

Creating Capacity for Improvement in Primary Care: The Case for Developing a Quality Improvement Infrastructure

Erin Fries Taylor, Deborah Peikes, Janice Genevro, David Meyers

In 1996, the Institute of Medicine's Committee on the Future of Primary Care observed that "primary care is the logical basis of an effective health care system....[P]rimary care is essential to reaching the objectives that constitute value in health care: high-quality care (including achieving desired outcomes), good patient satisfaction, and efficient use of resources" (Donaldson, et al., 1996).

Committed to strengthening the role of primary care in a high-value health care system and energized by the potential of the patient-centered medical home, many practitioners, purchasers, and quality improvement (QI) organizations are focused on improving the quality and safety of primary care services. This work benefits from the experiences of hospitals, which have institutionalized a culture of QI over the past several decades, and other large organizations such as integrated delivery systems, which, like hospitals, have the resources and economies of scale to make robust QI investments.

Primary care now has a significant, and perhaps unprecedented, opportunity to emphasize QI and practice redesign in ways that could fundamentally improve health care in the United States. But to ensure that these efforts are successful, there is a need to build and sustain the ability of primary care practices to engage in QI activities in a continuous and effective way. We refer to this ability as "QI capacity."

Redesign efforts in primary care are closely tied to the concept of the patient-centered medical home. According to the Agency for Healthcare Research and Quality, a critical element of the medical home is:

"a commitment to quality and quality improvement by ongoing engagement in activities such as using evidence-based medicine and clinical decision-support tools to guide shared decision making with patients and families, engaging in performance measurement and improvement, measuring and responding to patient experiences and patient satisfaction, and practicing population health management."

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How can QI capacity be created? Developing QI capacity within primary care practices will require a variety of approaches and supports. In this paper, we make the case for a specific type of multifaceted support external to the practice. We call this QI infrastructure, which is a necessary condition for building effective QI capacity in primary care. We provide background on QI efforts in health care, discussing the QI infrastructure that exists in hospitals. In addition, we describe how a corresponding infrastructure could help primary care practices improve quality and safety and strengthen the performance of the health care system as a whole. In a second, related paper, we describe the specific approaches and supports that a robust QI infrastructure would offer to facilitate the development of QI capacity at the practice level (see Taylor, et al., 2013).

Quality Improvement, QI Capacity, and QI Infrastructure

Q*uality improvement* involves using data and feedback to (1) track and assess performance over time and (2) make necessary changes in processes. From our perspective, QI involves all activities that improve performance on the three-part aim of improved individual and population health, improved patient experience, and reduced cost. It may also improve provider experience. This type of comprehensive QI sometimes is called performance improvement or systems improvement.

QI capacity involves a deep understanding of and commitment to QI beyond any particular project. It entails ongoing, continuous QI work. For a practice, this requires the following:

- ▲ *Knowledge and understanding* of QI approaches and how to use data and feedback for QI.
- ▲ *Commitment* of practice leadership and staff to dedicate time and resources to QI activities.

In particular, practice staff must find time to work as a team to identify problems and possible solutions on a continuous basis, make improvements, monitor the effectiveness of the improvements, and refine them further as needed. Ambulatory care practices, and primary care practices in particular, typically do not have this capacity, and developing it is difficult. Primary care providers want to deliver high-quality care, and many engage in QI projects (such as boosting flu vaccinations or increasing the number of foot exams for patients with diabetes) from time to time. But few can devote substantial attention to developing QI capacity, due to lack of needed resources and inadequate or absent financial incentives.

QI infrastructure is essential to helping primary care practices develop QI capacity. It provides the staff, resources, and supports needed to help practices identify QI needs, develop skills, and engage in continuous QI. QI infrastructure can be thought of as a type of “self-management support” for practices in the area of quality improvement. It provides support, including assessment, information, coaching, and skilled intervention to help primary care practices achieve their improvement goals, that is similar to the support practices offer to patients to help them achieve their health and quality-of-life goals. This support is intended to foster, to the extent possible, the development of autonomous capabilities that practices can apply to new challenges over time.

Because of the limitations in resources that characterize most primary care practices that are not part of large systems, such practices are likely to require external infrastructure to help them develop QI capacity and supplement their internal assets of staff and skills when they engage in continuous QI.

Even when practices have the staffing, resources, and commitment needed for sustained QI activities, they rarely have internal QI expertise and concrete ideas about ways to make improvements and will require training and ongoing support in QI from an external source.

For large multispecialty practices and practices affiliated with larger systems, some of the multifaceted support a QI infrastructure provides may be internal to the system (not to the practice itself). This could take the form of one or more staff who:

- ▲ Regularly monitor and assess practice performance on various quality and safety measures;
- ▲ Organize QI activities around areas for improvement and help practice staff carry out these activities; and
- ▲ Find, vet, and disseminate guidelines or examples of best practices.

Even in these cases, a QI infrastructure external to the system in which the practice operates could provide specialized primary care QI support and expertise that may not be available within the system.

Examples of the types of support that could be provided by a multifaceted *external QI infrastructure* include:

1. General training in QI approaches, using data for improvement, and troubleshooting quality issues as they arise;
2. Assistance in assessing and identifying areas in which changes might improve outcomes through continuous feedback and benchmarking;
3. Resources and tools for making practice changes (such as examples of processes for moving to a team-based approach to patient care); and
4. Best practices and shared learning about QI based on the experiences of many practices.

An external infrastructure could also serve as a hub for the spread of new evidence-based research, new models of care, and other innovations.

From our perspective, an effective external infrastructure would increase the QI capacity of all types of practices—small or big, independent or part of a larger system, rural or urban, or serving affluent or disadvantaged patients—and for all current levels of QI capacity. In other words, a practice's QI capacity should grow when supported by an effective external infrastructure. Moreover, depending on practice size, resources, and other characteristics, this external infrastructure may also serve to increase a practice's internal infrastructure.

Specifically, of the four components of external QI infrastructure described above, the initial investment in the first—general training around QI—will be substantial. But it is likely to decline over time as practices absorb this knowledge and (when possible) develop some level of internal infrastructure. If this work indeed increases practices' internal infrastructure, it will allow the external infrastructure to shift more of its focus to maintaining QI gains, engaging practices in more sophisticated QI work, and spreading new innovations as they occur.

Why QI Infrastructure Is Needed in Primary Care

QI in health care is a national priority. Currently, the National Quality Strategy specifies three main goals for the health care system—better care, healthy people and communities, and affordable care—and establishes corresponding priorities related to these goals. Each priority targets improvements in quality and safety across the system (HHS, 2012). Historically, attention to quality and safety improvements in health care has focused largely on hospitals. In contrast, improving quality and safety in ambulatory care—particularly in primary care—has received considerably less attention.

Some pioneering practices have reoriented toward continuous QI and others pursue individual QI projects as part of clinicians' Continuing Medical Education requirements, State and local initiatives, grant requirements, insurer incentive programs, and other efforts. Still, a well-developed, comprehensive infrastructure to promote QI capacity in primary care has not yet emerged. Underscoring the need to enhance QI capacity are a number of quality measures that indicate opportunities to improve primary care performance, such as followup from the physician office on lab results and coordination between the primary care clinician and specialists (AHRQ, 2012b).

The time is ripe for primary care practices to institutionalize QI. Hospitals were a logical place to begin building QI capacity. The consequences of low-quality care in the inpatient setting are often immediate and significant, such as death or hospital-acquired infections leading to serious complications, and hospitalizations typically account for the bulk of the total costs of care. Thus, for many years, regulators, legislators, purchasers, and consumer advocates have focused on hospital quality and safety.

While primary care accounts for a smaller share of health care expenditures, it represents the main access point to health care for most Americans. As a coordinating mechanism for care in the system, the primary care medical home holds tremendous potential for improving preventive care, influencing patient trajectories of care and health status, preventing hospitalizations, reducing costs, and improving population health. Accordingly, developing a QI infrastructure that focuses on strengthening primary care can bring considerable benefits.

Policies and Supports for QI Infrastructure in Hospitals

Hospitals have devoted considerable resources to building internal QI capacity as a result of incentives to do so (such as public reporting and financial incentives), combined with resources, supports, and external structures to help them design and put in place the needed QI infrastructure.¹ As a result, over time, QI has become integral to the culture and environment of inpatient care, and hospitals routinely have QI departments and staff that oversee QI activities (Draper, et al., 2008).

Moreover, a number of QI interventions in hospitals have shown impressive results. For example, the Michigan Health & Hospital Association Keystone Intensive Care Unit project generated

¹ In a small study on the resources devoted to improving quality and safety, Chen, et al. (2009) found a wide range of total reported investments for inpatient QI among four acute care hospitals in the Northeast United States, from \$2 million to \$21 million, or \$200 to \$400 per discharge. While these results need to be interpreted with caution, given the study's small size and geographic scope, along with the challenges of defining QI costs, they highlight the fact that hospitals devote considerable resources to QI and safety.

substantial decreases in catheter-related bloodstream infections (AHRQ, 2012a; Pronovost, et al., 2010; Pronovost, et al., 2006). While much work remains, including further alignment of financial incentives, hospital QI activity can provide valuable lessons for QI in primary care practices.

Hospitals encounter and respond to a number of incentives to build QI capacity and undertake QI activities:

- ▲ *Licensing and accreditation requirements*, which require certain standards of quality and safety, are required by many payers for reimbursement.
- ▲ *Public reporting of hospital quality* at the Federal and State levels through such efforts as the Centers for Medicare & Medicaid Services' (CMS) Hospital Quality Initiative and a number of State initiatives.
- ▲ *Financial incentives for high-quality care*, which encourage improvements in quality. Medicare reimburses hospitals using a prospective payment system, based on diagnosis-related groups, which encourages hospitals to manage hospital care efficiently. To the extent that some QI activities enable hospitals to provide care more efficiently, they will profit directly. Under the Affordable Care Act, Medicare will make several changes to hospital reimbursement that will incentivize additional QI activities. These include payment reductions for hospitals with high readmission rates and those with high rates of hospital-acquired conditions, and a value-based purchasing program that provides incentive payments based on performance on certain quality measures.
- ▲ *Media attention to hospital quality and safety*, often resulting from publicized cases of tragic medical errors, litigation, or public reporting.
- ▲ *A growing reliance on outcome measures (versus process measures) by purchasers and policymakers*. This shift requires hospitals to investigate root causes and explore more sophisticated approaches to improvement, thereby making QI more valuable.
- ▲ *Patient feedback and, to some extent, employee feedback*. Feedback can encourage hospitals to engage in QI efforts (Draper, et al., 2008).

Most investments in QI efforts in the hospital sector have been internal but can be supported, given the scale of resources available, services provided, and number of patients served. External structures and supports have not been the critical drivers of investments in infrastructure development but have helped hospitals adopt and refine their QI infrastructure.

The Joint Commission, which was founded in 1951 to improve health care quality and safety by evaluating health care organizations, accredits and certifies hospitals (along with other providers). The accreditation process helps hospitals organize and strengthen their QI and patient safety efforts.

Medicare has supported first Peer Review Organizations, beginning in 1983, and now their successors, Quality Improvement Organizations (QIOs). While QIOs work with physician practices and others, historically they have tended to focus on QI in hospitals. In addition, organizations such as health plans and State hospital associations are increasingly collecting and reporting hospital quality information (Draper, et al., 2008). Other entities, such as the Institute for Healthcare Improvement, provide technical assistance and learning community activities to hospitals as they tackle QI issues.

How the Right Supports and Infrastructure Would Bolster QI Capacity in Primary Care

In contrast to hospitals in the United States, ambulatory care practices—and primary care practices in particular—lack a well-developed QI infrastructure.² Practices lack the size and resources to invest in internal QI infrastructure and the training and skills development that are essential elements of QI capacity. With the current preponderance of small practices and relatively low reimbursement for primary care, most practices will depend on external infrastructure for needed support.

The financing and structure of primary care make it difficult to build internal QI capacity without external supports and financial incentives. Relative to specialty providers, primary care providers have substantially fewer resources to develop QI capacity on their own. Most primary care practices are comparatively small, and many function on thin profit margins. Moreover, given the undersupply of primary care clinicians, most practices have large patient panels, leading them to focus on the daily demands of patient care.

Many of the same mechanisms for promoting accountability in inpatient care, such as public reporting of quality measurement and financial incentives for quality, are being tested now in primary care in some markets and among some payers—but their use is sporadic. Some primary care practices now pursue Joint Commission accreditation. In the past several years, a rapidly increasing number are pursuing medical home recognition or accreditation processes, either as part of a particular initiative or at the encouragement or requirement of payers. Increasingly, payers are monitoring quality of care at the practice level, and some are encouraging value-based purchasing by linking financial reimbursement or bonuses to outcomes. Finally, a handful of public reporting efforts on quality exist at the practice level. Leveraging all of these approaches and mechanisms on a larger scale could provide a step in the right direction.

Currently, practices have little incentive to focus systematically on improving quality and safety. QI activities are not reimbursed, and the benefits accrue primarily to others, to patients in the form of better health outcomes and experience of care and to payers in the form of lower costs. Therefore, while most clinicians want to improve care delivery and patient outcomes, they cannot devote substantial staff time or other resources to QI efforts the way that larger organizations such as hospitals might.

Moreover, even in the presence of incentives that encourage QI, without external supports, only large practices or those affiliated with hospitals or larger systems are likely to have or develop the capacity for a substantial and sustained focus on QI. Considerable support and realignment of incentives are needed for a QI culture to become an integral part of daily operating processes in primary care practices in the way this has happened in hospitals.

Given the structure of primary care in the United States, a QI infrastructure external to practices holds the greatest promise for improving QI capacity in primary care. This infrastructure could provide practices—especially smaller, independent, and underresourced practices—with the tools, resources, and technical assistance needed to develop this capacity. Within this infrastructure, professionals who

² To the extent that specialists operate within large and well-resourced practices, they may have substantial resources to devote to QI activities, although incentives for them to do so still need to be strengthened.

specialize in QI can deliver training and support to practices of different types, settings, patient mixes, and resources. Ultimately, such support would empower practices to use QI techniques and help them build the capacity for continuous QI.

This QI infrastructure may also allow for cross-germination across the silos of individual practices and delivery systems, and allow innovations and best practices to be disseminated efficiently. Ideally, there also would be mechanisms for a community of QI professionals to share best practices through formal and informal networks.

A challenge to the development of an external QI infrastructure is identifying and building sustainable financing models. Every practice has patients covered by many payers. Thus, most individual payers are unlikely to act unilaterally to support system-level changes in the practice, particularly since such changes would also benefit their competitors. A number of other stakeholders have some limited incentives to support QI. For example, clinicians, patients, medical schools and professional organizations, integrated delivery systems, QIOs, accountable care organizations, and others all may have a role to play, but coordination will be needed to spur action.

Moving Forward

Developing internal QI capacity contributes to the ability of primary care practices to improve quality and patient and provider experience and reduce costs. Yet practices will need incentives to devote resources to developing internal capacity, coupled with substantial external support to guide their investments. Financial and nonfinancial incentives have a key role in encouraging the development of this capacity. For example, creative ways to share savings from any reductions in specialty and acute care costs with primary care practices is one way to channel resources for internal and external QI capacity in primary care. In addition, payers could increase practices' focus on QI by including expectations for robust QI activities in accreditation and certification of primary care practices—through, for example, medical home recognition and meaningful use attestation standards.

Even with new incentives, most practices, especially those that are small and underresourced, will need substantial help with redesign and transformation. They will need training on how to conduct QI, information on best practices around different primary care functionalities to identify possible solutions, and meaningful and customized feedback so they can monitor performance on the triple-aim outcomes. Therefore, external support is required to provide the QI infrastructure practices need as they increase their QI capacity. Ultimately, practices should reach the point where ongoing QI efforts become a part of their policies and procedures, with support from the external infrastructure evolving to focus on helping practices maintain QI gains, engage in more sophisticated QI work, and adopt innovations as they occur.

Policymakers and payers have an opportunity to consider ways to promote and support the development of QI capacity in primary care. Ideally, multiple payers and other stakeholders would join forces to provide incentives and external QI infrastructure support for practices. If given the right tools and supports, primary care practices can develop an orientation toward systematic, continuous QI and institutionalize this mindset, thus harnessing tremendous potential to substantially improve the outcomes of care in the United States.

References

2012 annual progress report to Congress on the National Strategy for Quality Improvement in Health Care. Washington, DC: U.S. Department of Health and Human Services; 2012. Available at: <http://www.ahrq.gov/workingforquality/nqs/nqs2012annlrpt.pdf>. Accessed March 1, 2013.

Agency for Healthcare Research and Quality. AHRQ Patient Safety Project reduces bloodstream infections by 40 percent. Rockville, MD: Agency for Healthcare Research and Quality; September 10, 2012a. AHRQ Press Release. Available at <http://www.ahrq.gov/news/press/pr2012/pspclsipr.htm>. Accessed November 6, 2012.

Agency for Healthcare Research and Quality. 2011 national healthcare quality report. Rockville, MD: Agency for Healthcare Research and Quality; March 2012b. AHRQ Publication No. 12-0005. Available at <http://www.ahrq.gov/qual/nhqr11/nhqr11.pdf>. Accessed November 9, 2012.

Chen LM, Rein MS, Bates DW. Costs of quality improvement: a survey of four acute care hospitals. *Jt Comm J Qual Patient Saf* 2009;35(11):544-50.

Donaldson MS, Yordy KD, Lohr, KN, et al., eds. Primary care: America's health in a new era. Washington, DC: Committee on the Future of Primary Care, Institute of Medicine; 1996. Available at http://www.nap.edu/openbook.php?record_id=5152&page=52. Accessed October 31, 2012.

Draper DA, Felland LE, Liebhaber A, et al. The role of nurses in hospital quality improvement. HSC Research Brief No. 3. March 2008. Available at <http://www.hschange.com/CONTENT/972/972.pdf>. Accessed November 9, 2012.

Pronovost PJ, Goeschel CA, Colantouni E, et al. Sustaining reductions in catheter-related bloodstream infections in Michigan intensive care units: observational study. *BMJ* 2010;340:c309.

Pronovost PJ, Needham D, Berenholtz S, et al. An intervention to decrease catheter-related bloodstream infections in the ICU. *N Engl J Med* 2006;355(26):2725-32.

Taylor EF, Genevro J, Peikes D, et al. Building quality improvement capacity in primary care: supports and resources. Rockville, MD: Agency for Healthcare Research and Quality; 2013. Available at <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/index.html>.



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