Pilot Debrief: Lessons Learned Assisting Physician Practices Adopt Health IT

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The pilot behind today's nationwide DOQ-IT project offers early lessons on both the characteristics and assistance that help physician offices succeed with health IT.

Physician adoption of health IT has become a major policy priority in the United States. But despite the drive to get more clinicians to transition from paper to electronic records, what do we really know about what it takes?

In April 2004 the Centers for Medicare and Medicaid Services (CMS) launched an ambitious pilot project known as Doctor's Office Quality–Information Technology (DOQ-IT). The pilot aimed to improve the quality of care in four states by helping primary care physicians in small and medium-sized medical groups (1–9 physicians) with the adoption of electronic health records (EHRs).

The DOQ-IT pilot identified factors that support successful adoption of an EHR system and, just as importantly, factors that support its effective use in improving patient care. Studies indicate that few physicians who adopt an EHR system use all of its functionality, missing opportunities to do more than simply document individual patient encounters. The pilot showed that having an independent organization provide hands-on help with early goal setting, workflow analyses, care process, role redesign, and implementation planning can help ensure and accelerate the effective use of an EHR to improve both preventive and chronic care management.

The pilot project is also significant because of its relationship to two subsequent federal initiatives: its expansion into a nationwide program, making physician support available in every state and territory, and its transition into a pay-for-performance demonstration project in the original pilot states. That demonstration project is expected to inform future national initiatives on pay-for-performance and chronic care management.

Practice Participation by State

Four states were chosen for the pilot, representing a range of practice environments nationwide. In all, 971 practices participated in the pilot, approximately one in four of those contacted. The 17-month pilot ended August 2005.

State	Practices Contacted	Practices That Chose to Participate	Percentage of Practices in State
California	600	123 (21%)	1%
Arkansas	1,571	168 (11%)	11%
Massachusetts	1,000	465 (47%)	6%
Utah	350	215 (61%)	61%
Total	**3,521**	**971 (28%)**	

The Characteristics of Successful Practices

To conduct the pilot, CMS chose four quality improvement organizations (QIOs) in four very different states—California, Arkansas, Massachusetts, and Utah. QIOs are independent private-sector entities that help health providers improve care in

every US state and territory. Under a three-year, performance-based contract with CMS, QIOs provide education and support to medical professionals in all care settings, assisting the adoption of more effective, patient-centered processes; design of efficient systems; and implementation of an organizational culture of quality.

The four states chosen for the pilot represented the varying practice environments found across the nation. California, with more than 12,000 primary care medical practices, represented large states, while Arkansas, with 1,571 practices, represented rural states. With about 7,700 primary care practices, Massachusetts is typical of the smaller, more densely populated states in the Northeast. Utah, with 350 primary care practices statewide, represented the sparsely populated western states.

In all, the four QIOs worked with 971 medical practices during a 17-month period ending August 2005 (see the table "Practice Participation by State," above). The pilot results were captured in qualitative surveys and interviews.

The QIOs assisted physicians and their staff through three general phases in the process of adopting an EHR system: assessing and planning to determine the practice's needs, selecting and implementing an EHR that would best meet those needs, and evaluating and improving how the EHR is used within the office to improve the quality of care. (See the table "Practice Participation by Phase," [below].)

One early lesson learned was not every practice that chose to participate was able to continue. The QIOs generally found that practices with a poor organizational structure and a lack of sufficient leadership were not able to succeed without first correcting the weaknesses. Many practices failed to see that the leadership of a physician champion or a strong office manager is just as important—if not more important—than the funding.

The pilot practices most likely to succeed were those with widespread physician buy-in, a physician champion, sufficient funding, sufficient time, and a strong office manager to support the project. Additionally, those practices that were already seriously considering a transition to an EHR when contacted by the QIO were also more likely to succeed.

Two factors of small importance to success were previous experience working with the QIO on quality improvement projects and past use of health IT.

Sweating the Details of Needs Assessment

QIOs found that practices encountered four major barriers to the adoption of EHRs: time, fear, communication, and capital.

Medical practices often have insufficient time to plan and select an optimal EHR system and to adequately train staff on its use. Physician partners fear making a wrong decision, and employees fear their jobs could be eliminated by the technology. Physician leaders sometimes fail to gain consensus, and often there is insufficient communication between physicians and staff regarding goals and expectations. Insufficient capital can strain the practice's ability to purchase a system and secure adequate support services from the vendor.

To address these barriers, the four QIOs provided free EHR planning and selection support tools, as well as hands-on consultative assistance throughout the adoption process. QIOs began by helping practices assess their clinical and financial needs.

To gauge the practice's preparedness to undertake this major quality improvement project, QIOs asked each practice to assess factors such as basic computer skills of the physicians and office staff, whether they had previously adopted other forms of health IT such as electronic prescribing, and whether the practice held regular staff meetings. QIOs also helped practices assess their financial readiness by determining if they had a budget for purchasing an EHR system and whether they had developed a timeline. QIOs found these factors to be key indicators of the ability of a practice to succeed with EHR adoption.

In clinics where assessments indicated potential trouble ahead, QIOs worked to create a readiness plan. They often helped the clinics identify physician leaders within the practice to champion the project, and they helped train the practice staff in process improvement skills.

Practices often resisted completing the needs assessment because, as Erika Jensen at the Massachusetts QIO noted, "Time is really tight for primary care physicians and their staff, which makes assessing the practice's needs and helping them plan for the future especially difficult. There is an atmosphere in many offices of just trying to get through each day without adding one

more task." However, she notes, it is interesting to compare that atmosphere to the "relative quiet and calm of practices that successfully implemented an EHR a few years ago and now have learned how to use it well."

Generally, QIOs found that completing assessments up front was a critical step in improving EHR implementations once the vendor was selected. Identifying potential trouble spots early, drafting realistic plans and timelines, and having reasonable expectations about the process of adopting and using an EHR ultimately made the remainder of the process—from selection and implementation through workflow redesign and use in everyday patient care—much less painful and more efficient for many clinics.

Addressing the fourth barrier—capital—was difficult for the four QIOs because they could not provide direct financial assistance. Instead they provided free hands-on assistance throughout the adoption process in order to minimize wasted time and capital. Knowing that as many as half of all IT projects can fail, and understanding that failing to maximize all EHR capabilities dissipates capital, QIOs sought to maximize the practice's time and capital. QIOs also helped educate practices about different ways to structure financing by negotiating for monthly purchase plans or tying payment to different stages of the implementation.

Practice Participation by Phase

The pilot assisted practices through three phases of EHR adoption: assessing the practice and planning for system adoption, selecting and implementing the system, and evaluating and improving the system's subsequent use. In Utah the high number of physicians who had already started on EHR adoption meant lower participation in the first phase and higher participation in the subsequent ones.

State	Practice Assessment and Planning	System Selection and Implementation	Use Evaluation and Improvement	Dropout Rate
California	68%	9%	20%	2%
Arkansas	67%	30%	0%	3%
Massachusetts	40%	50%	10%	1%
Utah	10%	42%	36%	12%

Doing the Homework on System Selection and Planning

After completing the assessment and planning process, practices were ready to begin evaluating EHR vendors. The QIOs generally found that physicians are bombarded with choices and have difficulty sorting through the sales pitches to determine a company's financial staying power and the level of support it offers. This fear of making the wrong decision often led physicians down the path of "analysis paralysis," soliciting one demonstration after another from multiple vendors for extended periods.

All four QIOs found that helping physicians narrow their choices based on objective criteria kept them moving toward implementation. A common method was use of a needs-based selection tool that incorporated the functionality recommended by the Institute of Medicine to prioritize the features desired by the practice. (The pilot predated the first certification of ambulatory EHR products by the Certification Commission for Healthcare Information Technology in June 2006.)

The QIOs also often provided a template that practices could use to compare the similarities and differences between vendors. After a practice narrowed its choices to two or three products, QIOs recommended and sometimes helped coordinate site visits with other physician practices currently using the systems.

The physician practice, not the QIO, selected the software vendor and the hardware necessary to run the EHR system. The practice negotiated with the vendor on price, support, and training. The vendor and the practice determined an implementation date and signed a contract.

Practices generally said that the most painful period in adopting an EHR tended to be implementation when the vendor installs the system in the office, completes training, and the system goes live. QIOs found that they could lessen the stress by helping the practice adequately plan for the changes in workflow ahead of time.

QIOs helped practices identify poor processes by surveying physicians and staff using the "Know Your Processes" survey from MedQIC, a CMS resource for QIOs and providers. The QIOs then helped map the workflow related to these processes and identify tasks that could be eliminated or automated by the EHR system to save time and improve patient flow through the office.

Without adequate preparation, practices often develop work-around processes that can undermine both the efficiencies and the quality gains that EHRs offer. For example, early adopters often overcustomized the user interfaces for each physician in order to encourage physicians to use the system; later they found it difficult to standardize the capture of important patient data to generate meaningful care management reports.

From "Survival" to Quality Improvement

After implementation, QIOs assisted practices in determining how well the EHR was meeting their goals and expectations. Once goals were reached, QIOs helped practices see how the same process of setting and achieving business goals could be applied to improving clinical care processes.

The QIOs learned that as practices began to undertake process improvement and workflow redesign in order to "survive" the implementation, they quickly began to see how the changes applied to improving quality of care for their patients. Physicians and staff were able to identify patient populations based upon a disease, set up automatic reminders when those patients were due for medically necessary services, and set up new care processes to positively influence patient outcomes.

In Utah, QIO staff interviews with 50 practices that had already transitioned to EHRs showed that most had spent one to two years getting used to basic system features before they were ready to try the proactive care management capabilities. The pilot showed that assistance with early goal setting, workflow analyses, care process and role redesign, and implementation planning can considerably accelerate the full use of an EHR's potential to improve preventive and chronic care management.

Mostly Likely to Succeed

The pilot identified four common barriers to EHR adoption: time, fear, communication, and capital. The practices in the pilot most likely to succeed were those with:

- Widespread physician buy-in
- A physician champion
- A strong office manager
- Adequate funding
- Adequate time
- Prior serious EHR consideration

Previous experience working with health IT or with a QIO were not found to be significant factors.

Successful practices took key steps in each phase of practice assessment, system selection, and implementation evaluation:

- Completed a thorough assessment of clinical and financial needs, even though it required a significant time commitment
- Avoided "analysis paralysis" by narrowing EHR product choices based on objective criteria, often with a needs-based selection tool
- Eased the stress of implementation by adequately planning for workflow changes in advance
- Accelerated full use of the system with early goal setting, workflow analyses, care process and role redesign, and implementation planning

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DOQ-IT Today

Based on the results of the demonstration project, CMS expanded the DOQ-IT pilot into a national program in August 2005. Now QIOs in every state and territory are working with at least 5 percent of adult primary care practice sites, helping more than 4,000 medical practices integrate health IT into everyday patient care. The ultimate goals are to accelerate health IT adoption and transform quality of care, using health IT as a tool to improve the management of chronic diseases and improve the delivery of preventive healthcare services.

Medical practices that participate in the initiative will also be able to submit clinical quality data to a centralized data warehouse as EHR vendors develop the necessary reporting requirements. The data will be analyzed by the state QIO and used to create feedback reports on how well the practice is performing in the management of general preventive services and several high priority conditions, such as diabetes and heart disease. Practices can enlist the help of the QIO to make changes for improvement as needed.

The DOQ-IT four-state pilot is also transitioning into one of the most anticipated ambulatory health IT and pay-for-performance demonstrations in the country—the Medicare Care Management Performance Demonstration.

The Medicare Modernization Act of 2003 directed CMS to create a four-state demonstration project to test methods for supporting health IT adoption and using it to improve care for beneficiaries with chronic conditions. To meet the requirement, CMS expanded the DOQ-IT pilot in the original four states into a demonstration project. The demonstration project was announced in October 2006 and is getting under way this year.

The QIOs in Arkansas, California, Massachusetts, and Utah will work with approximately 800 small and medium-sized physician practices. In the first year, practices will receive a financial incentive to report quality measures in diabetes, congestive heart failure, coronary artery disease, and selected preventive measures. These practices will use EHRs to improve care for patients and, in subsequent years, will be eligible for financial incentives of up to $10,000 per physician or $50,000 per practice per year, according to their performance on the quality measures. The QIOs will serve as a resource in both EHR adoption and care management for the practices.

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Read more about EHR adoption in physician practices in "Selling Physicians on EHRs" [*Journal of AHIMA*, June 2007]. The FORE Library: HIM Body of Knowledge, online at www.ahima.org, includes additional physician office resources, including the article "Small Practice, Big Decision," which details a process for system selection in small practices. AHIMA "Fast Facts" audio seminars offer 30-minute prerecorded seminars for physician practices.

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