these are key criteria for NCQA PPC-PCMH Level 1 status).[61] It is possible that a practice could use a well-designed, stand-alone preventive care or chronic disease registry to pass initial requirements, but it is likely it would eventually find it difficult to reach the highest functionality of the medical home model without an EHR to support its efforts.

In addition to registries, practices may need other IT-related capabilities, such as e-prescribing, quality reporting, patient portals to facilitate e-visits, online appoint scheduling and portals to facilitate provider-to-provider communication for care coordination. Again, over time these various pieces will likely need to be integrated. Also, a more robust infrastructure for information exchange among key participants to facilitate care delivery and coordination may be required. As a result, it is important to have a standards-based technology infrastructure that is adequate to begin an initiative, but which can scale to support larger implementations when required.

Figure 9 shows our concept of an appropriate information infrastructure to support PCMHs. It displays some of the flow, integration, feedback and access required for a robust information resource. Each participant, including the patient, has access to information appropriate to his or her role through a portal. The portal must be designed to allow the participant to access only necessary information and to carry out assigned tasks. Again, these capabilities can be developed over time and do not need to be in place to start most PCMH initiatives.

FIGURE 9.
Sample information infrastructure to support the PCMH.



Source: IBM Healthcare and Life Sciences.

Patient attribution

A mechanism needs to be in place to easily map each patient to a personal PCP and a health plan. Patients need to know their medical home PCPs and what services will be provided. PCPs similarly must know the list of patients for whom they have a PCMH relationship. Medical homes may want to give the patients an opportunity to select their PCP (important for buy in), or even decide the level of participation in the medical home initiative they desire. And payers, typically health plans, need an up-to-date patient-PCP list to pay/reimburse the correct PCP for providing medical home services and to collect quality and utilization data for reporting and evaluation purposes.

The approach to matching patient and PCP accurately and seamlessly is a challenge and explains one reason for our current non-proactive approach to care. For example, what happens when patients are not required to declare a PCP? How can a single PCP practice be mapped across multiple health plans, without unnecessary burdens on the practice? How do you make sure the PCP has a large enough panel to make involvement worthwhile, yet confirm a balanced risk, thereby avoiding the risk of "cherry picking" patients?

Common patient attribution approaches include the identification and assignment of patients by health plans through claims review,

Sustainability must be considered from the start.

the identification of patients by the PCP (or vice versa) or a hybrid scheme combining elements of each. The claims-based approach is commonly used to assign patients to a practice. While this is operationally easy, it is also susceptible to data quality issues and the realities of patient behavior (on average, for example, Medicare beneficiaries see about two PCPs and five specialists across four different practices per year, yet 15 percent of all Medicare beneficiaries never visit a PCP, only specialists).[62]

Another approach is to have PCPs select their patients, which is, again, operationally easy. However, it raises a possible concern about cherry picking or potential conflicts, as patients may have been selected by other providers or the patient has selected a different PCP.

A third approach is having the patient select the PCP, which assures patient involvement and creates minimal operational burdens to the provider or health plan. However, it excludes the PCPs from the decision, who may have a different perspective on which patients should be a part of their medical home panel.

As with other implementation issues, experimentation is important, specifically finding the right balance across these three approaches to find the most suitable one. In the case of patients who have not recently seen a PCP, for example, the health plan could send the PCP office a list of patients to recruit for their medical home. Or the health plan could send the patient a list of local medical homes from which to select one to join. And in the case of multi-payer initiatives, health plans could combine their administrative data to better enable patient attribution, as well as to create a single report card that is more meaningful to PCPs.

Sustainability

Even though the principles of the PCMH make sense in addressing today's high-cost, fragmented, volume-based healthcare system, sustainability of the pilot implementations could be challenged by a number of factors, such as funding issues and resistance from key stakeholders concerned about being negatively impacted by the model. Given the early stages of most medical home implementations in the United States, sustainability is frequently still an open issue.

Some implementations are likely to be sustainable because of the commitment of a dominant payer, or because of legislative support for the PCMH model that enables a public-private partnership. In other cases, sustainability will need to be considered throughout, since decisions on which problems to address and key implementation issues could impact overall sustainability. For example, even for a highly focused pilot, it could be beneficial to have the key stakeholders involved in governance – or at least informed throughout any initiative implementations. Also, it could be helpful to identify upfront what efforts (e.g., provider practice transformation) or investments (for example, initial funding coming from grants) are available just for the initiative and how they could be replaced post-initiative.

Next, a high-level post-initiative rollout plan could be developed including alternatives for which patient populations, which PCP practices, which payers and which care delivery sites might be included, in what order, and what changes or incentives might be required for the various stakeholders to begin or continue to participate. Additionally, selecting the right metrics for success is critical. Some metrics might be for proof-of-concept for the initiative (for example, reduced hospitalizations) while others might be more relevant to sustainability (for example, patient or clinician satisfaction).

FIGURE 10.
PCMH groups should assess their readiness for their initiative.

Implementation issue	Sample assessment questions
Incentives to participate	• Is there a "burning platform" or mandate (e.g. legislative) to proceed? • If not, is there a critical mass of people willing to work collaboratively to shape the future? • Have potential impacts to all key stakeholders, particularly those who could be negatively impacted been identified?
Members/patients	• Do the members/patients have sufficient incentive to participate? • Will the member/patient cohort participating be able to demonstrate initial success of the initiative? • Will the member/patient cohort participating be able to demonstrate sustainable success of the initiative?
Initial funding	• Is the initial funding adequate to cover one-time or upfront expenses? • Are key participants willing to invest appropriately to ensure success? • Is there an approach to shield the must vulnerable participants from unacceptable results (e.g. PCPs sustaining losses that put them out of business)?
Governance	• Are all key stakeholders adequately represented or are some over-represented? • Is there an appropriate balance of zealots and skeptics? • Is there a multi-stakeholder agreement (e.g. project charter) describing what the implementation will accomplish? • Is there adequate PCP leadership and plan to insure ongoing participation? • Is there a good plan and a strong project manager? • Have key risks been identified and has a plan to mitigate them been developed?

Key metrics	• Is there an agreed-upon set of metrics that are aligned with your original problem?
	  – Pilot phase? Full roll out?
	  – Regular updates?
	• Is the data needed easy to collect, analyze, report, and act upon?

Reimbursement	• Will the reimbursement encourage desired care outcomes and practice transformation? • Are incentives in place to motivate prevention? • Does the reimbursement promote and reward collaboration and coordination with other providers? • Are appropriate reimbursement incentives in place for other providers?
Practice transformation	• Are there adequate resources allocated to support provider practice transformation? • Does the group have people with culture change, process redesign and IT skills?
Technology infrastructure	• Are there "good enough" IT capabilities (for example, registries, e-prescribing or patient portals) for a successful pilot? • Is the technology infrastructure scalable and reliable enough to support subsequent implementation phases? • Are controls in place to protect patient security and privacy?
Patient attribution	• Is the approach or combination of approaches accurate enough to get started and fairly assess progress?
Sustainability	• Is there adequate participation by the stakeholders needed to make the pilot sustainable? • In addition to an implementation plan, is there have a plan to address sustainability? • Are there metrics to address the potential for sustainability?

Source: IBM Healthcare and Life Sciences.

In short, sustainability of PCMHs could be challenged by a number of factors. Planning to address the sustainability issues should be done concurrently with planning for the initial implementation and included in the PCMH charter.

Conclusion

In the United States, there is a growing recognition that the healthcare system is broken and unsustainable, which is increasing the momentum for healthcare reform. Primary care is the part of the healthcare system that is "the most broken." Revamping primary care is an essential component of healthcare transformation, and the medical home can become a cornerstone of this endeavor.

The medical home can be a foundation piece of overall healthcare transformation, but it is not a "silver bullet." We will need better clinical information and evidence, changes in the responsibilities of key stakeholders, such as consumers and other clinicians, and a cross-organizational infrastructure to support coordinated and accountable care. It will not be easy to implement PCMHs on a large scale – even with the current momentum behind them – given such challenges as funding, the level of change required and a variety of entrenched, competing interests. Even attempts initiated with the purest motives can fail because of unrealistic expectations, poor planning or poor implementations. Fortunately, best practices are emerging for common issues related to planning and implementation (see Figure 10). Appropriately, applying these best practices can help increase the likelihood of success for an initial rollout and for a sustainable model.

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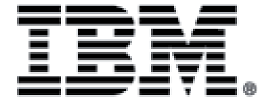

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