

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

Principal Investigator:	Krist, Alexander H., M.D., M.P.H.
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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 is assessing 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). The IPHR called MyPreventiveCare incorporates clinical decision support software, a reminder system, tailored educational materials, and decision aids into one package for patients and clinicians. A previous study showed IPHRs to enhance clinician-patient communication and increase the delivery of recommended preventive services by 3-to-12 percent. The current study builds on those findings to evaluate whether the IPHR can be applied in health care settings that use different EMRs.

The study is being conducted in six practices that use Epic or A4 EMRs and cover a range of service areas (rural, suburban, and urban), and sizes (from two-to-10 clinicians). Through a series of learning collaboratives, study staff are guiding practices to create a shared vision for IPHR implementation. Separate learning collaboratives are being conducted at each practice before and after IPHR implementation. The study team is working 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. **(Ongoing)**
- Measure the utilization and effectiveness of the IPHR. **(Ongoing)**
- Determine the necessary steps and procedures that practices need to follow or avoid in order to implement the IPHR successfully. **(Ongoing)**

2011 Activities: All core programming tasks, including the addition of laboratory functionality, were completed. The seventh learning collaborative was completed. MyPreventiveCare continues to be utilized by the six study sites and all wish to do so indefinitely. The research team completed the formal observation of

all study sites. The contract was extended due to delays in site implementation to provide additional time to obtain post-implementation EMR datasets from all of the study sites. This was a substantial data query that included information about all patients in the past 2 years at the six study sites. The process of cleaning the data for formal analysis was initiated.

All of the collaboratives' audio recordings were transcribed and site observation field notes were compiled for every site. Transcripts were coded for the qualitative analysis. The research team completed a draft implementation guide.

Extensive dissemination activities, including presentations to the Virginia Commonwealth University Health IT Committee, the Agency for Healthcare Research and Quality Practice Based Research Network Annual Conference, Centers for Disease Control and Prevention's public forum discussion on Development of a Health Risk Assessment Guidance, and National Institute of Health and the Society of Behavioral Medicine. Additional manuscripts are being developed and published.

Preliminary Impact and Findings: All six practices were able to adopt the IPHR and begin offering it to patients. The six practices had varying rates of IPHR utilization. One site had 22.2 percent of patients using the IPHR over a 15-month implementation period, while another had only 0.8 percent of patients using the IPHR over a 9-month implementation period. The project observed statistically and clinically greater increases in colon and cervical cancer and cholesterol screenings 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 talking to patients about the IPHR during a visit; nurses rather than clinicians primarily engaging patients; local 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 get patients to use the IPHR.

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
