

Improving Meaningful Access of Internet Health Information for Older Adults

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Organization:	University of Miami
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Summary: There has been enormous growth in the development of consumer-oriented health information technology (IT) applications designed to support tasks such as the exchange of health information, communication, health decisionmaking, and disease management. These applications are intended to support the delivery and self-management of health care and ultimately improve health outcomes. Data suggest that the usability and utility of many consumer health IT applications that are available on the Internet, such as health Web sites, are uneven across user groups.

This is especially true for older adults whose age-related cognitive changes can impair their ability to find information on the Internet. Many older adults have less experience with computers and the Internet than other age groups. Finding, using, and discerning the reliability of Internet health information, as well as integrating and interpreting the wealth of information available, may be challenging for older people. In fact, when compared to younger adults, older adults report more anxiety about technology adoption. Studies have shown that older adults use less-efficient search strategies and have less success finding specific information than do younger adults. Given our aging population and the fact that older adults represent a large segment of the consumer health population, it is important to consider and identify ways to reduce barriers to access and use health IT applications by older adult consumers when implementing health IT applications.

This study is refining four existing cognitive aiding tools that are designed to help individuals filter, integrate, and interpret Internet health information. The refinement process is intended to enhance the usability of the tools to support effective use of health IT applications by older adult consumers. Dr. Sara Czaja and her research team at the University of Miami Miller School of Medicine is collaborating with the Palo Alto Research Corporation to conduct this two-phased study.

In Phase I, the research team is conducting an iterative tool-refinement process that began with a detailed task analysis of the tools to inform initial refinement. A series of focus groups involving older adult users and clinicians who work with older adults and underserved populations was conducted to provide a preliminary assessment of the usability of the tools. Findings from the focus groups informed additional refinements to the tools. A second cycle of usability testing of the refined tools will be completed in 2012.

During the second phase of the study, the tools will be formally evaluated with a randomized study comparing “aided” to “unaided” adults 30 to 85 years of age. Both groups will receive general practice on Internet searching, while participants assigned to the “aided” group will also receive training and practice on each of the four refined cognitive aiding tools. Subsequently, both groups will be assigned

scenarios and problem-solving tasks to complete. The “aided” group will have access to the four tools to assist in completing the tasks; the “unaided” group will not. The feasibility, acceptability, and usability of the aiding tools and their impact on the performance of Internet-based health management tasks will be evaluated by measuring information-seeking performance, domain knowledge, tool use, and usability of the tools. This project will obtain information on the influence of individual characteristics such as age, cognitive abilities, and health literacy on information-seeking performance and the perceived usability and use of the tools. Ultimately, the tool refinement process and tool evaluation findings will be used to develop a set of tools that are easy to use and support effective use of e-health applications by older adult health care consumers.

Specific Aims:

- Refine, through a user-centered iterative design process, a set of software aiding tools so that they can be used by health consumers, particularly older adults, in the performance of Internet-based health management tasks. **(Ongoing)**
- Evaluate the feasibility, acceptability, and usability of these tools among adult health consumers and the impact of the use of these tools on the performance of Internet-based health management tasks. **(Upcoming)**

2011 Activities: The four aiding tools have undergone initial testing and refinement, first by a task analysis in which the research team reviewed, evaluated, and modified the tools accordingly. Subsequently, an initial usability assessment was conducted by holding a series of focus groups with older adults, the findings from which led to additional revisions and design changes to the four tools to enhance usability. Final refinements are being made, and the formal evaluation tool study will be initiated in 2012.

As last self-reported in the AHRQ Research Reporting System, project progress and activities are mostly on track, and project budget spending is roughly on target.

Preliminary Impact and Findings: Findings from the focus groups conducted as part of the user-centered iterative design process indicate that the four tools are helpful and that older adults would use them.

Target Population: Adults, Elderly*

Strategic Goal: Develop and disseminate health IT evidence and evidence-based tools to improve health care decisionmaking through the use of integrated data and knowledge management.

Business Goal: Implementation and Use

** This target population is one of AHRQ's priority populations.*