

# Using Health Information Technology to Support Quality Improvement in Primary Care

The full white paper associated with this summary is available at <http://www.pcmh.ahrq.gov/page/quality-safety>.

## Introduction

Commitment to ongoing quality improvement (QI) activities is a crucial element in primary care redesign, including efforts to adopt new models of care such as the patient-centered medical home. Quality improvement involves using data and feedback to track and assess performance over time and to make necessary changes in processes to improve performance.<sup>1</sup> Examples of activities to support continuous QI include:

- having a standing QI committee within the practice that meets regularly and reports back to the entire staff on QI activities and progress;
- implementing a system for providing and acting on provider- and practice-level feedback on selected quality measures;
- developing an approach for identifying preventive service needs and gaps in care by running daily reports on patients with scheduled visits;
- using decision support tools to remind providers to address these needs at the point of care; and
- monitoring progress toward meeting quality goals over time.

Recent health care policies and incentives have supported the adoption and use of health information technology (IT) to support quality improvement in primary care practice. Health IT can support QI in many ways, through data extraction and analysis enabled by electronic health records (EHRs), registries, and health information exchange (HIE), whereby different providers can exchange data about patients. However, significant barriers related to cost, clinician and staff training and time, and the functionality and interoperability of the technology have limited the use of health IT to support QI. Despite these barriers, some exemplary primary care practices and organizations have found ways to effectively use health IT to support QI activities. These

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<sup>1</sup> Taylor EF, Peikes D, Genevro J, Meyers D. “Creating Capacity for Improvement in Primary Care: The Case for Developing a Quality Improvement Infrastructure.” Rockville, MD: Agency for Healthcare Research and Quality, April 2013. Available at <http://www.ahrq.gov/professionals/prevention-chronic-care/improve/capacity-building/pcmhqi1.html>.

practices offer powerful lessons that can be put into practice to support and increase the use of health IT to improve the quality of primary care services and population health outcomes.

## Methods

With the goal of sharing lessons learned, we performed a targeted review of published literature; convened a panel of eight nationally recognized experts in health IT, clinical practice, QI, primary care transformation, health care policy, and human factors engineering; and held discussions with representatives of three primary care organizations that have made exemplary use of health IT for QI.

We have categorized the lessons derived from this work based on the stakeholders who are likely to put them into practice. The categories include general factors that support the use of health IT for QI; lessons for primary care practices; lessons for IT developers and standards certifiers; and lessons for decision makers.

## Factors Supporting the Use of Health IT for QI in Primary Care

Discussions with experts and representatives of exemplary primary care organizations suggested that to effectively use health IT for QI, primary care practices require four interconnected factors, none of which is sufficient in isolation:

- A practice culture with a strong commitment to using health IT for QI.
- High functioning health IT tools to track and extract data.
- Practice clinical team and staff knowledge and skills related to IT and QI.
- Practice processes and workflows that incorporate effective use of health IT for QI.

Ideally these factors are supported by financial incentives and transformation assistance, including consultation with experts in IT and QI.

## Lessons for Clinicians, Practice Leaders, and Facilitators Working with Primary Care Practices

- Understand that transitioning from using health IT to document visits to using health IT-generated data for QI requires time, training, and workflow shifts. Transforming the way a practice delivers care using health IT as a tool involves significant staff retraining on how to enter EHR data and generate useful reports on quality of care and gaps in care.
- Provide leadership and vision, which are critical for transforming into a practice that effectively uses health IT for QI. Practice leadership should convey to the practice how health care delivery and payment systems are likely to evolve, how health IT and QI play a role in this evolution, and how to take the first steps to maximize the use of health IT for QI.

- Facilitate transformation by explaining to clinicians and staff how using health IT for QI will ultimately help them deliver care and improve outcomes for patients. This is particularly relevant because many primary care practices have limited resources and might view the use of health IT for QI as extra work rather than fundamentally helpful to the practice and patients.
- Establish a dedicated QI team that communicates regularly with the rest of the practice to keep QI activities progressing and build them into regular operations. Exemplary practices' QI teams tend to include four or five staff at all levels, including a clinician champion (and/or a clinician who is skilled with IT), a data analyst, and a member of the front desk staff. The teams regularly present updates and seek feedback from the practice.
- Clearly define QI goals, strategies for achieving goals, and how health IT will facilitate the QI process *before* starting. Align the QI project with the practice's values or strategic plans to ensure the project's fit with the practice's mission. Define QI measures to keep work aligned and prevent errors and misunderstandings as the project progresses.
- Consider the effects of a new QI process or policy on the work of all staff in the practice.
- Use health IT-generated data to inspire a practice to pursue QI. Baseline data specific to the practice help illustrate areas where QI might be helpful to the practice. Then, as the practice undertakes QI, leaders can use data to demonstrate progress toward QI goals.
- Sustain QI through continued surveillance and commitment to improving an issue over time. Data alone are not sufficient to sustain QI work; ideally, ongoing surveillance and commitment to QI will be a key element of one or more employees' formal job duties.
- Use workarounds to achieve QI goals when EHRs do not include every tool the practice wants to use. For example, some EHR systems for risk stratification may not be accurate for patients with multiple comorbidities. To work around this limitation, clinicians can use other databases to rank patients by assessing health status, recent emergency department visits and hospitalizations, and mortality risk.
- Pursue opportunities for health information exchange (HIE) either at the community level or, as a first step, on a smaller scale, such as by establishing bilateral agreements for data exchange between primary care practices and hospitals or by sharing data among providers in an integrated delivery system or hospital system.
- Use health IT, such as patient portals, health apps linked to the practice, and text messages, to engage patients and families. Patient engagement via health IT can be central to QI efforts.

### Lessons for IT Developers and Standards Certifiers

- Consider how health IT will be used to support care improvement when designing and setting standards for new tools to help primary care practices use this technology for QI. IT developers and primary care practices and organizations should work together to ensure that

health IT tools—including but not limited to EHRs, registries, and HIEs—serve primary care’s needs both for documentation and for data and feedback to support QI.

- Improve interoperability and the information exchange standards and capabilities of health IT. Without effective and secure information exchange among different health IT systems, primary care practices will face barriers to improvement of care for their many patients who access care from multiple providers.

### Lessons for Decisionmakers

- Provide practices with the latitude to choose their own QI goals and tailor their approach to using health IT for QI accordingly. Practices benefit from deciding for themselves which specific QI goals are most important to their particular practice, patients, and community.
- Support the provision of external technical assistance, which can be invaluable—particularly for small, independent practices interested in using health IT for QI.
- Make health IT more affordable to adopt and implement for smaller practices and safety net providers. Developing new or expanding existing avenues of financial support for the purchase and implementation of health IT would benefit primary care practices interested in implementing health IT for QI.
- Provide funding to encourage the use of health IT for QI in primary care. This will create “breathing room” in clinician and staff schedules to perform this work.

### Conclusions

Exemplary primary care practices have demonstrated that using health IT for QI is possible in diverse settings, and that it can pay off in improved patient care and health outcomes. Collaboration among primary care practices, practice facilitators, IT developers, and decisionmakers has the potential to spread best practices, help with the sharing valuable guidance and tools, and ultimately increase the use of health IT for QI in primary care. Additional support, including targeted technical assistance and payment reforms, will help more practices commit to using health IT for QI and ultimately ensure patients are receiving the best possible primary care.