

C.H. YU, M. CHAN, W.J. HATT, H.B. JIMISON. *Usability testing applied to a health coaching interface for older adults. Gerontechnology 2010;9(2):262; doi:10.4017/gt.2010.09.02.298.00* **Purpose**

While the number of seniors rises, technology presents solutions for helping this population maintain their physical and cognitive health. Moving health care to the home, we developed a system that promotes healthy behaviors delivered via a web-based health coaching interface^{1,2}. A suite of cognitive computer games was also developed as a cognitive exercise intervention. We designed a dashboard-like screen that provided monitoring data, action plans for health change, and feedback from health coaches. **Method** We conducted an observational study in the homes of five subjects participating in OHSU's Living Lab, a cohort of seniors (mean age 78.3±7.8) provided with computers with health coaching software installed. We based our evaluation approach on the discount usability paradigm³. This approach has been shown to be effective for evaluating home health applications⁴, demonstrating that useful input could be gleaned from small samples. In our usability tests, one evaluation team member led participants through representative tasks as facilitator, while the other acted as observer. Following data collection, the evaluators analyzed field notes to identify usability issues that guided further development. **Results & Discussion** The subjects' computing environments were heterogeneous, though all users had similar use patterns, such as using the cursor for guiding attention. Users varied in their facility with the mouse, and user feedback identified usability problems in the prototype. Four participants requested instructional pamphlets, citing difficulty in navigating the interface. All of the users expressed concern over the difficulty of some of the cognitive games, though the introduction of game tutorials mitigated these concerns. Participants mistook status indicators for interactive interface elements, leading to further redesign. Another concern was the wording of the on-screen labels. Overall, we determined that the screen needed to be redesigned to be simpler with less information. Future iterations will emphasize catering to patients with physical ailments like color blindness or manual dexterity. As this study progresses, we will continue to address usability concerns.

References

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Figure 1. Patient User Interface Action Plan