# An Interactive Preventive Health Record to Promote Patient-Centered Care

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**Organization:** Virginia Commonwealth University

**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, Including No-Cost Extension

**AHRQ Funding Amount:** $1,198,677

**Summary Status as of:** December 2010

**Target Population:** Adults

**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 the project are to design, develop, implement, and evaluate whether an interactive preventive health record (IPHR) linked to an electronic medical record (EMR) will increase recommended screening tests, immunizations, and counseling. MyPreventiveCare provides tailored recommendations, links to educational resources and decision aids, and patient and clinician reminders. MyPreventiveCare gives 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 include 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 provides the clinician with a summary of the patient’s risk factor information, which can be used to update the clinician’s EMR.

The study involves eight primary care practices in the Virginia Ambulatory Care Outcomes Research Network. All of the practices use a common EMR, the Certified Commission for Health Information Technology-certified Allscripts Touchworks® EMR. A randomly selected sample of 5,500 of the practices’ 228,000 patients, stratified by age and sex, receive a request from their clinicians to use MyPreventiveCare or receive “usual” preventive care. Through this randomized, controlled trial, the project team is examining the effects of MyPreventiveCare on clinical preventive services, shared decisionmaking, and patient-physician communication. This involves 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. **(Ongoing)**
- Evaluate whether an invitation from a patient’s primary care clinician to use MyPreventiveCare increases delivery of age- and gender-appropriate clinical preventive services. **(Ongoing)**
- Evaluate whether an invitation from a patient’s primary care clinician to use MyPreventiveCare increases shared decisionmaking for preventive services. **(Ongoing)**
• Evaluate whether an invitation from a patient’s primary care clinician to use MyPreventiveCare improves clinician-patient communication about preventive needs. (Ongoing)

2010 Activities: The grant team analyzed baseline and four-month post-intervention data from both the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey and the EMR. The team also completed the collection of both survey and EMR data for the 16-months post-intervention. In February 2010, the team mailed the preventive services survey to 4,500 predefined intervention and control patients and the CAHPS survey to an additional 1,000 predefined intervention and control patients. They prepared and transferred EMR data on all 5,500 intervention and control patients and, at the end of the calendar year, were in the process of the combined EMR and survey data analysis. The team created a detailed and extensive protocol to address data discrepancies (i.e. when EMR data and survey responses are inconsistent) and merge the datasets. These refined protocols were made consistent with the U.S. Preventive Services Task Force recommendations and the prevention recommendations that MyPreventiveCare promotes to patients.

Analysis of qualitative data included review of focus group transcripts by team members and the use of an immersion and crystallization approach to the analysis to identify key themes. Results are being written for publication. The team completed a presentation of findings at the Agency for Healthcare Quality and Research Annual Conference in September 2010.

In July 2010, MyPreventiveCare was officially recognized by the Centers for Medicare and Medicaid Services (CMS) as a qualified Physician Quality Reporting Initiative (PQRI) reporting registry. Obtaining recognition involved submitting a nomination letter, documenting and justifying the quality measures calculation, getting CMS approval on the data validation process, and demonstrating an ability to submit quality measures in the specified XML format. CMS PQRI approval facilitated the recruitment of six additional study sites for future work.

Grantee’s Most Recent Self-Reported Quarterly Status (As of December 2010): Project progress is completely on track, meeting all milestones on time and project spending is roughly on target. The project staff are focused on qualitative data collection and quantitative data analysis.

Preliminary Impact and Findings: Within six weeks of receiving the invitation, 292 patients (11 percent) had established an account and used MyPreventiveCare. Users were more often male and older than non-users. Although 76 percent of users had attended a wellness or chronic care visit within the past year, only three percent were up-to-date with risk factors under control for all 18 preventive services (for example influenza vaccination and diabetes screening). Among MyPreventiveCare users, 49 percent and 56 percent were due for screening tests and vaccinations respectively; 91 percent and 55 percent needed counseling for unhealthy behaviors and preventive medications respectively; and 35 percent had inadequate control of chronic conditions. Alerts to clinicians issued by MyPreventiveCare led practices to update 59 percent of patients’ records and to contact patients to schedule a wellness visit (80 patients), chronic care visit (49 patients), or an appointment for a specific preventive service (56 patients).

The team has combined EMR and patient survey data, and completed and cleaned four-month post-intervention data, which is currently being written up for publication. Overall, MyPreventiveCare increased the delivery of all preventive services by 5.4 percent; colon cancer screening by 12.3 percent; breast cancer screening by 16.1 percent; and cervical cancer screening by 12.3 percent, when comparing users to non-users.
**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