

Project Title: Evaluation of a Computerized Clinical Decision Support System and Electronic Health Record (EHR)-Linked Registry to Improve Management of Hypertension in Community-Based Health Centers

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Organization: Primary Care Development Corporation

Mechanism: RFA: HS07-006: Ambulatory Safety and Quality Program: Improving Quality through Clinician Use of Health IT (IQHIT)

Grant Number: R18 HS 017167

Project Period: 09/07 – 09/10

AHRQ Funding Amount: \$1,132,569

Summary Status as of: December 2008

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: Implementation and Use

Summary: This project was initiated in September 2007 and has completed the first third of the grant period. The project aims to address the need for more empirical outcome data on effective information technology strategies for improving control of hypertension among low-income immigrant populations. Primary Care Development Corporation, in collaboration with Open Door Family Medical Center (Open Door)—a not-for-profit organization that operates four primary care sites serving low-income, primarily Latino immigrants—New York University College of Dentistry and School of Medicine, and the Columbia University Mailman School of Public Health are analyzing the effects of a multi-component, technology-driven quality improvement intervention on hypertension control. This multi-disciplinary collaborative effort provides a unique opportunity to target an underserved immigrant population that is difficult to reach. The project hypothesized that clinical decision support (CDS) and electronic registry-linked performance feedback will be more effective for improving hypertension control than a usual, standard care electronic health record (EHR) in community health clinics (CHCs) serving low-income, primarily Latino patients. The project will extract data from the eClinicalWorks Electronic Health Record 8.0.47.3, which is Certification Commission for Healthcare Information Technology (CCHIT) certified, on a monthly basis and will estimate the effect of the intervention using AutoRegressive Integrated Moving Average (ARIMA) modeling. The large number of minority and low-income patients served by Open Door CHCs and the existing practice-based research infrastructure provided by Primary Care Development Corporation and Open Door offers a unique opportunity to investigate the efficacy of these interventions in CHCs serving this hard to reach immigrant population.

Specific Aims

- Test the hypothesis that an office-based EHR with decision support and registry-linked provider performance feedback will be more effective in improving hypertension control than a standard EHR alone. **(Ongoing)**
- Assess the implementation process and delineate factors that influence adoption of the EHR-supported quality improvement intervention. **(Ongoing)**

2008 Activities: Process data related to the management of hypertension, use of clinical guidelines, and use of EHR and technology was analyzed, which included the analysis of structured interviews of Open Door providers as well as surveys. Transmission of EHR data has been occurring monthly as planned.

The study intervention for the project is almost complete. However, the following tasks are still in progress: creating functional and technical specifications, programming the intervention in the EHR, and assessing user acceptance of EHR functionality. In the upcoming quarters, the team plans to train clinic users on the CDS application and is currently working on the preparation for the training, which is on track.

Preliminary Impact and Findings: The project does not have a preliminary impacts or findings at this time.

Selected Outputs

Baseline Clinician Interview Script

Healthcare Provider Survey

AHRQ 2008 Annual Conference presentation: Evaluation of a Clinical Decision Support System (CDSS) and Electronic Medical Record (EMR) Based Registry to Improve Management of Hypertension in a Community Health Center ([PowerPoint® File](#), 420 KB; [Web Version](#)).

Grantee's Most Recent Self-Reported Quarterly Status: Due to a compulsory EHR upgrade, which occurred at the study site in November 2008, the team delayed the implementation of the study intervention by approximately 6 months. Accordingly, the project anticipates extending the project by 6 months. This delay does not affect the goals, milestones, scope, or other major component of the timeline.

Milestones: Progress is mostly on track.

Budget: Spending is roughly on target.