

Tailored DVD to Improve Medication Management for Low Literate Elderly Patients

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Target Population: Elderly*, Low Literacy

Summary: Medication decisions are the most common type of decision that physicians make, yet the evidence shows that discussions between patients and providers regarding medications remain infrequent in primary care settings. Medication management issues among older patients include high incidence of preventable adverse drug events and noncompliance with medication regimens. Access to comprehensive and accurate electronic medication history provides the opportunity to create tailored interventions based on the particular medication issues a patient may be experiencing.

Dr. Lapane's research team hypothesized that electronic medication history can be harnessed to develop tailored patient education DVDs and print materials for low-literate audiences. The purpose of these materials is to empower geriatric patients and their caregivers to participate in treatment decisions and negotiate acceptable medication regimens that are more amenable to follow-through. This project focused on developing and testing health information technology (IT) interventions that improve medication adherence and use by patients, shared decisionmaking, patient-clinician communication, and patients' self-management of chronic conditions. The team developed paper-based and tailored DVD content for low-literate patients, illustrating the principles of medication adherence and providing guidance on medication use so that they can better adhere to complex drug regimens.

The study used a mixed-methods formative evaluation to ensure a representative variety of data are analyzed for the development of the final product. Data sources included: focus groups with patients, providers, and caregivers; electronic prescription data and other sources of data such as the National Health and Nutrition Examination Survey, and other publicly available databases; and telephone surveys with a cross-section of the population. Once developed, materials were confirmed with additional focus groups, and the DVDs and print materials were pretested in a live environment. The research team engaged primary care practices and community centers in a pilot study of the intervention, and 132 patients completed the follow-up activities which included collecting and analyzing information such as demographics, social support, medication profiles, medication management issues, stage of readiness to change, self-efficacy, self-reported adherence, adherence measures based on electronic medication history, and a series of clinical process measures.

Specific Aims:

- Develop algorithms to identify potential medication management issues based on community

pharmacy-generated electronic medication history of elderly people in census areas with high concentrations of minorities and poor people. **(Achieved)**

- Develop tailored print materials based on electronic medication history to assist geriatric patients in adhering to complex medication regimens. **(Achieved)**
- Develop tailored instructional videos which focus on improving the geriatric patient's role in patient-provider communication regarding medication issues and adherence to medication regimens. **(Achieved)**
- Pretest these interventions with versions in English and Spanish as part of a feasibility study within physician offices likely to service low-literate geriatric patients. **(Achieved)**

2010 Activities: Pharmacists were engaged to help expand medication lists so that they could be integrated with electronic medical record data and the algorithms for identification of potential medication management issues. The team developed the specific algorithms to trigger segments of the DVD. Analysis and testing of the algorithms was completed.

DVDs were finalized in English and Spanish, and were prepared for distribution. All print materials corresponding with the videos were completed, translated into Spanish, printed, and prepared for distribution.

The evaluation was designed and implemented. Surveys were developed, piloted, finalized, and translated into Spanish. The intervention was pilot tested and finalized. The team enrolled participants through community centers in Rhode Island and Massachusetts and primary care practices in Virginia. Nearly eighty-seven percent of persons completing the baseline assessment (n = 146) finished the entire protocol (n = 132).

Grantee's Most Recent Self-Reported Quarterly Status (as of September 2010): The project was completed in September 2010. All aims and milestones were achieved. An administrative supplement was granted by AHRQ so that the aims could be achieved, and the final budget spending was roughly on target.

Impact and Findings: Virtually all households in the United States have a television, with 8 in 10 also having DVD equipment. While the initial cost of DVD production can be somewhat high, reproduction is inexpensive and has the potential to make accurate information regarding medication management available to diverse populations in a convenient, acceptable, and cost-efficient way. Clearly, different mechanisms are needed to provide information to older adults and low literate adults. The findings of this study support the notion that DVDs are a viable mechanism to provide such information. Another opportunity for provision of medication information is via community pharmacies. The distribution of consumer medication information is effective; however, the content, format, reading level, and excessive length of informational materials is not. The extent to which integration of tailored DVDs for home viewing via community pharmacy is acceptable to older adults with diverse backgrounds remains unknown. Also, before promoting widespread diffusion of this approach, the impact of tailored medication education DVDs on health outcomes needs to be proven in a larger study.

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to support patient-

centered care, the coordination of care across transitions in care settings, and the use of electronic exchange of medication information to improve medication management.

Business Goal: Implementation and Use

* *AHRQ Priority Population*