

Technology for Optimizing Population Care in a Resource-Limited Environment (TOP-CARE)

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Organization:	Massachusetts General Hospital
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Summary: In recent years, many organizations have designed health information technology (IT) initiatives to help provide consistent, high-quality care to everyone, thereby improving health care in the primary care setting. Despite the increasing adoption of basic health IT capabilities, studies continue to reveal low rates of appropriate preventive screening. The Technology for Optimizing Population Care in a Resource-Limited Environment (TOP-CARE) project is working to design, develop, and implement a novel cancer screening intervention program. The goal of this study is to improve clinical decision support and enhance preventive cancer screening. The screening program is being integrated with electronic health record (EHR) data to assess whether clinical decision support can efficiently enhance preventive care—specifically, breast, cervical, and colorectal screening—in a primary care setting.

User feedback, particularly from key stakeholders such as primary care physicians, practice contact delegates, patient navigators, and central administrative personnel, is critical to guide the successful design of the TOP-CARE system. A practice cluster randomized trial of the TOP-CARE program will provide an opportunity to assess its impact on cancer screening rates in eligible patients. Practices within the Massachusetts General Primary Care Practice Based Research Network (MGPC-PBRN) will be randomly assigned to intervention or augmented standard care. This randomized clinical trial uses tailored outreach, including letters and practice personnel or patient navigator contact to see whether screening rates differ when outreach is linked to the patient's needs. The control group receives a standard of augmented care that mimics current population-level reminder systems, supplemented by the use of automation.

Using average cancer screening test completion rates for breast, cervical, and colorectal cancers, Dr. Atlas and his research team will demonstrate the use of a state-of-the-art approach to automated, cancer-specific patient reminders and its impact on involving clinicians in patient population management to facilitate between-visit, patient-centered cancer screening. This research is relevant to nationwide efforts to rigorously demonstrate the most effective ways to implement new IT-based delivery models.

Specific Aims:

- Design, develop, and implement a novel cancer screening intervention program (TOP-CARE) that facilitates the identification, individualized contact, and subsequent tracking of patients overdue for screening. **(Achieved)**
- Conduct a practice-randomized trial of the TOP-CARE program within the MGPC-PBRN

assessing its impact on cancer screening rates in eligible patients. **(Ongoing)**

- Collect data prospectively throughout the randomized trial on costs, preferences, and clinical and process outcomes to inform a subsequent formal cost-benefit analysis. **(Ongoing)**

2011 Activities: Activities focused on the development and implementation of the TOP-CARE intervention. The randomization scheme and randomization of practices to the intervention or the automated control arm was completed in March 2011. In May, the functionality and quality control testing on the system was completed. The project team conducted data quality testing in which a comprehensive data reconciliation process was conducted between the live system in production and the retrospective data collection to identify any causes of discrepancies. During this same period, the TOP-CARE beta application was rolled out to a pilot site (Ambulatory Practice of the Future) for additional usability testing. Training sessions were provided to all primary care practices involved in the study and users of the applications—primary care physicians (PCPs), delegates, practice managers, and administrators—received more intensive training. Overview and training of the applications for PCPs and practice population managers were completed in all nine intervention and all nine control practices. On June 15th, 2011, the TOP-CARE application was launched on schedule.

Meanwhile, the study team continues to improve the TOP-CARE applications based on user feedback received after the initial launch. Training of existing navigators was completed in August. In September, all practice population managers were emailed offering a followup training session and the opportunity to meet the TOP-CARE navigator. Brief meetings were held in five intervention practices to introduce the patient navigation.

To identify the variables necessary for the cost analyses, a survey instrument for PCPs, practice delegates, and navigators was developed. The survey was administered in paper form to PCPs and practice delegates during initial meetings and training sessions. The survey will be re-administered after the completion of the randomized controlled trial.

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

Preliminary Impact and Findings: The 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
