

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 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 of the Internet-available consumer health IT applications—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. Furthermore, many older adults have less experience with and more anxiety about using computers and the Internet than do younger people. Studies have shown that older adults use less-efficient search strategies and have less success finding specific information than do younger adults. For these reasons, 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. Given the aging population and the fact that older adults represent a large segment of the consumer health population, it is important to identify ways to reduce barriers to access and use of health IT applications by older adult consumers when implementing these applications.

This study involves refining and testing 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. Drs. Sara Czaja and Joseph Sharit and their research team at the University of Miami Miller School of Medicine are collaborating with the Palo Alto Research Corporation to conduct this two-phase study.

In Phase I, the research team conducted 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 was completed in 2012.

In Phase II, the tools will be formally evaluated with a randomized study comparing “aided” to “unaided” adults aged 30-85 years. 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. **(Achieved)**
- 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. **(Ongoing)**

2012 Activities: Upon completing the refinement process for the four aiding tools in 2011, the project team began work on evaluating the feasibility, acceptability, and usability of the tools in 2012. The tools were pilot-tested before initiating the randomized trial, which revealed that the data collection protocol and tools were not appropriate for the target population of this study. The study investigators determined it was necessary to revise the data collection protocol and tools to better meet the needs of older adults, while also maintaining the integrity of the study and the quality of the data to be collected. This change resulted in significant delays as the tools and a new data collection protocol were developed and approved by the institutional review board. Dr. Czaja is using a 1-year no-cost extension to extend the project period through September 2013 to provide additional time to conduct the randomized trial, which will open to enrollment in January 2013.

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

Preliminary Impact and Findings: Findings from the focus groups conducted as part of the user-centered iterative design process indicated 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.*