

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

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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, few studies currently evaluate the impact of PHRs on care outcomes.

This project is seeking 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, both small and large. 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. The passive PHR used in this project 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 PHR form 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. In this project, participants have been randomized to a passive PHR (n = 500) or an active PHR (n = 500) at four sites. Focus groups and surveys are being 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.

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. **(Ongoing)**

2011 Activities: The project team completed the development of the interactive component to the existing PHR in 2011. Email or text alerts are transmitted to the patients in the intervention group based on the specific cardiovascular health maintenance activities for which the patient is due. The project team is preparing a demonstration for the PHR user group that will include technical details on the management of the reminder system and data on the number of and intervals between reminders in a typical ambulatory patient population.

Recruitment to the randomized controlled trial was relatively slow in early 2011 and additional recruitment strategies, including direct mail, advertising, and a monthly raffle, were initiated to improve enrollment. Since the enrollment target of 1,200 study participants was achieved mid-year, the reminder mechanism has been successfully sending electronic reminders to study participants.

The study team has also completed several preliminary activities related to cataloging the barriers and facilitators to implementation, including conducting the first PHR user focus group.

Dr. Roberts did not submit a report with a status of activities or project spending to the AHRQ Research Reporting System in 2011.

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

Target Population: Adults, Chronic Care*, Heart Disease

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

** This target population is one of AHRQ's priority populations.*