

Optimizing Medication History Value in Clinical Encounters With Elderly Patients

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Target Population: Elderly*

Summary: Electronic prescribing (e-prescribing) combined with a medication history may help physicians better understand adherence issues with older patients. These systems promote clinician-patient partnerships, empower patients to participate in treatment decisions, and help clinicians to negotiate acceptable medication regimens that are more amenable to patient follow-through. Some e-prescribing systems are integrated with pharmacy chains, making medication histories and information on unfilled prescriptions available to clinicians.

Stemming from Dr. Lapane's previous research, this project explores the hypothesis that in order to optimize improvements in quality of medication management during clinician office visits, clinicians need additional training to improve their use of the medication history in the clinical encounter. The research team also hypothesizes that additional clinical information systems must be used in conjunction with the flow of detailed medication history via e-prescribing to help guide and structure the clinician's approach to medication management in ambulatory settings.

The project aims to test information technology (IT) by leveraging the flow of community pharmacy-based medication history at the point of prescribing, coupled with training to enhance patient-provider communication. The project is focused on improving medication management among elderly people seeking care in ambulatory care settings. Specifically, the intervention strives to aid in the evaluation and prioritization of medication management issues at the point of prescribing, incorporating medication information into the clinical encounter, and fostering the clinician-geriatric and patient-caregiver communication regarding potential medication management issues. The purpose of the intervention is to improve the facilitation of informed, shared decisionmaking and monitoring for medication-related problems, and assist clinicians in evaluating and monitoring complex medication regimens to help identify, resolve, and prevent medication-related problems.

In order to test this intervention, the project will conduct a large-scale randomized trial, recruiting physicians that use DrFirst, an e-prescribing application and network to transmit prescriptions to pharmacies. One-half of the practices will receive the innovative modality for delivery of the standard of care by leveraging medication history information to generate triggers or alerts; the other half will receive the triggers plus training. The evaluation of the project relies on extensive process tracking, existing data sources of medication history, and primary data collection of provider information.

Specific Aims:

- Develop geriatric-specific algorithms to identify potential issues with medication management (e.g., polypharmacy, potentially inappropriate medication use, duplicative therapy, and nonadherence) using community pharmacy-generated medication history. **(Achieved)**
- Develop structured, problem-oriented frameworks for organizing medication history information during visits (triggering) for common issues identified by the algorithms developed in Aim 1. **(Achieved)**
- Develop and pretest modules to teach clinicians how to improve geriatric patient-provider communication relating to medication management with the use of technology (training). **(Achieved)**
- Test the impact of these interventions on clinician behavior using a randomized controlled trial with two arms: 1) delivery of triggers; and 2) delivery of triggering and training interventions. **(Ongoing)**
- Develop “tool-kit” resources and developed intervention products for use by nonphysician providers in other ambulatory settings (e.g., pharmacists in community pharmacy settings). **(Achieved)**

2010 Activities: While physician practice recruitment has started, it has remained a significant challenge. The intervention has been administered to those randomized to the treatment arm.

The research team worked with the e-prescribing software developer, DrFirst, to finalize the specific triggers and to review additional issues as needed. This process was informed by the analysis of secondary data to confirm what had been learned from earlier systematic reviews. The triggers have been implemented, and all physicians participating in the study have had the triggers installed in their e-prescribing solution.

In order to code the physician-patient interaction, physicians are audio taping a small number of clinical encounters at baseline and followup. The research team worked closely with the developers of the Medicode System to develop and test a protocol for coding patient-physician communication. All baseline audio tapes were submitted for coding.

The team identified a few areas for improvement for the physician training modules, and updated the Web site and CD modules to include the changes. They also used Articulate software to convert the training modules into a more effective format. Each CD contains one module, and the plan is for each physician to receive one module every 10 days for four waves.

Grantee’s Most Recent Self-Reported Quarterly Status (as of December 2010): The project budget is underspent primarily because a substantial portion of the budget is tied to participant recruitment, as well as coding of clinical encounters. Spending will be on target following enrollment phase. Project progress is on track in some respects but not in others due to challenges in recruitment.

Preliminary Impact and Findings: To date, physicians are more likely to use the CDs than the Web-based modules. The CDs have also been tested in training other health professions about drug issues experienced by older adults, and the team has confirmed that the content is appropriate for this wider audience.

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*