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Collaboration Between Managing and Educational Audiologists, in partnership with Educational Audiology Association

Samantha Kesteloot, AuD
Educational Audiologist
Trenton Public Schools

Samantha Kesteloot, AuD

Dr. Samantha Kesteloot has been an educational audiologist with Trenton Public Schools since graduating from Wayne State University's Audiology program in May 2020. She serves as co-chair of the Michigan Audiology Coalition's Pediatric & Educational Audiology subcommittee and is the Michigan representative for the Educational Audiology Association. Dr. Kesteloot is also a Deaf/ Hard of Hearing Guide with Michigan Hands & Voices. In this role, she draws on personal experiences growing up and living with hearing loss to unbiasedly support families and D/HH children. Dr. Kesteloot loves to volunteer with the University of Michigan and the Michigan EHDI's Family Matters! Conference, engage in various presentations or educational series, and guest lecture with colleagues at Eastern Michigan University or Wayne State University.

Limitations/Risks

- The applicability and accuracy of the course content may vary by the clinical, geographical, and cultural context; you should evaluate the course accordingly.
- 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.
- The interventions discussed in this course may be limited in generalizability, requiring practitioners to consider specific individual and population factors.
- The course may not cover all possible risk factors, diagnostic methods, or treatment options, and complex cases may require additional considerations.
- 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.

Disclosures

- **Presenter Disclosure**: Financial: Dr. Kesteloot received an honorarium for presenting this webinar. She is an Educational Audiologist at Trenton Public Schools. She is also a D/HH Guide for Michigan Hands & Voices. Non-financial: Dr. Kesteloot is the MI State Representative for Educational Audiology Association. She is part of the Michigan Audiology Coalition and serves as the Pediatric & Educational Audiology Subcommittee Co-Chair. Dr. Kesteloot is also a Guest Lecturer at Wayne State University and Eastern Michigan University. She is a member of the Council for Exceptional Children.
- **Content Disclosure**: This learning event does not focus exclusively on any specific product or service.
- **Sponsor Disclosure**: This course is presented by AudiologyOnline in partnership with EAA.

Learning Outcomes

After this course, participants will be able to:

- Identify the variable and sometimes dynamic roles and responsibilities held by an individual's managing pediatric audiologists and educational audiologists.
- Describe how to access tools to help develop communication protocols and preferences between community partners.
- Explain the benefits of successful communication between managing audiologists and educational audiologists.

Poll

- Are you an educational audiologist? A clinical pediatric audiologist? Both? Other?

Q&A

- What do you collaborate with your educational or managing audiologist counterpart most frequently about? How?

Audiologists

We generally develop niche audiological expertise by virtue of the setting we practice in.

Quiz Hint

Q1

Audiologists in education…

- High level of variability in service provision & structure across states, counties, districts, etc.
  - Clinician experience and knowledge level
    - ie. Education and Audiology
  - Training/ in-service available from employer
    - Does an educational administrator understand best practices in audiology?
    - Does an audiologist understand the educational system by virtue of training?

Certificate Holder–Educational Audiology (CH-EdAud)

- Partnership between EAA and The American Board of Audiology
- Online Self-Study course
- 7 recorded modules, available asynchronously after module 1 is completed.
- Based on The Educational Audiology Handbook, 4th Edition (2026)

Dynamic Duos!

When audiologists share patients, across settings…

- Goals are intertwined
  - Early Hearing Detection & Intervention (EHDI) 1-3-6
  - Audibility
  - Language development
  - Educational equity via access

EHDI 1-3-6

Clinical

- Identify via NHS diagnostic follow-up.
- First to fit infant/ child with amplification.
- Referral to IDEA Part C (Early Intervention) program
- Fitting and verification of amplification to DSL-5 or NAL Pediatric Targets. (AAA, 2013)
- Clinicians who don't have access to verification measures are fitting children. Educational audiologists can be a great check for this.
- Can also get murky if too many people are running REM/SREM and parameters are not the same.

Educational

- Possibly a follow-up diagnostician.
- Referral for IDEA Part C (Early Intervention) program starts evaluation process.
- Will parents agree? If they don't, educational audiologists are not on that student's team. Clinical audiologists and that connection become critical.
- In-home or community based visits with family as part of Individualized Family Service Plan (IFSP) if the student is found eligible.
- IFSP service providers may not be experienced with DHH, if districts or EI teams don't have an educational audiologist or TC-DHH

Loss to follow-up (LTFU)

Our families and kiddos don’t benefit from early identification if they don't move through the EHDI 1-3-6 process to receive the *intervention*

(Sapp,et al., 2021).

Audibility

"Hearing aid manufacturers typically offer custom hearing aid prescriptions that have been developed by and for the proprietary use of the hearing aid company. Such prescriptions are not standardized nor are they typically subjected to external scrutiny, and are typically developed for use in the adult population. *Use of independently validated pediatric focused prescriptive targets, as well as normative data, and fitting methods is always recommended.*"

"Independent pediatric-focused and pediatric-validated prescriptive targets, normative data, and fitting methods that take into account the unique developmental and auditory needs of children should be used for pediatric hearing aid verification instead of manufacturer's proprietary prescriptive approaches."

(American Academy of Audiology, 2013.)

Audibility

Clinical

- Reliable thresholds
  - AC & BC for a low frequency and a high frequency obtained in each ear separately. The Joint Committee on Infant Hearing (2019)
  - Thresholds can be obtained via behavioral or electrophysiological measures, preferably both.
- Verification

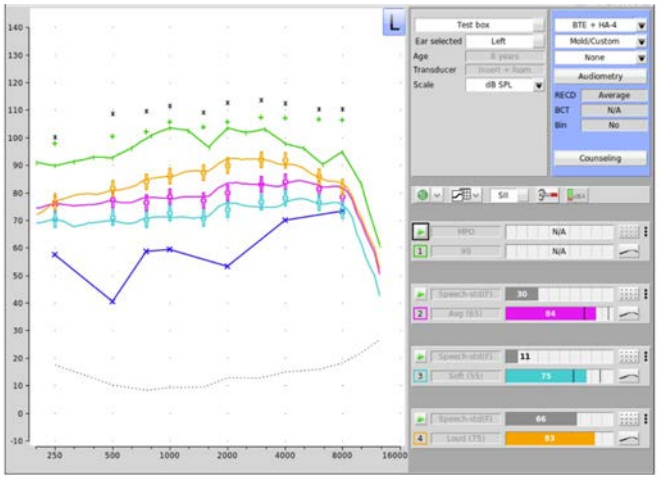
Educational

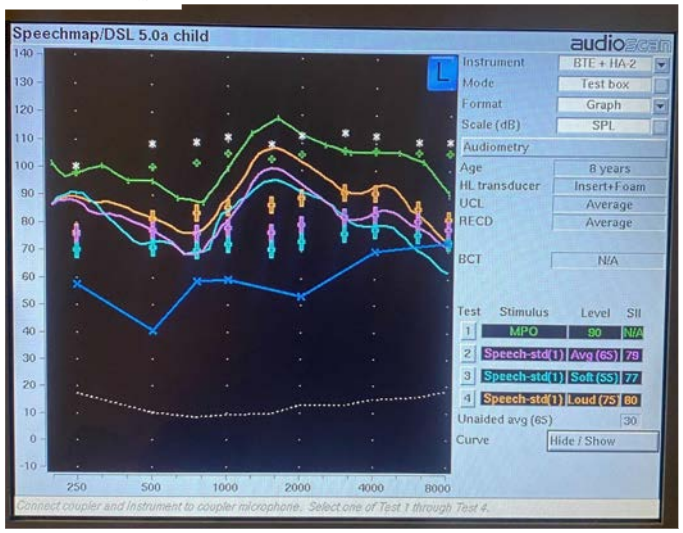
- Depending on system and services, may be fitting first or working together to obtain threshold information.
- IFSP/ IEP provider
- Assisting family with strategies for retention, use, Hearing Assistive Technology (HAT)
- Continuous progress monitoring
- Changing thresholds indicated by educational concerns or lack of progress.

More than half of children's HAs were not fit optimally
(Mccreery, et al. 2015)

Student A

- Unilateral hearing loss.
- Student fit with amplification from a non-pediatric provider, with no verification measures completed.
- Prior to uploading DM receivers, ran audibility curves.





Language Development

Clinical

- Maintaining routine audiological assessments
- Regular management of personal devices and earmolds if appropriate.
- Determination of change in devices, if progressive loss.
- Possible conductive/ fluctuating components.

Educational

- 10 hours of wear leads to strong language growth (OCHL, 2025)
- 65% of children in [OCHL] study had adequate aided audibility of speech and stable hearing during the study period.
- Limited audibility was associated with more hearing loss and deviations from prescriptive targets.(Mccreery, et al., 2015)

Quiz Hint

Q5

Educational Equity

Clinical

- Consider HAT applications and connectivity when fitting devices.
- Convenience and ease
- SmartBoards, Projectors, Laptops, Chromebooks
- If personal devices need to be repaired or replaced
- Loaners
- Coordination

Educational

- Determination of individual SNR is necessary to select appropriate HAT.
- Personal DM systems require verification procedures to establish appropriate gain and output
- Validation procedures are required by IDEA [34CFR300.6(a)]

- Risk Factors for Non-Use (Peters, 2019)

When audiologists share patients, across settings…

- Processes are interconnected
  - Medical diagnosis and documentation
  - Releases of Information
  - Reliance on community based audiologists (hopefully) if there is no educational audiologist in schools

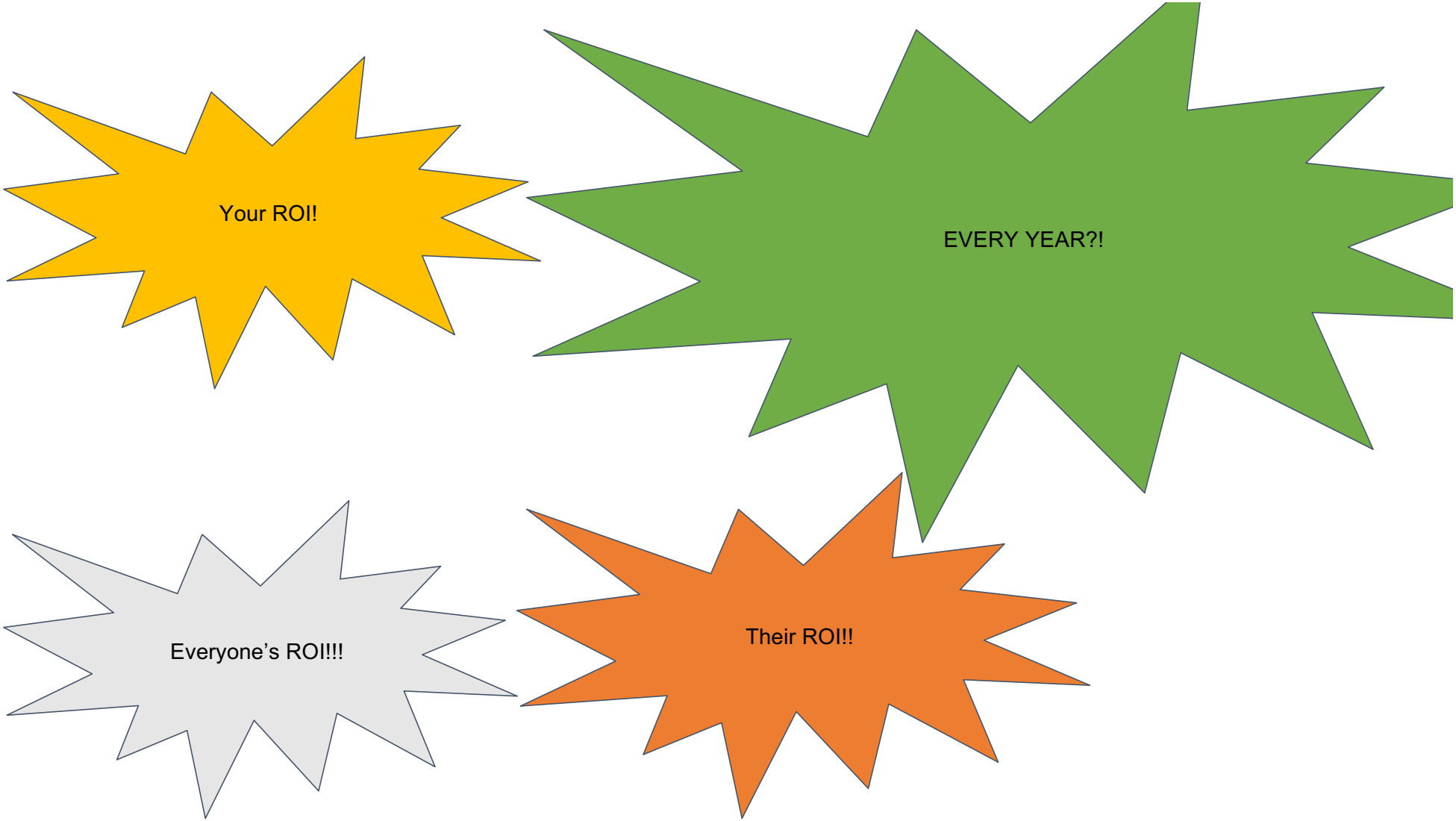
Diagnoses or Documentation

- In Michigan…
- Report within 6 months from Ear, Nose, and Throat or Otolaryngologist with diagnosis, statement of permanency and medical clearance for amplification or HAT
- Audiological report has to be current
- Every 3 years, updated audiological report required for MET eligibility

Diagnosis = IEP??

Nope.

A student's medical diagnosis does not guarantee they will qualify for special education services.


Your ROI!
EVERY YEAR?!
Everyone’s ROI!!!
Their ROI!!

Quiz Hint

Q2

Releases of Information

Required by each entity transferring sensitive data.

- Health Insurance Portability and Accountability Act (HIPAA)
- Family Educational Rights and Privacy Act (FERPA)

Quiz Hint

Q4

No Educational Audiologist?

- Families and educational staff may rely on community based audiologists for HAT decisions
- In some instances, teachers of the D/deaf or SLPs may be inappropriately fitting HAT
  - Based on professional scopes of practice in audiology (AAA,2004; ASHA, 2002), speech-language pathology (ASHA,2017), and deaf education (CEC-CED, 2015), the audiologist is the only professional who is qualified to fit and verify hearing aids and personal hearing assistance technology (Educational Audiology Association, 2009).
- Consider offering services via contract or telehealth

When audiologists share patients, across settings…

- How we talk to, and about, members of the child's team is impactful
- Mindfulness of how we talk about colleagues in front of parents
  - It does make a huge difference in their confidence between clinical and educational staff
- Educational audiologists may see students or families more often
  - Home based services can increase family involvement and device wear time (Harrison, et al., 2015) (Brigham et al., 2024)
- Managing audiologists in a medical setting may be held in a different regard than educational staff

Student B

- Email sent to managing audiologist to confirm if they had recommended an aid. They had not.
- Student saw different clinician who parents told the TC-DHH was recommending hearing aid.
- Student with minimal-mild hearing loss. Ear level DM receiver.
- At IEP, teacher consultant interpreted a functional listening evaluation that showed benefit hearing assistive technology.
- When leaving, parents told TC-DHH their child was getting a hearing aid

IDEA defines Audiology Services to include:

(i) **Identification** of children with auditory impairments, using at-risk criteria and appropriate audiologic screening techniques;

(ii) **Determination** of the range, nature, and degree of hearing loss and communication functions, by use of audiological evaluation procedures;

(iii) **Referral** for medical and other services necessary for the habilitation or rehabilitation of an infant or toddler with a disability who has an auditory impairment;

(iv) **Provision of auditory training, aural rehabilitation, speech reading and listening devices, orientation and training, and other services**;

(v) Provision of **services for prevention of hearing loss**; and

(vi) **Determination of the child's individual amplification,** including selecting, fitting, and dispensing appropriate listening and vibrotactile devices, and evaluating the effectiveness of those devices. (EAA, 2009)

Early Intervention

Early Intervention

Part C of IDEA

Ages 0-3

Federal Eligibility of Part C services-

(i) developmental delay in the areas of cognitive, physical, communication, social adaptive OR

(ii) has a diagnosed physical or mental condition which has a high probability of resulting in developmental delay;
Fed reg: 20 U.S.C. 1432(5)(A)(B)

Developmental Delay is defined by each state.

Early Intervention

Part C of IDEA

Ages 0-3

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Fed reg: 20 U.S.C. 1432(5)(A)(B)

Developmental Delay is defined by each state.

Michigan, for example.

Developmental Delay means:

A. A delay:
   1) Of any magnitude (i.e., any delay) for a child up to two months old (adjusted age).
   2) Of 20 percent (or one Standard Deviation below the mean) for a child two months to 36 months old.

B. In one or more areas of development (cognitive; physical, including gross and fine motor; communication; social/emotional; adaptive).

C. As measured by an acceptable developmental evaluation method or tool applying informed clinical opinion.

Early Intervention

Major IDEA Part C principles

Non-categorical

Natural Environments

Individualized Family Service Plan

Qualified Personnel

Non-Categorical

System is designed for all children with disabilities

Variation between states' definitions and systems change service accessibility, affecting outcomes based on geography.

Early Intervention

Major IDEA Part C principles

Non-categorical

Natural Environments

Individualized Family Service Plan

Qualified Personnel

Natural Environments

"To the maximum extent appropriate, are provided in natural environments, including the home, and community settings in which children without disabilities participate... (34 CFR 303.12(b))

Natural environments:

"settings that are natural or normal for the child's age peers who have no disabilities" (34 CFR 303.18).”

Early Intervention

Major IDEA Part C principles

Non-categorical

Natural Environments

Individualized Family Service Plan

Qualified Personnel

Individualized Family Service Plan

1. Present level of development
2. Family's input
3. Measurable outcomes to achieve
4. Specific EI services
5. Natural Environments where EI will be provided
6. Dates for service initiation
7. Identify service coordinator most appropriate for child & family's needs
8. Steps towards child's transition to education

Early Intervention

Major IDEA Part C principles

Non-categorical

Natural Environments

Individualized Family Service Plan

Qualified Personnel

Qualified Personnel

The federal law says, "The IFSP must include the name of the service coordinator from the profession most immediately relevant to the child's or family's needs (or who is otherwise qualified to carry out all applicable responsibilities under this part), who will be responsible for the implementation of the IFSP and coordination with other agencies and persons." - Sec. 303.344(g)(1).

Special Education

Special Education Determination

Part B of IDEA

Ages 3-21

1. Identify a student's disability.
2. Determine if that disability adversely affects the student's educational progress/ performance.
3. Determine if the adverse effects of the student's disability requires specialized instruction.

Special Education

Major IDEA Part B principles

Least Restrictive Environment

Free & Appropriate Education

Evaluation

Individualized Education Plan

Procedural Safeguards

Least Restrictive Environment (LRE)

Children with disabilities must be educated as much as possible with typical peers.

A continuum of services should be offered, from least restrictive to most restrictive.

Removal from general education occurs only when the severity of disability effects prevents progress in education.

Educational placement is determined by IEP goals & reviewed annually.

Special Education

Major IDEA Part B principles

Least Restrictive Environment

Free & Appropriate Education

Evaluation

Individualized Education Plan

Procedural Safeguards

Free & Appropriate Education (FAPE)

- Every student has the right to educational opportunities.
- Children with disabilities must be offered a free & appropriate education.

Special Education

Major IDEA Part B principles

Least Restrictive Environment

Free & Appropriate Education

Evaluation

Individualized Education Plan

Procedural Safeguards

Evaluation

- A comprehensive evaluation by a multidisciplinary team must be completed before a student is placed in special education.
  - D/HH eligibility requires
    - Otolaryngologist/ ENT
    - Audiologist

Special Education

Major IDEA Part B principles

Least Restrictive Environment

Free & Appropriate Education

Evaluation

Individualized Education Plan

Procedural Safeguards

Individualized Education Plan (IEP)

- Educational programming is to be determined on an individual basis.
- Requirements regarding IEP content, scope, timeline, participants, parent participation, accountability & private schools.

Special Education

Major IDEA Part B principles

Least Restrictive Environment

Free & Appropriate Education

Evaluation

Individualized Education Plan

Procedural Safeguards

Procedural Safeguards

- Regulations, standards & procedures for compliance ensure fairness of educational decisions and offer accountability.
  - Written notice to parents of referral, confidentiality of information, rights to independent educational evaluation, consent for placement, due process hearings, etc.

Quiz Hint

Q3

Cochlear Implants

Schools are exempt from optimizing CI functioning of internal device.

Routine Checking of Hearing Aids & Cochlear Implants

Schools must ensure devices are functioning at school.

Assistive Technology

The IEP team may determine that HAT is to be used outside of school to meet IEP goals.

Interpreters

Interpreting must be provided by "highly qualified" interpreters.

Consideration of Special Factors

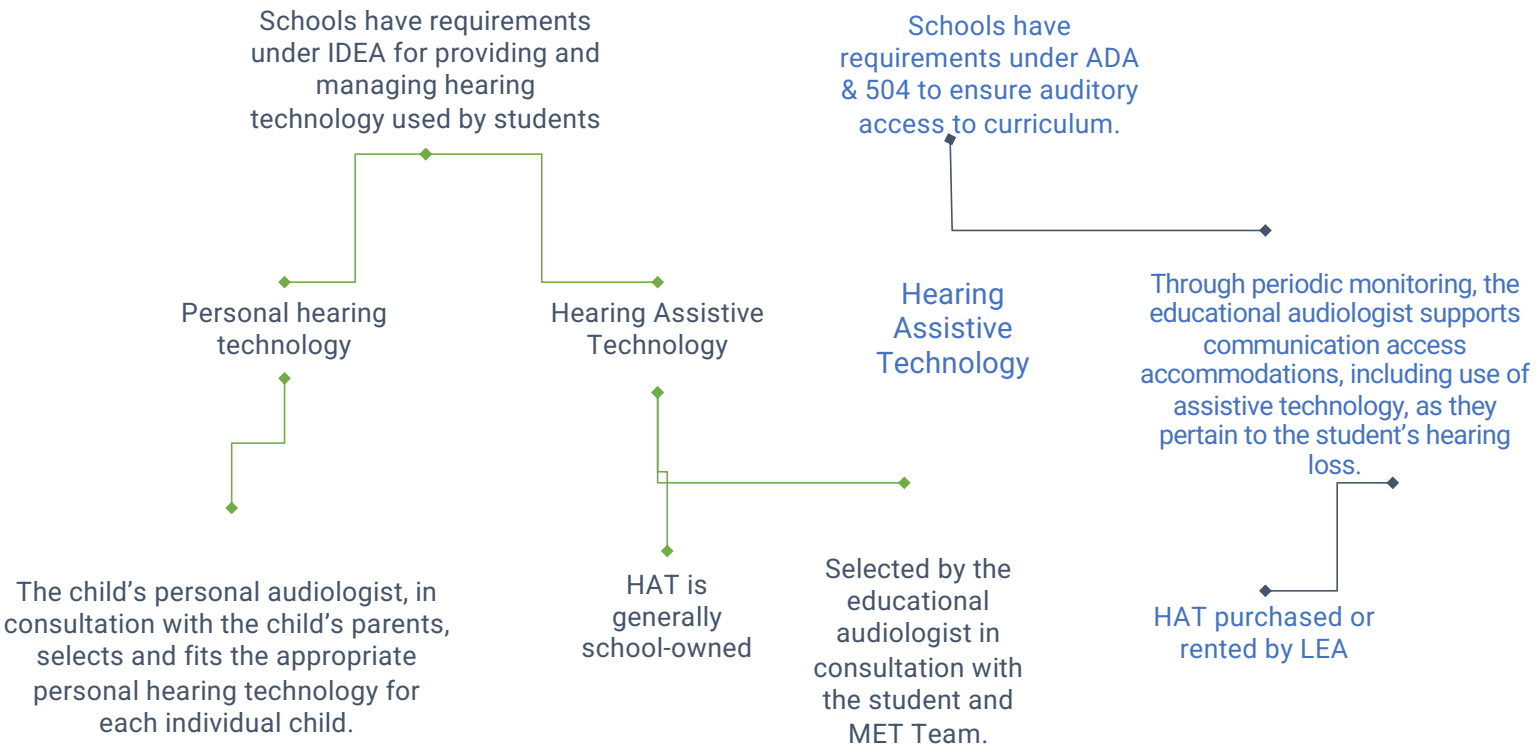
Requires access to communication with peers & personnel in the student's communication or language mode.

504 Plan

Section 504 of the Rehabilitation Act and the Americans with Disabilities Act (28 C.F.R. Part 35.)

1. Identify a student's disability.
2. Ineligible for Special Education because effects of the disability do not require specialized instruction.
3. 504s are coordinated by a designated team at the student's school.

Hearing Assistive Technology



12%

Statistics have shown ***consistent HAT use rates as low as 12%***

(Davis, Gustafson, Hornsby, & Bess, 2015).

Access Points for Collaboration

Access Points for Collaboration

- Loss to follow-up between screening & diagnosis
- Monitoring of hearing status
- Verification
- Release of information forms
- Counseling
- Conductive hearing loss
- Bone conduction devices
- Auditory Processing Disorder

Access Points for Collaboration

- **Programming of hearing aids**
  - DSL or NAL vs Proprietary Manufacturer Algorithms (PMA)
  - Would you make changes without consulting the managing or educational counterpart?
- **DM/ RM access**
  - Numerous situations in education where “ease” of use & integration of connectivity or team teaching prohibit a student's auditory access
  - 3–4 microphones being worn by a teacher

Student C

- Student with long standing bilateral hearing loss moves back from out of state.
- Notable inconsistencies on my testing.
- Thresholds were significantly worse, long wait time and partial spondee responses.
- No difference in educational performance or communication abilities.
- Immediately began communicating with managing audiologist.
- Between colleague, parents and myself we were able to coax out the exaggeration.

Improving Collaboration

Resources from our Organizations

- ASHA Interprofessional Education/ Interprofessional Practice
- How To: Tips for Working on an IPP Team as an Audiologist
- Educational Audiology Association: Comparison of Roles- members only

Improving Collaboration

- Active involvement in state audiology organizations
- Develop relationships with your team members
  - If we know somebody, email/ text tones can be easier to interpret or understand, less threatening.
- Confirm and re-confirm the preferred way to obtain ROIs with your regular communication partners

Improving Collaboration

- Diagnostic audiology is a great system of checks & balances.
  - Yes, it's ideal to get every piece of information perfectly, but we all know it does not work that way.
  - We can use each other to navigate discrepancies to best help the students we share.

Improving Collaboration

- We should consider each other valuable partners.
  - If a mistake occurs, or we are not able to obtain every data point, hold each other in grace.
    - Reflect before placing blame or judgment
      - “Were there factors outside your colleague's control that limited their capabilities to complete every single item that you wanted them to?”
      - “Have I been unable to complete testing before?”

Collaboration Beyond Audiologist

Collaboration Beyond Audiologists

- How can we help parents feel more comfortable and prepared for their newborn's hearing screening?
  - Partnerships with local OB GYNs to explain NHS
  - Mothers with more information about NBHS had more positive attitudes
    - Just being present at the screening and learning results helped mothers
  - It is possible that early education about NBHS may lead to positive outcomes
    - Reduce loss to follow-up?
    - Decrease maternal anxiety?

(Krishnan, 2019)

Collaboration Beyond Audiologists

- Community partnerships with Physicians to educate them on follow-up benchmarks
  - Strong support from family physicians was reported by physicians in Part 2 of the study
  - Part 1 of this study involved parent report that physician involvement and persuasive recommendations impacted timeliness of audiology services

(Danhauser, 2005)

Our most impactful collaboration yet …

Resources

- Federal CDC funding & staff cuts have directly impacted EHDI
- Federal Special Education & education budget proposals for “block funding” will decrease funds
- Medicaid payment cuts may affect our students receiving school services
- Voucher programs will put students with disabilities at risk, private schools are not beholden to IDEA

Thank you!

Samantha Kesteloot, Au.D.

Educational Audiologist

Trenton Public Schools

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