Remote Hearing Aid Support: The Next Frontier

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Disclosure

• Funding and equipment for both phases of this study were provided by Phonak, AG
Acknowledgements

• Phonak, AG
  – Jean Anne Jordan, AuD
  – Martina Wolf
  – Michael Boretzki, PhD
  – Stefan Launer, Ph.D.

• Bill Dickinson, AuD

• Gurjit Singh, Ph.D.
What is telehealth?

• Cardiology monitoring

• Mental health counseling

• Speech therapy
Telehealth in Audiology

• Diagnostics

• Hearing Aid Fittings
Study Design

• In-Clinic
  – Conducted within Vanderbilt Medical Center

• In-Home
  – Conducted in participant’s home
In-Clinic: Research Questions

• Are remote hearing aid follow-up appointments feasible?

• What are the perceived benefits of remote hearing aid follow-up care?
In-Clinic Appointments

- 50 participants
- Average Age: 64.4 years
- Average Travel Time: 32.09 Miles/37.46 Minutes
- Mild to profound hearing losses of all types
In-Clinic Appointments

• Pre-evaluation

• Equipment and Materials

• Participant had to express concerns

• Procedure
In-Clinic Appointments
In-Clinic Appointments: Results

• “How would you rate your computer skills?”
  – 22% Beginner
  – 52% Average
  – 16% Advanced
  – 10% Expert
In-Clinic Appointments: Results

- 82% were able to install the software with no assistance
In-Clinic Appointments: Results

• Connection between hearing aids and software was stable for 86% of appointments

• In-Clinic Professional Assessment
  – 80% of appointments were as efficient
  – Satisfied with 82% of appointments
In-Clinic Appointments: Results

• In-Clinic Client Assessment:
  – Strengths
    • Time savings
    • Convenience
    • Reduced travel costs
  – Weaknesses
    • Lack of face-to-face time
    • Computer and software issues
In-Clinic Appointments: Results

• In-Clinic Client Assessment:
  – 88% of participants would prefer DS appointments under difficult conditions
  – 92% would recommend DS appointments to others
  – 64% would prefer DS appointments, if possible
• In-Clinic Appointments – It Works!!

• In-Home Appointments
  – Conducted in participant’s home
  – Variable internet connections
  – Various operating systems
In-Home Appointments: Research Questions

• Will it still work if the participant is at home?
• Is there added benefit with the addition of a web camera?
• Are the examiner and the participant still satisfied with the appointment?
In-Home Appointments:

• 22 participants

• Average Age : 61.52 years

• Average total time: 72 minutes
  – Driving time plus waiting room time
In-Home Appointments

• Equipment and Materials
  – Same as In-Clinic appointments
  – Addition of a web camera
  – “Feelings About Computers” questionnaire
    • Adapted from Wild et al (2012)

• Procedure Overview
In-Home Appointments: Results

- 82% of participants installed the software without assistance.
- Web camera successful for 77% of appointments
- In-Home Client Assessment
Future Research

• How can you prefer something with only a single exposure?

• Return to addressing participant concerns
What did we learn?

• It works!

• The following considerations should be made:
  – Instruction manuals
  – Backup communication
  – Internet connection and inclement weather
What did we learn?

• Patient benefits
  – Time, convenience, and cost savings
  – Can now program hearing aids with the patient in different environments

• Clinician benefits
  – May be more effective in our programming and counseling
  – Can work from anywhere
What did we learn?

• Patient limitations
  – Requires stable access to the internet/phone service
  – May require an additional appointment

• Clinician limitations
  – Cannot touch and check all components of the hearing aid
  – Rely on patient’s ability to manipulate and show you the hearing aid
Set-Up Considerations

• Space considerations

• Have a secondary form of communication

• Dual monitors, if possible
Appointments Considerations

- Support staff to help with orientation and/or installation
- Introduce everyone in the room
- Check-in process
Appointment Considerations

• Practice, practice, practice with the camera!

• Be mindful of facial expressions

• Talk...A LOT!
Thank you for your time!

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