

Pharmaceutical Safety Tracking: Managing Medications for Patient Safety

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Organization:	Children's Research Institute
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 – May 2011, Including No-Cost Extension
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Summary Status as of:	December 2010

Target Population: Medicaid, Mental Health/Depression, Pediatric*

Summary: Pharmaceutical Safety Tracking (PhaST) is a health information system that assists clinicians' management of medications in ambulatory settings. It is an automated system for monitoring medication adherence, side effects, and patient symptoms using research-based assessment procedures administered via interactive voice response (IVR) telephony. PhaST seeks to protect outpatients taking medications that have recognized side-effect risks even when those drugs are correctly prescribed.

When a patient reports a problem with a medication on an IVR call, PhaST alerts a psychiatric social worker trained to triage the problem, counsel the patient or family, and when necessary, contact the patient's prescribing clinician or the hospital emergency services. The goal of PhaST is not to replace clinician visits with telephone calls, but to improve safety and remediate access problems by augmenting communication channels already available to families. PhaST communicates data about patients to clinicians using e-mail. PhaST does not directly store information in an electronic health record (EHR) system. Rather, copies of the e-mailed PhaST reports are filed in paper charts. This is primarily due to the fact that the complete EHR system has not yet been fully implemented for the behavioral health clinics, which are the primary source of patient referrals, and because PhaST serves patients across systems with independent health record systems.

The target medications for this project are pediatric antidepressants. To compare the use of PhaST to usual care, the project is conducting a randomized trial in a large, urban, specialty mental health system that serves a primarily Medicaid population. The project seeks to enroll youths who are receiving new prescriptions for antidepressants to assess them for adverse events at baseline and 1-, 2-, and 3-month milestones. Patients are recruited based on physician referral. A total of 200 to 250 patient recruits are anticipated by the project end. The project will compare chart-documented adverse events to adverse events that have been determined by an examiner who is blind to the patients' randomization. It is predicted that there will be higher agreement between chart-documented adverse events and examiner-determined adverse events when PhaST is used. The project is also comparing PhaST to usual care on measures of patient and provider satisfaction, patient outcomes, and measures of the quality of medication management, such as rates of patient medication non-adherence.

Specific Aims:

- Determine whether PhaST is superior to usual care on measures of system process. **(Ongoing)**
- Determine whether PhaST is superior to usual care on measures of patient and provider outcomes. **(Ongoing)**

2010 Activities: The primary focus of activity was on finalizing and deploying the production version of the PhaST software. The ongoing recruitment of study participants was another important focus. The final deployment of the highly-automated system was a gradual process which began in June 2010, and as confidence in the system grew, less supervision was required. While the revised system requires significantly less supervision than it did initially, minimal supervision continues to be required due to the inherent security environment that a Web-based program faces when interacting outside the hospital system. The remainder of the project will be spent completing patient followup, data analysis, and summarizing the results.

Grantee's Most Recent Self-Reported Quarterly Status (as of December 2010): The project is mostly on track in meeting all its aims and milestones. Moderate underspending in the budget will help facilitate the no-cost extension period, during which time the data analysis and manuscript writing will occur.

Preliminary Impact and Findings: There are no findings to report at this time. Initial recruitment was slower than originally planned, but participant retention is relatively high. Although the overall sample size may be smaller than anticipated and some questions may be harder to answer, this is not anticipated to significantly impact the analysis. Anecdotally, despite lower-than-expected physician adoption of the software, physicians who use the software provide very positive feedback. The system has also been very reliable, with virtually no downtime.

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*