

## **A Simplified Patient-Centered Educational Tool for Improved Hearing-Aid Outcomes**

**Objectives:** Reasons for non-use of hearing aids are varied, but many studies have suggested that a lack of knowledge about how to use and/or take care of the hearing aids is a major factor. This is not surprising given that other healthcare fields have reported that between 40-80% of information provided during a clinical appointment is forgotten by the patient immediately after the appointment and almost half of what is remembered is not correct. The long-term goal of this project is to improve the delivery of information during the hearing-aid orientation, as better delivery of information will result in better hearing-aid handling skills and thus better overall hearing-aid outcomes. To accomplish this goal, we propose to refine and evaluate the effectiveness of three forms of supplemental hearing-aid-orientation tools, each of which was developed using established guidelines for good patient-provider communication

**Plan:** The purpose of the proposed application is to evaluate the relative effectiveness of four forms of hearing-aid orientation provided to first time hearing-aid users, three of which use some of the aforementioned strategies to enhance the standard of care. The four forms of orientation will be: (1) the standard-of-care hearing-aid orientation; (2) the standard of care plus provision a one-page hearing-aid information guide (3) the standard of care supplemented by an explanation of its content using the talk-back technique to confirm patient understanding; and (4) the standard of care plus provision of a take-home hearing-aid orientation DVD.

**Methods:** Up to 468 hearing-impaired Veterans who are about to become first-time hearing-aid users will be enrolled to participate in this investigation. These individuals will be recruited from the Portland VA Medical Center's Audiology and Speech Pathology Service (ASPS). Prior to receiving their hearing aids, subjects will be enrolled in the study at the National Center for Rehabilitative Auditory Research (NCRAR), and will conduct health literacy, manual dexterity and hepatic sensitivity, visual acuity, and learning and memory assessments. They will then attend their hearing aid fitting in the ASPS and will receive standard-of-care hearing-aid orientation. At the end of that appointment, they will be assigned to one of the four arms of the study described above and receive that intervention. Subjects will return to the NCRAR 4-6 weeks after the hearing-aid-fitting appointment to complete the following outcome measures: a knowledge test and a practical test regarding hearing-aid use and care, a measure of self-efficacy, and a measure of hearing-aid outcomes. They also will be interviewed so that we can learn their opinions about the intervention. A subset of the initial 50 participants enrolled into each study arm will attend a second follow-up appointment 6 months after the fitting appointment so we can examine longer-term impacts of the hearing aid orientation interventions.

**Findings to Date:** None, data collection has not started.

**Clinical Relevance:** Hearing loss is the second most prevalent individual service-connected disability among Veterans receiving compensation from the Veterans Benefits Administration. A hearing aid is the most common technological intervention for hearing loss. As such, the VA spends a considerable amount of money on hearing aids with the aim of addressing the hearing-related problems experienced by these Veterans. Despite these expenditures, hearing-aid use remains disappointingly low. The educational tools used in this study have the potential to increase a patient ability to use of their hearing aids, which is likely to result in other improved patient outcomes.

**Key Words:** hearing aids, counseling, outcomes assessment (health care)