

Using Information Technology to Provide Measurement Based Care for Chronic Illness

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Organization:	University of Texas SW Medical Center – Dallas
Mechanism:	RFA: HS07-006: Ambulatory Safety and Quality Program: Improving Quality Through Clinician Use of Health Information Technology (IQHIT)
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Project Period:	September 2007 – February 2011, Including No-Cost Extension
AHRQ Funding Amount:	\$1,196,703
Summary Status as of:	December 2010

Target Population: Adults, Chronic Care*, Mental Health/Depression

Summary: Current routine practice in psychiatric settings does not depend on a systematic measurement-based approach but on global clinical judgment. This approach often results in suboptimal care and outcomes. Depression is the most common mental health cause for disability, and treatment should consider the chronic nature of the disorder. Despite the development of effective treatments over the last 30 years, evidence from practice settings continues to show inadequate antidepressant medication treatment in terms of dose and duration. This project applies expertise in algorithm and guideline implementation to the development of a clinical decision support system (CDSS) integrated with an electronic health record (EHR) with the goal of disseminating the principles of evidence-based treatment for depression in large systems of care.

The project focuses on the use of Measurement Based Care (MBC) to improve the quality of care for patients with major depressive disorder (MDD). The EHR-CDSS program will facilitate MBC to improve medication management for patients with MDD by using information technology (IT) to ensure that clinicians are monitoring three critical response domains (symptom severity, side-effect burden, and treatment adherence) using standardized measures. The IT system will also provide decision support during each medication treatment phase and will help prevent medication errors.

This project is a collaboration between the University of Texas Southwestern Medical Center and the Centerstone Community Mental Health Center, Inc. (Centerstone). Centerstone is a behavioral health services provider that provides treatment throughout Tennessee. The first phase of the project was primarily devoted to customization of the CDSS to take into account the specific needs of Centerstone and integration of CDSS into Centerstone's EHR, CenterNet. The objective of the second phase was to test the effectiveness of the EHR-CDSS to increase clinicians' use of MBC principles in medication management for patients with MDD.

To fully evaluate effectiveness of the EHR-CDSS, this project involves two research studies. The first study is a comprehensive, system-wide evaluation that will include clinicians using the EHR-CDSS and their patients with depression who require a treatment change, either a change in medication or an increase in dose. The second study is an in-depth evaluation of the impact of the EHR-CDSS on a limited sample of physicians and their patients, directly assessing the use of MBC using a pre-post test design.

Specific Aims:

- Integrate a CDSS that facilitates MBC with physician needs and the EHR at Centerstone. **(Ongoing)**
- Evaluate EHR-CDSS's successful promotion of MBC in improving medication management. **(Ongoing)**

2010 Activities: The integration of the EHR-CDSS and implementation of MBC started in February 2010 and was instituted in 21 clinics (14 rural and 7 urban) that treat approximately 8000 patients with MDD. Data collection was ongoing through the end of the year.

Most Recent Self-Reported Quarterly Status (as of December 2010): The grantee did not provide self reported status.

Impact and Findings: As a first step, a needs assessment was conducted with representative Centerstone clinical staff members to determine how best to integrate the CDSS and EHR. The primary concern expressed by clinical staff members is the increased time burden, in terms of both the length of the treatment visit and the number of treatments visits. Based on prior reports, the research team expected that providing MBC would initially require more time, but once the system was established, the increased visit time would primarily involve the time the patient needed to complete the self-report assessments. Data showed that while patients in the algorithm arm of the trial initially were seen at a higher frequency, the total number of visits over a year were similar in both arms of the trial.

The first study was designed to provide a systematic evaluation of any changes in treatment patterns in the Centerstone System before and after implementation of EHR-CDSS. There was a significant difference in both the total number of visits as well as the patterns of treatment visits. Additional analyses that explore differences based on decision support usages, length of time between visits, and the utilization of MBC assessments during treatment visits are ongoing.

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve the quality and safety of medication management via the integration and utilization of medication management systems and technologies.

Business Goal: Implementation and Use

* *AHRQ Priority Population*