

Health IT Enhanced Family Health History Documentation & Management in Primary Care

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Summary: The growing understanding of the genetic and hereditary components to disease has increased the importance of information about family history as a component of a patient medical record. However, in the context of short primary care visits, full family histories accompanied by individual risk assessment are challenging for providers. Technology has the potential to improve the ability of providers to both capture this type of information and to estimate and provide guidance on health risks based on family history. This project is developing two methods to collect family health history as part of an integrated risk assessment module: 1) a telephonic interactive voice response system (IVRS) that uses a computer to detect voice during a normal phone call and encourages patients to provide their history through programmed questions; and 2) a Web-based tool with a series of questions. Patients will choose their preferred method and information gathered will be incorporated into the patient electronic health record (EHR). Based on reported family history, a computer server will summarize information into a risk assessment for patient and provider discussion. This will be paired with clinical decision support reminders to providers based on the assessment.

The integrated risk assessment module will be evaluated through a cluster randomized controlled trial of adult primary care patients in the Brigham and Women's Primary Care Practice-Based Research Network. The evaluation of this project will assess the ability of the module to reach a large number of patients, its effectiveness in improving personalized risk assessment and counseling, and the facilitators and barriers of adoption and implementation. The findings from this research will increase understanding about how technology can be used to improve collection of family health history information from diverse populations and be used to provide personalized risk assessment.

Specific Aims:

- Develop a patient-reported, EHR-integrated, personalized risk assessment module to provide tailored disease risk and risk reduction information for these four common conditions (breast cancer, colorectal cancer, coronary heart disease, and type II diabetes) for the patient and his/her primary care physician (PCP). **(Ongoing)**
- Measure the reach and effectiveness of this integrated risk assessment module by conducting a cluster randomized controlled trial of adult primary care patients in the Brigham and Women's Primary Care Practice-Based Research Network. **(Upcoming)**
- Evaluate facilitators and barriers to the adoption and implementation. **(Upcoming)**

2011 Activities: The research team began developing a risk assessment tool to incorporate both patient-

reported family health history and lifestyle risk factors into a single tool to provide tailored disease risk and risk reduction information for the patient and PCP. An IVRS script and Web-based version of a risk assessment tool is being created based on Your Health Snapshot and the Surgeon General’s My Family Health Portrait that will run on a secure site behind the health system’s firewall. The IVRS and Web-based risk assessment surveys are being augmented through a literature review of metrics associated with lifestyle risk factors for the targeted diseases/conditions. For physicians, the team is developing a survey to measure self-efficacy for individualized risk assessment and patient counseling about personalized risk, and perceived barriers and facilitators to these activities in the primary care setting. The provider survey will be distributed at the end of the intervention to get feedback on the risk assessment tool. The team is developing a survey for patients to measure their personal assessment of risk for breast cancer, colon cancer, heart disease, and diabetes and the process of care for preventing these conditions.

There are two study arms. One consists of patients who will complete their history through robocalls and the integrated voice response; the other is patients who will complete their history through a personal health record. The research team is currently developing the tools and surveys to be used through each arm. The team has expanded the disease categories to include ovarian, prostate, endometrial, and lung cancer and is finalizing the risk assessment module of self-reported family health history and personal risk factors. The goal is to use these in a randomized control trial across Partners HealthCare primary care clinics. There are 16 clinics affiliated with the Brigham and Women’s Hospital and the scheme is to have eight control clinics.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are on track and project spending is on target.

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

Target Population: Adults

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Knowledge Creation
