Consensus continues to support the belief that healthcare providers must lead the way in making value the overarching goal of healthcare reform. To accomplish this goal, providers recognize the patient-centered medical home as one model for transforming how primary care is organized and delivered. But to date, the evidence on medical home performance related to cost, quality, and experience of care is mixed, and a good understanding of the specific elements or functions of the medical home that drive better outcomes remains elusive. As more primary care practices are moving toward the medical home model of care, we want to better understand the factors that will determine their success.

With a long history and experience in the development of 139 patient-centered medical homes, Geisinger has developed a proven approach—one that has been successful first within the Geisinger Health System and now at other health systems as well. “It is possible to improve patients’ health and experience while reducing costs—Geisinger has done just that,” explains Gordon Norman, MD, MBA, and chief medical officer for xG Health Solutions, the exclusive provider of Geisinger’s health care improvement intellectual
xG Health leverages Geisinger’s expertise to help other health systems develop and implement
strategies focused on improving quality and reducing cost of care by accelerating their care redesign efforts.

“What we offer is not a brand new theoretical construct, but something tested, refined, and proven,” Dr. Norman says. “We have demonstrated, published results.”

According to Dr. Norman, “The transition requires a significant change in the primary care delivery model and the willingness to challenge traditions and older professional habits. Having committed, engaged providers working in empowered teams is essential. And the process benefits from having a proven road map and successful model like Geisinger’s to emulate.”

Clearly, maintaining the status quo is not an option. Experts believe it is only a matter of time before the medical home becomes the standard of care delivery. Many healthcare providers are already moving forward with the medical home model of care despite the challenges associated with healthcare redesign.

Defining the Medical Home

The patient-centered medical home approach to care delivery is not new, having been introduced by the American Academy of Pediatrics in 1967 to improve healthcare for children with special needs. It wasn’t until mid-2000s, however, that the model started to gain momentum as a solution for better chronic condition management in primary care. The concept evolved into the model that is generally recognized today: a team-based approach to care with care providers working at the top of their license and the physician focused on complex decision making. Yet despite years of discussion, considerable variability exists about exactly what defines a medical home.

According to the Agency for Healthcare Research and Quality (AHRQ), the patient-centered medical home must emphasize five critical elements to fulfill the full potential of primary care:

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1 E.H. Wagner, Chronic Care Model from Improving Chronic Illness Care (created in 1998). Evidence on the effectiveness of the Chronic Care Model (CCM) was summarized in 2009. http://www.improvingchroniccare.org/index.php?p=The_Chronic_Care_Model&gs=2
• **Comprehensive care** that meets the majority of each patient’s physical and mental healthcare needs—including prevention, wellness, and acute and chronic care—delivered by a team of care providers.

• **Patient-centered care** that recognizes patients and family members as core members of the care team.

• **Coordinated care** that encompasses all elements of the broader healthcare system, including specialty care, hospitals, home health care, and community services. Such coordination is particularly critical during transitions from one care site to another.

• **Accessible services** that offer shorter wait times for urgent needs, enhanced in-person hours, around-the-clock telephone or electronic access to the care team, and alternative methods of communication such as care by email and telephone.

• **Quality and safety** by relying on evidence-based medicine and clinical decision-support tools, performance measurement and improvement, patient satisfaction measurement, and population health management\(^2\).

  AHRQ also recognizes the central role of health IT, significant workforce development, and fundamental payment reform.

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**Why Some Models Fall Short**

Even when all of these critical elements are incorporated, considerable variation exists in how different medical homes function. “You might say that if you’ve seen one medical home, you’ve seen only one medical home, at least until you understand how it functions and what it does,” says Dr. Norman.

For example, the medical home is team-based, but there may be variations in how the team functions. Some models emphasize the physician; others, the team members. Some models are less robust; they may not employ case managers or, if they do, they do not place them at the practice site. In some models the main function of a case manager is to carry out physician orders as opposed to working directly with the provider

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\(^2\) See Defining the PCMH on [http://pcmh.ahrq.gov/page/defining-pcmh](http://pcmh.ahrq.gov/page/defining-pcmh)
teams to coordinate care. Other models—such as those that reported results in the South Central Pennsylvania Chronic Care Collaborative in March 2014—focus on disease registries and the electronic health record rather than on complex case management or population health management. Some practices lack physician commitment and leadership. Others may merely employ analytical tools without the benefit of expertise to interpret the data and apply data insights. Analytics alone almost never achieve sufficient results; it takes interpretation and understanding of analytics to generate the clinical insights and action plans that lead to interventions that yield improved value.

In the end, practices that are not committed to meaningful practice redesign ultimately lack sustainability and struggle to find significant improvement in utilization, quality, and satisfaction metrics over time.

**The Geisinger Approach**

Driven by an aging population, fragmented care, significant gaps in care, and unmanaged costs, Geisinger recognized the need to transform the way they deliver care. As one of the first health systems to embrace the medical home concept, in the mid-1990s Geisinger began to reengineer how it delivers, finances, and coordinates healthcare while transitioning to a more integrated health delivery system. One of its initiatives was to pioneer ProvenHealth Navigator® (PHN), an advanced patient-centered medical home model. A pilot study, conducted between 2006 and 2010, was comprised of 26,300 Medicare Advantage plan enrollees and resulted in outcomes that included greater adherence to medication regimens, increased use of generic drugs, fewer hospital admissions, reduced all-cause readmissions, and improved chronic care management. Geisinger demonstrated that its medical home model reduced costs by providing patients with improved care coordination and quality of care, enhanced access to primary care providers, and more effective and efficient disease and case management. Significantly, the study demonstrated that lowered costs were associated with longer period of exposure for program members in the PHN program. For every dollar that
Geisinger invested in its medical homes, it received $1.70 in return on investment\(^3\). See more at:


Geisinger’s medical home model has improved coordination of care, enhanced patient access to primary care providers, and provided more effective and efficient condition and case management—all of which have contributed to a decrease in avoidable hospitalizations. To test this model outside its home state of Pennsylvania, Geisinger has implemented this model at other healthcare delivery systems in West Virginia, Maine, and Jersey and has obtained similar results.

**Five Pillars: Better Care, Lower Costs**

Geisinger has continued to find ways to deliver higher quality care with better outcomes, lower utilization, and reduced cost by refining its unique patient-centered medical home approach. Geisinger’s more comprehensive approach is differentiated by five pillars:

- **Patient-centered primary care**—care is delivered by a multidisciplinary team led by the primary care physician with each team member operating at the top of his or her license; the team provides a full spectrum of population health services from prevention to chronic condition management.

- **Integrated population health management**—segmenting the population served and optimizing services across the spectrum of health—becomes a pivotal part of sustainability. Successful population management leverages resources for multiple populations. Managing resources for patients who are well; for patients who have choice and who can benefit from fundamental behavior change; and for patients with indications that their multi-morbid conditions will benefit from complex case management is a critical responsibility of the primary care team.

\(^3\) Am J Am Manag Care. 2012;18(3):149-155
• **Connectivity to the medical neighborhood**—the medical home is at the center of patient care but other providers and stakeholders such as specialists, hospitals, skilled nursing facilities, home health providers, and community resources, must be aligned to optimize care across the continuum.

• **Performance management**—the population is best served by closely monitoring population outcomes, which may include metrics on chronic condition care, preventive services, patient satisfaction, and financial performance. The medical home model is attentive to outcome data because, without it, clinicians can only guess at how to improve the quality of care.

• **Value-based reimbursement**—value-based care incorporates incentives to reward the highest quality, most cost-effective care. Value-based incentive payments are shared by the primary care physician and all other staff in the medical home based on site-specific and individual performance on a series of quality and cost measures.

**Sharing Geisinger Success**

Based on its experience, Geisinger has determined that its model for the patient-centered medical home can produce significant cost savings and improved quality for other health systems, too. Since 2009, Geisinger has helped other healthcare organizations start their transformation with help from the advisory services of a small, internal consulting group. With the later launch of xG Health Solutions, the exclusive provider of Geisinger intellectual property, Geisinger and xG Health have implemented 139 medical homes, with approximately 70% outside the Geisinger Health System. What began with ProvenHealth Navigator® has been adapted by xG Health to provide a flexible and scalable model that will provide comparable results for other health systems. Four years of data and outcomes from these implementations have shown that this medical home approach can be replicated successfully in other health systems.
How the Components of the Advanced Medical Home Approach Amplify Success

The essential components of Geisinger’s unique approach that determine a practice site’s success include primary care redesign and the ability to manage change. Key elements include physician leadership; the establishment of team-based care—including embedded case managers and a best practice team; redesigned processes and customized available tools; accessible, practice-based analytics that proactively identify and stratify patients and drive interventions; ongoing staff training; and monthly medical home team meetings.

Primary Care Redesign

At Geisinger and xG Health Solutions, primary care redesign means team-based care with each professional working at the top of his or her license so that the physician can focus primarily on complex decisions and forge engaging, trusting relationship with patients. Practice redesign also must include using data to support
coordination of care for the sickest patients in conjunction with establishing a system of care to ensure the right care at the right time for the right patient across the care continuum.

**Physician Leadership**

Physician leadership is an area that requires strengthening in patient-centered medical homes. In some cases, a physician may not be ready for change. In other instances, physicians may be reluctant to delegate clinical procedures to staff members who are fully licensed to perform them.

**Embedded Case Manager**

An embedded case manager possessing skills to manage complex health conditions must be completely engaged as a member of the care team. While case managers focus on the most at-risk patients to reduce unnecessary resource use and fragmented care, many medical home models either don’t include embedded case managers or do not fully use their services.

“"We believe that most of the success of the medical home program has been because of the value case manager brings to the highest risk population," emphasized Ms. Tomcavage in a 2010 report of the Commission for Case Manager Certification (Commission for Case Manager Certification, 2010 CCMC Issue Brief).

**Best Practice Team**

The best practice team consists of RN/IT and analyst/IT specialists who understand the challenges that clinicians encounter in office workflow and in using electronic health records. This specialized and empowered team is part of the infrastructure of the medical home model and helps support sustainability by ensuring access to evidence-based practices.
“I’ve not seen other organizations offer what we have to support the primary care practice like this,” says Meg Horgan, RN, MSN, senior vice president of Advisory Services at xG Health. “We teach people how to incorporate evidence-based guidelines in the care redesign process, to work with the group to get consensus on best practices, to perform a current-state workflow and then integrate changes throughout the workflow and electronic health record to automate them. And we help them develop the metrics to measure outcomes.”

**Practice-based Analytics**

Practice-based analytics inform and drive transformation within the practice because these data allow practitioners to understand the patient population: Who are the high-risk patients today and tomorrow? Who has a pattern of escalation that needs attention before it results in multiple hospitalizations? The ability to access actionable, site-specific data that can be interpreted to identify opportunities for improvement is critical to successful outcomes.

**In-depth Staff Training**

xG Health provides in-depth education to ensure that care team members are prepared and can sustain an independent level of success. Training is an intensive, three-week program with one week of distance web-based tools for didactic training followed by two weeks of immersion at a Geisinger site with a seasoned case manager. The three-week intensive session is followed by coaching sessions and case reviews after case managers’ return to their practices.

Janet Tomcavage is clear on the point: “We hold fast to the fact that immersion is important. You can learn about case management and listen to the essentials, but until you get into the practice and see the relationship that the case manager builds with patients and his or her approach on the phone and with
other care providers, you don’t really understand the types of interventions we expect from our case managers and their advanced skill. We believe that good case management is a critical component to help the practice transform.”

**Monthly Medical Home Team Meetings**

The medical home team meeting provides an important platform for data to shape team thinking about priorities. Team members come together once a month to review cases, uncover patterns, and study metrics. How are we managing our patients? Are there gaps? Who was readmitted and why? The meeting allows dialogue around what is working and what is not and thus drives the transformation. Ms. Tomcavage highlights that the monthly medical home team meeting is one of the most powerful components of Geisinger ProvenHealth Navigator® approach (now xG Health’s Advanced Medical Home model). The team meeting has been instrumental in practice transformation and, in the end, outcomes.

**Implementation: Turning Data into Action**

Finally, the ability to execute is key to a practice’s success. Without execution, there can be no meaningful change. The first step in implementing practice redesign is measuring the practice’s current state and identifying the areas needing the most work. Using a maturity grid, xG Health experts can quickly assess the practice’s strengths and gaps, and tailor a specific action plan. The maturity grid measures factors such as physician leadership, data integration, team competencies, and quality improvement abilities along with a number of other components. Results reveal the areas where the practice should focus to achieve the greatest return on investment.
xG Health and Geisinger have deep experience in data interpretation. Data is important but by itself is insufficient to achieve results. It must be interpreted by clinical analytical specialists who understand what it means and know how to act on it. xG Health analysts rely on their clinical background to help practice sites gain a better understanding of the clinical reengineering that is required. Analysts provide clinical recommendations based on years of knowledge of what has worked (and not worked) at Geisinger and non-Geisinger practice sites. “We provide boots on the ground,” Ms. Tomcavage explains. “We have experts who have worked through this type of transformation for years and bring this expertise directly to the practice to help it improve.”

Each component of Geisinger’s approach is important and offers benefits in its own right, but to achieve results, they must work together. Optimal results can’t be achieved by selecting individual components. Jeffrey Davis, MD, senior medical director at xG Health Solutions, sums it up: “We put together a composite of activities and functions and interventions that we’ve tested. We can’t guarantee performance if you vary it significantly.”

“We provide boots on the ground. We have experts that have done this kind of transformation for years…”

Janet Tomcavage, RN, MSN
Chief, Population Health
About Geisinger Health System
Geisinger is an integrated health services organization that has been widely recognized for its innovative use of the electronic health record and the development and implementation of innovative care models, including ProvenHealth Navigator®, an advanced medical home model, and its ProvenCare® program. Geisinger Health Plan, the insurance affiliate of Geisinger Health System, serves members in Pennsylvania, Maine, New Jersey, and West Virginia. The plan is consistently ranked among the top-ranked health plans in Pennsylvania and the nation, according to the National Committee for Quality Assurance’s (NCQA) annual Private and Medicare Health Insurance Plan Rankings. For more information, visit www.geisinger.org and www.thehealthplan.com.

About xG Health Solutions, Inc.
xG Health Solutions’ mission is to help health systems and others committed to high quality, value-based care succeed under risk-based payment arrangements. Our volume-to-value action plan, care design and delivery, population health analytics, and financial optimization services are powered by Geisinger Health System’s methods that have been proven to achieve best-in-class outcomes.

xG Health is the primary provider of Geisinger’s Health Care Improvement Intellectual Property (IP). xG Health also provides experienced professionals to partner in developing and implementing strategies focused on improving quality and reducing cost of care over the long haul. For more information, visit www.xghealth.com, or follow the latest xG Health news and more on LinkedIn or Twitter.