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

Presenter: Samantha Kesteloot, AuD

Well, hello everyone and thank you for joining us for our webinar today on the collaboration between managing and educational audiologists, which is presented in partnership with the Educational Audiology Association. It is my pleasure to introduce our presenter, Dr. Samantha Kesteloot. Dr. Kesteloot is an educational audiologist with Trenton Public Schools. She serves as the co chair of the Michigan Audiology Coalition's Pediatric and Educational Subcommittee and she is a Michigan representative to the educational audiology association. Dr. Kesteloot is also a deaf hard of hearing guide with Michigan Hands and Voices.

In this role, she draws on personal experiences growing up and living with hearing loss to unbiasedly support families and deaf and hard of hearing children. You can read more about Dr. Castalhut on our course page. And at this time, Dr. Custalhout, we welcome you and turn the floor over to you.

Thanks everybody. I'm so excited to talk today about collaborating between managing pediatric and educational audiologists. You will see some limitations and risk that are inherent for today's course. The next slide you'll see some disclosures of note. I would also like to mention that I am a member of the Council for Exceptional Children and was able to advocate on the Capitol Hill in July.

So that was really a great opportunity. I think it's also relevant to add that audiology has been a big part of my life since I was about four and a half years of age. I was late identified by a preschool screening with normal precipitously sloping to profound hearing loss. So I grew up with hearing aids. I use an implant and a hearing aid now.

I think this is really important to share that I have this personal connection to the field of audiology because I also have that personal connection to the people in audiology. When I collaborate with people, I really feel like I am working in a field with family and that is a really unique experience.

So here are the learning outcomes for today's slide presentation. I'm sorry, and I want to go ahead and ask a poll here. Just sort of are you an educational audiologist? A clinical pediatric audiologist? What's your role?

And then also in the Q and A, I want to get your input about how you collaborate with any pediatric managing audiology audiologist or an educational audiologist. I just think that is it's so variable across counties, even across districts. So you know this. Even though this is a presentation, I really want it to be interactive and collaborative because, you know, things vary so widely across the country. All right, so are we having any poll responses?

Let's See what we have here. Okay, so it's about split pretty evenly between an educational and pediatric audiologist. And then about 13% of you are serving as both and then others, there's a good number of 20% of you are involved in some other way. So if you want to please put that in the Q and A. And that would be interesting to know.

So I didn't get any information in the Q and A. So I guess this presentation will hopefully be pretty helpful and open up the collaborativeness for everybody.

Okay. So as audiologists we really do tend to develop our expertise during practice. Right. So if you're doing vestibular audiology, you're in a balanced clinic and that becomes your area of expertise, same as. And that works.

That's generally how it works for educational audiologists. There's a high level in service provision in the structure of educational audiology, kind of as I alluded to earlier. So there's a vast difference in clinician experience and knowledge level both in when you're looking at it as the audiology side of things and then also the educational side of things. So, you know, as an audiologist coming into the schools, does your administration know what best practices in audiology? Are they going to tell you

how to do your job?

You know, that is something they don't really have the expertise. So a lot of that responsibility falls on the individual provider. And then, you know, does the audiologist understand the educational system by virtue of our programs and our training? And there seems to be a pretty big gap in that. And so EAA actually did a survey about educational audiology coursework and there was a request from new educational audiologists for mentoring opportunities.

So they built a program and so now they are offering the certificate holder educational audiology. And that's a partnership between EAA and the American Board of Audiology. It's an online self and there are seven recorded modules. So yeah, and that's based on the new edition, the fourth edition of the Educational Audiology Handbook. So this is really meant to assist those existing educational audiologists to stay current with best practice.

As we all know, everything is really changing a lot. And in education things have really changed a lot in terms of connectivity and all of those things. So just kind of getting to stay current. Right. And then also to help those audiologists who might be transitioning into the educational setting, or if there's a pediatric audiologist who wants that school based expertise, maybe they're going to start providing telehealth or contracting educational audiology services and then to meet Some state certification requirements as of this time.

This is not a requirement for any state, it's voluntary. So I think that we are all dynamic duos. The clinical audiologist and the pediatric audiologist. We really, you know, I, it's helpful when we work together as a team and we can really bring a lot of good things into our children's and family's lives. So when we share our patients across settings, our goals tend to be intertwined.

I picked a few here to kind of go into. So first we have the Early Hearing detection and intervention 136benchmark. Then also audibility, language development and educational equity via Access. So first EHDI 136 guidelines. You know, by one month we are screening for hearing loss.

By three months those kids are getting diagnosed and hopefully by six months they're enrolling for that early intervention and services and all those supports to access the language that the family has chosen. So when you think of a clinical audiologist and meeting those 136 goals, you might think that they are the ones who will identify the hearing loss via that diagnostic follow up. Most likely they're going to be the first professional to fit an infant with amplification, hopefully making that referral to the early intervention teams. And then when they're fitting those hearing aids, using the appropriate fitting and verification of amplification to DSL 5 or NAL pediatric targets, that comes from AAA best practice fitting guidelines. And so I'll kind of go over a case study later in this presentation, but I do want to note here that there are clinicians who don't have access to verification measures and they are fitting children as educational audiologists.

You know, we can be a great check for this if, if we know a provider doesn't have verification, we can offer it, you know, just to make sure that those kids are really truly hearing what we need them to hear.

Then also again, sometimes if there are too many cooks in the kitchen, you know, it gets murky because there's a lot of room for human error when we're doing those verification measures. So if things are being split up in that way, it may be good to chat about those kinds of things. And then on the educational audiology side of things, you know, that audiologist might be a follow up diagnostician. There are, you know, any follow up sites that could be educational audiologist. And then also they're receiving that referral for part C or early intervention and it starts the evaluation process.

Some notes here I wanted to just bring to light is that sometimes parents don't want that early intervention. And if they don't, then a lot of the supports and those types of things would fall to the

managing audiologist. So that that connection really does become critical if there's no educational piece or partner, I guess in that situation in home, our community, community based visits with the family as part of the ifsp, if the student is eligible, the educational audiologist might be on that team and be that service provider. But in other situations the practitioner may not be an audiologist. That is the IFSP provider.

So it's good to know, I guess, if you're a managing audiologist, if you know, you might need to fill in some gaps there.

Loss to follow up is a major issue, as most of us know when we're talking about those 1, 3, 6 goals. Families and kiddos really don't benefit from that early identification if we can't move them through this process and they receive that intervention. So in our state, Michigan, as of the last count, this number is from Michelle Garcia. She's our EHDI follow up consultant. And so she told us that 43% of babies in Michigan currently, I think last March, were lost developed between screening and diagnosis.

And that rate is about 31.3 nationally. When I was researching for this presentation, I found it really interesting and I hadn't really thought of this before, but there were some researchers that argue that this portion of loss to follow up isn't really the worst because a lot of those children will not have hearing loss. But the worst loss to follow up is after that diagnosis. Right. Where there's a diagnosed hearing loss and those families aren't receiving the intervention that basically is a little bit more impactful.

So I thought that was a good food for thought. I see there's a question. Okay, there's a program audiologist for TALA for the newborn. Is that a screening program? I hope.

Okay, awesome. So I just kind of check in. I saw there's a Q and A there, but I thought that that was a very interesting kind of take on things. So SAP in 2021, there was a quality improvement study in Iowa done with their early hearing detection and intervention program. And they sought to expand the role of

educational audiologists after the failed newborn hearing screenings.

So basically they offered training and supports for educational audiologists at the service agencies across the state. And so they were provided guidance on abrs and how to interpret waveforms. And then they compared de identified data and significant findings were that the drive time decreased for families and then that EHDI age of diagnosis goal at 3 months was improved. The researcher also noted that the protocols for follow up screenings are not being followed very well. That protocol is one rescreen each each ear only and then if they fail each year, any ear, they go straight to a diagnostic.

So if we get, if we're doing a lot of repeat screenings, we might miss a mild hearing loss. So that was an interesting, just kind of take from that research. Another article I read, Zemba et Al in 2024 found that loss to follow up for babies in the NICU increased if diagnostic audiology services were not offered in the nicu. So that was just kind of interesting finding as well that if we can do diagnostic audiology in the NICU for those babies, we can get them diagnosed. Here's a slide just to kind of harp on that audibility piece of things and quote our AAA guidelines here about using those really well researched and normative prescriptive targets based on normative data for children.

That is really best practice. It's not the proprietary software, unfortunately. So going into more audibility related shared goals, clinical audiologists, we're striving for those reliable thresholds. The Joint Committee on Infant Hearing, they say that air conduction and bone conduction for a low frequency and a high frequency and each ear is enough to start aiding a hearing loss. So you know, obviously those thresholds, we obtain them electrophysiologically at first and then we're really striving to get those behavioral results.

So yeah, you know, we might get those clinically or maybe we're going to need some assistance and stuff like that with the educational audiologist to fill in the gaps. And then obviously that verification, as I've mentioned before, then educational audiologists, if we're talking about audibility, we might be the

first fitting or working together to obtain threshold information, which I kind of just said. And then also they're going to be the IFSP and IEP provider where audibility and ensuring audibility is crucial to the learning outcomes. And then educational audiologists will have more involvement with hearing assistive technology, most likely and can help families integrate that into their life if they'd like. I think that having an educational audiologist on the team, you have that continual progress monitoring which is really, really important.

We can see a lot of changes by how a child might be performing educationally or how they might be communicating with us and how we can see them struggle or not struggle in schools. So yeah, and I have another case study that kind of goes into that a little bit later.

And then this is another thing. I think this is why I harp on audibility quite a bit is in the Macquarie et al study back in 2015 as part of the outcome study for children with hearing loss that more than half of the children's hearing aids were not fit optimally. So does that mean that we're not meeting the target just by virtue of their hearing loss? Possibly. And then in that case is that a cochlear implant candidate?

You know those are. Is that what that means? So it is just important to note that there's so much variability in how these kids are coming to school and coming to their days hearing. And as educational audiologists we do need to make sure that they are hearing optimally for school and it can change sometimes. Right, so here's student A, she, they have a unilateral hearing loss and this student was fit by a non pediatric provider and there were no verification measures completed.

So she was new to us and we went out there and before I ran, before I put the uploaded the DM receivers I did want to run an audibility curve and this is what I got. As you can see we're pretty far over target in quite a lot of areas here above pain thresholds here. This right here is inappropriate. I emailed the audiologist and she said that they had no verification capabilities and was adjusting to the child preferences and does not fit kids typically and was very happy to let me run these measures And I

always try to ask permission. I never just go in somebody's hearing aids or run verification without talking to the managing audiologist.

I'll make multiple attempts. I don't want to encroach and generally someone doesn't have the equipment. So it's nice to be able to provide this service and catch something that is not going to help our students. So then we were able to fit her with a school hearing aid and as you can see under the pain threshold and everything's looking good there.

So when we're talking about shared goal of language development, clinical audiologists, you know, maintaining those routine audiological assessments, managing those personal devices and ear mold if appropriate. If we are, you know, using personal hearing aids we want to make sure that they're being seen regularly and then at some point maybe if they're, you know, that care is being diminished, if they're not following up every year, is it time where you lean on the educational counterpart a little bit more for those things? Let's see. And then determination and different devices. If the hearing loss is progressing or maybe even improving.

If we have a conductive kid, something like that. Then also those, like I said, conductive and fluctuating children, kids with hearing loss, that is definitely more clinically managed because there's more medical. And then in the educational realm, we're really working with those families to try to get 10 hours of wear time as soon as possible. The outcome for children with hearing loss study did find that 10 hours leads to very strong language growth over time. And then 65% of children in that study, the same study also had adequate aided audibility of speech and stable hearing.

So that's great to know that the majority of our kids will have adequate aided audibility. But you know that 35% of kids, they're going to need to be kind of caught, right. When something's changing or something like that, we need to be able to catch it. And managing this all together as a team is really helpful for that. And then that limited audibility was also associated with more hearing loss and

deviations from prescriptive targets.

So that's interesting to know.

Okay. Educational equity for clinical audiologists in this realm, I would say, you know, it's really important to consider the hearing assistive technology applications and connectivity when fitting the Bluetooth devices or hearing aids. I'm sorry, you know, convenience and ease. But like in school specifically, we are connecting our kids to smart boards, to projectors, to laptops, to Chromebooks, into microphones. So there's a lot of, there's a lot of connectivity and it can be really tricky.

And then also loaner devices and coordination of repairs here. So, you know, if a student's devices are broken and they need to be repaired, the clinical audiologist could provide loanos, but sometimes the school might have loaners. Then something that I really, I think is awesome is the coordination. I actually live really close to one of our children's hospitals where I work is about 35, 40 minutes away.

I'm able to take the broken hearing aid down and I'll just drop it off and say hi to my friends there and pick it back up and I'll save a parent the trip. You know, the calling off from work, the drive time, the stress, all of that. It's been a really nice. We've been able to do that for a number of families and it's a good opportunity and just make life easier for our kids and keep them on the air. So for educational audiologists in the equity realm of things, we are looking to determine individual signal to noise ratios that is important to select hearing assistive technology, the DM systems that we use.

So the when the, you know, the microphone that goes to the student's devices, we have to verify that the output is appropriate and validation measures are also required by IDEA.

This study here Peters in 2019 was it went over risk factors for non use. And so it was an anonymous questionnaire to speech langu pathologists, audiologists and teachers of the deaf. It was the first study

not to use parent report and it found that kindergarteners, third graders, sixth graders and eighth graders are at the highest risk for non use. And most often that hearing aid and DM system nonuse is in 6th grade due to sustainable pressure. And if you're an educational audiologist, even any of your managing audiologists, we see this all the time.

So sometimes maybe having a plan, working it out with your educational and managing audiologist can help keep some kids on the air and get some creativity going.

Then again, when we share patients we have interconnected processes. We need medical diagnoses and documentation, release of information. And then also there's a reliance hopefully on community based audiologists. If there aren't is there's not an educational audiologist in school. So in Michigan this is going to be different by state.

So in Michigan we are required to have a report within six months for an ear, nose and throat or otolaryngologist with a diagnosis, statement of permanency and medical clearance for amplification or hat. The audiology report also has to be current. And then every three years this documentation, the audio documentation must be updated for eligibility meetings. It's also really important to note that the IEP team, if a student does have hearing loss, the IEP team may not find them eligible under deaf and hard of hearing services. There might be another disability or something that's really hindering their access to education more than hearing loss.

It just really is variable and depends on each child's situation. So diagnosis, does it = an IEP? Nope. The medical diagnosis does not guarantee that students will qualify for special education services.

Okay, so your ROI, their spirit, everyone, every year. So ROIs are required by and usually required by every entity that's transferring sensitive data. We have HIPAA in the medical system and then we have FERPA in the school system. And yeah, so we have to do that. And you know, depending on each

institution, we have an institution in the US that has a annual, basically a clause that says it doesn't expire until the student stops rece services.

And that's really helpful to kind of have a non expiration clause just increases the longevity of use. Okay, so if there's no Educational audiologist, what happens? Like I said, there's going to be a higher reliance on the community based providers. There are some instances where teachers of the deaf or speech language pathologists are fitting hearing aids and hearing assistive technology. I've heard of one instance with hearing aids.

I think it was in another state. But you know, I'm not surprised it's happening. But unfortunately that is really just not appropriate based on everyone's professional scope of practice in the teacher of the deaf and hard of hearing SLPs and AUDs audiologists, we are the only ones with that training and expertise. And if there isn't an educational audiologist, consider becoming one. There's opportunities to contract, there's opportunities to provide telehealth.

You can get so creative. Okay, so when audiologists share patients across settings, I think it's very important for us to think about how we talk to and how we talk to members of the child's team. That can be very impactful on people's impressions and opinions and decision making. Honestly, we need to be mindful of how we talk to colleagues in front of parents. You know, parents can pick up on little cues and little hints and you know, gestures.

So it really does make a big difference in their confidence between that clinical and educational staff. I know personally, I remember when I took this position here in Trenton and I was going into my first year as an audiologist and one of my good friends, she had a patient parent and she said, oh, you're in Trenton. Oh, the audiologist is Dr. Kustelu. I know her so well. She's great.

You're in great hands. And you can almost visibly see that, you know, sigh of relief that okay, like if they say that, I know they are going to be taken care of. And you know, it goes both ways, right. If I say that to a family, they feel good about that. We know each other, you know, educational ideologists, we might see each other, see the families and the kids more often just by virtue of, you know, multiple meetings or whatever.

We might need to do direct services throughout the course of this year. And then, you know, those home based services, especially going back to early intervention, really can increase, have been shown to increase family involvement and device wear time. There's two studies quoted there. And it's also important too that home based services, you know, educational audiologists might not actually be there. And so just because they don't exist in that program, or maybe the family is refusing services, maybe the family's, you know, canceling visits.

So it's good to like always kind of think, I'm not sure how this works. They're not guaranteed, it's not guaranteed that we're in their homes or seeing them more often or spending more time. So it just very, very much depends on each program. And then I think it's interesting to note here too that managing audiologists that are in a medical setting tend to be held in a very different regard than educational staff. It's pretty challenging to get someone to call me doctor being a female in the school system.

But if you're an audiologist at a clinic or at an ENT's office, they may be more likely to call you doctor in that setting. And then sometimes it can be pitted against each other. Oh well, the doctor said that. And so it's just kind of, I think important to take note that our, you know, our words can have different impacts based on where we're, where we practice.

So here's student B. So I this. Oh, okay, so there's something missing. But anyway, so I have a teacher consultant of the deaf and hard of hearing and she was in an IEP meeting, an individualized education plan meeting. She was reviewing a.

The result of a functional listening evaluation for other little one who used, she's not very little anymore but they use a focus so an ear level receiver. And we did a functional listening eval to show the benefit. And so parents as they were leaving the meeting said, oh okay, we're going to get her a hearing aid now. So kind of confused. The teacher consultant was worried that they misinterpreted something.

And then I was worried, oh no, did something change? So I emailed the audiologist and confirmed if they had recommended a hearing aid or not and they hadn't. So we kind of got on the same page there. But then the student went into the office and saw another provider and I got a really concerned email back saying that the teacher was recommending a hearing aid and you know, all of this. And I was like, oh, let me clarify.

And she said, you know, the managing audiologist said all I have is really the parent, you know what they're telling me. And so I think that that's really important to remember as we are clinical audiologists or educational audiologists and we're hearing maybe doesn't make sense or seems a little elevated or just. Yeah, it's helpful to email and have these relationships with each other so we can just double check and get on the same page without overstepping or anything like that. I did find it interesting as well when I came into education, we are never allowed to say recommend. We must say suggest.

So obviously in the medical field we're saying recommend, but in education we're saying suggest. And that because if we recommend something that's placing financial liability on the district to pay for that student's testing or for whatever else. So we just have to be careful about that. Okay, here's kind of a busy slide. I'm not going to go too deep into it, but this is just idea.

The Individuals with Disabilities Education act defines audiology services and to include identification of hearing loss, determination of the range in nature and degree, referrals for other services, provision of auditory training, rehabilitation, speech, reading and listening devices, as well as orientation and other

services, and then determination of amplification.

So here we'll get into early intervention. Part C of IDEA Services. Birth to three. And federal eligibility says that these children must have a developmental delay in the areas of cognitive, physical or communication, social, adaptive, or a diagnosed physical or mental condition with a high probability of a developmental delay. And developmental delay is defined by each state.

In Michigan, for example, developmental delay means a delay of any magnitude for a child up to two months and then a delay of 20% or one standard deviation below the mean for a child two months to 36 months of age. And then this developmental delay also is in one or more areas of development. And this is as measured by an acceptable developmental evaluation method or tool applying informed clinical opinion. So that, okay, so a big part of early intervention is that it's non categorical. So the system is designed for children with all disabilities and it's really for an at risk.

Whereas, you know, when you're talking about education, you're looking for a need for specialized services. And I'll get into that in the next portion. You know, this variation between states, definitions and their systems, even across the state and across counties, you know, really changes service accessibility and it affects outcomes based on geography. In 2022, there were 24 state early intervention programs that viewed hearing as kind of a more complex variable, which is more consistent with the Joint Committee for Infant Hearing. And then there are two other states who are very nominal or very quantitative about it.

So you have to have a peer tone average of this amount in both years. And so you can see how those definitions can change services. So natural environments, so services, early intervention services must be provided in natural environments for families and in those settings where children without disabilities with would participate.

Okay, so there's an individualized family service plan, the ifsp, and it must contain a present level of development, family Input, measurable outcomes that are going to be achieved. Specific early intervention services, the natural environment where these services are going to take place, dates for the services, and then, you know, the IFSP does identify that service coordinator that is most appropriate for that family and child's needs. And then it will also include steps toward the child transition to their education plan.

And then talking about qualified personnel and early intervention. The federal law says that the IFSP must include the name of a service coordinator from the profession most immediately relevant to the child or family's needs. So ideally this would be an educational ideologist, but this could be if there, you know, if there is not a teacher of the deaf in that district or available, it could be a speech language pathologist. And a lot of speech language pathologists, you know, do not work with children with hearing loss. And you know, working with children with hearing loss is very different, so, and very intentional.

And you're focusing on different things sometimes. So it's really important that we're there.

Okay, so now we're going to get into special education determination. And this is part B of IDEA, and this is for services ages 3 to 21, and it may vary by state. For example, in Michigan, we service ages 3 to 26. So we have to identify a student's disability.

We have to determine if that disability adversely affects the student's educational progress and performance. And we have to determine if the adverse effects on that student of the student's disability or hearing loss in this case requires specialized instruction. You know, talking about the identification here too, it's really important to have educational audiologist on that team for initial, I think initial eligibility determinations. You know, legally we are on the paperwork, but are we present and involved in those, in those decision making processes? I believe we should be.

You know, there are a lot of other things that look like hearing loss. And so, you know, if we're, you know, kept out of those processes and aren't able to do objective measures or anything like that, there could be some inappropriate referrals. We really do catch a lot of. I mean, I know after the pandemic I had a colleague who had a number of malingerers, they had a student show up with hearing aids who had no hearing loss and it was simply due because there were no objective measures. So we really want to make sure that we get that identification and that disability correct.

I also want to mention too, I see a change over time, especially in our center based program. We have a center based program still. And I notice over time as children get Older ADHD seems to be a really big one that comes through as maybe being more impactful than the hearing loss. Once that hearing loss has been addressed, I just have very profound memories of seeing a student and they have unmanaged ADHD and you could just see that struggle then. Now we're going to talk about least restrictive environment.

Children with disabilities must be educated as much as possible with their typical peers. A lot of people think of this as a location, so being back in your home school with fully mainstreamed. But for deaf and hard of hearing students, it's really important. Specifically that least restrictive environment includes full communication access and it's based on student driven data and performance and not on preference. So like least restrictive environment is really just having options and developing a continuum of services that will meet each child's individual needs.

Yep. So least restrictive is, you know, when they're fully mainstream, maybe out in a, in a gen ed classroom. And then when, when we're talking about most restrictive, we're talking about busing a student from their home district and bringing them in for intense small groups instruction from a certified teacher of the deaf or at least in our program. So the educational placement, where are they on that continuum? What services are they getting, what goals are they going to have?

Is determined every year at an IEP meeting. The families involved, should they choose to be involved, we want them involved, you know, other providers. There's always a gen ed teacher and always a special ed teacher too. Okay, next we're talking about free and appropriate education. Every student has the right to educational opportunities and this includes children with disabilities.

There's an evaluation component of special education. There's a comprehensive evaluation team that, that completes a full eval and then deaf and hard of hearing eligibility. As I was saying earlier, a otolaryngologist and ENT is required to be on that met team, determination of eligibility team and then as well as an audiologist. The IEP is the educational programming that is determined on an individual basis. There are requirements regarding content, scope, timelines, participants, all of those things.

And then there are procedural safeguards. So if parents need any, you know, form of recourse or anything like that, they are able to do so using these, you know, defined ways as ways to. Yep. So due process is what I was thinking about. So due processes.

If you know, a family has a complaint, they'll start the due process process. So IDEA does have specific provisions regarding hearing aids and implants and those types of things. Hearing loss related. So cochlear implants. Specifically schools do not have to optimize those devices.

So we're not responsible for mapping the internal piece and doing all of those things. However, we are responsible to ensure that those devices are functioning at school, especially if we're providing a microphone system. So, you know, any personal device, if we are, we are, you know, that's a tool that we are implementing the IEP through. So if that microphone hearing assistive technology is in someone's iep, then then we're using our personal devices to implement that access. And so we are responsible to make sure that those hearing aids and those cochlear implants are working.

So for example, our program and we are very lucky. So we have a center based program and we're funded by Act 18 money, which is specific in Michigan and it's for center based programs. So we are able to keep a pretty good loner stack of of the N8 and N7 cable coils and batteries, disposable battery racks. So if a child does come off the air, we're able to put them right back on. And then same for hearing aids.

Sometimes that can get a little more tricky with ear mold and the time that takes. But we've been able to cut some time off with ear mold making and really just what we call a piggyback ear mold. So like if I know that a student got ear molds from this hospital and I know that usually we just can have the account numbers and we'll just say, oh, I want a duplicate of this earmold from account, you know, whatever, and then, you know, but bill it and ship it to me. So that is a very, that's been very helpful in cutting, you know, that turnaround time. I remember, you know, a few years ago when it was taking like six weeks to get ear mold.

So, you know, being able to collaborate with our, you know, managing clinical audiologist in those ways is very helpful just to cut the wait time. And it is a lot of travel in the educational, you know, audiology sphere, at least in how our program is structured. So we're always trying to.

Next is assistive technology. The IEP team may determine that hearing assistive technology can be used outside of school to meet IEP goals. So we actually just had a student this morning and their mom is concerned with cheerleading. And we think that was the moment that she had the aha moment where oh, my daughter isn't hearing. And so, you know, we will provide that assistive technology outside of school because, because she is, you know, she deserves access to all of that stuff.

We have Another student, they just, she's just upgraded to an N8, saw her in the hallway talking about buying a microphone. And I said, why would you buy a microphone? Because in schools, you know, when you have school age kids, really a lot of stuff can be provided for them. I said, you don't need to

worry about that. What's going on?

And she said, well, I need something for swim. You got two aqua kits, but I don't have a way to use the Roger. And so, oh well, we can use a mini mic too. And so we were able to show user Roger through the day and the mini mic too when she goes to swim. So that is one of those instances where we're putting assistive technology outside of the school.

All right. Interpreters must be highly qualified. Highly qualified is also determined by the state. So I know here in Michigan there are like language interveners. And if people are not proficient in ASL but still working sort of interpreting or translating and then consideration of special factors, we are required to provide communication access with peers and personnel in a student's communication or language mode.

So section 504, 504 plans here of the Rehabilitation act and under ADA. So in this instance, a school will identify a student's disability. They're going to be found ineligible for special education because there's no area of need for special instruction. There's no, you know, impact on education. So there's no delay or anything like that.

And then 504s tend to be coordinated by a designated team. Are designated, I'm sorry, but are completed by a designated team at that student school. So there's a lot of variability with the 504s. You can see how there's not much oversight, so. And there's not much accountability.

So there's a lot more variability in a 504 plan. When you think of this, you can think of the 504 plan. Really. Answers is the answer for those students who just need that access to auditory access. They need the equipment, they just need to hear it and they're good to go.

You know, we've gotten a lot more 504 plans or kids who would be best served that way as early intervention done such a good job. This is tricky though because educational audiologists, if we are financed or funded by special education money, how do we service gen ed kids? Hearing assistive technology here is just kind of a breakdown of a 504 and a special education, where that equipment would come from. So in the blue you have the school. So we're required under IDEA to provide and manage technology.

But we as educational audiologists are selecting the hearing assistive technology. And it's school owned generally. And that's selected, like I said, by the educational team. And then the child's parent and their personal audiologist will choose the hearing aid or personal technology. Under a 504 plan, schools have to require to provide access under ADA and 504.

So that might take hearing assistive technology and the educational audiologist might do some periodic monitoring of that equipment. And the hearing assistive technology tends to be rented by the local school district. So you have to think in that situation, the ISD or the regional educational service agencies, that's what we call them here in Michigan. They have to have a whole system to be able to rent it out. So could be tricky.

So statistics have shown that consistent hearing assistive technology rates can be as low as 12%. But you know, there's. When there's a vigilant system of monitoring and listening checks and there's a good plan for that swift repair. You know, that might be me driving down and dropping off a hearing aid, that swift repair and putting a loaner on. Right.

You can see that that malfunction rate of hearing assistive technology could be really reduced by just having a well oiled machine between the two managing and educational audiologist. So here's some access points for collaboration. This is just kind of my thoughts as I was going through this and got some input from my friends and colleagues who do audiology as well for a living. So obviously I've

already mentioned lots to follow up between screening and diagnos, diagnosis, monitoring of hearing status, verification of devices, those ROIs that we talked about, counseling, conductive hearing loss, bone conduction devices and auditory processing disorder. I want to touch on counseling here.

I think that it's really important that we connect that to language and are always connecting that access to language. You know, the.

I think there's a big disconnect between what we say to families about wear time and expectations. And that equipment really only works if you get that wear time up and then they can make all this progress. We've recently been exposed to an article that claims audiologists give families unrealistic expectations about technology. And I feel like we all know no matter how much we say wear time, all waking hours, you know, and we really, you know, stress that parents still, you know, sometimes aren't doing that part and they just don't get it. It's not connecting, they're not understanding that you have to wear these devices.

So yeah, I Just think if we can all really just keep hitting at home. You know, I did also have a really interesting conversation with a parent and she felt that, and this is her opinion, but she felt that clinical audiologists didn't emphasize early intervention enough. I'm just passing that along because I don't know what happens in the managing audiology, clinical audiology setting when it comes to those conversations around early intervention and accessing those services. But maybe that's something as a profession we can try to make better again, programming of hearing aids, DSL or NAL versus that proprietary, proprietary manufacturer algorithm. You know, I talked to many audiologists who would make changes to devices without, you know, contacting their counterpart.

And I just don't understand why we're not discussing these idea, these decisions. You know, if you're changing between the two algorithms, have you seen the output curves? And they're majorly different. So, you know, maybe opening the door to having a conversation, even if it's a little awkward, is worth it

because at the end of the day, that student should have consistent access, auditory input.

Yeah. And then again, that DMRM access that guy was talking about earlier, that ease in connectivity. So student C, she had long standing bilateral hearing loss and she moved out of state and then came back.

It was late fourth grade and I was noticing some very interesting inconsistencies. Her thresholds were worse. She was doing these weird wait times and partial spondee responses. Red flag, right? And there was no difference in her educational performance whatsoever.

High, high performer, so smart. And she was still getting great grades. So that doesn't make sense. How is just hearing dropping off, but you're performing exactly the same. So I immediately began communicating with that audiologist and got her in a couple times.

And with the parents we were able to really tease out that exaggeration. And that was just a really great example of how we collaborated pretty well to get this child some help. So improving collaboration. There are some resources here from our national organizations. The first two are from ASHA about working on an interprofessional practice team.

And then the last one there is from the Educational Audiology association and it's a really nice worksheet and it compares roles of educational audiologists and managing audiologists and different tasks. And it's a really nice worksheet if you have access to eaa. I highly, highly recommend.

So these are my thoughts really here. I think really maintaining that active involvement in your local and state audiology organizations is really important and helpful to collaborating successfully really helps to develop relationships with Your team members as well. I know that that is something I find invaluable to what I do. Texting all my main. My clinical audiologist friends or the teacher consultants and all of that.

You know, just really developing strong relationships with each other. If we know somebody, the text and email tones are easier to interpret, right? We know their humor. We know something's going on. So maybe they're upset, right?

Maybe something's happening in their personal life and you're like, oh, okay, maybe there's something happening there, right?

We're here to work together. Right? And then also confirm and reconfirm your preferred ways to get information, your ROIs, all of that. You know, as we all know, the medical field's always changing and different rules and stuff like that. So it's good to, you know, people revamp the processes.

So it's always good to double check, double check, double check, check what we do. Diagnostic audiology is such an amazing system of checks and balances. I find myself still geeking out over that. Sometimes it is ideal to get every piece of information, but we all know it doesn't work that way. But we can really use each other to navigate any discrepancies and best help the students that we share.

You know, if. If we should consider each other valuable partners if a mistake occurs, you know, we can just hold each other in grace. Things happen clinically that we can't control. You know, reflect before you place blame or judgment or get, you know, frustrated with something not being there that you wanted to be there.

You know, just think, think. Were there factors outside of my colleague's control maybe that limited their capabilities to get this information? You know, we. It's hard to get to hospitals, it's hard to drive, it's hard to park, you know, to get everyone out the door. So these families are dealing with a lot.

And then have you ever been unable to complete testing? Because I know I haven't been able to always get everything all the time. So, you know, just taking a step back, back, and instead of placing blame or pointing fingers, really, okay, I need this information. How can we all get it? And then a couple things just beyond audiology, I think that I found very interesting and worth mentioning is collaborating with OBGYN.

So there was a study done by Krishnan in 2019, and it looked to try to help help parents or mothers specifically become more comfortable with newborn hearing screenings. And so OB GYNs explained the newborn hearing screening ahead of time, and the results really just showed that any amount of pre. Prior information helped These mothers feel better about their hearing screenings. I guess they, I don't have a child, so I haven't experienced this yet. And just being present at this screening was helpful and knowing the results in person, I guess there's hearing screenings, sometimes they'll just come in and do them without letting the family know.

So doing that is helpful. Knowing that is helpful to thinking about how we provide our services and educate our families. So is it possible that teaching families sooner about newborn hearing screenings would help us reduce loss, development, follow up and really decrease that maternal anxiety? Then next is just working with our physicians, our PCPs, our pediatricians. There was a study, a two part study done here and the first part of the study found that the influence of physicians was very significant.

So then they surveyed physicians in their area about the EHDI program and about, you know, how much do you follow these or how much, you know, how do you, what's the word? You know, how do you emphasize these results and these things to parents? And they all said that they did a great job doing that. So I thought it was kind of a funny disconnect. But it's really important that we know that that is a big, those people play a big role in getting our families back in.

In and in my opinion, our most impactful opportunity for collaboration is in the future. And that is going to be advocacy. So there's a lot changing and a lot, you know, happening to the systems with, in which we exist and we provide services and all those things. So here are just some links for information and advocacy options. The federal CDC funding and staff cuts have directly impacted EDDIE programs already.

There's a county in Michigan that no longer has hearing screenings. So it's really happening. Our deafblind program lost their funding. So these things are really having a big impact on our little niche field. And our kids need us to stand up for them.

Our families need us to stand up for them, fight for their rights. Federal special education and education budget proposals for block funding is going to decrease funding for special education. When you take rules away from money, they don't. That money doesn't tend to follow the rules anymore.

And then Medicaid payment cuts are going to affect our students receiving school services. So when I was in D.C. in July with the Council for Exceptional Children, our Michigan special education supervisors, the woman who runs it, she shared this fact that Michigan schools actually bill more in Medicaid than California. So I found that to be quite astonishing. I don't think that means we're number one, but that's a lot of money that our schools are going to lose and our students with special needs are going to lose and, and then voucher programs are going to put students with disabilities at risk. Private schools don't have to uphold idea.

They can legally discriminate. So we really want to protect our students as we're moving forward and our patients as we're moving forward. So yeah, I think that about wraps it up. Thank you so much. Is there any questions?

Anyone have any questions? I'm happy to answer questions any them. So thank you very much, Dr. Castalud, for that fantastic presentation. If anybody has a last minute question, please please do type it into the Q and a pod. Otherwise, Dr. Castillud, if you could please advance to the next slide.

Just like to thank everyone for attending our webinar today and remind you to please remember to complete your examination. It should be posted in your pending courses page in about 10 or 15 minutes and you need to complete this within seven days. We really look forward to getting your feedback on the course evaluations and we hope to see you at future webinars and have a great rest of your day. This concludes our webinar today.