Hello everybody, my name is Will Eiserman, and I am the Affiliate Associate Director at the National Center for Hearing Assessment and Management. Known as NCHAM. Ncham is housed within the Institute for Disability Research, Policy, and Practice at Utah State University, which is a federally funded university center for excellence in developmental disabilities, with a

Critical nationwide focus. Starting in about 2001, it was a while ago. I, um, started to serve as the director of the Early Childhood Hearing Outreach Initiative, which became to be known as

The echo Initiative. For 20 years or more, the ECHO Initiative served as a national resource center on early hearing detection and intervention with a focus on supporting early Head Start and Head Start program staff.

In implementing evidence-based hearing screening and follow-up practices. Now, we're delighted to be able to continue to make our resources and learning opportunities like this one available to staff. From Head Start programs, as well as anyone from early care and educational settings who can put this information to use, including those of you who are in early intervention programs. Healthcare settings, schools, or private practice, or any number of other settings. Now, I'm joined today by my good friend and colleague, Dr. Terry Faust, who is a pediatric audiologist and speech-language pathologist who has served as a consultant and trainer to the ECHO Initiative.

Since our very beginning, way back in 2001. So, Terry, thank you for being with me yet again. Thank you, William. I was just thinking about the length of time we've been doing. Can't believe it's been so long yet. It feels still so relevant, um, today.

So, as William said, he and I, along with many other ECHO team staff, as well as local collaborators, we've provided training on almost nearly every state, um, with the, um. Echo initiative, since its very beginning. Um, we've worked with Head Start, American Indian, Alaska, Native, and Migrant Head Start programs, as well as many other early care and education programs over the years. And we're always encouraged, like William said today, by the large amount of interest there is in establishing evidence-based hearing screening programs so that children with hearing-related needs can really be identified in the. Served. So what about you all?

We'd like to just do a couple of quick poll questions to make sure that we're aware of. Where you're coming from. So, I think Gunner's gonna, um, toss up a couple of polls for us, and if you could just quickly answer these, that would be great. Here's the first one. Which screening method are you currently using? Um… PureTone OAE, or both.

And just quickly just answer that for us. And we'll give you…

3 more seconds, how about that? All right, let's see the results. Most of you are using OAEs, about 12% are doing pure tone, and 24% of you are doing both. Okay, great. Excellent information, good to know.

Here's the next question for you. Which of the online courses have you completed at LearnToScreen.org? These are online, take-at-your-own-pace courses on each of these methodologies. We're just curious to find out if you know about these courses, and if you're accessing this training, or maybe you're meeting your training needs another way, but as you'll hear today, we're going to be talking about. Why getting good training is so important. Um, let's see the results of that.

Okay, great. We're glad to see so many of you are… are using it, but keep in mind, learntoscreen.org is a place you can go to get training. For you and your other staff. Okay, the next question. Yeah, two more. What age group are you primarily screening?

Birth to 3, 3 to 5? Birth to 5, or 5 and older. And let's see those results. Let's see those results, Gunnar. Birth to 3… oh, a really nice distribution of… of child groups here. That's great to see.

All right. And then our last question… What is your primary work setting? Where are you… where are you guys all coming from? Early Head Start, Head Start? Part C, early intervention, home visiting, healthcare, something else. All right, Gunnar, let's see that result.

Okay, that's a nice distribution. Lots of Head Start, early intervention. A few home visiting. Yeah, that's a great distribution. Excellent. All right.

Well, thank you. So, today's webinar is intended for those of you who. Already have some experience. Implementing evidence-based hearing screening for children, either in the birth to 3 age range, 3 to 5. Or both, or even beyond. And, you know, we're just delighted to have so many of you from so many different corners coming and joining with us today, and.

We should have ample time to address a lot of your questions. Those of you who submitted questions in advance, we've tried to build in our answers to those questions. Into our

presentation today. So, listen for that. We'll open up the floor. Once we're done presenting for you to answer, uh, ask additional questions.

But we may have already answered the question that you submitted to us. One of the things that we noticed in your questions are there were a fair number of questions that would indicate. That adequate training may not have actually happened for your program. So. That's not a criticism, it's an encouragement. That you think about how to get.

Thorough, comprehensive training, and we'll share more about what we have on our website, but there are a variety of ways to do that. One way or another, you want to make sure you and your staff. Are all trained. Doing the same thing for the same purpose. Um, and in the same way. So, that's our… that's what we're… we're going to be, um.

Talking about today, in addition to answering all your questions. Now. You probably noticed that I just said this is for those of you who have. Already undertaken screening. Um, and training, and are underway. Now, next week, if you're a newcomer.

To evidence-based hearing screening. You're welcome to stay today, by all means. But we may be a step or two ahead of you in the conversation today. Next Tuesday, on October 7th, we have an introductory webinar where we're starting from the very beginning. And you can register at kidshearing.org, or if you want to click the QR code right on your screen there, that'll take you straight to the registration link for next week's webinar. But by all means, feel free to stay with us, but we're not going to be entertaining introductory questions today.

As much as we're going to be trying to take it to the next level. So, this is how we're going to organize our time today around the questions you all submitted. We're going to present some information about the following topics. You know what, I'm going to turn my video off now, so that you don't have to look at my mug. And I think Terry will probably do the same thing. So, we're gonna, um, we're gonna start off with a brief review.

Uh, and for the newcomers to evidence-based screening, this is a part you may benefit from, about the purpose of screening. The… the, um, what the recommended methods are. All of that big picture stuff. We're then going to review the screening and follow-up protocol that applies to whether or not you're using OAE or PureTone, and no matter what child you… age child you're screening. We had a number of questions about. What to do when children don't pass.

So we're going to review that protocol with you. Um, then we're going to turn our attention. To a review of specific elements of the PureTone audiometric. Audiometry procedure, and I know some of you aren't using that, but hang in there, because after we're done with that, we're going to go on to OAE screening. A number of you are using both, and we're going to set that into a context for why doing… having skills in both pure tone and OAEs are so good, especially for those of you screening older children. And then we're gonna wrap up by, uh.

Reviewing some of the additional technical resources we've got available, and remaining questions that you might have. So, that's the sequence for the… for today's discussion, and that's going to be shoved over to the left side of the screen while we progress through today, and if you're watching this as a recording, and you see a topic over on the. Left that you want to just go directly to, you can advance forward to where you see that topic highlighted. So you've… likely seen this graphic before. I kind of hope you have, because we've been using it for a long time to remind people. That the work of the ECHO initiative that we've been doing for decades now.

Is based on the recognition. That each day. There are young children who are deaf or hard of hearing. Being served in early childhood education and healthcare settings. Often without their hearing-related needs. Being known.

Hearing loss is often called the invisible condition. So. How can we reliably identify which children have normal hearing? And which may not. And William, the short answer to that question is really that early care and education providers can be trained to conduct evidence-based hearing screening just exactly like you see depicted here in these photos. The, um, ultimate outcome of a hearing screening program is really that we can identify children who are deaf or hard of hearing who have not been identified previously.

Now, you're going to recognize the procedure on the left. As otoacoustic emissions, or OAE hearing screening. And that's the recommended method for children birth to 3 years of age, and increasingly recommended for children 3 to 5 years of age as well. Now, on the right, you'll see the procedure, um, pure tone audiometry hearing screening, and that's historically been the most commonly used screening method for children 3 years of age and older. And you'll still see, um, many in early care and education settings and providers using that. Now, as William mentioned, we're going to talk about both of these methods today, but we want to keep in mind that hearing screening… the hearing screening process.

Um, does not diagnose a hearing loss, but it's going to identify those children who need further follow-up, um, evaluation, either by a healthcare provider or an audiologist, with that ultimate aim of diagnosing a hearing loss. If, in fact, it exists. And then after that, we want to connect those children with intervention services that they need. So your screening process is going to be that really most. Important first step in the process. Thanks.

Now, that was Terry Faust, if you came on a little late. He's my… comrade in this business, and he's a pediatric audiologist and a speech-language pathologist who's been working with the ECHO Initiative for. Since our very beginning. So, some of you have asked, how can we more effectively encourage parents to follow up. When a child hasn't passed a screening. One way is to share information about the incidence of hearing loss, and the fact that a child's hearing ability can change at any time, with.

Audis even recognizing. So, here are some important facts that you might want to… Think about sharing with the parents. About 3 children. In every thousand are born with some degree of hearing loss, deaf or hard of hearing. Most newborns in the U.S. Are now screened for hearing loss using evidence-based methods, most before even leaving the hospital.

But screening at the newborn period isn't enough. The research suggests that the incidence of permanent hearing loss. Actually doubles between birth and school age, from. 3 in a thousand at birth, to about 6 in 1,000 by the time children enter school. And that incidence continues to go steadily upward. Throughout the child, um, school-age period.

And so, we can see here now that we can't only screen for hearing loss at birth. We need to screen throughout childhood because, as William said, hearing loss can occur at any time. And it can occur as a result of. Illness, um, physical trauma, or environmental or genetic factors. And this kind of hearing loss is often referred to as late-onset hearing loss, simply meaning that it's acquired after the newborn period. Now, again, um, very similar to the subtle changes you might see in vision that can happen to us, that can occur for, um.

The same way with hearing. A child can experience a change in hearing ability, and so we want to identify that so that they can have full access to language and all of the information they're, um. Being exposed to as they learn and grow. Now, you'll find this information on our website, um. And, uh, there's also a letter for parents there that, uh, you are… just all more than welcome to use. Please, please use that information.

And our website is kidshearing.org. You'll see us mention… hear us mentioning that. All the time today. Um, so any conversation we have about screening and follow-up should always begin with a reminder that screening methods. Are not perfect, and that whenever a parent or a care provider expresses a concern about language or hearing. Children should be referred for a more thorough evaluation, even if the child passed the hearing screening.

And that is true even with the highly reliable hearing screening methods we're talking about here today. We also want to acknowledge, just right up front, that for any number of reasons, there's going to be an occasional child that you just can't manage to screen. After you've tried everything you can do, um, which happens, and even maybe having a colleague try as well, if possible, you'll be faced with the dilemma now, what do I do? And here's our recommendation about that question, um, which, again, some of you have raised. And our recommendation is that if you are not successful screening a child. Then, it's time to make a referral to someone who can, and that will often be a pediatric audiologist.

Now, keep in mind that sometimes the children, you may have the most difficult, um. Difficulty in screening may actually be the very ones who have a hearing loss. So we really don't want to skip them and then just try again next year, for example. Yeah, and you know, before you go to the pediatric audiologist, if you have others in your program who. Have skills doing the screening method that you're using. You could always have one of your colleagues try as well.

Sometimes kids just respond to a different person and are more cooperative. So, think about that as well. So, we just mentioned. The words pediatric audiologist. And a pediatric audiologist, if you don't know, is a professional. Who specializes in the diagnosis and non-medical treatment of hearing-related and.

Other disorders associated with the ear and the auditory system. A pediatric audiologist. Specializes in children. So, having access to a local pediatric audiologist. Can be really helpful. They can help with equipment questions you might have, they can consult with you about specific children who aren't passing your screenings, and importantly, they may be one of your resources when you need to refer a child.

For further evaluation. Now, on our website, kidshearing.org, you'll find a link. That is titled, Find an Audiologist, which should help you. In fact, one question that is a perfect question for a pediatric audiologist, and which. Some people submitted questions about is whether they should screen children whom they know to have PE tubes. So let's just answer that question right now, Terry, because we have a pediatric audiologist.

Right here. So, Terry, what do you say? Do you screen children who have PE tubes? So, yes, you absolutely can and should screen children whom you know have PE tubes. It's actually one way to find out if the tubes are doing the job they've been put in to do. So children with PE tubes should pass the hearing screening if the rest of their auditory system is functioning normally.

So, for those of you that are using the OAE method, you'll want to look at your equipment manual, um, because. You may have an extra button push or so to adjust the setting for screening an ear that has PE tubes. So you want to be sure to check that out. Again, some equipment does require a temporary adjustment, and other brands may not. Um, and then for those of you doing pure tone, you'll complete the screening just as you would for any child. So, yes, you can and should screen children with PE tubes.

Excellent, thank you, Terry. We're just ticking through a lot of your questions as we go here. So…

As we, um… we have two screening methods that we want to talk about today. By way of big picture, if you are responsible for children. Who are under 3 years of age. The answer to the question of what method to use is pretty simple.

It's the recommended method of OAE screening, which you see on the left here. If you're responsible for screening children 3 years of age or older. Historically, pure tone audiometry has been considered the recommended method for this group, and a number of you are still using this method. This is that headset screening where the child raises a hand, or. Performs another task each time they hear a sound that is presented into the earphone. And you see this method on the right side of your screen here.

Now, several of you have asked about why, um, some programs may no longer be using pure tone audiometry with the 3 to 5 population, and they've switched to using autoacoustic emissions, or OAEs. And that's because there's some… there's growing recognition that although the pure tone method has been the most widely used method historically. It may not always be the most feasible method to use with some of these younger children. The research is showing that about 25, excuse me, 20 to 25% of children in that, um, 3 to 5 age group we're talking about. Can't be screened with this methodology, um, just because they aren't developmentally able to follow the directions reliably. And that's really been our experience over the years as well.

In those instances, then, OAE screening is going to be the preferred method for these children. Um, and really, it comes down to, as we emphasized, you know, a moment ago, we want to be able to screen every child, even the ones that we find challenging to screen, right? Yeah, so at a minimum, if you're establishing or maintaining evidence-based practices for 3- to 5-year-olds, and if you're using pure tone screening or considering it. You'll also need to be equipped and prepared to do OAEs on that. 20-25% who can't be screened with pure tones. Or, alternatively.

If you're using pure tones, you'll need to have a means for systematically referring all of those children who can't be screened. To audiologists who can perform the screening. And frankly, that could be fairly challenging in its own right. If we're referring 20% of the children to an audiologist for screening, there just aren't that many audiologist appointments available in most communities. To make that happen. So to simplify things, more and more audiologists are recommending the use of OAEs uniformly with all children 3 to 5 years of age and older, and that's really the answer to, um, that question why some programs may no longer be using pure tone audiometry with this 3 to 5 population.

Um, it's, uh, it's quicker than pure tone screening, both to learn to do and to actually implement. And it's far more likely, really, to be a method that'll work across the board with all children in that 3-5 age group that you'll be screening, and it's equally as effective. If you or your program are still undecided about which method to use, or you're reconsidering it. Um, particularly for this 3- to 5-year-old group. We want to encourage you to carefully review a document that we have on our website that compares OAE screening and PureTone for this population. Now, here's an important note.

Some states have regulations about what methods are to be used. Based on age. Requiring pure tones for children 3 years and older, or at least as the primary method. So, you do need to check with your state if you're considering OAEs, um, for this 3 to 5 age group or older, and you can do that. By contacting your state's newborn hearing screening program, and you might think newborn, I'm not dealing with newborns, but they know where all of this information is to be found. You'll find a link to your state's newborn hearing screening program.

On our website as well. So, under Find an Audiologist, you'll find a link. To your state's newborn screening program. Now, on another note. We had a question about whether there are any other recommended evidence-based methods that should be considered, other than OAE or PureTone. For any of these age groups we're talking about.

Terry? Weigh in on that. Yeah, yeah, and the answer to that really is just no. There are no other recommended evidence-based. Methods for the populations that you're screening. Now, you can augment these methods with, uh, parent questions or your observations of a child, and that's absolutely important to note.

But those do not and cannot stand alone as a hearing screening. Great. So, we use evidence-based ACE… We use evidence-based methods, which are key to fulfilling the purpose of hearing screening, um. But our best screening efforts are only worthwhile. If we implement effective follow-up. Right?

So, if a child doesn't pass, we've got to make sure that we're following up with those children in a way. That is, in fact, evidence-based. So let's take a good walkthrough of the follow-up protocol. And see if we're able to answer some of the questions you all submitted about this part of the process that can get so complicated, because it's not only up to you, you're relying on parents and healthcare providers and. Communication channels, so let's… let's talk about that. Now, Terry, I know you have something to say here.

Yeah, you know, you talked… now just about how complicated it could be, but I think it's really key to remember. That the steps of the follow-up protocol, they're going to be the same, regardless of which screening method you're using or how old the child is. They're gonna be the same. And there's one main rule to remember, and that's that the screening and follow-up process is complete. When either the child passes the screening on both ears. Or the child receives an evaluation from an audiologist.

And you've obtained the results. Those are the only conditions under which you. Are complete. If you've made a referral to a healthcare provider. You're not done yet, because you haven't… achieved either of these two. So this is the rule that you want to always, um, use as your anchor point.

So, here is how the screening and follow-up process. Unfolds. Keep in mind, we're always, as Terry said, talking about. Regardless of what method, and we're talking about screening both ears, and they each need. To fulfill the passing criteria in order for the child to pass. So, if an ear passes the screening.

Right off the bat, let's say. The process is complete for that year. Easy enough. Now, if the ear doesn't pass. We're not absolutely sure why that is. Yeah, that's because sometimes, you know, an ear may not pass due to screen or error.

Could be my. My error, or the child could have a temporary condition, like a head cold. So, it wouldn't usually be practical for every child who doesn't pass that first screening to be referred. Onto a healthcare, um, a healthcare provider or an audiologist. In that birth to 3 age group, we can see that we have up to 20-25% of children that we screen with OAEs that do not pass on at least one year the very first time we screen them. So, several of you have asked about how, um, a head cold or congestion can affect screening outcomes.

And this is where we might see that. Um, and… that might resolve and get better within a week to two weeks, and then they would be able to pass. So we don't want to refer them on right then. We want to bring them back and rescreen. So, yeah, if an ear doesn't pass the first screening. Instead of making an immediate referral.

We wait about 2 weeks, and we screen again. And by the way, if one ear passes the first screening and the other does not. You don't need to screen the ear that passed again. Just the one that didn't already pass. If the ear. They didn't pass previously does, in fact, pass this second screening.

Can you guess what your conclusion can be? The screening is complete. For that year. All right. Now, if, however, the ear still doesn't pass the screening. This is the point at which further evaluation is needed, and we expect about maybe 8%, or maybe fewer.

Won't pass this second screening. Which means they didn't pass twice in a row over a several-week period. And you'll want to have their ears checked by a healthcare provider using tympanometry or pneumatic autoscopy. Yes, William, it's not uncommon that something like a wax blockage. Or fluid, or inflammation in the middle ear has prevented the screening of that inner ear from being completed. And that could have caused that non-passing result.

So then, at this point, we're going to want to intensify our monitoring of that child's follow-up. So we're going to want to consult closely with that healthcare provider to find out those results of the middle ear evaluation, and then any treatment that's being provided. We want to always document the results of the middle ear evaluation, and we want to keep in mind that since that year has not yet passed the screening, we still don't know if the inner ear or the cochlea is

functioning properly. It's a really important point. Most healthcare providers actually do not have the ability to screen. They don't have the hearing screening equipment.

And therefore, they can't complete the screening process. So, you'll need to confer with the healthcare provider about when that ear should be rescreened. Yeah, and that's why… just merely referring a child to a healthcare provider. Is not the end of the process, because they're not going to complete the screening, and we don't have a result yet. So, after the middle ear evaluation. We conduct the re-screen.

But keep in mind. This is a small fraction of the total number of children you're screening, so don't get too overwhelmed by that. Usually less than about 8 out of 100 children. Will go this far into the follow-up protocol. Most of them will have passed by now, but it is essential. That they get these steps completed when needed.

So, you'll re-screen these children after they've been to the healthcare provider. And in most cases, can you guess what will happen? They'll pass. If the ear doesn't pass, though. You know, if the air passes, they're complete. If the ear.

Still doesn't pass, tell us, Terry, what happens now. Yeah, this is now when the child should be referred to a pediatric audiologist for evaluation. This is when our level of concern now is heightened, because the child has repeatedly not passed, and so we really don't think there's a middle ear condition now to explain why the child's not passing. Um, that's what typically gets addressed or ruled out when we referred for the middle ear consultation. Less than 1% of children will typically need this. Step of going all the way to the audiologist.

When you make the initial referral, however, to a healthcare provider for a middle ear. Consultation. At that point where you see the oval on your screen. For children who get to that point, it's a really good idea to inform the healthcare provider that you will be rescreening the child again. Uh, once they give you clearance that the middle ear all looks healthy and fine. And that you very likely will need their assistance in making a referral to the audiologist.

Should that ear still not pass when you re-screen? In those instances, you want to be sure to support the parent. In getting the audiological evaluation completed. Helping them make the appointment, following up with them, reminding them of the appointment, asking them of the result. Of the appointment. You want to provide the audiologist with all your screening and follow-up hearing health outcomes.

And you want to obtain a complete report. Of the audiologist's evaluation. I want to encourage you to look on our website at kidshearing.org. We've got referral forms there. Letters to parents, letters to healthcare providers and audiologists that help to explain to them. What you are seeking from them, both in the middle ear consultation, and that you need a referral.

For an audiologist. So, take a look at those, because we know a number of you have been. Stuck at this point. You've asked about, how can we get the healthcare providers to cooperate with us? We need their referral. We need to educate the healthcare providers about your evidence-based practice, and to get them to support you in getting it completed.

So, that gives you an overview. Of the complete screening and follow-up protocol from start to completion. Keeping in mind the overriding rule, and. See if you can say it to yourself. A screening and follow-up process. Is complete when either… The child passes the screening on both ears.

Or… The child receives an evaluation from an audiologist. And you've obtained the results. And remember, although screening can lead to the identification of. The most common types of permanent hearing loss. It is only a screening. Anytime a parent.

Caregiver or teacher has concerns about a child's hearing. Or language development, even if they pass their hearing screening, referral for an audiological evaluation is warranted. And that's just a really important point. Now, we know that a number of you have had questions about how to move through this process along. Yeah, especially once referrals are made. You've asked both about how to support parents in follow-up, as well as what to do when.

Healthcare providers don't support the ongoing follow-up steps. Terry? What have you found? What can you…

Advice. I mean, there's no simple answer to these questions, right? Right, but, you know, the way you started the webinar today, you talked about hearing loss being.

Kind of the invisible condition. And that actually sometimes makes it a little bit harder for us. We have to be sure that we provide the education. And emphasize the concern that we have the same way we might with other health conditions that, um, may be. More easily observed. It's similar to vision.

It's similar to, um, you know, the importance of getting a childhood asthma, for example, addressed. Um, it has profound implications on communication and language development. And so we have to be sure that we communicate our concern and motivate for follow-up in a way that, um. We can try to get that follow-up to occur. Um…

And Terry, let me ask you something, because I know that one of the… Um, experiences that people might have with healthcare providers, or with parents, or maybe the teachers that they work with, they'll say, this child can hear, watch. And they can get the child to respond to sound.

And… and they're making the assumption that that response means that they are hearing perfectly. Yeah, you know, and I just equate that to myself and with my vision. When I first got glasses in first grade. Um, my vision was terrible, and uh… and so, even seeing, um. You know, the teachers at that time, the chalkboard and all of those things. Even though I could see, and my parents were sure that I could see, but my level of visual acuity is not what it needed to be for me to learn.

It's the same with hearing. You might be able to hear certain pitches and not others, and then you miss the whole picture. So, having a piece of the puzzle isn't… the same as being able to see or hear the whole thing. And when children are functioning in a group environment. They can go along. They can follow the leaders.

They can look in the right direction. They can kind of follow directions. Because they're following other children, that doesn't mean they're hearing everything. So, we say this to encourage you not to be easily dissuaded by parents. Hopeful observations. When you know a child hasn't passed a hearing screening.

It means something. So, um… being able to educate them about. How those visual cues can trick us. That's why we say it's an invisible condition. They can fool us about how… just how well they're hearing. And William, I like to call it opt… you know, um… optimistic observations, because they don't want to believe something's wrong either.

And so. You see something that looks like hearing, and you want to believe it. Sure. Sure. Yep. So, let's look at where you'll find this hearing screening protocol we just went over, and these referral letters we're talking about, and other information that you may want to give.

To healthcare providers, or parents as you work with them through this process. So, this is the landing page of kidshearing.org, and if you go down to the first group, Planning Resources, you'll find a variety of things here under Big Picture Resources. Do you see there where it says, find an audiologist? That is where you'll find information about your newborn hearing screening program, and where you can actually find some directories of local pediatric audiologists and their expertise. So, take a look there. You'll also find information about screening equipment if you're needing to make.

Some new choices there. In the next group, this is where you can find information about training. We've mentioned it early on that we… we want to make sure that everybody who is doing hearing screening has been trained the same way. Um, under, um, with following national guidelines of excellence and best practice. And so, take a look at those resources, and if you need training, that's the place you can go. For as-you-need-it training.

The next group is information about preparing for screening. That's where you'll find our protocol that we just went over. Our documentation forms, which we'll be showing you in a moment, the results, uh, letters and referral forms are also there. And then, lastly. Tracking resources and other, um, helpful. Monitoring quality, um, resources there.

So, get acquainted with what we've got on our website, and. Um, uh, see what… see what you can use there that might be helpful. So, we really appreciated the various questions we received from. Some of you in advance, asking us to review the screening methods and to walk you through, um, each of the screening processes and their documentation of results. Some of you were getting confused about this and wanted to make sure that. We're all on the same page.

So, we're going to do that review, and hopefully we'll be answering the questions that we've tried to integrate into this presentation. So, let's start off… With pure tone audiometry, everybody who's not doing pure tone, just hang in there a minute, we're coming around to OAEs. Now, keep in mind that Puritone and. Our OAEs are different. They follow. They follow many of the same steps, but.

Only in ways that are unique. To each method. So, as I showed you, um, there are a variety of tools on our website that you can tap into, and for each method, and. For each of them, we have a screening skills. Checklist, which you see on your screen here. This is helpful as a step-by-step guide for conducting any given screening using this method.

You might want to look over this to make sure, gee, am I following. These steps, have I maybe drifted off course? Um, you know, that's… Very common and understandable that we might have forgotten something. So. Use the screening skills checklist to check yourself, or maybe as a peer help in making sure you're all screening the same way, following recommended method. Not only can it be a useful tool.

But for ourselves, but for monitoring the quality of our screening, if you need to evaluate yourself or others. For each method, we also have. Documentation forms that directly correspond. With the recommended screening and follow-up protocol that we just went over. These are the forms that you see right here for the pure tone method, in which. After recording the identifying information for the child being screened, you document the screening results.

Of the first screening. Now, in most cases. Children will pass on both ears at the initial screening. This first portion of the form is then all you need to use. That part that is… the most visible, right there. In cases, however, where the child doesn't pass on one or both ears.

The form includes fields. To record subsequent results. So there you see the second screening that can be done. And we also have. A second form, as a companion to this, when the child is referred for the middle ear evaluation or consultation, and the subsequent steps in the protocol. Together, these two forms.

Include space to indicate the results for completing the entire possible protocol. For a given child. Having good documentation like this. Is really useful for knowing where a child is in the process of follow-up. As well as for, really, overall program fidelity, monitoring the quality. Of your program.

Being able to show others that you have a protocol you're using. And you have it fully documented. So, let me walk you through how you might put these tools. To use, okay? As you prepare to screen, the…

The screening results, um, the screening checklist will remind you of the steps of your screening. Process, starting with setting up your environment, um, checking to make sure your equipment is in good condition and is operating as it should.

Um, you should always do this, uh, before each screening day or session. And then the checklist then proceeds to step through all of the specific steps of the screening process. Um,

which are reflected on the documentation forms as well. Including the first step in the screening process, which is a visual inspection of the ear. And going through the entire process. Now.

Let's switch over. And look at how you use these forms that I just showed you to record the results. And hopefully answer some of the questions that were received about the follow-up process. So, the first step for any hearing screening is to conduct. A visual inspection. Of the outer ear.

Terry. What are we looking for in a visual inspection of the ear that might tell us. Whether or not to continue. Yeah, so this is where we're going to take a careful look at the ear, and we want to just make sure that there's no visible sign of infection, which could be something like, um, fluid. Sometimes you can get a little bit of a smell coming out of that ear. Um, or excessive wax, or something that looks like it could be blocking that ear.

What you're really looking for here is anything that might indicate that we may want to not proceed with the screening, but maybe get, um, um. Refer or hold off on that screening. But if the ear appears normal, which is really going to be most of the time, you'll go ahead and proceed with the next step. So the next step is to prepare the child for the screening by doing what we call conditioning. The child. This means teaching the child the process where the child provides the behavioral response.

Each time they hear a sound. So, this is where you, as the screener, you instruct, or as William said, condition the child in how to listen for a tone, and then respond by raising a hand. Or placing a toy in a bucket, for example. And you do this by presenting tones at the 60. And 40 dB levels, those loudness levels. And while you're conditioning the child, you're usually going to be facing them, making sure that you can carefully assess whether they're understanding your instructions.

When you think they understand, then turn them around so they can no longer see you, and see if they can continue to respond as you've instructed. Once you've observed that they, um, that the child reliably responds to the sounds that are presented, just like you instructed, that's when the actual screening gets started. So let me interject, Terry. We received some questions about how long the conditioning process. Should take. Oh, yeah, it really shouldn't be very long.

You can condition a child, um, through instruction and modeling in just, um, 3 to 4 minutes. So, children who are going to be successfully screened using the PureTome method. Ought to be

able to be screened, what, in, like, 10 to 15 minutes max? Including the conditioning step? Yeah. Yeah, sometimes the condition's even faster than what I said.

So, if you can't condition a child in 5 minutes or less, then you probably should consider using your backup plan, which is either to do the OAE. Hopefully, right then and there, while you have the child there. Or you could also try on another day, if you have flexibility to do that, but just remember that if you can't screen the child. You'll either need to do an OAE or refer the child to someone who will be able to. Successfully screen the child. Probably a pediatric audiologist.

And as we said earlier. Remember that some children who have a hearing loss could be the very ones who are difficult to condition to do the screening. So, one way or another. We want to get every child screened. Not just the ones that are the easiest to screen. And they know that seems so obvious, but.

It actually does become an actual dilemma for many of you, we know that. So it's never… you just have to remember, it's never okay to conclude that if a child can't be screened. You'll just wait. Until next year, or another time. These may be the very children who have the hearing loss we're trying. To identify.

So, Terry, are you, um, on your next screen here? I am now. There we go. Thank you. I…

There we go. Yeah.

Little… yeah, thank you, got it. Okay, so let me come back to this, then. So now, let's do a review of the Pure Tone Audiometry screening process. So, during the screening process, that listen and respond game that we just talked about, that's repeated at least twice at 3 different pitches on each ear. And we're gonna note the child's response or their lack of response, after each tone is presented. If the child responds appropriately and consistently to that range of tones presented to each year, then the child passes the screening.

Now, assuming that the child is, um, success… has been successfully conditioned, um. Then we complete that screening process. Now, note that the form that you see here, it provides space to record the results for each error. So, we're going to begin with the right error by repeating the conditioning tone. One more time, and noting that the child responded as desired. Then that actual screening begins.

So up to 4 presentations of the tone could be made for each frequency level, starting at 2,000, then 4,000, and finally 1000. Hertz. Or tones. Now, two responses are going to be needed for the ear to pass for a given tone. Once you've completed the presentations across all three frequency levels, then the form's going to remind you how to determine if the child passes for that year. Now, to pass, the child needs to have at least 2 successful responses.

Out of no more than 4 attempts at each frequency level. Again, in order to have an overall ear pass. Now, once that's recorded. Um, then the left ear is screened in the same way, recording each presentation result as you go. If the child responds at least 2 times at each frequency level on both ears, then they pass the screening. Now, again, sometimes you may have an ear, or even both ears, that don't meet the criteria for passing.

Just like, um… for passing, just like we see in this example here for the right ear. You can see how the child only responded successfully. 1 out of four attempts at the 2,000 Hz or tone level. Now, if one or more ears do not meet the past criteria, like you see here, then a second screening of the previously non-passing year is conducted, again, in approximately 2 weeks, as the form indicates. So that's why we found that this form has been so helpful for people, because it takes them through this. Non-automated process that Pure Tone Screening requires.

So, at this point, you'll do the second screening two weeks later on the ear or ears that didn't pass the first time. In this case, we only need to rescreen the right ear. If the child passes at this point. The screening is complete, because you've received passing results on both ears across your two screening sessions. But what if the previously non-passing ear still doesn't pass? As we see here.

This is where. We go on to the middle ear consultation. Now, for any child that, um, is referred for a middle ear consultation, or who, yeah, referred from a middle ear consultation, from a healthcare provider, then you're going to want to use the diagnostic follow-up form. And this is where you're going to document the remaining steps in this child's screening and diagnostic process, starting with the results of that middle ear consultation. So, since the child was referred, um, to the healthcare provider to see if there may be middle-ear health-related problems that… or problem that may have prevented the child from passing the screening on either ear. Then during your first two screening sessions, you'll want to find out the results of this consultation and record them.

Right here. Right there. Then, once the healthcare provider, um. Comes back and indicates that the ears are healthy and clear, then you'll rescreen the child's ear or the ears that have not yet

passed. Now, all children referred for a middle ear evaluation must receive the re-screen on any ear that did not previously pass. And then you're going to document those screening results on the screening form that you started with.

So if the air passes, again, the screening's complete. If at this point, there's still an ear that has not yet passed. Then the child's referred for a complete audiological evaluation. And like we talked about a little earlier, you'll want to support the family in completing this very important step, this follow-up, and be sure to get the results and document them back on this form. You'll also want to collect additional supporting documentation from that audiological evaluation, especially if a permanent hearing loss is identified. In most cases, this'll include additional referrals for intervention services that you're going to want to be aware of, and so you can also help support the family in obtaining those services.

Once you have all of these results, then you can consider that child screening and their follow-up process complete. Boy, I know that is, like, really hard to listen to. Yeah. All of those forms and blanks and this and that. You can review this again on our website, or by going back through this. The point, though, is that we do need to document our results and follow this protocol.

And with pure tone screening. Because it isn't automated. We have to go through all of these steps. This is one of the reasons why people are trying to move toward. Oaes is because this is a lot harder to do, but. To conclude this… this review of pure tone screening.

This one rule to remember. Is always in play, and that the screening process is complete. When the child passes the screening on both ears, or the child receives an evaluation from an audiologist. And you've gotten the results. And so. We just want to make sure that for every child you're screening, you can document exactly what happened.

And if there was a disruption in follow-up, you can see exactly where that disruption happened, or where you are currently. So that you can then try to reinforce the follow-up steps in getting completed. I don't envy anybody doing that follow-up process. It is difficult. But it is also critical. It is, um, very critical.

Um, William, let me, um, interject here with another question that someone raised in a previous email to us. And that question, um, is that, what if a child does fine in responding at first, but then they become distracted, or you observe they're no longer engaged in the screening, say,

after the first couple of pitches, or. Oh, you mean, like, as they're underway in a given screening, they seem attentive at first, but then all of a sudden they're not. Yeah, what do you do? Exactly, yes, yeah. So, this… this absolutely happens, and so if it does.

Just be sure to document as far as you got, and then you can do one of several things. You can… Use your backup method, the OAE instead, if you have that. Or, if you don't, you can come back to this child on another day, and then you can continue where you left off, just making sure, however, that you always start by repeating that conditioning process before you continue with the actual screening steps, um, that you left off on. So, Terry, you'd have to do that same thing, right? Like, if there was a sudden increase in environmental noise that is outside of your control. You kind of have to pause, right?

Yeah, absolutely. Um, if you can't continue to screen at that time, you have to come back another time and pick off… pick up where you left off. Um, you know, if the child's just not able to be conditioned again. Or remain attentive, that's really the best time to use the OAE method. Um, and if this continues, you're just not able to get it, then refer the child to an audiologist. But I think the most important point here is this, is that, as you just said, um, earlier, that sometimes children with hearing loss are the very ones who are the most difficult to screen.

So. What I really want to emphasize is that the last thing we want to do is abandon the screening process on those children, and then simply conclude they cannot be screened without doing something else. Whether that's screening with another method, um, OAE, or making a referral to an audiologist. All right, so remember, you've got resources on our website about the PureTone activities that we just went over. And they're all right there, the training ones, everything else, so… Take a look at what you've got there. Now, let's shift gears and talk about OAE screening, which many of you are doing.

As we said, this is the only recommended method for children birthed to 3 years of age. But increasingly, as we keep mentioning, being used for older children as well. So, Terry, walk us through the OAE screening process. Yeah, so to conduct an OAE screening, we're gonna start the same way as we did with PureTone. We're gonna take a thorough look at the outer part of the ear to make sure, again, that there's no visible sign of infection or blockage. Then, if the ear appears to be fine, um, normal and healthy, then we're going to place a small probe on which a disposable cover has been placed.

We're going to then insert that firmly into the ear canal. And then we're gonna… a button will be pushed that'll start that automated screening process. Now, the probe sits independently in the

ear. That delivers a low-volume sound stimulus into the ear. And a cochlea, or the inner snail-shaped portion of the ear that you see here. And a cochlea or inner ear that is functioning normally, that will respond to that sound by sending the signal to the brain.

While also producing an acoustic emission. This emission is analyzed by the screening unit. And in approximately 30 seconds or so, then a result will appear. As either a pass. Or a refer. And so, every normal, healthy inner ear should produce an emission that can be recorded in this way.

So, like we showed you with the pure tone screening, we have a checklist for OAE screening that you can use. To make sure that you're going through each of those steps, um, and including all the supplies you might need, all of that. So, we want to make sure that you, um. You take a look at that. And Terry, you know, you always want to remind me and everybody else about keeping it fun. Can you talk a little bit about that?

Yeah, in fact, that's actually kind of like our main recommendation, is to keep it fun, regardless of which method we're using. So. Right from the very start, simple things like, rather than referring to the activity as screening or a hearing test, we want to make it fun. We want to call it a listening game. We want to engage teachers or parents in some activities. That include noticing the child's body parts, including their ears, and maybe expand on the idea that, um, what animals might have ears, too.

Yeah, in fact, we have a… we have a Listen Up song on our… a video on our website that you can play for them if you have a way of showing that to kids. It's just a fun little…

Animated video that shows kids and ears and… Just making it a fun listening game. Um, so… This is our screening form. Um, and we just want to make sure you're aware of these resources as well. These forms are, frankly, easier to follow than the pure tone ones, because there's not as much auto… it's a much more automated process. We also have the follow-up form.

So, uh, to go through these, let me… Oops. Here's the screening form. You're going to record the results for the first OAE screening there for both ears. And… And then, if you need to do a second one because they didn't pass the first one, you can record those results there. They still don't pass, you refer them to our middle ear consultation. And record those results over on this form.

And then do the re-screen, just like we talked about with pure tones. And if they still don't pass on one or both ears. Then you've got a place to record your audiological evaluation results. And, you'll have a complete screening and follow-up process. So…

Because OAE screening is automated, it doesn't require a lot of manual steps, like pure tone screening does. But there are challenges in OAE screening.

Uh, like managing children's behavior, having some skills for doing that, no matter how much experience you have. You will be met with challenges. So, let's just talk about some of those skills. Um, that might be useful, and we'll just move through some of these. Quickly, and Terry, I'm going to ask you to, you know, really… talk about some of the key elements of. Of screening that is really helpful.

Let's go… let's go here, Terry, if you can go forward. The… what are the four keys to successful screening? Yeah, thank you, William. So let's talk about that. The four keys to successful screening, in our experience, have been, first, good probe fit. I want to be sure that we get a good, tight, um, probe fit.

Uh, the second, we want to do all that we can to minimize movement, keep little hands, um, busy so they're not pulling out probes, all of those kinds of things. We want to work to minimize movement. We want to minimize internal noise. So, internal noise is going to be. For example, the noise that the child generates. So, it could be that they're sucking on a bottle, and we want to wait till the sucking stops, for example, to get a good screening.

We want to also minimize external noise, so that's loud noises or background noise that could interfere. Um, with the screening. So that's external noise in the nearby environment. Now, um… Of course, as you screen, there's gonna be times when you get an error message or a refer, and we want to tell you, don't worry too much about what the error message actually says. Because what it really is gonna tell you is that you want to just retry, do the same things, and try again. So, you're going to, um… try to reposition the probe.

That's the most common thing. Hey, reposition it, try to get a better fit. Again, we want to reduce the external environmental noise, that background noise that's going on. We're going to want to check the probe for wax. Sometimes you put it in there, it gets clogged with some wax, we clean it, put a new cover, and boom, we can get the screening. Um, we work to quiet and reduce the movement of the child, um, and… Often, we want to have unique and cool, quiet toys to distract the child.

And then, one of the most helpful things is to elicit the help of another adult or screener to help you with the process. So, let's, um… open up our field, uh, for questions, and as we get some questions in, we're going to go over. Some of the… some strategies that we think can be helpful, but let's allow people to start asking. Some questions. And… and then we can chime in with some of our. Ideas as well.

That we've prepared in advance. So, Terry, you said creating a fun feeling, and so the question is, like, how did we do that? So you can tell a child that you're going to listen, you're going to play a listening game. And include another adult as the first person to be screened. Placing the probe near their ear and asking them if they could hear, let's say, the birds sing. Um, uh, if you're working with a group of children, you could ask the child, the teacher, for suggestions about.

Which child might be the most cooperative and could be the first to be screened to set an example? And the tone that the other children might want to follow. Like, even saying, wait your turn. Gives them an idea that, oh, this is not something to be reluctant about, this is something to want to get in line to do. So, creating that anticipation. Around that.

Um, I need to open my… Questions field…

Is it, Gunnar, are the questions in the questions or in the chat? It's in the Q&A field. Okay, thank you. All right. Um, so Terry, we've… we've seen people use these light. Spinners, uh, flashing lights, and the question is, is it okay to use a lighted spinner?

Is that a great distraction? Um, or is the noise it makes a problem? So, I'm gonna just jump in here. Um, a lighted spinner is actually one of my most favorite toys. Um, I… I… I will turn it on, they just barely see the light, and then I'll… Give them a little taste of the spinner, and I can prolong that out sometimes just to get the entire screening done with just that toy. Now, obviously, we want one that isn't loud, but most of the ones we have found, the noise level is just fine for screening, and they work great.

Yeah, I was looking for… oh, here's a… here's a picture of that lit… lit… spinner there in the lower left. Yep. Yeah, that's great. Um. Here's another question, Terry. How do you know whether.

Uh, to set the device for…

Uh, 4,000 or 2… thousand… I'm not sure of the difference. Do you see that question, Terry? I do. I think that's getting into settings on whether they're looking at 4 frequency… 4 frequencies or 2, um, and what we really want most of the equipment should have a screening default, and that's where the parameters should be set to get. Um, the required responses across the frequency range. We do want to test more than two, and so that DP2, we would not want to use.

But what I really want you to do is, rather than become, um, experts in the options the machine has, get, um, either through your manufacturer or your consulting audiologist. The, uh, screening, uh, default, or have them set up the appropriate screening. Test so that it'll be automated for you, and you don't have to go in and set anything. Yeah, that's a great idea. You know, some of our questions have been about, how do I position myself when doing. We know with PureTone that you need to be… behind the adult… the individual being screened all the time.

What about when you're doing OAE screening? How do you best position yourself there? Yeah, so as the screener, I need access to the machine, and I need access to the ear. So I like to be off to the side, where I can still make eye contact, talk to the child, but I can access and position that probe, um, appropriately. Love to have another adult or someone who can sit right in front of them, keep their attention, and then I can work off to the side. But…

Yeah, having that helper is huge.

Because they can help control the situation, entertain the child, be aware of what's going on in the room. All of that. You know, William, we had talked a little earlier about making it fun, and um… So, a couple things, you know, about making it fun. We talked about, but there's some things to avoid to keep it fun as well, and uh…

And that's avoiding phrases like, I'm gonna test your ears, or it won't hurt, or even saying, can I? Um, we don't want to give them the opportunity to either think it's gonna hurt or to say no. And so we want to avoid phrases like, I'm going to test your ears, or it won't hurt.

Yeah, and to bring out novel toys that they may have never seen before, or. Only rarely that you know they like, or if there is a favorite toy, or a book that a particular child. Has… well, then by all means, use that. Yeah, in fact, sometimes it doesn't even have to be a toy. We've seen people who have balled up a bunch of tape that's kind of sticky, and they play with that, or they have them toss wadded-up paper. I mean, sometimes it can be very simple.

And then, you know, with some children, it may just be some comfort that's needed, and that's where sometimes a gentle caress or playing a touching game can distract the child from the sensation of that probe being in their ear. What we're really doing is introducing something that captures their attention through another sense, and that can help distract them as well. Yeah, and that… you see that in this image right here, where, you know, whenever we have a probe put in our ear, our attention immediately goes to that particular thing. But if somebody starts stroking the back of our hand at that moment. Or on our forehead, like you see here, it's very hard to attend to both things at the same time. And so, we're hoping that that touch on the forehead.

Commands their attention. And we can get the ear… the ear probe in and get it underway. Praise and rewards, especially when you see it, you know, being, um, given out to other children, inspires children to be in line, to want to cooperate, and to… I don't mean by being in line, being, um… compliant, although maybe, but it's to actually want to have that experience that the other children that they're seeing. Now, Terry, what about hands? Those tricky hands that can sometimes. Get in the way.

We…

Yeah, this is just one of the, probably, the biggest challenges, and where I often see, actually, people improve a lot. But, um, let's go ahead and show you some strategies for engaging children in playful ways. But, um, as William said, a very important strategy is to try to keep those hands away from the probe. They're going to want to pull it. You can see this child here. There she goes, she reaches right up to pull it out.

But see, she filled her hand with her finger, and then is gonna place a toy right in it, and we're gonna keep that little hand busy. So, um, we just want to redirect them to manipulate an object, or grasp, uh… An adult's finger or hand, but the goal is to keep those little hands busy. That screener was so skillful, it looked… she is a person who is like the skier that makes us going down the slope look so easily. You know, she had that toy ready to go, that puzzle, she hovered her hand over that child's arm, she anticipated when the child was going to reach her hand back up, she was doing multiple things at once. That made this all work so well. Um, and it was because she kind of thought it through in advance, having the toy there, knowing that that child was going to reach up, oh, we're just gonna grab it there, there we go, no problem.

You know, that kind of skill set, you know, and you all are probably doing these kinds of things. All the time, so give yourself. Credit when you do. Oh, absolutely, yeah. Choices are another thing. You know, children shouldn't really have the choice on whether to be screened, but they could choose.

Where they're gonna sit, or what toy they're gonna hold. Or, um, what direction they're going to face, you know, do they want to look out the window, or look over here? Giving good, meaningful choices that don't disrupt what you have to get done. Yeah, and well, I mean, I see a question here about sharing some strategies for children with special needs, mental health issues, for example, and some of these that we're talking about right here, um. Can really address that. You mentioned the… or we talked about the song with ears.

So, the reason I bring that up is you actually can. Start, um, socializing the screening process. Way before we actually have our screening session, so we can, um, talk about our ears, touch our ears, and we can play the song, and ways that we're gonna reduce any anxiety about that screening. And then we can familiarize the child with the probe before we attempt to insert it in the ear by… we can… we can have them touch it, feel it, kind of listen to it up to their ear before it's put in the air canal. We can touch their arm, their leg, or their cheek. We can point out how soft it is.

Um, and we can elicit the child's help, and maybe screening a dollar of stuffed animal, but the point is, there are things that we may want to do ahead before we ever try to screen to reduce any anxiety that the child may have. And then, of course, we want to probably adjust our strategies for their developmental level. Yeah, and you know, you will have children cry. While you're screening. That will happen. And our impulse, is it not, Terry, to immediately, oh, take the probe out?

Take it out, they don't like that. And… and yet…

Yep. If you can, leave it in. They may just have to get used to it, and depending on your device, you have one of two things that. Well, you could have one of three things happen. One is that the device just will not operate.

The other is that it might continue to try. When the child even momentarily quiets. So, they might take a big breath. And while they're doing that. The screening might get done, or move along. And then it'll slow down for a minute while they cry a little bit more, and then it'll move to the next step.

So. Just because they're crying doesn't mean you have to, um, abandon the endeavor. The other thing that could happen is that if you leave it in. Once they get quiet, it's already in their

ear, now push start. Rather than now insert the probe. So, those are some strategies that can be helpful around that.

Yeah. You know, we have one participant who says that they're a speech-language pathologist in early intervention, and they do their speech language assessments in the home. And so many of their babies don't get the audio done ahead of time. They use the Mako AeroScan, and they have the parents sit the child on their lap in the center of the couch, and they have the child play on the tablet or a cell phone and watch TV, and then she can sit on one side, and then the other side to get her screening done, and she's also. Use their little… taking the child's little index finger to draw a green line up the screen as she screens. Now, Terry, what about a child who's a little bit fidgety.

And the parent is, like, ready to give that cracker. Do it. Yeah, so here, sorry, I'm ready to jump in, but, you know, this is one where we say, oh, we want to… we want to keep the child as quiet as possible, and I already talked about reducing internal noise or noise generated from the child. But here's a strategy that actually works with that. So, if they're uneasy about being screened, but they can be soothed by a pacifier or a snack. You can attempt to screen them while they're sucking or chewing.

Like I said, it introduces noise, but when they might chew, swallow, suck, but when they take a pause, then that, like as William said, that machine will then continue to read, and we can often get the screening done and get a pass. Now, if they don't… if they don't pass while eating. You gotta screen them again. But if they do pass. Yeah. Even though they're chewing, you got it.

You can call that complete. Now, remember, you can also screen children while they're sleeping. That's always a good option to keep in your back pocket. If you wake them up during nap time, some of your teachers might not be happy with you, but it is a way. That you can get children screened some of the time. So that's another set of possibilities.

And just remember that if you. Don't get a pass in a given screening session if the child is still cooperative, try again. Right then. It may just be a, you know, that you didn't have a good enough probe fit. Make sure you've attached the cord with the clip on the back of the. Shirt of the child, and try again, and then document the results for that screening session.

So, we hope that these, um… we're not done. I mean, we've got a few more minutes if you have more questions here. But I want to make sure that. As we wrap things up, you remember that

there are. All sorts of resources for you to tap into on our website about these strategies and the training that we have that goes into greater detail about these strategies. Um, because it isn't easy to screen every child the same way.

You've got to have a whole… repertoire of things ready to go. The…

What OAE demands of you is having a broad repertoire of ways to manage children's behavior. Um, what pure tone screening demands of you is a non-automated process that you have to step through, step by step by step. So, both of them require training and skills development. And it sure is nice to have other people who can help you with that. To tap each other in and out if you're not successful with a given child, and letting one of your colleagues do it for you, if you… if you have the luxury of that assistance.

Um, Terry, there's one question here. Do you also focus on AABR for newborns? Not just OAE as an evidence-based screener. So, we're not talking about newborn screening here in the hospital, but Terry, feel free to make a comment about AABR as. An evidence-based practice. Yes, yes, it's a very, um, appropriate and used, um.

Evidence-based screening method. Aabr stands for Automated Auditory Brain Stem Response Audiometry, which is a test that we do when a child is very still and they're sleeping. And it's used, um, to screen newborns, and then it's also used diagnostically, um, at later ages, but, uh, not what we're talking about here today. And not because… and the reason why it isn't used for these older children is because they would have to be anesthetized. To be able to have that procedure done, correct? Right, uh-huh, it requires such a level of stillness that older kids are often need to be fully asleep and may need assistance with that, so exactly right, William.

Yep. So, our website, kidshearing.org. Check out these different resources that are there. Before you go to create something new, a form or a letter, make sure it hasn't already been made. You can always download these things, adapt them to your needs. They're there for your… for your use.

So, feel free to check out all those free resources, and of course, our training options as well. Um, so, to conclude, remember, if this has been recorded, so if. If you need to review any of this again, I know when we went through that form in particular, that was pretty dense, so… Um, if you need to review that again, know that that's on our… going to be on our website in the next couple of days at kidshearing.org. Work, and refer others to the website. For the webinar, if they weren't able to attend live. If you or people you know.

Need a, like, the very beginning introduction to evidence-based hearing screening. Our website, kidshearing.org, is a place you can register, or you can take a screen. Shot of this QR code, and it'll take you directly to the registration. For the introduction webinar, which is next Tuesday, October 7th. Same time, same place, and um…

We're gonna cover everything in a, uh, starting at the very beginning. So, um, in… before you head off.

You can get a… a certificate of attendance for today's webinar by…

Um, completing the short evaluation survey that you'll see in the chat right now. So please click on that, give us your feedback. And you'll also get a certificate of attendance for today's webinar. We really appreciate, um, all that you do to. Make sure that the children in your care have. Somebody attending to the status of their hearing, knowing that it can change, even subtly.

And that those subtle changes can have an impact on their growth and development. And so. Um, we're really appreciative of the seriousness with which you take on this work. Terry, thank you. Gunner, as our tech person, thank you. And, um, we will… Um, watch for future inquiries through our website if you have any questions you'd like to ask us, you can contact us through the Contact Us.

Button on our website. Thanks, everybody! Thank you.