

Using Health Information Technology to Improve Health Care Quality in Primary Care Practices and in Transitions Between Care Settings

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Organization:	Virginia Commonwealth University
Contract Number:	290-07-10011-3
Project Period:	September 2009 – March 2012
AHRQ Funding Amount:	\$499,982

Summary: There is a major discrepancy between the American public’s perceived value of personal health records (PHRs) and the actual use of PHRs. This less-than-optimal use of health information technology (IT) occurs at a time when the Nation is looking at health IT as an essential tool to reform health care, improve quality of care, coordinate care delivery, and reduce costs. For small- to medium-sized primary care practices implementing health IT, financial and technical resource limitations often require the adaptation of technology that is already available.

This project assessed methods of creating PHRs from existing electronic medical record (EMR) systems at small- to medium-sized primary care practices. For this project, a PHR is defined as a nonproprietary, prevention-focused patient record. When integrated with a clinician’s EMR, it is termed an “interactive preventive health care record” (IPHR). This IPHR, called MyPreventiveCare, incorporated clinical decision support software, a reminder system, tailored educational materials, and decision aids into one package for patients and clinicians. A previous AHRQ-funded [study](#) showed IPHRs to enhance clinician-patient communication and increase the delivery of recommended preventive services by 3-to-12 percent. The current study built on those findings to evaluate whether the IPHR can be applied in health care settings that use different EMRs.

The study was conducted in six practices that cover a range of service areas (rural, suburban, and urban), and sizes (from 2-to-10 clinicians). Through a series of learning collaboratives, study staff guided practices to create a shared vision for IPHR implementation. Separate learning collaboratives were conducted at each practice before and after IPHR implementation. The study team worked toward eight components to help engage practices and create change: 1) securing leadership buy-in and support; 2) creating a culture that is conducive to change; 3) establishing a sense of priority; 4) forming a guiding coalition; 5) developing and communicating a shared vision; 6) empowering members to act on the vision; 7) planning for short-term wins; and 8) consolidating and institutionalizing improvements.

Project Objectives:

- Determine whether the study sites can begin implementing the IPHR. **(Achieved)**
- Measure the utilization and effectiveness of the IPHR. **(Achieved)**
- Determine the necessary steps and procedures that practices need to follow or avoid in order to implement the IPHR successfully. **(Achieved)**

2012 Activities: The study team analyzed collaborative transcripts and finished cleaning EMR data to

evaluate delivery of preventive services pre- and post- MyPreventiveCare implementation. Qualitative themes were linked to quantitative findings to better understand the project impact. During the year, a [Handbook for Using Patient-Centered Personal Health Records To Promote Prevention](#) was developed and posted on the AHRQ Health IT Web Site. The team presented study findings at the 2012 American College of Preventive Medicine's Annual Prevention Conference. Based on this work, Dr. Krist received a grant from the National Cancer Institute to field MyPreventiveCare to 300 practices in 13 States.

The project was completed in 2012.

Impact and Findings: Within 6 months, an average of 14.4 percent (ranging from 1.5 to 28.3 percent) of practice patients used the IPHR. All six practices were able to overcome technical and cultural barriers to adopt the IPHR and begin offering it to patients. By the end of the study period all six practices had varying rates of utilization ranging from 0.8 percent over 9 months in one practice to 22.2 percent over 15 months in another. Statistically and clinically greater increases were observed in colon and cervical cancer screening, cholesterol screening, and tetanus vaccinations for IPHR users compared to non-users 4 months after an office visit. Factors associated with increased patient use of the IPHR included multiple staff members engaging patients with the IPHR during a visit; nurses rather than clinicians primarily engaging patients; practice leadership buy-in; and a clear understanding of the IPHR's functionality among staff. Confusion and competing demands from fielding multiple patient portals significantly limited practices' ability to induce patients to use the IPHR. Practices that had greater proportions of patients using the IPHR had greater percentage increases in patients with up-to-date preventive services.

Target Population: Adults

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-centered care, the coordination of care across transitions, and the electronic exchange of health information to improve quality of care.

Business Goal: Knowledge Creation
