

Project Title:	Improving Lab Follow-up by Delivering an Enhanced Medication List to Outpatient Physician Practices
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Organization:	Indiana University
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Summary Status as of:	December 2008

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: Knowledge Creation

Summary: In this project, outpatient primary care clinicians receive a medication history based on pharmacy dispensing records immediately prior to each patient’s visit. The goal is to use this document to prompt discussion between the clinician and patient regarding the patient’s medications. The document is designed to support medication management; it contains decision support reminders specifically related to the patient and includes clinical decision support on drug-drug interactions, drug-lab interactions, and drugs to be avoided in the elderly. The document contains dispensing data from multiple pharmacy sources, as opposed to prescribing data currently stored in the patient’s chart.

The intervention will be piloted, fully implemented, and evaluated for its impact on quality and safety.

Specific Aims

- Aggregate medication histories from multiple sources into a single document. **(Achieved)**
- Add decision support rules to medication history documents in four areas: inadequate lab monitoring, drugs with abnormal labs, drugs to avoid in the elderly, and drug-drug interactions. **(Achieved)**
- Deliver enhanced medication history documents to clinics. **(Achieved)**
- Examine instances of decision support rule use. **(Ongoing)**
- Examine quality and safety improvements. **(Ongoing)**

2008 Activities: We are about mid-way through this study. The year 2008 involved substantial labor-intensive programming and development work necessary to begin delivering the enhanced medication history document. First, we helped the clinic registration system create a trigger message each time that a patient arrived to register, and then send the trigger message to the Indiana Network for Patient Care. Second, we used the patient identifiers in the trigger message to collect dispensing records from three sources: RxHub commercial pharmacy benefit managers, Medicaid, and the Wishard County health services outpatient pharmacy. Third, we used the patient identifiers to collect laboratory test results. Because patients have different identifiers at different institutions, we had to match patient identifiers to aggregate the pharmacy and lab data. Fourth, decision support rules were written to recognize combinations of medications, labs, and age, and the resulting reminders were added to the summary file. Fifth, the data were formatted to produce a final readable report. Sixth, we developed a process to deliver the report to the correct printer at the correct clinic within a minute or two of the patient’s registration. When the report is printed, nurses or clinic staff place the document in the patient chart in preparation for the physician-patient visit.

We spent approximately 2 months testing the system with the clinics to ensure that the trigger messages worked properly and that the system responded promptly. Once testing was successful, we asked the nurses/clinic staff to begin delivering the documents to the charts. Initially, we went live at two clinics. One clinic has been very responsive; the physicians report that they like the document and appreciate its value. At the other clinic, we discovered that the data were not as thorough as what the clinic's current in-house system supplied. We are conducting a chart review to verify what data are missing and determine how to fix this.

We will be adding an additional clinic in early 2009.

Preliminary Impact and Findings: There are no preliminary findings available at this time.

Selected Outputs

None available.