

An Interactive Preventive Health Record to Promote Patient-Centered Care

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Mechanism:	RFA: HS07-007: Ambulatory Safety and Quality Program: Enabling Patient-Centered Care through Health Information Technology (PCC)
Grant Number:	R18 HS 017046
Project Period:	September 2007 – February 2011
AHRQ Funding Amount:	\$1,198,677

Summary: While there is clear evidence supporting the health benefits of preventive care, Americans receive only 50 percent of indicated preventive services. A number of patient, clinician, and health care system barriers contribute to this gap in the delivery of quality preventive care.

The objectives of this project were to design, develop, implement, and evaluate whether linking MyPreventiveCare, an interactive preventive health record (IPHR), to an electronic medical record (EMR) would increase the number of patients who receive recommended screening tests, immunizations, and counseling. MyPreventiveCare provides tailored recommendations, links to educational resources and decision aids, and patient and clinician reminders. The PHR gave the patient a link to preventive elements of his or her EMR, a health-risk assessment, an individualized list of recommended preventive services based on risk stratification, education resources, and reminders. Reminders included messages encouraging healthy behaviors and recommended services, alerts informing patients when they become eligible for retesting or new services, and requests encouraging patients to update their profiles. MyPreventiveCare provided the clinician with a summary of the patient's risk factor information, which could be used to update the clinician's EMR.

The study involved eight primary care practices in the Virginia Ambulatory Care Outcomes Research Network. All of the practices used the Allscripts Touchworks® EMR. A randomly selected sample of 5,500 of the practices' 228,000 patients, stratified by age and gender, received a request from their clinicians to use MyPreventiveCare or receive "usual" preventive care. The project team used this randomized controlled trial to examine the effects of MyPreventiveCare on clinical preventive services, shared decisionmaking, and patient-physician communication. This involved the analysis of data in the EMR, utilization data from MyPreventiveCare, and data collected from patient and provider surveys.

Specific Aims:

- Evaluate whether an invitation from a patient's primary care clinician to use MyPreventiveCare increases use of the system. **(Achieved)**
- Evaluate whether an invitation from a patient's primary care clinician to use MyPreventiveCare increases delivery of age- and gender-appropriate clinical preventive services. **(Achieved)**
- Evaluate whether an invitation from a patient's primary care clinician to use MyPreventiveCare increases shared decisionmaking for preventive services. **(Achieved)**

- Evaluate whether an invitation from a patient’s primary care clinician to use MyPreventiveCare improves clinician-patient communication about preventive needs. **(Achieved)**

2011 Activities: The study team used a 6-month no-cost extension to complete final project activities. Data collection, analysis, and manuscript development were the primary focus during this period. All grant activities were completed by the end of the project period.

Impact and Findings: At 4 months, the proportion of indicated preventive services that were received by eligible patients did not increase significantly among patients in the intervention group compared to the control group. Not all patients assigned to the IPHR arm used it, but statistically significant changes were observed in those who did. The proportion of indicated preventive services received increased by 5.6 percent among users, whereas non-users experienced an insignificant increase.

Over 16 months, the proportion of eligible preventive services that were up-to-date declined in both the control group and the non-user subset of the intervention population but increased among IPHR users. The proportion of patients who were up-to-date with all 18 preventive services did not change significantly over the 4 months or differ significantly between groups, in either the intention-to-treat analysis or the comparison of users and non-users. At 16 months, however, the proportion of patients who were up-to-date with all preventive services was higher among intervention patients (including both users and non-users) than among controls, but the net increase among intervention patients was demonstrably greater among users than non-users.

The primary care practices received a summary from the IPHR on all patients who used the system. The summary was transmitted electronically to the EMR task list for the patient’s self-identified primary provider. A chart review and content analysis of these summaries revealed that only 2.2 percent of users were up-to-date for all preventive and chronic care services covered by the IPHR. Among users, 49 and 56 percent were due for screening tests and vaccinations, respectively; 91 and 55 percent needed health behavior counseling and preventive medications, respectively; and 35 percent had inadequate control of chronic conditions. These alerts led clinicians to update the EMR records of 59 percent of patients to fill in missing information that patients had entered into the IPHR. With few exceptions, clinicians accepted the patient’s reported updates and changes as accurate. Additionally, after receiving the summaries from the IPHR, the study practices contacted 27 percent of patients to schedule a wellness visit, 17 percent to schedule a chronic care visit, and 19 percent to deliver a specific service (e.g., mail a referral for a mammogram or colonoscopy, arrange a nurse visit for an immunization).

Focus groups with patients revealed that trust and functionality were the two major themes that influenced whether they would use a health Web site and the value they obtained from doing so. Trust included whether they believed that: 1) information on the Web site was accurate; and 2) security and confidentiality of their personal information would be protected. Functionality included whether the patient expected a health Web site would be useful, the anticipated benefits of using a Web site, and the potential challenges of using a Web site. The degree to which trust and functionality (and their subthemes) mattered to patients was dependent on the relationship of their clinician to the Web site. For example, several participants noted that all information on the Internet is vulnerable, but they seemed willing “to take a leap of faith” with their personal health information and use a Web site if it had the approval of their clinician.

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
