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# Educational Considerations for the Clinical Audiologist, in partnership with Educational Audiology Association

Monica Gallien, AuD, CCC-A



# Monica Gallien, AuD

Dr. Monica Gallien is an educational and pediatric audiologist. She is the owner of Educational Audiology Resource Solutions (EARS) LLC and works to bring educational audiology services to school corporations in and around central Indiana. She began her career at Riley Hospital for Children in Indianapolis where she worked for nine years on both the Diagnostic Audiology Team and Hearing Aid Team. Dr. Gallien also served for a time as the Follow-Up Coordinator for the Indiana State Department of Health's Early Hearing Detection and Intervention (EHDI) program before beginning her work as an Educational Audiologist. She earned a Bachelor's degree in Communication Disorders from Murray State University, and a Doctor of Audiology (Au.D.) degree from Ball State University. She is passionate about bringing equitable and accessible services to Hoosier children who are deaf or hard of hearing.

# Disclosures

- **Presenter Disclosure:**
  - Financial: Monica Gallien is the owner of Educational Audiology Resource Solutions (EARS) LLC. She received an honorarium for this presentation. Non-financial: Monica Gallien has no relevant non-financial relationships to disclose.
- **Content Disclosure:** This learning event does not focus exclusively on any specific product or service.
- **Sponsor Disclosure:** This course is presented by Education Audiology Association in partnership with AudiologyOnline.

# Learning Outcomes

After this course, participants will be able to:

1. Identify two pathways for students who are d/Deaf/hard of hearing to receive services in school.
2. Identify 3 assessments or tools used by educational evaluation teams to inform decisions regarding classroom accommodations and services for students who are d/Deaf/hard of hearing.
3. Describe benefits/challenges associated three different remote microphones commonly used in schools.

# Current State of DHH Education

# Current State of DHH Education

- Only 1% of students receiving special education services in the 2020-2021 school year were identified as d/Deaf/Hard of Hearing (NCES 2022)
- In the 2021-2022 school year, 14.7% of all public school students were served under IDEA

EXAMPLE: In a district with 50,000 students enrolled, only 73 students have a DHH eligibility.

# Current State of DHH Education

- Teacher shortages
- Lack of educational audiology services
- TODHH vs. Educational Audiology responsibilities
- What if there is no Educational Audiologist available?

# Current State of DHH Education

- Classroom teachers
- SLPs
- ASL Interpreters/Oral Language Facilitators
- School nurses
- *Re-inserting devices*
- *Changing batteries*
- *Listening checks*
- *Tubing pulled out of earmolds*
- *Feedback disrupting classroom*
- *Cleaning devices*

# ADA vs. IDEA

- Americans with Disabilities Act: The ADA prohibits discrimination on the basis of disability in employment, State and local government, public accommodations, commercial facilities, transportation, and telecommunications.
- Individuals with Disabilities Education Act: IDEA is a law that makes available a free appropriate public education (FAPE) to eligible children with disabilities in the least restrictive environment (LRE).

## 504 Plan vs. IEP

- 504 Plan: Based on Section 504 of the ADA, a 504 Plan is developed by the school, outlining the accommodations or modifications necessary to create equal access for a child with a disability.
- Individualized Education Program (IEP): A very specific document regulated by IDEA and each state's special education law to map out the special services, accommodations, and needs of an eligible student.

# 504 Plan vs. IEP

- 504 Plan:
  - Hearing Assistive Technology
  - Preferential Seating
  - Closed captioning
  - Use of visual aids during verbal instruction
- IEP
  - Special education services with a goal of supporting the student's self-advocacy
  - Speech-language goals
  - Special education services with a goal of math or reading remediation
  - Related services of audiology, OT, PT, etc.

# Dispelling Common Myths - Myth 1

When a child is referred for special education services and has specific accommodations or recommendations from a medical professional, the school is required to automatically accept and implement any/all recommendations.

# Dispelling Common Myths - Myth 2

Thanks to Bluetooth technology, it doesn't really matter which hearing aid I choose for my pediatric patient because every manufacturer has a remote microphone available.

# Common classroom transmitters

| Phonak Roger Touchscreen             | Oticon EduMic                        | Cochlear MiniMic 2+                  |
|--------------------------------------|--------------------------------------|--------------------------------------|
| Automatic connection (once paired) ★ | Automatic connection (once paired) ★ | Automatic connection (once paired) ✗ |
| Networking option ★                  | Networking option ✗                  | Networking option ✗                  |
| Does not require external receiver ✗ | Does not require external receiver ★ | Does not require external receiver ★ |

# Dispelling Common Myths – Myth 3

If the school needs audiology records, the educational audiologist will obtain a signed release and request those records from the managing audiology clinic.

# Dispelling Common Myths – Myth 4

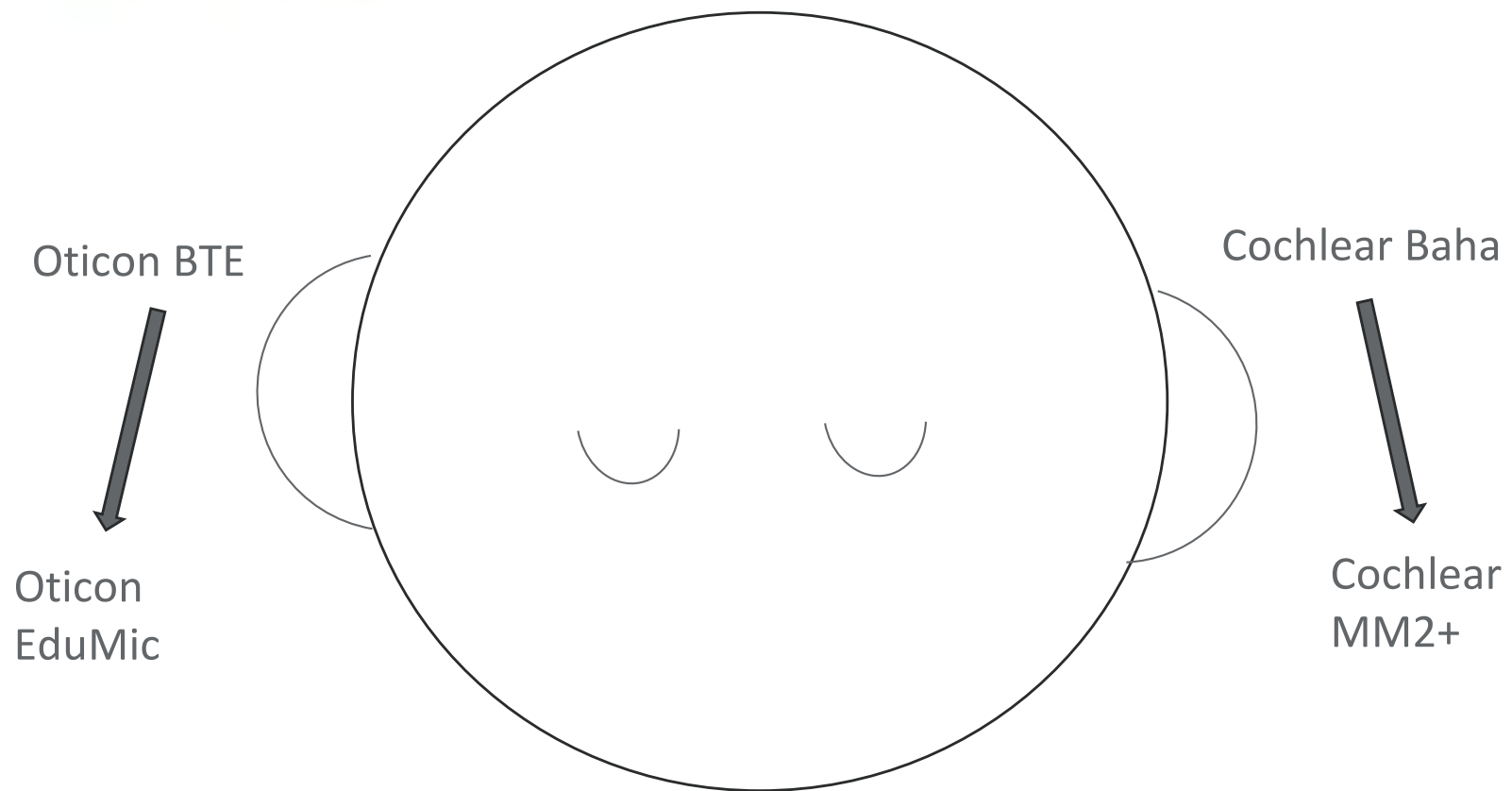
Rechargeable hearing aids are better for everyone!

# Special Considerations - #1

Don't just consider “connectivity” and “compatibility,”  
but EASE of connectivity and compatibility.

# Special Considerations - #2

Inter-Device Compatibility



1. EduMic and MM2+ worn as streamers
2. EduMic and MM2+ worn by teacher
3. Soundfield system

# Special Considerations - #3

There may be a classroom solution you haven't considered.

# Evaluating a Student's Needs

- SETT Framework
- Classroom Observations
- Functional Listening Evaluations
- Questionnaires/Inventories

# SETT Framework

Method described by Joy Zabala (2005) to assist educational teams in determining the best tools/technologies for each individual student

- **S**tudent's characteristics
- **E**nvironments in which the student will learn
- **T**asks required of the student to learn
- **T**ools necessary to enable the student to participate in those environments and tasks identified

# Classroom Observations

At a minimum, should include:

- Physical description of classroom
- Environmental description
- Technology in use
- Teaching strategies/characteristics observed
- Student characteristics

# Functional Listening Evaluations

- An evaluation used to assess a child's performance in a variety of listening conditions in order to approximate conditions in a classroom environment
- Multiple factors are manipulated including:
  - Distance
  - Noise
  - Visual access to the speaker's face
- A formal test battery, recorded materials, and interpretation matrix (Johnson and VonAlmen, 1993) are available online at:  
[www.successforkidswithhearingloss.com](http://www.successforkidswithhearingloss.com)

# Functional Listening Evaluations

- Modified/informal FLEs can be extremely useful
  - Only comparing a couple of variables
  - Recorded voice vs. live voice
  - Clear mask vs. surgical mask
  - Comparing two different HAT configurations
- FLEs can often provide valuable information in the determination of appropriate technology

# FLEs $\neq$ Speech in Noise testing

## FLEs

- Classroom acoustics/environment
- Actual HAT system(s) in use
- Not calibrated

## Speech in Noise Testing

- Calibrated
- Stable signal to noise ratio
- Standardized materials/scores

# FLE – Example

|   | Background<br>noise<br>present | Visual<br>access to<br>examiner's<br>face | Distance<br>from the<br>examiner | Sentence/Phrase<br>Score<br>(Percentage of<br>complete<br>sentences/phrases<br>repeated correctly) | Word Score<br>(Percentage<br>of individual<br>words<br>repeated<br>correctly) |
|---|--------------------------------|-------------------------------------------|----------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 1 | ✓                              | ✓                                         | 6 feet                           | 70%                                                                                                | 90%                                                                           |
| 2 | ✓                              |                                           | 6 feet                           | 70%                                                                                                | 76%                                                                           |
| 3 | ✓                              | ✓                                         | 2 feet                           | 90%                                                                                                | 98%                                                                           |
| 4 | ✓                              |                                           | 2 feet                           | 90%                                                                                                | 98%                                                                           |

# Questionnaires/Inventories

- Parent's Evaluation of Aural/Oral Performance in Children (PEACH) or Teacher's Evaluation of Aural/Oral Performance in Children (TEACH)
- Screening Instrument for Targeting Educational Risk (SIFTER, Pre-school SIFTER, Secondary SIFTER)
- Vanderbilt Listening Fatigue Scales
- Listening Inventory for Education – Revised (LIFE-R)
- SEAM for School Success (Student Expectations for Advocacy and Monitoring Listening and Hearing Technology)

# Case examples - #1

- 10 year old student with SSD in the left ear and severe vision impairment
- Uses a Cochlear Baha 6 Max on a SoundArc
- Has a 1:1 classroom aide

What do we need to consider about his classroom environment?

# Case examples - #1

## Classroom environment

- Needs to hear teacher AND aide at his side
- Moves between different classrooms and resource room throughout the school day
- Has a lot of devices already in use (magnifier, Braille writer, cane, Chromebook)

# Case examples - #1

- 10 year old student with SSD in the left ear and severe vision impairment
- Uses a Cochlear Baha 6 Max on a SoundArc
- Has a 1:1 classroom aide

✓ What do we need to consider about his classroom environment?

What are classroom technology options?

# Case examples - #1

## Technology options

1. Cochlear Mini Mic 2+ paired to Baha
  - a. Pros
    - small size
    - no need for receiver
  - b. Cons
    - no ability to network additional mics
    - difficult for student to independently put Baha into streaming mode

# Case examples - #1

## Technology options

1. Cochlear Mini Mic 2+ paired to Baha

**FAILED**

Why??

# Case examples - #1

## Technology options

Problems to solve:

1. Network mics
2. Ease of connection/more user-friendly

Solution??

**Phonak Roger Focus on better ear**

**Phonak Roger Touchscreen Mic for teacher AND aide**

## Case examples - #2

- Nearly 3 year-old girl
- Transitioning from early intervention into inclusion preschool classroom
- Mild to moderate SNHL bilaterally
- Bilateral Oticon Play PX 1 hearing aids
- No independence with HAs, no reporting malfunction
- What are technology options?

## Case examples - #2

Four options presented to IEP committee:

1. Soundfield system
2. EduMic
3. Roger Touchscreen, Roger X + FM10 audio shoe/tamper proof door
4. Roger Touchscreen, Roger X plugged into EduMic

## Case examples - #2

Four options presented to IEP committee:

1. Soundfield system
2. EduMic
3. Roger Touchstone shoe/tamper
4. Roger Touchstone EduMic

Difficult to capture all instruction in preschool classroom (resource teachers, aides, therapists).

Student will receive therapy in class, group/center work = whole class does not need to hear this but she still needs benefit of HAT.

## Case examples - #2

Four options presented to IEP committee:

1. Soundfield system
2. EduMic
3. Roger Touchscreen, Roger X + FM10 audio shoe/tamper proof door
4. Roger Touchscreen + EduMic

No ability to network, if necessary.

Does not have conference mic ability of Roger Touchscreen.

## Case examples - #2

Four options presented to IEP committee:

1. Soundfield system
2. EduMic
3. Roger Touchscreen, Roger X + FM10 audio shoe/tamper proof door
4. Roger Touchscreen, Roger X + FM10 audio shoe/tamper proof door + EduMic

Added difficulty of  
changing batteries,  
attaching  
receiver/audio shoe.

## Case examples - #2

Four options presented to IEP committee:

1. Soundfield system
2. EduMic
3. Roger Touchscreen, Roger X + FM10 audio shoe/tamper proof door
4. Roger Touchscreen, Roger X plugged into EduMic

Student has to wear EduMic, or keep very close by.

## Case examples - #2

Four options presented to IEP committee:

1. Soundfield system
2. EduMic
3. Roger Touchscreen, Roger X + FM10 audio shoe/tamper proof door
4. Roger Touchscreen, Roger X plugged into EduMic



# Summary

- Stay up-to-date
  - EAA website
  - Continuing education
- Arm parents with information
  - Provide records
  - Provide Wrightslaw article and other resources regarding need for Educational Audiologist
- Collaboration is key!
  - Get releases signed!
  - Communicate with school team!

# Questions?

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