

Promoting Use of an Integrated Personal Health Record for Prevention

Principal Investigator:	Krist, Alexander H., M.D.
Organization:	Virginia Commonwealth University
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Target Population: Adults

Summary: Patient-centered health information systems have great potential to improve the quality of care by providing centralized medical information, improved patient education and activation, enhanced patient and clinician communication, decision support, and reminders. However, these systems cannot improve health if they are not used by patients and clinicians. 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 sophisticated systems typically occurs only within a subset of a primary care practice's patient population.

In a previously-funded Agency for Healthcare Research and Quality (AHRQ) 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 (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 will evaluate 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.

The project will apply 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 will conduct key informant interviews and record and analyze 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.

Findings from this study will assist in the design of a future practice-level randomized, controlled trial and will inform practices, policymakers, and payers about how to integrate a PHR in typical primary care practices.

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)**

2010 Activities: Study staff invited eight practices, each of which had participated in the original AHRQ-funded grant, to participate in this project and all sites agreed. A central learning collaborative for the eight practices was assembled. The 16-member collaborative consists of four doctors, one resident, two office managers, four nurses/supervisors, two reception supervisors, two information technology staff, and the organization's central director of quality assurance.

In May and June, baseline observational evaluations of each of the study sites were conducted. Two practice liaisons spent a day at each of the eight practices, observed their workflow, and talked with doctors, nurses, receptionists, and office managers. They collected field notes about workflow, beliefs in preventive care, general office culture, and the general decisionmaking process.

While MyPreventiveCare was programmed in the previous grant to work with the Enterprise EMR, which the study practices use, the team made additional changes to integrate MyPreventiveCare into Epic's and Professional's EMRs. These changes made MyPreventiveCare more generalizable to other EMRs and more adaptable to changes over time. Between June and September, MyPreventiveCare was re-programmed and reconnected to the Enterprise EMR at the eight study sites, per the specifications stated. The study team queried selected variables entered in the EMR since 2004 and re-matched them with MyPreventiveCare variables.

The data collection process to assess the reach and maintenance of MyPreventiveCare within the Enterprise EMR was completed. This methodology is being used to calculate baseline statistics on reach, and practice- and patient-level maintenance. The calculation of practice- and patient-level maintenance statistics will be repeated 6- and 12-months post-MyPreventiveCare. Post-implementation results will be compared to the baseline.

Grantee's Most Recent Self-Reported Quarterly Status (as of December 2010): Progress is completely on track and spending is roughly on target.

Preliminary Impact and Findings: The project has no findings to date.

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