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From Remote Mics & Telecoils to LE Audio & Auracast: Accessibility for All and the Evolution of Wireless Technologies in Hearing Aids

Part 2: Accessibility and Candidacy

Juliëtte Sterkens, AuD
Hearing Loss Association of America
Brian Taylor, AuD, WS Audiology

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- As healthcare is rapidly evolving, new findings may change the validity of the information presented in this course. Providers should always consult the latest research and guidelines from professional associations.
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- Healthcare providers should apply cultural competence and sensitivity to ensure effective and respectful care based on their patients' diverse needs.
- Providers should always evaluate the limitations of diagnostic and screening tools, considering their potential for false results as well as any ethical implications.
- It is the responsibility of course participants to critically evaluate the evidence from multiple sources to guide professional practice.

Learning Outcomes

After this course, participants will be able to:

- 1.) Describe the different types of wireless technologies in modern hearing aids*
- 2.) Differentiate the advantages and limitations of various types of wireless technologies inside modern hearing aids*
- 3.) Implement a clinical strategy that leverages all types of wireless technologies to improve patient accessibility and outcomes*

Disclosures

- Brian Taylor, AuD
 - Senior Director, Audiology, WS Audiology
 - Adjunct Instructor, University of Wisconsin
 - Editor, Audiology Practices
 - Editor-at-Large, This Week in Hearing (HHTM)

Disclosures

- **Juliëtte Sterkens, AuD**

- Retired from private practice in Oshkosh WI in 2012
- Consultant to the Hearing Loss Association of America (HLAA) 13+ yrs
- I receive a consulting fee from HLAA, thanks to grant funding from the David and Carol Myers Foundation
- Frequent guest lecturer at several AuD programs
- Board member of HEAR-in-the-Fox Cities, a non-profit which funds hearing aids for children in Northeast Wisconsin

Professional Awards

UW-Oshkosh - Distinguished Alumnus Award 2015

Arizona School of Health Sciences - Humanitarian of the Year 2013

Academy of Doctors of Audiology - Leo Doerfler Award 2013

Wisconsin Audiologist of the Year 2011

Larry Mauldin Award 2011

American Academy of Audiology - Presidential Award 2011

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Today's Agenda

- Accessibility Issues – Juliëtte
- Candidacy Issues -- Brian

Wireless Technologies: Audiologist Dilemmas

1. Should a patient need to request?
2. Why do you think many audiologists don't tell their patients about assistive listening systems?
3. Who is responsible for ensuring that patients learn about their ADA rights related to hearing disabilities?
4. How does an audiologist fit in a wireless technology discussion when time is limited?



ADA: 2 Sections, 3 Conditions

1. Assembly Areas

- a. Entities **With** a Public Address System (theater, government meetings, auditoria, etc.)
- b. Courtrooms

2. Effective Communication

- c. Entity **Without** a Public Address System (healthcare, meeting rooms, service counters, etc.)



Communication access helps people with hearing loss the same way ramps help people with mobility needs.

Around the World

- [Legislation and building regulations](#). 2018. (Ampetronic manufacturer, 8 pages, pdf)
- [Global Disability Legislation](#). 2021. (Williams AV, 9 pages, pdf)

Where are Assistive Listening Systems Required?

- amphitheaters
- arenas
- auditoria
- classrooms
- concert halls
- convention centers
- courtrooms
- dinner theaters
- grandstands
- lecture halls
- legislative chambers
- motion picture houses
- performing arts centers
- playhouses
- public hearing rooms
- public meeting rooms
- stadiums
- theaters

Thousands of locations!

ADA Standards for Accessible Design

106.5 Defined Terms. **Assembly Areas.** A building or facility, or portion thereof, used for the purpose of entertainment, educational or civic gatherings, or similar purposes.

ADA

Other Possible Assembly Areas or Areas for Effective Communication

- airport gate waiting areas
- community rooms, e.g. fire and police station
- cruises
- funeral homes
- grocery stores
- gymnasiums
- hotel conference rooms
- information, registration desks
- lifelong learning classrooms
- pharmacy counters
- places of worship*
- senior centers
- senior communities
- transient venues
- transit
- yoga studios

Even more locations!

* commonly exempted under the ADA but depends on activities, funding sources, and state or local building codes or regulations. See [Religious Entities Under the ADA](#)

Types of Assistive Listening Systems

ADA Compliant

1. Hearing loop
2. Radio frequency (RF), Frequency Modulation (FM)
3. Infrared (IR)
4. Direct-wired equipment (very uncommon)

Other Assistive Listening Systems. Buyer beware.

5. Audio Over Wi-Fi. *There is no known product that meets the ADA.*
6. Auracast streamed assistive listening system. It is too soon to say if individual products (or installations) meet the ADA; one contributing factor is that the international standards are not expected until late 2027.

[ADA requirements & Assistive Listening Systems](#) (1 page, pdf).

Assistive Listening Systems Quick Guide

	Hearing Loop	FM	Infrared (IR)	Wi-Fi	Auracast as ALS*
People with hearing loss					
Easy to use, with one push button on hearing aids or cochlear implants	✓				Yet to be solved
User needs no extra equipment from facility	✓ [†]				Extremely few hearing aid users have Auracast; receivers required for foreseeable future and for those without devices
Does not need a smartphone or app	✓	✓	✓	If receivers provided	If receivers provided
Minimal latency (end-to-end sound delay)	✓	✓	✓		Latency varies depending on transmitter model, settings, and receiving device. Typically > 30 ms
Meets ADA standard 	✓	✓	✓		Under investigation
Hearing instruments can connect using built-in telecoils (systems are required to be hearing-aid compatible)	✓	✓ ^{††}	✓ ^{††}		When used with receiver and neckloop; needed for foreseeable future
Installed in facilities, in 30+ countries	✓	✓	✓	Limited	Extremely few but should increase over next 5-7 years

* Auracast streamed assistive listening is an emerging technology. The full technical name is “Auracast™ Broadcast Audio used as part of an Assistive Listening System (ALS).” It can be installed alongside an existing ALS. See [Auracast Streamed ALS](#) (webpage) for more information.

[†] For ADA-Access hearing instruments with telecoil-enabled hearing instruments (hearing aids, cochlear implants, and bone conductive devices). A list of [hearing instruments](#) (3 pages, pdf), with telecoils and Auracast, is available.

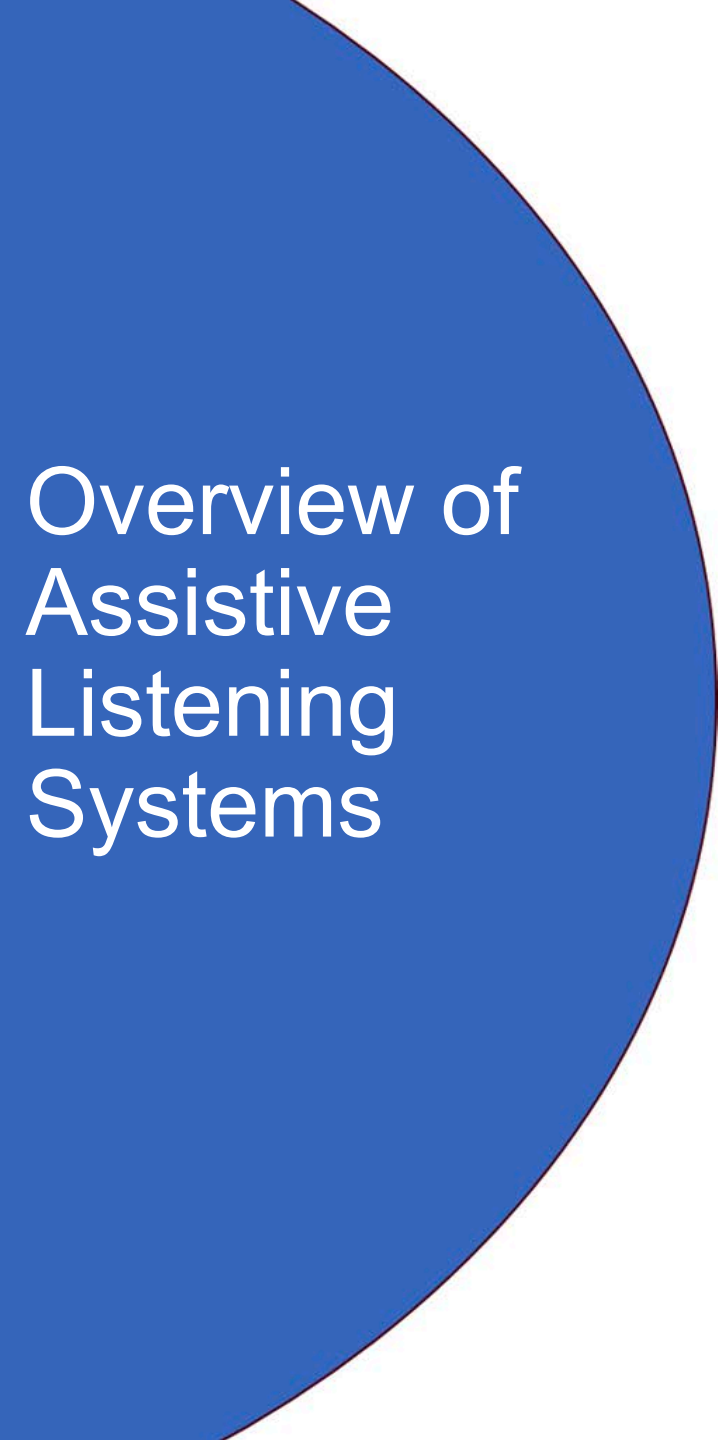
^{††} When used with a neckloop.

© 2023-2025 Center for Hearing Access

For the complete 3-page Assistive Listening Systems Comparison Guide see www.centerforhearingaccess.org/comparison

Assistive Listening Technical Summary

	Latency (ms)	Acceptable (<30-40 ms)	IEC Standards	Independent Research
Hearing Loops	• ~1-20 ms	✓	60118-4 & 62489-1	✓
FM/RF	• ~1-30 ms	✓		
Infrared	• ~1-20 ms	✓		
Audio Over Wi-Fi, with BT from phone to hearing aids	• ~200-300+ ms	✗		
Auracast streamed ALS • 24 kHz sample rate transmissions (11 kHz band)	• ~36-100+ depends on transmitter, receiver	?	60118-17 (expected late 2027)	

A large blue circle is positioned on the left side of the slide, partially cut off by the edge. It contains the title text in white.

Overview of Assistive Listening Systems

1. Hearing Loops

- No “outing the disability” with a telecoil
- Has international standards
- Telecoils are susceptible to EMI interference



Washington National Cathedral

- Please wait for any social media posts
- Hearing loop added to FM system



for lists see

www.centerforhearingaccess.org/state-lists

Photo credit: Contacta

Over 20% of the 15,000 taxis in Madrid, Spain.
All new taxis must have one

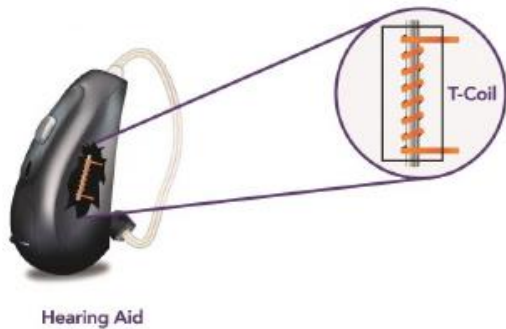
How Everyone Can Use Hearing Loops

Option A

- Hearing instruments **WITH** a telecoil

Switch to the telecoil program

OR use an accessory with built-in T-coil



Challenges with Telecoils in an accessory

- Charging
- Remembering to bring
- Troubleshooting
- Extra steps to connect
- Sometimes 2 remotes
- Adds stress



Option B

- Hearing instruments **Without** a telecoil
- **Without** hearing instruments

Borrow a hearing loop receiver & headphones from the facility

Option: bring your own wired headphones or earbuds

Receiver

Headphones



Photo Credit: Contacta

2. FM/RF Assistive Listening

- Requires all users to borrow equipment
- “outs the disability”
- Thousands of installations in the United States, most common ADA assistive listening system
- “Audio out” volume from the sound mixer is often set too low for HA/CI who use a telecoil and neckloop (no FM installation standard)
- Telecoils are susceptible to EMI interference
- FM/RF systems range around the world:
 - 72 to 76 MHz
 - 216 to 217 MHz
 - 2.4 GHz is also used

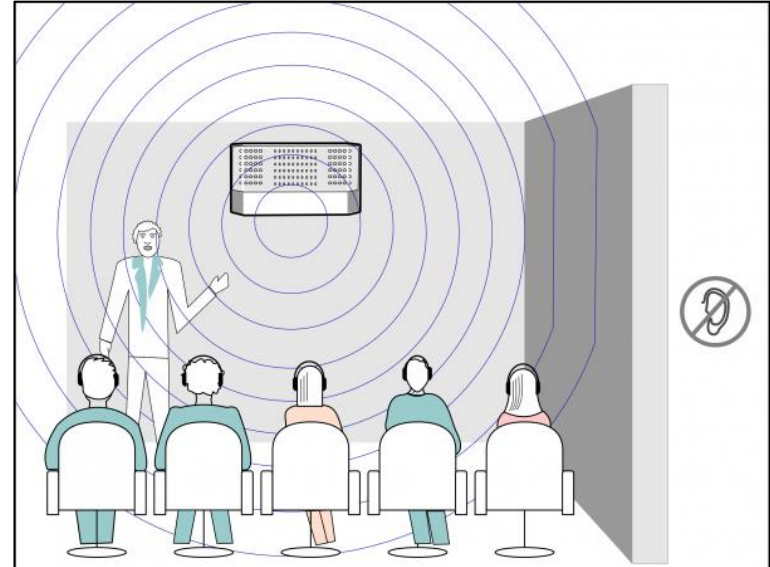


FM System connected to AV system for large conference plenary session

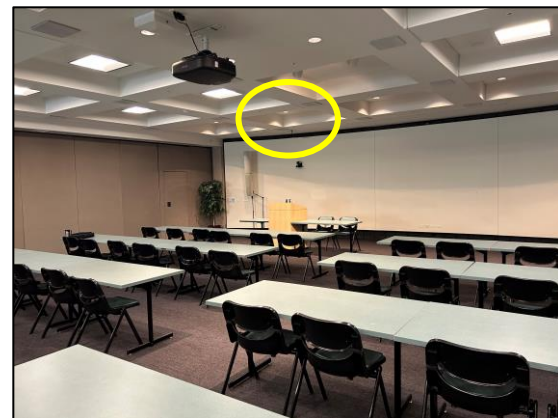
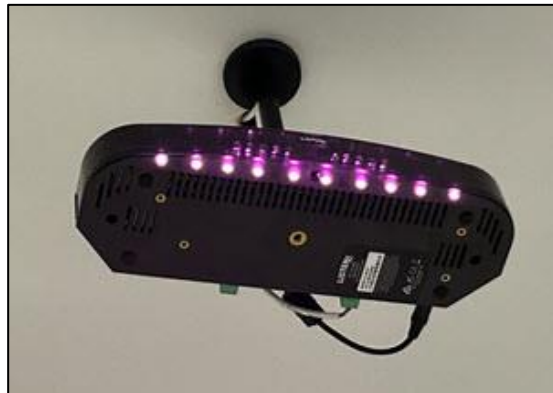


3. Infrared Assistive Listening

- **Uses line-of-sight light transmission.**
- For good user reception, the emitter needs to be optimally positioned for all users and may be mounted on the wall or in the ceiling.
- Often found in courtrooms and some theaters
- Telecoils are susceptible to EMI interference



Graphic credit: [Assistive Listening HQ](#)



How **everyone** can use **FM/RF*** (or Infrared Systems)

***FM systems are the most common ALS across the country**

Option A

- Hearing instruments **WITH** a telecoil
- Borrow a receiver and neckloop from the facility, switch to the telecoil program



Neckloops must match receiver

A word about neckloops



- When clients use neckloops – the telecoil may be directly **above** the neckloop where the magnetic field is *horizontal and volume may thus be less*
- Positioning neckloop wider over shoulders (**in red**) or draping the neckloop over the ear (image on left) may provide stronger signals, as do amplified neckloops.
- Also, it is a method for patients to cope when the facility has a poor FM/RF assistive listening signal

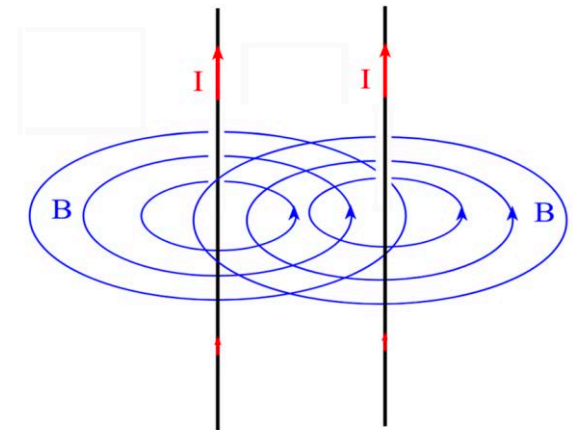
A word about Electro Magnetic Interference (EMI)

EMI is

- Normal and present in everyday life
- Caused naturally or by man-made sources often due to problems with electrical wiring, nearby electrical transformers, etc.
- Has NOTHING to do with an **assistive listening system**
- Heard as a buzz or hum when a telecoil is turned on
- EMI is not only an issue for room (hearing) loops, but for **any** assistive listening system (ALS) that utilizes the telecoil in a user's hearing device

A venue's EMI levels must be assessed prior to installing **any** type of ALS:

- a) Hearing loop
- b) FM/Infrared system with neckloops
- c) Auracast system with neckloop receivers



5 & 6 Other Systems: Latency Concerns

[Audio clip of 47 ms latency](#) (16 seconds)

Who would like listening to this audio for an hour?



Latency

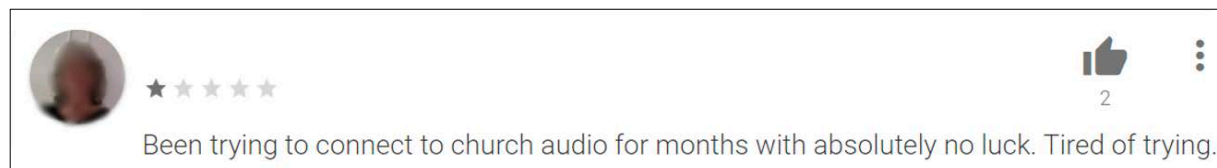
Minimal latency (10-20 ms) where direct sound is mixed with processed (delayed) sound is important for people with hearing loss:

- Clarity vs. echo
- Lipreading synchronization
- Hearing instrument/CI latency *is in addition to* the ALS latency

<https://pmc.ncbi.nlm.nih.gov/articles/PMC10805375>

<https://hearinghealthmatters.org/waynesworld/2023/hearing-aid-delay>

5. Audio Over Wi-Fi, Pros and Concerns



Buyer beware of claimed compliance as an ADA assistive listening system

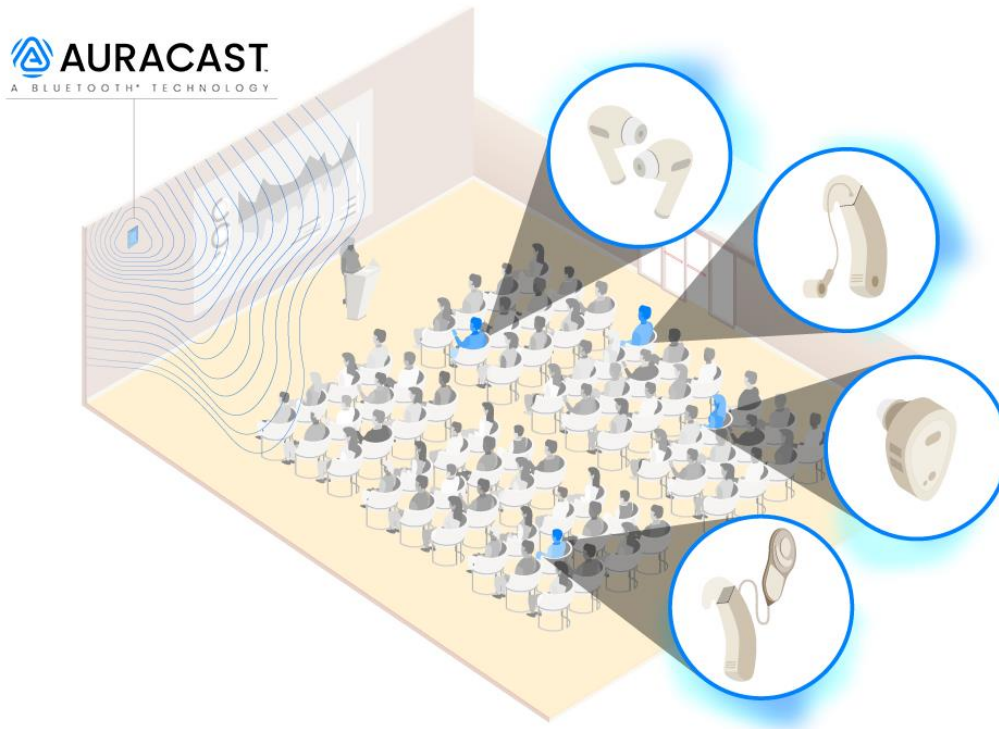
Works well when the live (in room) sound is OFF

- TVs at sports bars, fitness centers, airports

Live sound concerns

- There is no known product that meets the ADA.
- Latency
- No universal app. Each manufacturer has their own smartphone app.
- Does not allow "Mic + Wi-Fi" settings on hearing aids and CI's
- Complex for users. They must download the app, connect to Wi-Fi, and use.
- Smartphone dependence could leave out people with dexterity challenges, low vision, IDD, and other disabilities.
- Whether it meets ADA 2010 Standards, 706 Assistive Listening Systems

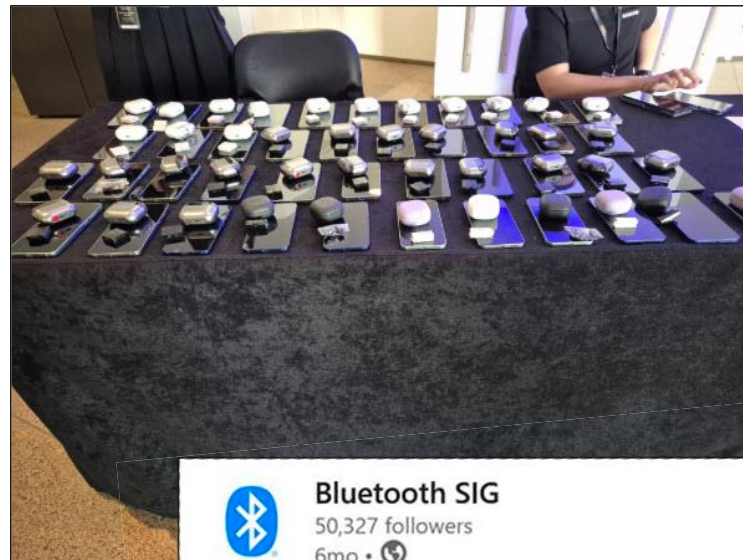
6. Auracast ALS*



To connect an intermediary device (smartphone, smartwatch, remote, etc.) is highly likely.

*The full technical name is “Auracast Broadcast Audio used as part of an Assistive Listening System (ALS)” and is simply identified as **Auracast ALS** in this presentation

Sydney Opera House (March 18, 2025)



Nearly all in attendance were provided *pre-programmed*, uniform devices



Bluetooth SIG

50,327 followers

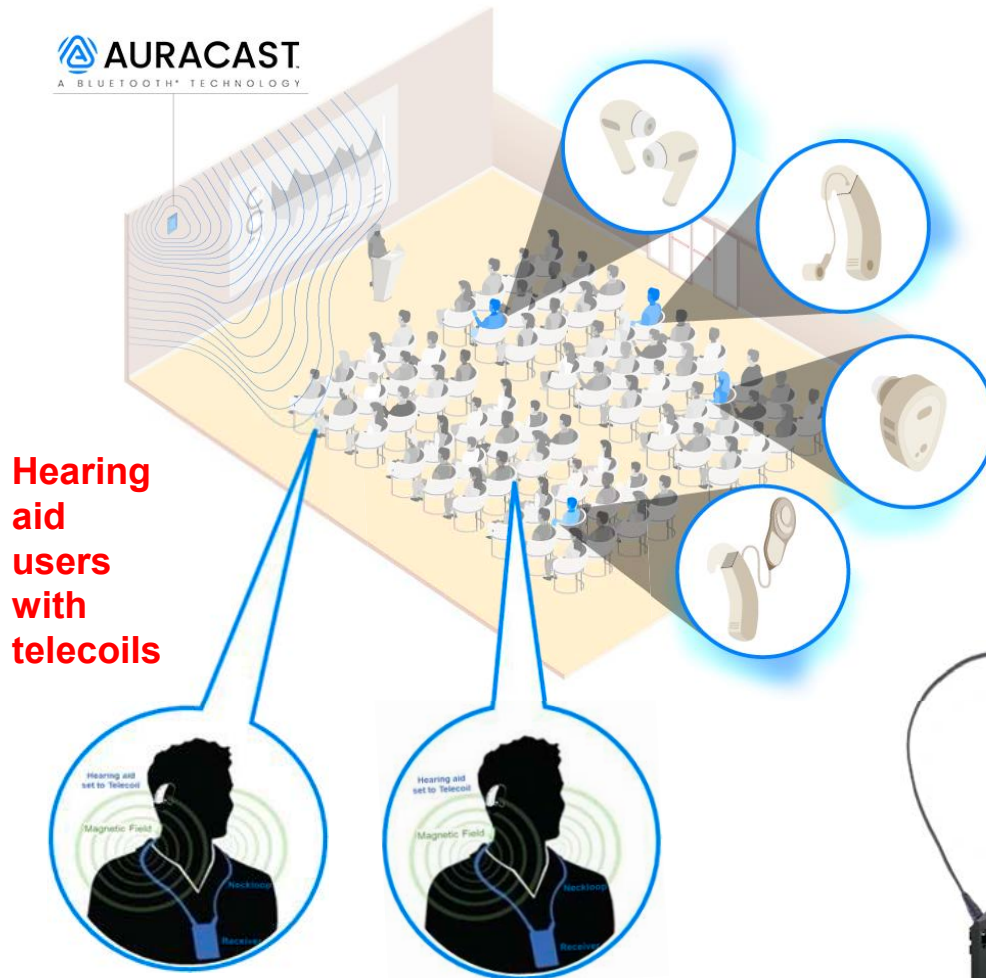
6mo • 🌐

A landmark venue, a transformative new experience. This is what progress sounds like. See how journalists are responding to an Auracast™ enabled [Sydney Opera House](#) and why it's resonating far beyond the stage 🗨️

"Sydney Opera House Introduces Auracast™, Transforming Hearing Accessibility in a World-First for a Cultural Institution" via [Hearing Health & Technology Matters](#): https://lnkd.in/gN_uTPVZ

"New Technology Transforms the Sydney Opera House Assisted Listening Experience in World-First Innovation for Live Performance" via [AudiologyOnline](#): <https://lnkd.in/dUQWZ5i7>

How Auracast ALS will likely be used in the foreseeable future...



If **few** Auracast-compatible hearing aids/CIs are owned, **most users** must then borrow an Auracast receiver with headphone or neckloop from the venue.

Auracast will thus initially function **as an FM system**



or



How **everyone** can use Auracast ALS

Option A (no built-in Auracast)

- Hearing instruments **WITH** a telecoil
- Borrow a receiver and neckloop from the facility, switch to the telecoil program
- The neckloop **MUST** be compatible with the Auracast receiver



Why Wait for Auracast ALS Standards? (expected late 2027)



International
Electrotechnical
Commission

Many issues not yet resolved

- Auracast is NOT an assistive listening system in itself – only *a part of it*
- Interference susceptibility
- Latency limits
- Satisfactory in all use cases: arenas, pharmacy counters, schools, courtrooms, senior living facilities etc.
- Advocates want to see AGC included on all ALS transmitters
- **Independent (non-manufacturer) studies still needed**
- Other unforeseen problems may present themselves: site and user equipment may be incompatible, may not fully work, users may need to use equipment differently, and other unforeseen problems
- Development of an Auracast Eco-system is only *just* begun

Resources

- [A Consumer Guide to Auracast™ Streamed Assistive Listening Systems](#) (1 page-graphical)
- [Phonak, Roger™ at hand, Auracast on the horizon: What audiologists need to know](#) (9/30/25)
- [Assistive Listening Systems Quick Guide](#) Easily compare 5 assistive listening systems on a grid that starts on page 2



ADA “Effective Communication”

Auxiliary Aids and Services Provided by the institution

..this includes providing

- a qualified notetaker
- a qualified sign language interpreter, oral interpreter, cued-speech interpreter, or tactile interpreter
- real-time captioning
- written materials
- a printed script of a stock speech (such as given on a museum or historic house tour)
- **assistive listening systems and devices**
- open captioning, closed captioning, real-time captioning, and closed caption decoders and devices
- telephone handset amplifiers, hearing-aid compatible telephones
- Etc.

Portable FM Systems

For effective communication and flexibility, a portable FM system works well when:

- a room doesn't have a public address system (classrooms, etc.)
- Groups are moving in different areas



Portable FM system with microphones



Photo Credit: National Park Service

Portable Hearing Loops

- Portable units are **good for one-time or on-the-fly needs**, such as for small meetings, but have their limitations. In general, they have a small field, which means orientation, microphones selection, and placement are important.



Meeting room for work or parent/teacher conferences



Hospital bedside table

Permanent Hearing Loops



Photo credit: Elite Hearing
Colorado Springs, CO



Photo credit: Audio Directions
Floor mat hearing loop in front
of pharmacy counter.



Gordon Hotel, Eugene OR
Two service counter hearing loops.



Fox Valley Hearing Center,
Oshkosh, WI

[HIPAA and Service Counter Hearing Loops](#) (1-page). Using a counter hearing helps providers meet their obligations under both the ADA and HIPAA by improving communication access while maintaining patient privacy.



Take Action for Accessibility

Change starts with you



- Make “[ADA-Access-Ready](#)” **hearing aids your default choice**
- Install the proper equipment in your office compatible with
 1. **Telecoil** (portable hearing loop (\$450-\$900) or personal amplifier with neckloop (\$250-\$300)
 2. **Auracast**
- Demo-demo-demo
- Urge hearing aid users to try hearing loops, FM/IR systems with neckloops, *and* Auracast installations in your community – provide a list
- Habitually use these systems yourself – write reviews
- Use educational materials from manufacturers for telecoil, Auracast, assistive listening systems, and ADA rights
- With permission, keep a private list of local venues and interested patients



Photo credit:
Richard Pocker



Waiting room sign



WilliamsAV
Portable
counter loop

Bellman & Symfon
Maxi Pro
w/ neckloop



Auracast installations can quickly increase, *if*

- HA/CI MFRs provide clear instructional and patient focused info, media, videos and handouts on benefits of **all** different Assistive Listening Systems (Every working system benefits everyone)
- Donate (towards) a local Auracast system with receivers + neckloops installation
- Encourage reputable ALS technology installations in your community
- **Get out of your office**, give educational lectures on “Hear Everywhere w/ ALS”
- Start a local “Auracast Initiative” with other local providers

**Without your active support
Auracast ALS will not happen**



Read: www.hearingtracker.com/opinion/auracast-is-here-now-what

Candidacy Issues



Networked Communication Devices

First, Let's Acknowledge

An Age-Old Challenge with All Wireless Technologies



Large Individual Differences:

- Adaption rates vary.....
- Unfamiliar with apps
- Uncomfortable using a smartphone
- Memory
- Dexterity
- Willingness to learn new things
- Activity levels
- Other health-problems take priority
- Complexity: Workload vs. Capacity

Candidacy Issues

- Who is a candidate for wireless technologies (WT) and networked communication devices?
- How do you determine WT candidacy during a routine hearing aid evaluation appointment?
- How to optimize outcomes with wireless technologies and networked communication devices?

What are Wireless Technologies (WT)?

Hearing aids are **networked communication devices** that enable greater accessibility and improved performance. WT are the backbone of this portable, individualized network.

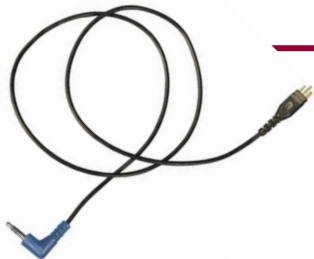


How to think about Wireless Technologies

- Requires a shift in thinking from an afterthought to a “must-have”

The “Accessory” Era (1980’s to 2015)

- Telecoils
- Remote Mics
- Direct audio input
- FM + shoe
- Infrared
- “Booted,” Isolated and Fixed
- “Choose one”



The “Networked Communication Device” Ecosystem (evolving since ~2015)

- Smartphone + HA = Hub
- Telecoils
- Remote Mics
- Auracast/LE Audio
- Wireless and Portable
- “Choose several”



The Networked Communication Device Era

	Remote Mics	Telecoils/ Hearing Loops & FM / Infrared with neckloops	Bluetooth Classic/ 2.4GHz	LE Audio	Auracast
Used for at-home listening	yes	yes	yes	Yes (slowly emerging)	no
Used for in-the-car listening	yes	no	yes	Yes (slowly emerging)	no
Used for public listening	limited	yes	no	no	Yes (slowly emerging)
Needs additional equipment	no	no —for loops [*] yes —for FM/IR (Receiver + neckloop)	no	no	Yes (slowly emerging)
Installation standards exist	n/a	hearing loops only	n/a	n/a	Expected late 2027
Ease of use	Depends on the individual				
Expected Patient Benefit	Depends on the individual				

^{*}Main reason consumers love hearing loops

Future-oriented and redundant

Who is a WT Candidate?

- According to the Audiology Practice Standards Association (APSO) guideline S2.1 Hearing Aid Fitting for Adult & Geriatric Patients (2021), “assistive technologies are considered to facilitate accessibility to other devices and to satisfy the wearer’s listening and communication needs.”
- During the HAE, “the discovery process”

1. Start with a structured needs assessment

- Ask about:
 - Lectures, houses of worship, auditoriums
 - Classrooms and large-group meetings
 - Telephone/smartphone use
 - TV/tablet streaming
 - Noisy restaurants
 - Airports and public transit
- Collaborate with the patient on a treatment plan for:
 - Face-to-face,
 - Groups
 - Phone
 - Media
 - Alerting

Open-ended worksheet: TELEGRAM or COSI

NAME: _____ Date of Birth: _____ Person completing Telegram: _____

	T	E	L	E	G	R	A	M	
	Telephone	Employment	Legislation	Entertainment	Groups	Recreation	Alarms	Members of the family	
RATING									
1 No Difficulty									Live with Normal Hrg Adult
2									Live with Young Children
3 Some Difficulty									Live with Teenagers
4		J		I					Live with Adult with Hrg Loss
5 Great Difficulty	C L			M	P M C		D S		Live Alone
	C- Cell phone L- LandLine	J- Job S- Sch	P- Public	T- TV	C- Church		S- Smoke D- Doorbell C- Clock	Check all that Apply	

Three Main Problems to Address

1. At Church
2. Meetings at work
3. Phone at work

Recommendations:

T _____ E _____ L _____ E _____ G _____ R _____ A _____ M _____

Linda M. Thibodeau, Ph.D.

University of Texas at Dallas

April, 2005

2. Consider hand dexterity & tech literacy

- Ask about:
 - Smartphone use confidence and ability
 - Ability and willingness to use apps
 - Comfort with pairing
 - Fine-motor skills
- Have the patient self-rate each:
 - “How a scale of 1 to 5 (5 is perfectly independent and confident), how would you rate your ability to....”

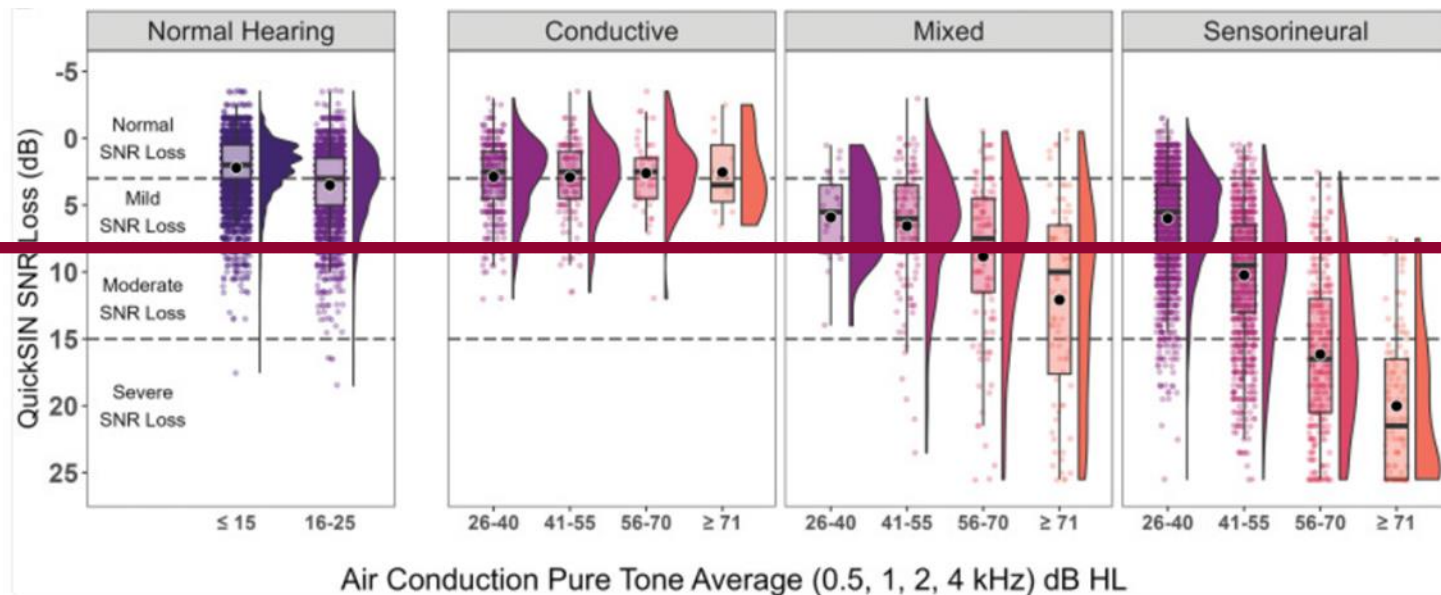
3. Cognitive load, listening effort and fatigue

- Patients with greater SNR loss, higher levels of listening fatigue or higher expectations in challenging listening situations are more likely to benefit from WT
- VFS-A-10 self-report:

		Never/ Almost Never	Rarely	Sometimes	Often	Almost Always/ Always
1.	I feel worn out from everyday listening.	0	1	2	3	4
2.	Struggling to listen and understand makes me feel tired.	0	1	2	3	4
3.	I get so exhausted from listening that I cannot do the things I enjoy.	0	1	2	3	4
4.	I schedule my day to avoid getting tired from listening.	0	1	2	3	4
5.	I get so tired from listening that I start to miss details in a conversation.	0	1	2	3	4
6.	I get so exhausted from listening that I go to bed early.	0	1	2	3	4
7.	I withdraw when I am unable to follow conversations in noisy places.	0	1	2	3	4
8.	Feeling tired from listening causes strain on my relationships.	0	1	2	3	4
9.	I feel emotionally drained when it is hard for me to listen and understand.	0	1	2	3	4
10.	It takes a lot of energy to listen and understand.	0	1	2	3	4

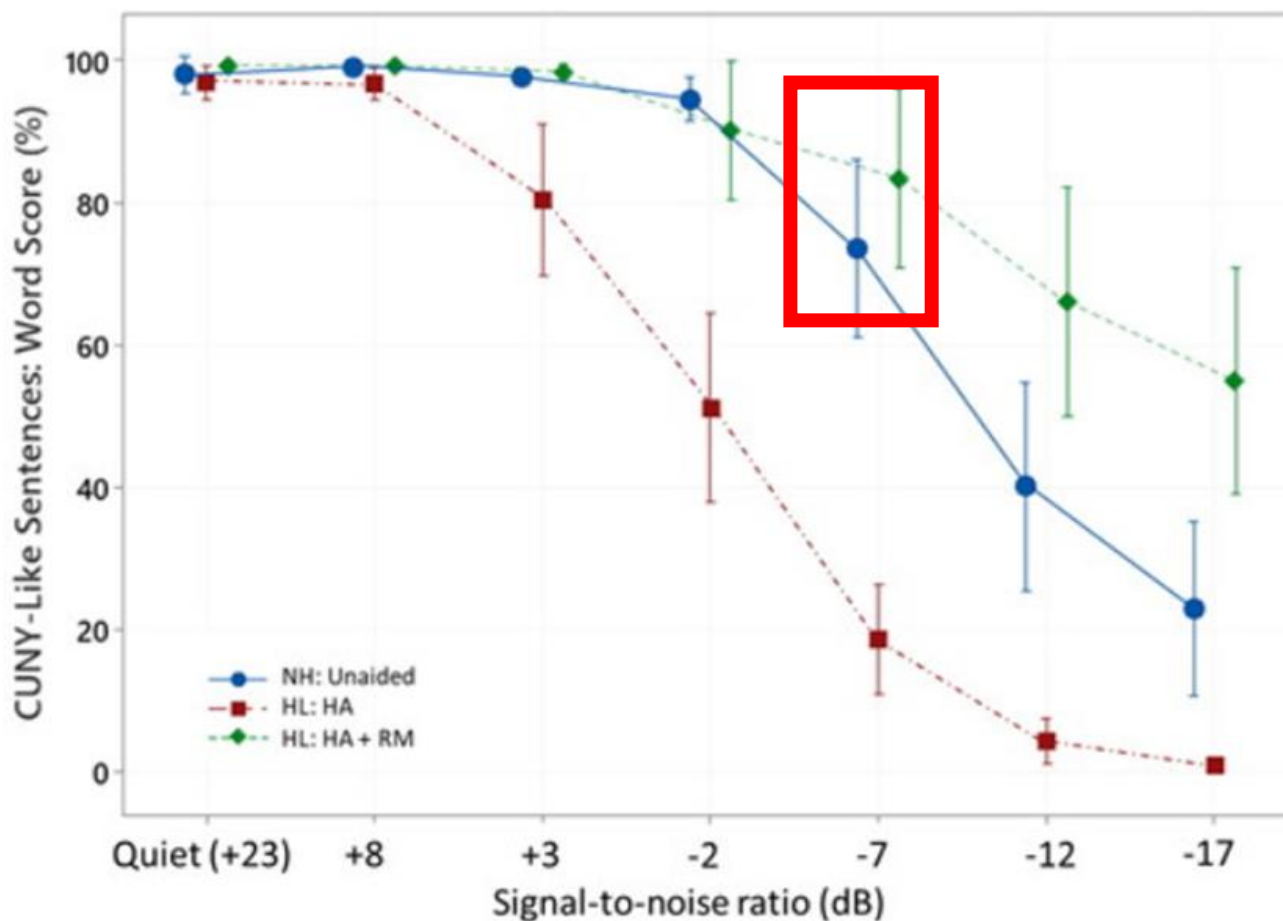
SNR improvements

- Worse than 5 dB SNR loss: consider WTs



Smith, Michael L.^{1,2}; Winn, Matthew B.²; Fitzgerald, Matthew B.¹. A Large-Scale Study of the Relationship Between Degree and Type of Hearing Loss and Recognition of Speech in Quiet and Noise. *Ear & Hearing* 45(4):p 915-928, July/August 2024. | DOI: 10.1097/AUD.0000000000001484

4. High listening demands or high expectations



Triaging WT Candidates

3 patient categories:

- Competent and Confident WT Users
- Coachable WT Users
- Non-Users of WT

Triaging Questions

1. It's important for me to use my hearing aids with my smartphone
2. It's important for my hearing aids to connect my smartphone to listen to music, podcasts or talk on the phone
3. It's important for my hearing aids to connect directly to my TV or laptop
4. It's important for my hearing aids to connect to PA/public listening systems (auditorium, movie theatres, live theatres)

- ☐ Very important
- ☐ Important
- ☐ Unimportant
- ☐ Very unimportant
- ☐ Tell me more about this option

Competency & Confidence Questions

1. How would you rate your skill level using a smartphone?

- ☐ never used
- ☐ beginner/novice
- ☐ competent: "I use my smartphone and apps every day."

2. How confident are you using a smartphone?

- ☐ Not confident and usually need help
- ☐ It depends on the task
- ☐ I am confident

Ferguson, M., Sahota, T., & Sucher, C. (2024). Why and how to assess digital literacy of older adults with hearing loss. ENT & Audiology News, July 4.

Retrieved from <https://www.entandaudiologynews.com/features/audiology-features/post/why-and-how-to-assess-digital-literacy-of-older-adults-with-hearing-loss>

Next steps

Wearer Categories	Competent and Confident WT Users
Results of the 4-WT Questions	"important" or "very important" rating for 1 or more questions
Results of DL-2Q	"confident" and "competent" rating
How to Apply Findings (Next Steps)	Move immediately to setting goals on COSI that involve wireless connectivity

Next steps

Wearer Categories	Competent and Confident WT Users	Coachable WT Users
Results of the 4-WT Questions	"important" or "very important" rating for 1 or more questions	"important" or "very important" rating for 1 or more questions
Results of DL-2Q	"confident" and "competent" rating	"never used"/"beginner" and/or "not confident"/"depends on the task" rating
How to Apply Findings (Next Steps)	Move immediately to setting goals on COSI that involve wireless connectivity	Provide additional personalized instruction and guidance on smartphone integration as part of the initial wearer experience

Next steps

Wearer Categories	Competent and Confident WT Users	Coachable WT Users	WT non-Users
Results of the 4-WT Questions	"important" or "very important" rating for 1 or more questions	"important" or "very important" rating for 1 or more questions	"unimportant" or "very unimportant" ratings for all 4 questions
Results of DL-2Q	"confident" and "competent" rating	"never used"/"beginner" and/or "not confident"/"depends on the task" rating	"never used"/"beginner" and/or "not confident"/"depends on the task" rating
How to Apply Findings (Next Steps)	Move immediately to setting goals on COSI that involve wireless connectivity	Provide additional personalized instruction and guidance on smartphone integration as part of the initial wearer experience	Re-evaluate in 6 to 12 months by re-asking these five questions

Tactics

Boost Self-belief Through Empowerment (Confidence)	Improve Skills (Competence)
Use testimonials from other wearers who are successfully streaming with hearing aids	Instruct on how to perform key behaviors/actions associated with streaming
Reframe use of smartphone-integrated hearing aid as a tool that promotes better engagement	Demonstrate key functions and model behaviors/actions associated with streaming
Positive framing: Encourage self-monitoring of streaming successes. Discuss these successes with audiologist	Practice these behaviors/actions with the audiologist

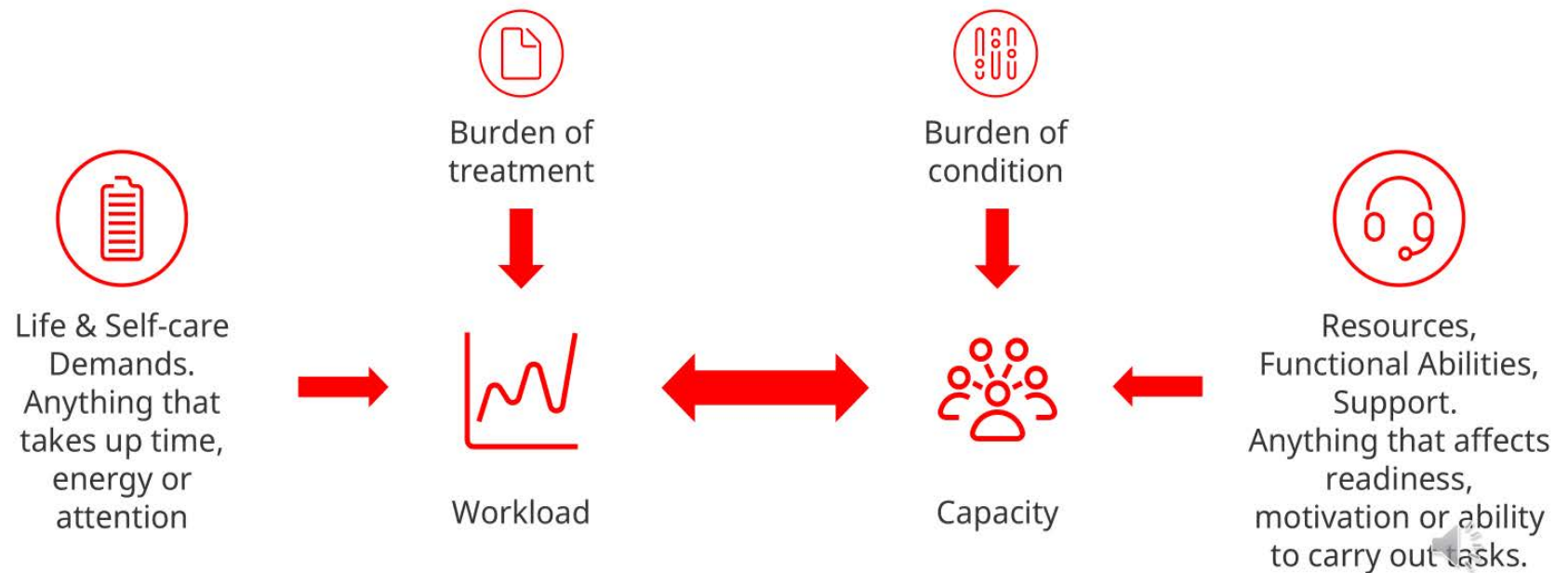
Patient Complexity

Workload



Capacity

Cumulative Complexity



Patient Complexity Checklist

Domain	Quick Check Questions
Cognition/Memory	Any trouble remembering instructions or following multi-steps tasks?
Physical/Sensory	Vision or dexterity issues that could interfere with device use?
Emotional/Psychological	Motivation and readiness? Any mental health concerns (PTSD, depression, anxiety)?
Social/Caregiver Support	Caregiver available and willing to help if needed?
Technology Comfort	Comfortable with chargers, buttons, and smartphone apps?
Healthcare Workload	Already juggling many appointments, medications or treatments?

Considerations and Conclusions

- Bluetooth *and* Telecoils – Redundancy is key to accessibility
- Be conservative but optimistic, don't overpromise Auracast
- Be a pillar in the community¹ – Hearing Loops didn't happen without support from providers, Auracast won't either
- Triage candidates with 6 questions
- Tailor orientation to WT based on responses to these 6 questions
- - Use Complexity Checklist to identify “roadblocks” to WT success
-

¹www.audiologyonline.com/articles/to-become-pillar-in-your-13254

Wireless Technologies: Audiologist Dilemmas

1. Should a patient need to request?
2. Why do you think many audiologists don't tell their patients about assistive listening systems?
3. Who is responsible for ensuring that patients learn about their ADA rights related to hearing disabilities?
4. How does an audiologist fit in a wireless technology discussion when time is limited?



Questions

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