

Promoting Use of an Integrated Personal Health Record for Prevention

Principal Investigator:	Krist, Alexander H., M.D.
Organization:	Virginia Commonwealth University
Mechanism:	PAR: HS08-269: Exploratory and Developmental Grant to Improve Health Care Quality Through Health Information Technology (IT) (R21)
Grant Number:	R21 HS 018811
Project Period:	June 2010 – June 2012
AHRQ Funding Amount:	\$299,998

Summary: Personal health records (PHRs) integrated with electronic medical records (EMRs) are potential tools to promote patient-centered care and ultimately improve health outcomes. Although adoption and use of integrated PHR-EMRs is increasing, effective use of such systems typically occurs only within a subset of a primary care practice's patient population.

In a previous Agency for Healthcare Research and Quality-funded project, [MyPreventiveCare](#), an integrated PHR-EMR otherwise known as the Integrated Personal Health Record (IPHR), was offered to 2,750 patients in eight primary care practices—about 3 percent of the total practice population. Use of the system increased the overall delivery of preventive services by more than 5 percent, and by more than 10 percent for some specific individual services such as colon, cervical, and breast cancer screenings. MyPreventiveCare linked patients to their health information in their physician's EMR; provided personally-tailored prevention recommendations to patients; linked patients to individualized educational resources and decision aids to activate patients and promote self-management; and generated patient and clinician reminders.

This followup project is evaluating whether and how these eight primary care practices can extend the use of MyPreventiveCare to their entire practice population (82,000 patients), and whether similar outcomes and benefits are seen when the system is implemented on a larger scale.

Dr. Krist and his research team are applying organizational change theory to develop guidance on how to integrate MyPreventiveCare into care delivery using practice champions, learning collaboratives, and a patient-centered communications strategy. Study staff is conducting key informant interviews and recording and analyzing learning collaboratives to understand the mediators and moderators to integration and use of the system. Evaluation of the impact of practice dissemination of MyPreventiveCare is based on the RE-AIM model, a systematic approach to evaluating health promotion interventions that assesses five dimensions: reach, efficacy/effect, adoption, implementation, and maintenance.

Specific Aims:

- Measure the utilization of the IPHR when the IPHR is promoted to patients by primary care practices using a patient-centered approach integrated into care delivery. **(Ongoing)**
- Assess how clinicians use information in the IPHR and the IPHR's impact on the delivery rates of preventive services. **(Ongoing)**

- Explore how well practices integrate the IPHR into care, identify mediators and moderators (patient, provider, and practice characteristics) to IPHR integration, assess the use of the IPHR, and the degree to which it impacts service delivery. **(Ongoing)**

2011 Activities: Four post-implementation learning collaboratives were held during this period. A patient survey was completed and fielded, and a physician survey development is in the final stages. Five sites began implementation. MyPreventiveCare was programmed to show patients all their labs with a linked doctor's message; this is significantly expanding MyPreventiveCare's functionality and increasing its value for practices. It will also provide a unique opportunity to observe the impact of this new functionality on increasing the proportion of practice patients who register to use the system.

The project team is working with Intuit Health to explore integrating MyPreventiveCare as their primary portal for the practices' patients. The practices are currently fielding two patient portals—MyPreventiveCare and Intuit's proprietary portal—to their patients. Each portal has a different functionality, which causes either confusion or under-use of MyPreventiveCare. Combining these portals would streamline the practices' workflow and reduce patient confusion about the functionality of the separate systems. However, Intuit Health's competition for programming resources is slowing down the potential for integration.

As part of the implementation strategy, the project team provides each practice with a weekly report on the number of new MyPreventiveCare registrants. This is a surrogate for reach and maintenance. Collectively, the study sites are getting approximately 200-250 new registrants per week, representing 10-to-20 percent of all unique patients who present for care in a week. Additionally, learning collaborative members asked that the project create a new user recruitment target for each office to further encourage offices to get patients to use the system.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are mostly on track and project budget spending is roughly on target.

Preliminary Impact and Findings: Practices successfully incorporated the IPHR into workflow and used it to prepare patients for visits, augment health behavior counseling, explain test results, automatically issue patient reminders for overdue services, prompt clinicians about needed services, and formulate personalized prevention plans.

The preliminary use of the IPHR offers encouragement that the IPHR and similar patient-centered information systems might be generalizable and scalable to a wide range of primary care practices. Further research is needed to replicate these findings elsewhere. Additionally, outcomes data are needed to determine the impact of the IPHR on the delivery of care and on patient engagement in decisionmaking. Future manuscripts that detail the findings of the efficacy, adoption, and dissemination trials will contribute to this evidence. The ultimate goal of transforming information systems is to improve the delivery of care and the health of patients. PHRs can play a pivotal role in helping to engage, inform, and motivate patients. While significant advances have been made in the design, adoption, and implementation of PHRs, much more is needed.

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 in care settings, and the use of electronic

exchange of health information to improve quality of care.

Business Goal: Implementation and Use
