

# Aural Rehabilitation of Older Adults with or at risk for Cognitive Decline: Development of Recommendations and Supplemental Resources Based on Evidence from the Literature

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## ABSTRACT

The purpose of this research project was to review the current research database and develop recommendations and supplemental materials to aid adults with hearing loss and risk or presence of cognitive decline. Through database search, evidence was collected from literature to determine professional recommended resources within the field of audiology and surrounding healthcare professions. Based on the literature, appropriate resources for retention of medical information in this population included supplemental written materials and supplemental video materials with family/caregiver involvement at sufficient reading levels were recommended. Resources were then created based on the literature recommendations for hearing aid fittings and follow-ups when working with older adult patients with or at risk of cognitive decline. The resources were created with a purpose to provide older adult patients with hearing loss and with or at risk of cognitive decline with additional support in the hearing aid rehabilitation process.

## INTRODUCTION & CURRENT EVIDENCE BASE

- **Research Question:** What does the literature suggest in terms of recommendations and needs for treating older adults with hearing loss who may also have difficulties related to cognitive decline?
- With the aging population, the prevalence of age-related ailments, such as hearing loss and cognitive decline, are on the rise. Lin and colleagues (2011), found the prevalence of hearing loss in older adults was 63.1% in one or more ear and factors were strongly associated with age, sex, and race.
- Some older individuals struggle with cognitive decline and face obstacles, including impaired memory for new information (Wingfield et al., 2005). Due to impaired memory as a result of cognitive decline, older individuals may struggle to retain important instructions during audiology appointments.
- The American Academy of Audiology (AAA) Task Force developed guidelines for audiological management of adult hearing impairment; however, there are no specific guidelines for adults with cognitive decline.
- Watson and McKinstry (2009) performed a systematic review of literature to determine the most effective supplemental materials for patients. The results indicated that written and audio-recorded methods of medical instructions were most effective.

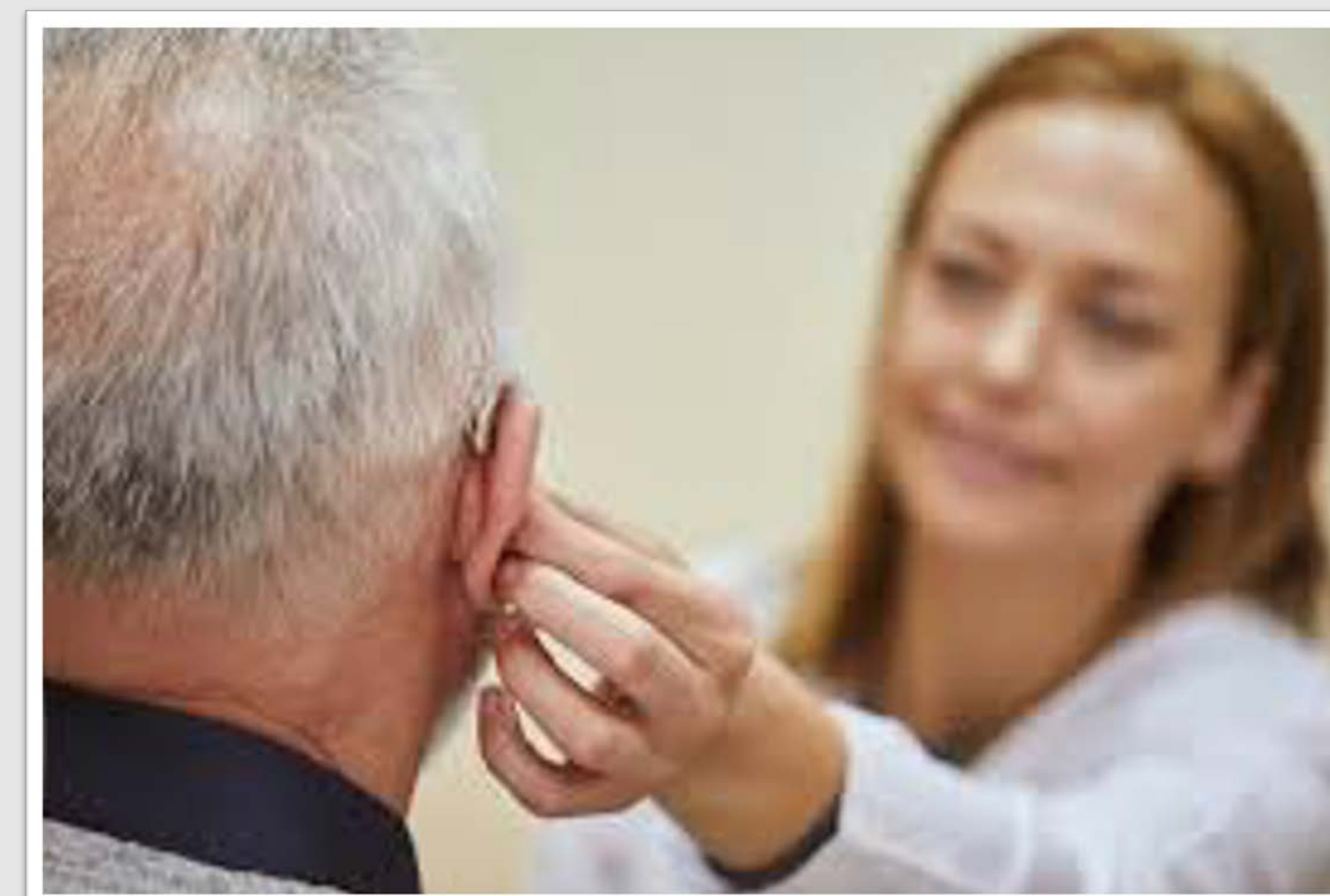
## STATEMENT OF CLINICAL PROBLEM

### Rationale:

Due to two possible physiological changes of cognitive decline and/or hearing loss in aging adults, audiologists may find themselves fitting amplification on this population. There are currently no best practices guidelines available on this topic and audiologists should be better equipped with materials to assist these patients.

### Hearing Aid Fittings:

A typical hearing aid fitting appointment consists of prior hearing aid selection, hearing aid verification, hearing aid validation, and counseling the patient on the device itself as well as any other assistive technology (Valente et al., 2006). At the UNC Audiology Clinic, a hearing aid fitting appointment is typically 1 hour in length. After the appointment, patients are expected to remember how to use the hearing device as well as any other assistive technology. Having a variety of supplemental hearing aid instruction materials available may reduce the challenges associated with cognitive decline.



## APPROACHES TO CLINICAL PROBLEM

### Proposed Solution:

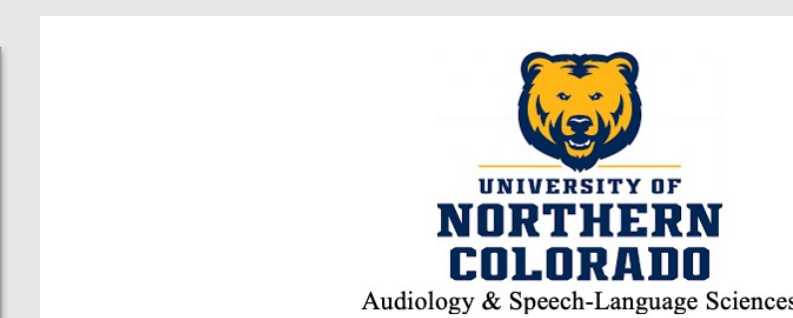
In order to increase memory recall of information during a hearing aid fitting appointment, a variety of modes of presentation are essential. By modeling suggestions made by researchers on how to promote medical retention in the general population, audiologists should be equipped with supplemental materials to provide their patients.

### 1. Written Hearing Aid Instructions with Picture Supplement

### 2. Video Hearing aid Instructions available on YouTube



(Youtube, n.d.)



Written Hearing Aid Instructions with Picture Supplement

## SUPPLEMENTAL MATERIALS

### Samples of Written Hearing Aid Instructions with Picture Supplement:

**RECHARGEABLE HEARING AIDS (RIC BTEs)**

**IMPORTANT HEARING AID FEATURES**

- Parts of the hearing aid: (circle appropriate hearing aid)

- Charger (circle patient's appropriate charger)

**SINGLE GREEN IN THE CENTER:** Plugged in to power

**FLASHING ORANGE:** Reading status of hearing aids

**SINGLE ORANGE:** 0-33% charged

**1 GREEN:** 34-66% charged

**2 GREEN:** 67-99% charged

**3 GREEN:** Full charge

**SINGLE ORANGE MOVING ACROSS:** cooling

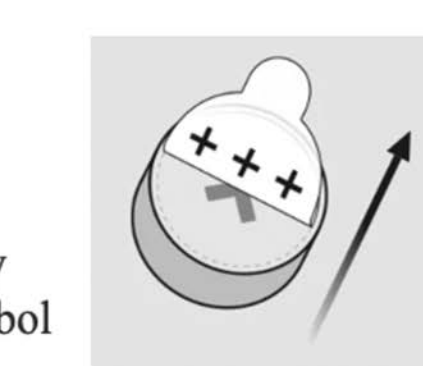
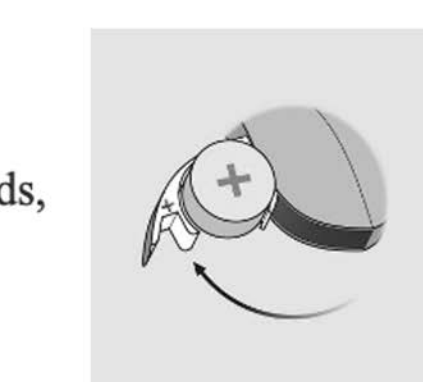
**FLASHING RED:** ERROR

(Inductive Charger II Quick Facts, 2019)

### USING HEARING AID BATTERIES

- To place batteries in hearing aids, open up the battery door at the bottom of the aid
- Peel of the sticker from the batteries
- Place new battery in the battery drawer. Make sure the '+' symbol is facing up
- Close battery drawer and listen for hearing aid to play a jingle through the earpiece

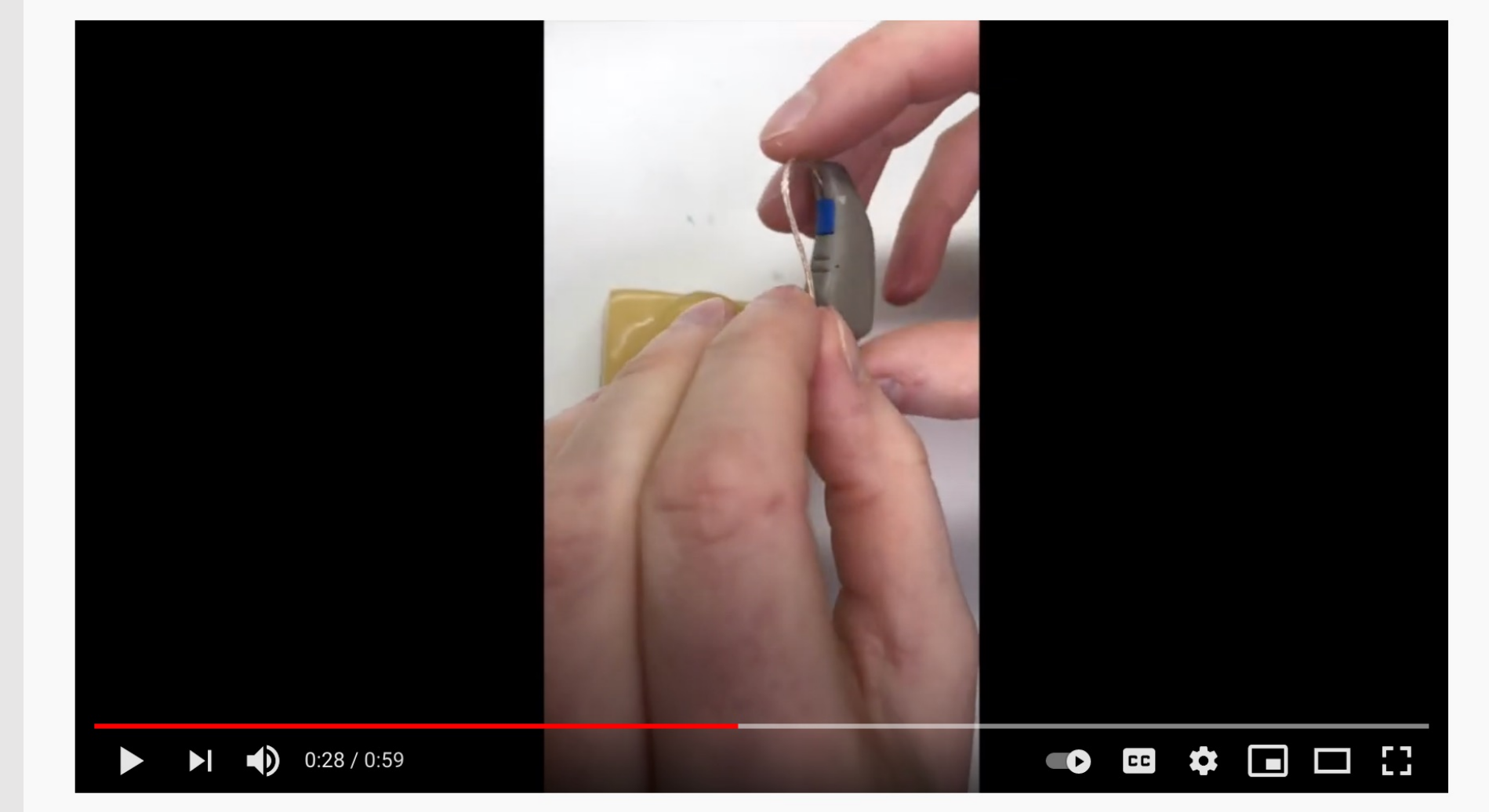
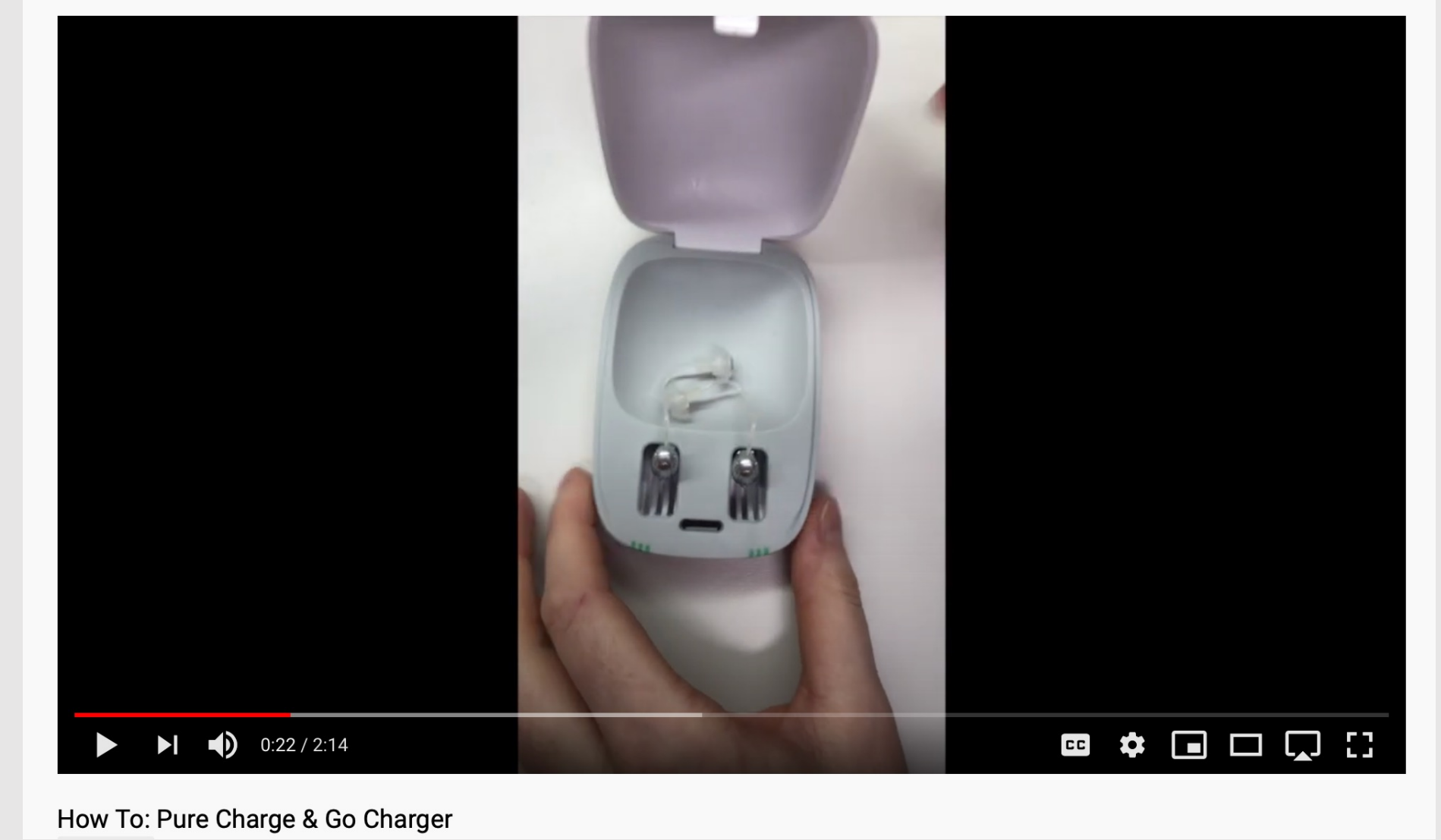
(Hearing aid batteries - FAQs | Starkey, n.d.)



Images: "How to change a battery behind the ear hearing aid battery," n.d.

## SUPPLEMENTAL MATERIALS

### Samples of Video Hearing Aid Instructions available on YouTube:



## CONCLUSION & FUTURE DIRECTION

Although there are clinical guidelines for audiological management of adult hearing impairment, there are not specific guidelines in relation to adults with cognitive decline. Older individuals may not fully understand or remember spoken and/or printed instructions for hearing aid use and maintenance. Duprius and colleagues (2019) emphasized the importance of counseling, adapting and modifying instructions, more frequent follow-ups and auditory-cognitive rehabilitation training were highlighted as essential modifications for working with this population. Formal clinical guidelines and supplemental written and video materials are warranted to assist this population in having a successful and beneficial experience with hearing aids.

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