

Self-Management & Reminders with Technology: SMART Appraisal of an Integrated Personal Health Record

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Organization:	University of Pittsburgh
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Summary Status as of:	December 2010

Target Population: Adults, Chronic Care*, Heart Disease

Summary: The complexity of patients' medical conditions is increasing, making preventive care and disease management more difficult. There is growing interest in integrating personal health records (PHRs) with providers' electronic medical records (EMRs) to assist patient self-management and improve care for complex diseases. However, studies that evaluate the impact of PHRs on care outcomes are few.

This project seeks to improve health care outcomes in patients who have or are at high risk for developing cardiovascular disease (CVD) by promoting patient self-management at more than 80 primary care practices, including small and large practices. Major activities include development of a patient-specific, active and interactive component to an existing electronic PHR; a randomized controlled trial to determine the effectiveness of passive and active PHR systems for improving adherence and clinical outcomes; and cataloging the facilitators and barriers to PHR implementation and use. To accomplish the first task, a user group was assembled to determine which features of an active PHR are considered to be most acceptable and useful. To facilitate the second task, target enrollment for the trial has been set at 1,200 patients with complex chronic disease leading to increased cardiovascular risk. This target allows for a 20 percent drop-out rate to arrive at a sample of 1,000 participants to be randomized to a passive PHR (n = 500) or an active PHR (n = 500) at four sites where the PHR currently is installed and in use. All participants will be surveyed using the PHR, along with nurses and physicians at the study sites. Focus groups will also be conducted among PHR participants, nurses, and physicians to determine the barriers to and facilitators of PHR use. Outcomes to be assessed include improvement in control of risk factors, frequency of compliance with testing guidelines, and clinical outcomes.

The PHR for this project, Health Trak, interfaces with EpiCare Electronic Health Record, the organization's Certification Commission for Health Information Technology-certified EMR system. The passive PHR allows patients to view portions of their EMR—including problem lists, medication lists, and test results—to communicate electronically with their physician's office and to track values of home-monitored blood pressure and glucose. This is the standard form of a PHR for many EMRs. The active PHR has the features of the passive PHR but also electronically advises patients to check a secure Web site when disease self-management tasks or preventive services are necessary. This project will help determine if the use of an active patient self-management version of an existing PHR can reduce cardiovascular risk factors.

Specific Aims:

- Develop a patient-specific, active and interactive component to an existing electronic PHR for patients with complex illnesses and conditions that contribute to the development of cardiovascular disease. **(Achieved)**
- Conduct a randomized controlled trial of the effectiveness of passive and active PHR systems for improving adherence and clinical outcomes of these patients in an ambulatory environment. **(Ongoing)**
- Enumerate and catalog the barriers and facilitators to implementation and use of an electronic PHR among providers and patients in an ambulatory setting. **(Upcoming)**

2010 Activities: Patient user groups and focus groups were conducted to inform the development of the interactive component of the PHR, which was activated in 2010 in both EpicCare and Health Trak. E-mail and text alerts are being transmitted to the patients in the intervention group based on the specific cardiovascular health maintenance activities for which the patient is due. Study recruitment for the randomized controlled trial went live June 2010. In the first 6 months of recruitment, over 400 patients were enrolled. Although the rate of recruitment was slightly lower than the desired levels, active and passive recruitment strategies continue to be utilized. To help increase recruitment the project team and providers met one-on-one to answer their questions and encourage participation. The study team anticipates reaching the enrollment target by spring 2011. The task of writing the EMR reports has also been initiated. These reports will be used to extract the EMR data such as demographics, PHR usage statistics, and outcome variables.

Grantee's Most Recent Self-Reported Quarterly Status (as of December 2010): No reports were submitted to the AHRQ Research Reporting System in 2010. However, Dr. Roberts provided information that, as of June 2010, the project was underspent due to hiring challenges and because the data center had not yet been invoiced.

Preliminary Impact and Findings: This 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: Knowledge Creation

* *AHRQ Priority Population*