OPENING THE LINES OF COMMUNICATION

HEARING LOSS TECHNOLOGY

TODAY AND TOMORROW

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OBJECTIVES

Identify signaling and environmental awareness technology for Individuals who are deaf or hard of hearing

Identify the functions of a telecoil, blue tooth and assistive listening devices

Increased knowledge of technology used for education and employment for people who are deaf and hard of hearing

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HEARING AIDS

- Sizes or Styles
- Features or Functions
- Accessories
FEATURES / FUNCTIONS

• TELECOIL
• PROGRAMS
• DIRECTIONAL MICROPHONE
• BLUETOOTH
Telecoils

Telecoil (t-coil) – A telecoil (or t-coil) is a small coil of wire inside a hearing aid that is designed to pick up a magnetic signal.

Telecoil (T) Only: No other sounds

Telecoil/Microphone (T/M): Telecoil and Microphone combined

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TELECOILS
TELECOILS

- Position Matters (horizontal vs vertical)
- “Most” hearing aids and cochlear implants
- Size Matters!

- Activated by switch or program button
- “Doubles” what the hearing aid can do
- Also known as telephone or t-switch

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TELECOILS WORK WITH

- Telephones
- Neckloops
- FM Systems
- Looped Facilities

Must be in “manual mode” not automatic
TELECOIL MISHAPS

• Not installed in the hearing aid = Some, but not all can have it installed
• Not activated by the audiologist or hearing instrument specialist = If installed it can be activated
• Automatic Setting = Can be reprogrammed to be manual
• No training on what it can do = Get informed

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BLUETOOTH

• An option for some hearing aids
• Requires a “streamer” (in most cases)

• Pairs the hearing aid, via streamer, to phones or audio devices
• DOES NOT REPLACE THE NEED FOR A TELECOIL

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STREAMERS

- Remote control
- A “go between” device
- Proprietary connection to the hearing aid

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PHONES AS STREAMERS

Smartphone App becomes the “streamer” for remote control functions and Bluetooth communication

https://www.apple.com/accessibility/iphone/hearing/

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ASSISTIVE LISTENING

Personal amplifiers
FM Systems
Loop Systems
Streamer ad-ons

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EAR PIECES

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NECKLOOPS

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PERSONAL SOUND AMPLIFIERS

- 15-28dB Amplification
- “Over the counter”
- Telecoil and BT models
- Over-the-counter hearing aids
ASSISTIVE LISTENING DEVICES – HARD WIRED

- Single Unit listening device
- Several headset options (headphones, earbuds, neckloop)
- One to one settings, in the car, television
- Pocket Talker
- $15 - $425

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ASSISTIVE LISTENING DEVICES – PERSONAL FM

- Transmitter and Receiver
- Can travel from room to room / through walls
- Wireless listening for churches, schools, theaters

- Loop and PA systems
- Multiple microphone and headphone options for the most flexibility

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LOOP SYSTEMS

- Entire area or room is looped
- Telecoil mode in the hearing aid will pick up the sound signal
- Telecoil users – no need for a receiver “box”
- Non-telecoil users will need a receiver “box”
ASSISTIVE LISTENING DEVICES – INFRARED

- Consist of two parts – transmitter and receiver
- Generally used for television or movie theaters
- Must be in “direct line of sight”
APPS - LISTENING

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COMMUNICATION OPTIONS

- Handwritten notes
- Typed notes (laptop, Ubiduo, iPad)
- Text Messages
- Instant Messaging
- Email
- Fax
- Apps

- Sign Language Interpreting
- CART Communication
- Realtime Translation
- Caption Services
- Relay Services
- Video Interpreting
- Video Relay
TELEPHONE ACCESS

- In-Line Amplification
- Amplified Telephones
- Voice Carry Over
- Phone line extenders
- Captel
- Large Print Captel
- Web / Mobil Captel
- Telebraille
- Cellular options
TELEPHONE ACCESS

- Landline phones must be hearing aid compatible and they connect to the telecoil when the receiver is placed next to the aid.
- Some need an added magnet to make the signal stronger (rare).
- Neckloops can be plugged into landlines or cellphones.
- Bluetooth Neckloops can be paired with cell phones.

Must be in “manual mode” not automatic.
Caption Service

1. You listen to the Caller and Feed Captions
2. Your Caller Speaks
   - Text
   - Voice
   - Caption Service

ClearSounds

Boost

SPEECH ADJUST-A-TONE

Frequency Compensation

ON

OFF

VOLUME

BASS

MID

TREBLE

FREQUENCY

MIN

MAX

WES-P-DHH
for the Deaf and Hard of Hearing
CAPTION PHONES

- Analog only
- Analog/Data
CAPTION SERVICES

- Web based captions
- Caption apps
RELAY SERVICES

- Phone or internet based services
- Video Relay (VRS)
- Free

- Video Remote Interpreting (VRI)
- Fee based sign language interpreting
1. Deaf user signs to the interpreter
2. Interpreter speaks to the hearing user
3. Hearing user speaks to interpreter
4. Interpreter signs to deaf user
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<th>Video Relay Services</th>
<th>Video Remote Interpreting</th>
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<td>Telecommunications Based</td>
<td>Fee Based</td>
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<tr>
<td>No Cost</td>
<td>Provides INTERPRETING services</td>
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<td>Videophones, computer based or smartphone/tablet apps</td>
<td>Brings the interpreter into the room</td>
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<tr>
<td>Used to make or receive TELECOMMUNICATIONS from one location to another</td>
<td>Videophone, computer based or smartphone/tablet access</td>
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ELECTRONIC COMMUNICATION

Cellular / Text

Skype / IM / Hangouts

Video Relay

Video Interpreting

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CART

In-Person CART

Remote CART

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SIGNALING

- Central Alert
- Silent Call
- Sonic Alert
- Alertmaster

Telephones, doors, babies, motion, smoke, carbon monoxide, weather alerts, emergency vehicles, room noise

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SMART TECHNOLOGY

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[Microsoft Accessibility Guide](#)                        [Apple Accessibility Guide](#)
COMPUTER ACCESS

Google Access

- Browser Extensions
- Captions
- Alerts/Notifications
- Hangouts

Google Accessibility Guide

Apps

- Outreach Apps Handout
- Tina Childress Handout
NOT TECHY TECH
Indeed, it’s almost certain the phone you use now is bigger than the one you used a decade ago.

Dork.
RESOURCES

http://hearingloss.org/content(loop-technology)

https://www.harriscomm.com (vendor site)

http://www.hearingloop.org/

http://www.hlaabq.com/telecoils.html

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QUESTIONS?

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