William Eiserman, Ph.D.: Well, Terry what do you say?

We've got people still signing in rapidly, but, I want to respect everybody's time here.

Welcome, everybody!

I am Will Eiserman, and I am the director of the early childhood ainitiative, the ECHO initiative is housed within the National Center for Hearing Assessment and Management, known as NCHAM.

At Utah State, Of which I am the associate director.

NCHAM, currently serves as the early-hearing detection, and intervention National Technical Resource Center, funded through a cooperative agreement with Maternal and Child Health Bureau, but for -- more than 20 years, since 2001 -- 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.

And we're delighted today, to continue, to make our resources, and, other learning opportunities like this one available, to staff from Head Start Programs as well as to anyone in early care and education settings, who can put the -- this information together.

Now, before I go any further, I just want to make sure you-all know, that this is being recorded.

So, if anything distracts you from full attention today, Or if you think of people who would benefit from the conversation that we're going to have --

Know that this will be posted on kidshearing.org, in the next couple of days.

So you can access and stream it, and scroll through it, at -- at any speed that you would like.

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>> DR. EISERMAN: I want to give a shoutout to our Interpreters and our Captioner today, thank you for helping make this as accessible as possible.

We always appreciate your amazing talents, and abilities to help us do that.

Dr. Eiserman,: Now, we're going to -- we received hundreds of questions, from you, when you registered.

And we have tried to incorporate answers to your questions, Into our presentation today.

We did -- we tried our best.

So, let's see how we do, and then, we'll open up the question -- for questions, And if there are remaining questions, that we didn't address, we'll open up a Q&A box for you to type in your question and we'll -- we'll address them that way.

So... we hope that goes -- my --

my copresenter today is Dr. Terry Foust, AuD, CCC-A/SLP, who is a pediatric audiologist and speech language pathologist, who served as consultant to the ECHO initiative since the very beginning, Terry, thank you, and welcome!

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>> your mic is off, Terry.

Terry Foust, AuD, CCC-A/SLP:

Thank you, and I apologize for that, and I appreciate that introduction, William, as William said, he and I, along with many other ECHO team staff, as well as local collaborators, have provided training in nearly every state, with thousands of staff from early Head Start Head start, American Indian Alaskan native and migrant Head start and early care and education programs over the years so it's been a lot of programs and we're always encouraged, just like we are today.

With the huge amount of interest that there is in establishing --

and maintaining --

evidence-based hearing screening programs.

Really, so that children with hearing-related needs can be identified and served.

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>> DR. EISERMAN: So our webinar today, is primarily intended for those of you who have already had some experience implementing evidence-based hearing screening practices, for children in the birth to 3 age range, in the three to 5 age range or both.

And, you know, we're just delighted to see that we've had over 1500 people register for today.

Now, -- I -- I want to make sure you know that we're -- we're going to do our best to address some of the questions that you address.

You sent to us, but, be aware that...

If you are really new to Early Childhood Hearing Screening, you're welcome to stay on, you can benefit from what we're talking about: But next week --

(as slide advances) we have another webinar, which is an Introduction to Evidence-based, hearing Screenings so you can find that on kidshearing.org to register for that, if you haven't already seen that, and if you're really needing information, that's basic, starting from the beginning --

that's the webinar that you'll want to attend for sure, and if you know of others, that may benefit from that webinar, send them there as well.

(Link in chat), .

>> DR. EISERMAN: (Continuing).

So, we're going to organize our time today, around -- as I said, many of the questions, that you submitted, and, we're going to present some of the information about these topics; and we're going to start, with a brief overview for everybody, and for those who are newcomers to evidence-based practices.

Some of you have asked questions about being able to provide a basic rationale to parents or other colleagues on the purpose of hearing screening and what the recommended methods are; so, we're going to -- we're going to talk about that.

That big picture.

We're, then, going to turn our attention, to a review of issues pertaining to PureTone audiometry, which is the method that's recommended for 3 to five-year-olds, since many of you are getting ready for a new round of screenings in the spring, we'll go over the key steps you want to complete to prepare this, and that's also, in response, to questions that we got that -- you know, can we just review this -- this procedure?

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We'll, then, review the steps of the procedure, and -- some of the questions that were raised about PureTone screening.

After we address those questions, we'll, then, move on to a similar conversation around otoacoustic emissions or OAE screening -- which, is the method used with birth-three-year-olds and increasingly, with 3-five-year-olds as well.

So, we'll be talking about --

about that.

And then we'll talk about the --

the screening and follow up protocol and parent support, and how to make sure that the steps that need to be followed after a child is screened, particularly, when they don't pass on one or both ears --

Has to get implemented, and, some of the challenges that --

that go along with that.

And then we'll wrap up by talking about some of our technical assistance resources that are available, so that, you know, what exists, and where to find them on our -- on our Web site.

And, you know, -- one of the things, I want to say right off the bat, (slide advances), is....

We're always -- you know, we're in an interesting dilemma when we try to develop training resources, and learning opportunities, like this, To explain things as clearly and as succinctly as we can.

And sometimes... I think, we inadvertently leave people with the impression that this is easy.

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>> DR. EISERMAN: And then, those of you who have some challenges feel like, something's wrong with you.

When, actually, -- it's really a skill-development experience that everybody has.

And that it can become easy, and it can be easy with certain children; but all of us run into experiences where we're challenged.

And where we have difficulty completing the screening process, and that's true, with PureTone audiometry, and with OAEs as well.

And so we'll give our best shot at giving you suggestions -- but we can't fix every single challenge you run into.

We're going to do our best, So let's start off... by just talking about the rationale so that you have a good way of being able to set the context for your own screenings.

And we always like to start with this graphic, to remind people:

That the work of the ECHO Initiative is based on the recognition, that each day, young children, who are Deaf or Hard of Hearing, are already being served in early childhood health, and education settings, Often without their hearing-related needs being known.

Hearing loss, is often referred to as an "invisible condition."

So, how can we reliably identify which children have normal hearing?

And which may not?

(Slide advances).

>> DR. EISERMAN: (Continuing).

>> Terry Foust, AuD, CCC-A/SLP:

William and everybody, really the short answer to that question is that early care and education providers, we all can be trained to conduct, evidence-based hearing screening just like you see in these photos here.

And, again, the ultimate outcome of hearing screening program, is that we can identify children, who are Deaf, or Hard of Hearing, who have not been previously identified.

So the procedure on the left on your screen, that's called otoacoustic emissions or OAE hearing screening, and like William said: That's the recommended method for children, birth to three years of age.

And it's increasingly being recommended for children three to 5.

Now, over here on the right, you'll see, the procedure PureTone audiometry.

Hearing screening, and that's historically been the most commonly-used screening method for children 3-5 years of age and older; and, you'll still see that in many early care and education settings, and see those providers using it and so we're going to talk about both of those methods today.

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>> DR. EISERMAN: Yeah, and before we jump in, Terry, I want to have you answer a question --

and Terry, it's fine if you want to keep your -- your video off now.

But one of the questions, that we've gotten repeatedly, in the context of those of you, who are facing some challenges, particularly, with children, that might have other special needs, disabilities, or even language differences.

Other than these two methods, are there any recommended methods that we could use for those instances?

And -- Terry, let's just address that question right off the bat.

Terry Foust, AuD, CCC-A/SLP:

Yeah, you know, there really aren't, because we don't --

since we have the ability, to do this, physiologic-type screening or objective screening -- we don't want to rely on subjective methods; so, maybe, some of those things that might come to mind, are some of those things, like, ringing bells, and -- and um -- you know, observing reaction to sound, but --

We -- we have the ability to do so much better; so really, it is OAE, and PureTone screening, and those should be the methods that should be used.

Dr. Eiserman: And when you're stuck, when you actually can't get a screening, whether it's one or the other methods...

There are a couple of things you can do: 1), is if you're using PureTone, you can try OAEs.

You can't do it in reverse, though, if you're using OAEs on younger children, birth-3, PureTone is not a back up method for you.

So that's one thing, to keep in mind.

And the other (2), is, you know, you can try having other staff, you can try again, at another day; and if you still are struggling, then you make a referral to a healthcare -- or to a -- an audiologist, who will be more skillful in being able to complete the screening.

The important thing to remember --

Is that, children who have a hearing loss, may be the very ones who are the most difficult to screen.

So, we don't want to just write off, they were difficult to screen; and set them aside for another indefinite time.

We want to make sure that those children get on the top of the list for follow up.

Okay?

So -- as some of you have asked whether or not you need to be certified to do screenings and that tends to be a very state-specific issue.

We don't know right now, of any states that require that.

But there are some state guidelines that can influence your practices, so, we would encourage you to check that out, on a state-by-state basis; and the best way to do that is to contact your state's early hearing detection and intervention coordinator, the person responsible for your state's newborn screening program; and you can find that link on our Web site -- when you look for information on finding an audiologist.

It will take you to the link for your state's EHDI Coordinator, the Early Hearing Detection, and Intervention coordinator.

(Slide advances) so in helping families to....

Really feel motivated, to follow up, That's another one of your questions, When children don't pass --

we need some... some information that will help them feel... the importance of this.

And one way, is to share information about the incidence of hearing loss, and the fact that hearing loss...

A child's hearing ability --

Can change.

At any time.

Often without us ever recognizing it.

About three children in a thousand, (animation plays on slide), are born with hearing loss being Deaf or Hard of Hearing, Most newborns in the U.S., are now being screened, for hearing loss using evidence-based methods before even leaving the hospital.

But screening at the newborn period isn't really enough because, the research suggests -- and this is the important point that you would want to convey to parents:

That research suggests that the incidence of permanent hearing loss doubles between birth and school age; from that original 3 in a thousand at birth, to another 3 in a thousand totaling 6 in a thousand, by the time children enter school.

And so....

We want to stay on top of that.

And so, when children don't pass a screening, they may have a mild hearing loss, they might have a more significant hearing loss, And we might not be able to observe it and so these screenings, are the way to get to that.

(Next slide), .

>> DR. EISERMAN:

(Concludes).

>> Terry Foust, AuD, CCC-A/SLP:

Now, hearing loss, you know, we don't only screen hearing at birth as William mentioned we need to screen throughout early childhood because as he said, hearing loss can occur at any time, and it can occur as a result of illness, or --

physical trauma, or environmental or genetic factors.

And so, when this happens, it's often referred to as "late onset hearing loss." And that just simply means that it occurred after the newborn period.

DR. EISERMAN: You know, and, again, it's similar to the subtle changes that you might see in vision that can occur for any of us.

A child can experience a change in hearing ability that we want to identify so that they have full access to language, and all of the information that -- that they're being exposed to, as they -- they learn and grow.

Terry Foust, AuD, CCC-A/SLP:

William I'm going to have to ask you to take this for a moment, I'm having a little trouble, technical trouble on my end.

>> DR. EISERMAN: Sure, so, you know, screening is the first step in the process of identifying a disability like a hearing loss, so it's important to know, no screening method is 100% effective in identifying possible areas of concern.

Parent and caregiver concerns always override a passing screening result, no matter what screening method is used.

So, you know, -- any conversation, we have about follow up --

And screening should always begin with a reminder that screening methods aren't perfect; and that whenever a parent or caregiver, expresses a concern about language, or hearing -- children should be referred for a more thorough evaluation, even if the Child passed the screening.

And that's true even with these highly-reliable hearing screening methods that we're talking about today.

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>> DR. EISERMAN: (Continuing), we also want to acknowledge, right upfront that for any number of reasons --

There will be an occasional child, that you just can't manage to screen, as we have already alluded to; and after you've tried everything you can do, and you have a colleague try it, if that's possible -- you'll be faced with that dilemma of what to do.

and our recommendation about that -- is that, you make a referral to a pediatric audiologist.

Keep in mind some children, you may... have difficulty screening like I said, maybe, the very ones who have a hearing loss.

So we don't want to just skip those children, just because they were hard to screen.

(Slide advances), So...

We just mentioned having a pediatric audiologist, in the picture.

Now, a pediatric audiologist, if you don't know, is a professional who specializes in the diagnosis and nonmedical 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 really be helpful, and we recommend, that, all programs consult with a local audiologist, to help develop and oversee your hearing screening and follow up activities; and, to be able to take questions like you have sent to us --

Not that we mind it, but it would be nice to have somebody local, that you can dialogue with about these challenges.

They can help with equipment questions you might have.

they can consult with you, about specific children, who aren't passing.

And importantly, they can be one of your resources when you need to refer a child for further evaluation.

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>> DR. EISERMAN: On our Web site, kidshearing.org, you'll find a link, to find an audiologist.

which should help you do just that.

Terry, are you still connected?

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>> Terry Foust, AuD, CCC-A/SLP:

I am -- I am back, so thank you, and -- and my apologies.

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>> No.

>> Terry Foust, AuD, CCC-A/SLP:

I did want to mention here William, and to all of us that are here, that some of you submitted some very specific equipment-specific questions about the error messages on your equipment.

And, we would love to address those, but it would be really difficult for us in a group setting, since there are so many different pieces of equipment, probably represented by you here today.

So, you -- you could pose those questions to the person who sold you the equipment.

And they can let you know what those specific error messages are related to.

Terry Foust, AuD, CCC-A/SLP:

While the equipment distributors and salespeople, aren't really the folks you should look to for aggressive comprehensive training and program, and those skills they do have expertise for those particular models and so they can absolutely help you understand your equipment functions, and error messages, and -- and things like that.

We'll address those, some of the commonality, as we go further today, But having access to both -- as William mentioned -- a pediatric audiologist, and your sales rep -- can really be helpful for different reasons, and so we really encourage you to have their contact information ready for when you need it.

And sometimes, of course, that equipment manual is really helpful as well.

DR. EISERMAN: Yeah, Terry, and, you know, one of the questions (an electronic tone), a number of you asked was related to screening children, with tubes, PE tubes, and, you know, do we screen these children?

Do I need to do something to the equipment?

And so, we can just get this question addressed right upfront right here.

So --.

>> Terry Foust, AuD, CCC-A/SLP:

Yeah.

>> DR. EISERMAN: Terry as our -- and, by the way, if you came on late, this is Terry Foust who is is a pediatric audiologist, and a speech language pathologist who has worked with us from the very beginning of our work, with the ECHO Initiative.

Terry Foust, AuD, CCC-A/SLP:

Yeah, thank you for that question, William

>> Yeah, let's address that right now.

So, yes, absolutely.

Yes, you can -- you can and should screen children who you know, have PE tubes, it's really one way to find out if the tubes are, actually, doing the job they have been put in to do.

Children, with PE tubes, they should pass the hearing screening, if those tubes are open, and working, and the rest of their auditory system is functioning normally.

So, for those of you using the OAE method, you'll want to look at your equipment manual.

Because there are a couple of pieces that need you to push a -- an extra -- there's an extra button push to adjust the setting for screening, an ear that has PE tubes so just be sure to check that out for your particular piece of equipment.

(After a pause), like I said, some equipment will require a temporary adjustment and other brands do not.

But, yes, you can, and should screen children with PE tubes, (A pause).

>> DR. EISERMAN: Okay, so we have two screening methods we want to talk about today, by way of big picture: If you're responsible for children, who are under 3 years of age, the recommended method is OAE screening which you see on the left here, and if you're responsible for screening children, 3 years of age or older --

Historically -- PureTone audiometry has been considered "the recommended method" for this age group.

This is that headset screening, where the Child raises a hand, or performs another task, each time they hear a sound that's presented into the ear, and you see this method on the right there.

(A pause), Terry Foust, AuD, CCC-A/SLP:

Now several of you asked about why some programs, are no longer using PureTone audiometry, with the three to 5 population.

And switching to OAEs.

And it's really because there's some growing recognition that although, the PureTone method --

it's been the most widely-used method historically, it may not always be the most feasible method to use with some of these younger children, so the research has shown that about 20 to 25% of children, in that three to 5 age group, can't be screened with PureTone audiometry, or this methodology because they just aren't developmentally able to follow the directions reliably.

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>> Dr. Terry Foust, AuD, CCC-A/SLP: And that's really been our experience as well.

So in those instances, then, OAE screenings the preferred method -- for those children.

As William emphasized a moment ago, we want to screen every child, even the ones that we find challenging to screen, right?

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>> DR. EISERMAN: So at a minimum, if you're establishing evidence-based practices for three to five-year-olds, and if you're considering using, or you're using PureTone screening, you'll also need to be equipped, and prepared to do OAEs, on that 20 to 25% who can't be screened with PureTones.

Or....

Alternatively, You'll need to have a means for systematically referring all of those children to audiologists, who can perform the screening.

Which -- as a cautionary note.

Frankly, could be -- pretty challenging, in its own right, if we're having to refer 20% of the children to an audiologist for a screening, That might not really -- really work.

Because, audiologists are stretched.

Terry Foust, AuD, CCC-A/SLP:

Yeah, I think, exactly -- and to simplify things, a bit here, I -- I would say more and more of us audiologists are recommending, the use of OAEs uniformly, with children, three years of age and older.

For several reasons, it's quicker than PureTone screening, both to learn to do, and, actually, implement; and it's far more likely, to be a method that will work across the board with children in that 3 to 5 age group that you would be screening and it's equally as effective.

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>> DR. EISERMAN: If you need some further guidance on the issues, of choosing PureTone versus OAEs, for this older population --

We have a document on our Web site, on kidshearing.org that addresses just that question, so go there, and look for that -- that document, and maybe you need to -- to hash that out with your health services advisory committee or whomever is involved. (Slide advances).

DR. EISERMAN: So Terry, let's jump into PureTone screening and get into a little more depth here.

>> Dr. Terry Foust, AuD, CCC-A/SLP: Okay, so, yeah, let's go ahead, so to conduct, a PureTone Screening.

We're, first going to take a look at the ear.

We want to make sure that there's no visible sign of infection, or blockage.

Now, by the way, you'll always want to do this first, regardless of what screening method you're going to use.

But after you do that, if the ear appears normal, (slide advances), then use the screener, or going to instruct or, what we call, "condition", we're going to condition or instruct the Child how to listen for a tone; and then, to respond, by raising a hand, or placing a toy in a bucket for example.

Now, once you have observed that the child reliably responds to sounds that are presented, just as you instructed -- then, we start the actual Screening.

So during the screening process:

This listen-and-respond game is repeated, at least twice, at three different pitches.

On each ear.

And then you'll be noting the Child's response, or their lack of response, after each tone or pitch is presented.

If the Child responds appropriately, and, consistently -- to that range of tones presented each ear, then the Child passes the screening.

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>> DR. EISERMAN: All right, Terry, let me just put a pin in it for a second.

[LAUGHTER], we have got several questions that came in, with the registrations.

And, about how to make this conditioning process easier, in -- you know, what do you do?

How do you -- how do you make sure that children really get it?

And especially -- and, you know, maybe this is a separate question, if there's a language difference between you, and the Child that you're screening?

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>> Terry Foust, AuD, CCC-A/SLP:

Yeah, and this is one of the things that can -- it always adds some variables in to the --

to the screening, which...

You know, you want to really be sure that it's going to be reliable, but what -- what you -- you can do, is, you not only model it, but for example, if I'm training, if you can see on this picture here, you can see that I've got this child's hand in my hand; and, I am going to demonstrate and, actually, when I present the tone, I'm going to raise their hand for her or I'm going to help her drop the toy into the bucket; and so, I am not only verbally instructing, but I am physically modeling, and helping her.

To understand the task, but then I'm going to do checks to make sure that our response is reliable before I would ever officially do the screening, and try to get those results that we want to get.

DR. EISERMAN: And if you want to see videos of that played out in longer... format, The training that's available on -- on...

Heretoscreen.org is where you can find a complete, training session on PureTone screening that -- that walks through that.

But, you know, those are the children, the ones that you're not sure, are conditioned, Those are some of that 20%, that really you have to find another way.

You don't want to just hope that they got it.

You want to feel really confident that they're following you.

One or two of you, actually, sent a message, saying that you had found that children who had -- who you were a little unsure about, and had passed the PureTone, but when you did OAEs, they did not pass -- that's the thing, where worried about

>> We're worried about somehow subjectively-passing a child --

Who really, shouldn't be passed because we're -- we're being generous, we're giving them the benefit of the doubt.

We shouldn't ever be giving benefit of the doubt.

We -- we want children to more likely refer than just pass because we're guessing.

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>> DR. EISERMAN: (Continuing) okay?

So the idea here to always remember: As much as we are champions of children, we don't -- we don't have an investment in them passing screenings, we want to get accurate results.

Dr. Terry Foust, AuD, CCC-A/SLP:

Yeah, thank you, William and maybe just to summarize on the teaching part, we -- we instruct, we show, we do it with them, and we try to make it fun.

so --

Let's -- let's go ahead and move on, so -- (pause), DR. EISERMAN:

So you condition the Child, you've gotten to the point, where, okay, they really understand the game you've set up with raising their hand or dropping a toy, and now this is the screening process, .

>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, so now -- now that we feel that they're reliable, during the screening process, this listen-and-respond game -- is repeated, at least, twice, at three different pitches, on each ear, and then you're going to note the Child's response or their lack of response, after each tone is presented (slide advances).

>> Now, if you take a look here.

If the Child responds appropriately, and consistently -- to the range of tones presented, then the Child passes the screening.

So you can see these checks here at these different pitches, okay.

and then -- what we would like to do -- is just remind you, of some of the things you're going to be want to be sure to address as you get ready to start screening a group of children, so to begin with -- and this goes for everyone, regardless of which method you're using -- be sure to refresh yourself on the resources, that we have at kidshearing.org.

P.

>> DR. EISERMAN: Yeah, and this is the landing page of kidshearing.org, where you --

where you're going to find a range of resources, and -- and this is good to go through, if you need to acquaint new staff or refresh yourselves, so let's just quickly look at this page (scrolling) and you'll see here there's planning resources, that right there, is where you'll find an audiologist, under the big picture resources -- is where you would find that document, comparing OAE, and PureTone, that I mentioned a moment ago.

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>> DR. EISERMAN: There's screening equipment resources there.

Then there's where to access training.

Some of you have -- asked us, "Where can we go to get standardized, reliable training so that all of our staff are going through exactly the same training?" And that's -- you can access those links there, and those -- those particular training resources there, are --

Virtual, so they will allow you to do the training, whenever you need the training.

so -- it's adaptable to time schedules.

The -- the next set of resources, is all about preparing for screening; the protocol guides and forms, which we're going to go over; and documents for how to document your results, and -- and share those results with healthcare providers, and audiologists, And then, lastly, there's resources for tracking a group of children, and monitoring program quality.

so if you haven't taken a dive into the resources, that are available here, we encourage you to do that, because as we went through, you know, some of your questions, we realized, oh!

If some of these folks had been on our Web site, they would find the answers to what they were looking for here.

In terms of resources, that were needed.

DR. EISERMAN: So -- and the other in the I want to point out here, at the very bottom, that last arrow, under monitoring program quality -- you'll see those two checklists -- OAE screening skills checklist, and PureTone screening skills checklist, those are really good resources, for refreshing, and evaluating yourself, and others -- on making sure that you're doing all of the steps that go along with the --

respective methods.

And they look like this: This is just an example of the step-by-step things you do to prepare for a screening and then what you have to do to complete the screening.

Take a look at these, as a good reminder.

Now, --

Some of you, had asked, regarding PureTone, and we're going to -- we're going to wrap up PureTone here in a minute and talk about OAEs, but before we do that, some of you, asked about a refresher for how to document the results.

And, this here, is -- a screening form that you can download on our -- from our Web site that follows exactly the recommended screening protocol.

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>> DR. EISERMAN: And it walks you through it step by step.

So, we encourage you to use this because it does follow exactly the recommended process.

The first step for any screening, as we said is the visual inspection of the ear.

And in most cases, the Child will pass at this point.

And you'll move on.

(highlighting), then, we condition the Child.

Which is that second step, (2), that Terry went over.

If the Child can't be successfully-conditioned to provide that behavioral response, then you'll either try again.

And if you still can't condition the Child:

If you are able to do an OAE screening instead, that would be appropriate, and if you don't have OAE screening available --

or are unable to do OAE screening, then you would make a referral to the audiologist.

But, assuming that the Child is successfully-screened, the screening process, then, begins.

(Slide advances).

>> DR. EISERMAN: And so we've got this screening conditioning the Child here, and Terry, I know you always have something to say when we get to this slide.

>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, thank you, always interject here, (laughing), we've received some questions about this conditioning process, as you mentioned, in preparation for today's webinar.

And really, those have centered around how long that conditioning process should take.

So, let's -- let's answer that.

Children, who are going to be successfully-screened using the PureTone method, you should be able to screen them in about 10 to 15 minutes max; and that includes the conditioning step.

So really, that conditioning should not take more than five minutes, hopefully less, If you can't condition a child in that amount of time, then you probably should consider using your back up plan, which is either to do an OAE, hopefully right then while you have the Child with you there.

Or, you could also try your PureTone screening on another day, if you have the flexibility to do that.

But just remember: 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 them, most likely a pediatric audiologist.

So, as we said, earlier just remember that some children, who have hearing loss, could be the very ones that are most difficult to condition to do the screening.

So, one way or another, we -- we want to be sure that we get every child screened (slide advances).

>> DR. EISERMAN: So assuming that the child is successfully screened.

The screening process then begins, (3), and you can see on the form here, it provides a space to record the results for each ear.

Since PureTone screening isn't automated, the form provides a reminder that for each ear, up to four presentations of the tone can be made, at each frequency level.

Starting at 2000.

Then 4,000.

Then 1,000.

That two responses are needed for the Child to pass for a given tone.

The screening begins... by repeating the conditioning tone, One more time, and then, proceeding.

(A pause), Okay?

Now, each child needs to have at least two successful responses out of no more than four attempts At each frequency level, in order to have an overall ear pass.

(Pause), Once that's recorded, the left ear, is screened in the same way as the right ear, recording each presentation result, as you go, if both ears meet the criteria for passing, then the Child's screening process is considered complete.

If one or more ears, don't, however, meet the pass criteria -- then, as you see here, a second screening, of the previously-nonpassing ear, is conducted, in approximately two weeks.

(Animation plays on slide), .

>> William Eiserman, Ph.D.: And then you would get those results.

(Animation continues), Now, (slide advances)....

Terry --

What if the Child does fine in responding at first?

But then becomes distracted or you -- or you observe somehow no longer engaged in this screening, and -- and say after the first couple of pitches, they just seem to have kind of --

Decompensated?

What do you do?

.

>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, -- you -- you really want to go ahead and you can suspend that screening session for the time being, and then you could either, like, we mentioned earlier, you can come back and have another screening session, with them, or go ahead and use your back up method, which is the OAE.

But, again, you're going to want to be sure that we follow up and we get that child all the way through, even if we're able to screen it ourselves and we need to refer them to an audiologist for a hearing evaluation, .

>> DR. EISERMAN: And so Terry, you have to do the same thing right, if there's a sudden increase in environmental noise, for example, that is outside of your control.

And you can't screen it that time.

You have to come back at another time, picking up where you left off.

But you had.

>> Terry Foust, AuD, CCC-A/SLP:

Yeah.

>> DR. EISERMAN: You have to start with conditioning again, right?

.

>> Terry Foust, AuD, CCC-A/SLP:

Yes, yes, that's right, if the Child is not able to be conditioned again, or to remain attentive, paying attention then like I said, you should probably use the OAE method or refer them to an audiologist.

But there's a really important point here:

And -- I know we'll sound like a broken record -- but, again, that point is -- is that, sometimes, children, with hearing loss, are the very ones who are most difficult to screen.

(Electronic tone), so the last thing we want to do is to abandon that screening process on children, who are unable to be conditioned, and simply conclude that they can't be screened without doing something else.

So whether that is screening with OAE or making a referral to an audiologist, we need to follow up.

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>> DR. EISERMAN: So if -- if we're still going through all of this kind of fast.

And you feel like you're not really getting it.

The way you need it.

I would really suggest that you go back to our Web site, to the training resources, And -- and look at the PureTone training modules.

That go through this, and pace through it at a slower pace, where you can start, and stop --

and really get this whole process nailed down.

So, let's say we do a successfully- -- a successful screening, and we have one or both ears, not passing at the second screening.

We want to make sure we indicate that on the form, and then, the Child is referred for a middle ear consultation, from a healthcare provider.

So, they have not passed twice now over two separate screenings; they go to a healthcare provider, And, what's going to happen there, Terry?

What -- why a healthcare provider?

.

>> Dr. Terry Foust, AuD, CCC-A/SLP: Well, because, for, you know, for any child who is referred for a middle ear consultation, from a -- so -- we want to make sure that that --

that middle ear system, is clear, and is processing that sound all the way through.

So we want to send them to the healthcare provider, for that.

Evaluation.

And so....

For every child, that's referred for middle ear consultation from a healthcare provider, then we want to use the diagnostic follow up form that you see here, and this is where you'll document the remaining steps, in this child's screening and diagnostic process, starting with the results of the middle ear consultation.

Dr. Terry Foust, AuD, CCC-A/SLP:

So since the Child was referred to the healthcare provider, to see if there might be any middle ear health-related problems, that may have prevented the Child from passing the screening on either ear, during your first two screening sessions, then you want to find out the results of that consultation, and record them here, then once the healthcare provider indicates that ears are healthy and clear, then you're going to want to rescreen, the Child's ears, or the ears that have not yet passed -- and record those results.

All children, that are referred for middle ear evaluation must -- and this is really important -- once they have been cleared, they have to receive the rescreen on any ear that hadn't previously passed.

So, if, at this point, there's still an ear that hasn't passed, then the Child is referred for a complete audiological evaluation, And you'll want to support the family, in completing this really important step, and be sure to get those results, and document them here, In this form -- it helps you to do that.

You'll also want to collect additional supporting documentation, from the audiological evaluation, especially, if a permanent hearing loss is identified.

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>> Dr. Terry Foust, AuD, CCC-A/SLP: And in most cases this will include additional referrals for intervention services, that you'll want to be aware of and you want to support the family in obtaining.

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>> DR. EISERMAN: And, you know, -- after a pause), these forms that we created, we did in collaboration with multiple --

early Head Start Head start, and Part C programs.

Trying to come up with easiest-to-follow documentation strategy that would be complete, and that would help you walk through each of the recommended steps (slide advances), so --

you know, you might think you want to create your with own form, and you can try, but, it's tricky to come up with a -- a format that really does follow all of this, so before you do your own, give a good look at what we've done here because we've gotten a lot of input on how to -- how to make this work for folks, so, let's pause for a moment here, and see, if we have any other -- I don't -- I don't think there were any other...

PureTone-related... questions that we got right there.

But -- jot them down, if there's anything missing, oh, -- you know, I know -- (pause).

Now, I think -- I think we're good with that (slide advances), so remember, you're going to find all these resources on PureTone screening activities on kidshearing.org.

so, go there, and have a look, (scrolling).

All right.

and that right there is where you'll find the training resources.

And so on.

(Next slide).

>> DR. EISERMAN: Remember, also to look at the -- the PureTone audiometry screening skills checklist, which is at -- at the bottom.

So, that was PureTone.

Now....

Let's shift gears and talk about OAE screening, otoacoustic emissions screening, as we've already said, is the recommended evident-based practice for children, birth to three years of age, and -- is increasingly, being used for children, in older age brackets, as well.

Terry, some people want to have a review of how the OAE screening is done, Can you walk us through that?

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>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, so we're going to start at the very same place we did with PureTone screening:

We're going to, first, take a thorough look at the outer part of the ear.

Again, to make sure there's no visible sign of infection, or blockage.

And then, if the ear appears to be normal, and healthy -- then we're going to place a small probe, and we use a small probe, on which we have put a -- a disposable cover has been put on it or placed on it; we take that probe, and we, then, insert it into the ear canal.

(Slide advances), and then, we push the button to start the automated screening process.

Now, the probe sits independently, so that probe that sits independently, in the ear, delivers a low volume sound stimulus into the ear.

Now, the cochlea, or as you can see here on your screen, that --

inner snail-shaped portion of the ear, a cochlea that's functioning normally -- it will respond to this sound by sending the signal to the brain.

While also producing an acoustic emission, And this emission, is analyzed by the screening unit, and in approximately 30 seconds or so, a result will appear, it will appear either as a -- a pass, Or, a refer.

Now --.

>> DR. EISERMAN: Terry, wait a minute!

Hold on, because this is where a lot of our questions come in, we go past this moment where we are putting the probe in the ear and letting go, and, you know, there's all these people saying, "It doesn't stay in the ear!"

Or, "I get poor seal error messages!" "I don't think the probes are the right size!" This is the difficult point, in OAE screening that people are struggling with, and that -- I think sometimes, we can inadvertently make look too easy.

So can you talk, for a minute, about some of the things, that we can do to get better at?

More skillful at, getting a probe in the ear for it to have a good seal, meaning, it's not going to -- it's not going to have the outside sound interacting, with what's going on in the inner ear.

And for it to stay put, .

>> Dr. Terry Foust, AuD, CCC-A/SLP: It is really the pain point for people, when we are doing OAE screening.

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>> Pain for the screener!

Not the Child.

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>> Terry Foust, AuD, CCC-A/SLP:

Exactly, for me is the screener, this is -- I should call it the frustrating point, the point of frustration but there are several things to do, the first is with probe cover selection, so you see on the -- on the picture here the Black part is the probe, and, you can see that beige-colored foam tip that is on there.

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>> Dr. Terry Foust, AuD, CCC-A/SLP: That's one of my first recommendations, is -- if you have the option for foam tips, use those, we find that those compressable foam tips, when they're inserted and expand, stay in the ear and are more stable than the other plastic tips.

So that would be my first recommendation is to: Use a foam tip if you have it.

The second, is, the largest-size probe tip, that will fit in the ear, the better.

.

So, too small of a probe won't be stable in the ear, it will let noise leak in and out; and fallout.

We like the -- the largest one possible that will fit in that particular ear canal.

The next thing, though, is...

Is a lot of practice, the older children, of course, will tolerate probe placement better.

So if you're newer to this, I would screen a lot of -- screen adults and practice placement, then I would go to some of the older children that will tolerate it well and then move down to the younger children, that are more apt to put a hand up and try to pull the probe out or wiggly or making -- making noise, so, I -- and a key point, to probe placement is:

We really don't -- we really do not want to hold the probe in place.

As a child moves it can be pushed up against a -- an ear canal wall, they are made to be self-seating, and so, it's -- it needs to fit in that ear, and not be held in place.

Dr. Eiserman: You're more likely to have success if you let go than if you hold on.

>> Terry Foust, AuD, CCC-A/SLP:

Actually, yes, yeah, so maybe, to summarize: It's -- its probe fit is probably the most important thing to getting a successful test done.

Second: Use a foam tip, if you ask -- if it's possible, you have access to foam tips for your particular brand of equipment.

I would recommend you use those, I would recommend you use the largest size tip that would appropriately-fit, in the Child's ear.

And then I would practice --

practice, practice, practice, on probe placement, A lot of little skills that --

experienced screeners start to take for granted but it's how to approach the ear, how to approach the Child, how to have that probe ready to slide right in to the ear.

So, I don't want to under- --

undersell experience, it's really important.

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>> DR. EISERMAN: And, you know, another thing that I think is a really important step, in developing our skills -- is to spend time screening yourself, to know what it should feel like.

So that it's really cutoff all that sound, where your ear has that clogged sort of feeling, to it.

You develop a sort of kinesthetic understanding of what you're trying to do on another person.

By doing it, first, on yourself.

Really getting -- and knowing --

oh, I have that really pretty tight in my ear.

It should be that tight, in the Child that I'm screening, it can't just loosely be in there, and so get to know it on yourself, where you know you can wiggle it around and you're not going to hurt yourself, you're not going to hurt the Child either.

But you're -- you're more likely to be concerned about that.

So -- give -- give some practice to screening yourself.

as well.

And so, you develop more of that skill.

(a pause), now Terry, you talked a minute ago, about how, then, we get these results of either a pass, or a refer.

Now, some of you are printing out results, that have a lot more details on it than just the pass or refer.

and some of you, have asked, how do I interpret that?

How do I know what that all means?

Some of you have even asked --

how do I know what scores to look at, to determine, if a hearing loss is significant enough to warrant interventions?

we need to make sure that everybody who is doing hearing screening, really knows the role of screening.

And screening is is not to know anything more than pass or refer.

The idea being....

Refer --

Is so that, somebody else, a pediatric audiologist -- and maybe, the input of a healthcare provider --

Can determine what the next steps need to be.

And certainly, they are the ones to determine whether there is a hearing loss or not, the significance of it.

The type of early intervention that maybe warranted, all of that, so, you really don't need -- and shouldn't -- go into the weeds beyond knowing a pass or a refer result.

(next slide).

>> DR. EISERMAN: Now I would like to do a quick poll question for those of you who are doing.

OAEs.

we're going to have a poll question.

Come up on the screen.

And first, I would like you to just take a look at this --

Table that you see on your screen.

And try to identify the device that you are using, Mostly, by appearance, now, some of you are probably using devices that you see up here that are older models that are no longer being sold.

But, we're doing this question, because some of you are asking about, well, what is everybody else using and what is working and what isn't?

So to begin with -- find your device.

And look at the column under which your device is found.

for example: Under Column A, you'll see, three different devices, those three devices, though, they have different names and they have a slightly different appearance, are basically, the exact same device with a slightly different appearance, The same is true, in column B.

Those two devices, are basically, the same.

And then the rest of them, that you see there, are individual devices, So, find your device, (An electronic tone), and...

tell us, Which one or ones, you're using, that you're the most -- that you've had some actual experience with.

and you can say multiple ones, if there are multiples that you -- you notice up here.

Now, Gunnar, am I going to be able to see the results?

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>> Gunnar Thurman: This is Gunnar, I think so we'll see once I close the poll.

>> Okay.

>> Gunnar Thurman: I'll let you know what they are.

>> William Eiserman, Ph.D.:

We'll give you about ten seconds more, to answer this question.

(A pause).

Okay.

Can you close it and see what we get?

Can you close it and see what we get?

Okay, great, so the most -- the most common clearly, are in that first A column, the -- the --

those three different devices you see there.

Okay, that's really helpful to know, All right, now -- let's ask one more question using the same strategy, And, do -- there we go, Thank you, (Pause).

>> William Eiserman, Ph.D.:

And this is a question that a lot of you have been asking about, because you're struggling with things like, screening in -- in noisy environments.

And getting too many refers or too many error messages.

Gunnar, I don't see the second poll question, should I?

The second poll question, there we go, now we want you to answer this question about what you would recommend, not that you're using but that you would recommend for screening in a natural environment, that is moderately-noisy.

And, you know, -- if you don't have a device, that you feel good about in that way, don't answer this.

But tell us, if you would make a recommendation that -- overall, you -- you have had decent enough success, that you would make a recommendation, and we'll give you about 5 more seconds to answer this question.

All right, let's all right, let's see what our answers are here, ah, interesting, so quite a few people, are recommending those first three, now, you're probably wondering why don't you just tell us, William and Terry, as federally-funded...

Agencies, we're not allowed to make, like, material recommendations, like that.

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>> DR. EISERMAN: (After a pause), so this is our way, to really get the perspective of those of you who are actually using these devices, in those settings.

So, if you're having challenges, with screening successfully, in noisy environments.

-- the question you should ask yourself --

Where is my device on this table?

If it's in that A column, Gee, some people seem to have having relatively positive experiences with this, maybe, I need to get some additional technical assistance, from an audiologist, or an additional screener, or -- maybe, you need to have a -- a one-on-one conversation with one of us.

Or, maybe, reach out, to some other people who are doing --

using these devices, If you're in one of the other columns, It may suggest that, that device is really harder to have success with, Under those screening conditions, And so....

That can inform future purchases, we always encourage people to try multiple people -- -- purpose -- multiple brands of equipment, before you purchase, and -- to give them a good test, not under just ideal circumstances, But, under less-than-ideal circumstances to see if they're going to, work for you, in the way that you -- you need them to.

So thank you, Gunnar, you can close that, close that down, Terry, did you have any other insights looking at those results?

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>> Dr. Terry Foust, AuD, CCC-A/SLP: No, I don't think so.

I -- I think because this particular piece of equipment Column A is branded by tree well-known brands it makes sense there; and the availability of the foam tip for it now is -- is helpful.

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>> DR. EISERMAN: Yeah.

So... going back to our Web site, kidshearing.org, this is where you find not only, the PureTone information, but, OAE-related information.

Again, a lot of it is -- is the same.

Big-picture resources, finding an audiologist, We have equipment information on there, that table you just saw in another format is on there, to look at these different brands of equipment.

So, if -- if you need to get a reference from that -- that's where you would go to look.

The training resources, are there, so -- again, we encourage you to take a dive into the Web site, to see what else is available, there, that can help ease some of these frustrations, that you may be experiencing, (Next slide), so -- and, again, the screening skills checklist, is one of those resources that we really encourage you to take a look at, So....

We also -- one of our Web site --

Resources is this Listen-up!

Video, if you're having challenges, in just getting children to cooperate, if there are children with special needs that you think, need just a little bit more time to warm-up to the idea of this, check out the video on there, for --

under "preparing children" and you'll see this short, little Listen-up Video which is just meant for entertainment purposes, primarily, So, again, -- our Web site --

(scrolling), And this is where you'll find, a to-do list; The Listen-up video is at the bottom under "Preparing children", letters to parents, letters to teachers To get everybody on board, knowing what it is you're doing.

(A pause), DR. EISERMAN: So...

I'm thinking about our time here.

And, I think what I would like to do, is -- (pause), open up the floor, to see what kind of questions you have right now.

And -- see what else we can address.

So, -- can you, Gunnar, make the Q&A field available for us now?

And if you-all see that, There we go....

Tell us if there are some questions that we haven't addressed that you would like some information about.

Okay, can we put the link up to your Web site again?

It's -- kidshearing.org, and Gunnar, will put it into the chat.

Kidshearing.org, so -- let's see... the OAE screening form, we have a screening form, and it looks just like this.

You see it on your screen there, And it walks through the entire screening protocol just like the PureTone screening does, as well.

You --

You do, you start off, like, Terry said with the inspection of the outer ear and then progress from there.

You do the OAE 1 on each ear, And it progresses from there; so, have a -- and you can -- you can look at that on our Web site, as well; and, again, there's a more detailed description of the use of that form in the modules that we have on -- online.

(After a pause), so where to find letters for parents?

I think I'm going to go back to that Web site, so some of you --

I think, I went through that a little bit quickly, huh?

So -- (slide advances) so on our Web site here, Under "screening resources" you'll see preparing screeners, it's a to- do list for yourselves.

Preparing parents is a handout for parents, in English, and Spanish, Preparing teachers....

And other adult assistants.

Preparing healthcare providers, that's a letter you could send out, to healthcare providers, who may be getting referrals from your screening.

And then, preparing children And that particular resource is found -- oops, Sorry.

On this page, at the bottom, under "sharing letters and and sharing resources, sharing results, preparing for screening -- that's where those are.

Okay.

(a pause), DR. EISERMAN: So on our Web site, if you -- you're looking for otoacoustic emissions training information, you would see right here, this is the landing page for kidshearing.org, under Access Training, you'll find OAE.

And under each of these other bullets, you'll find information specific to OAE, or, PureTone screening, (An electronic tone).

>> DR. EISERMAN:

Can you talk more about screening in a moderately-noisy environment and the reliability of the results?

Terry?

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>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, absolute, in fact I love this question because that's one of the -- so let me talk about both methods, though, first, with PureTone audiometry, we want as quiet of a environment as possible.

Because, we don't want any background noise, interfering, with the perception of those tones, under headphones; now, we're also as equally concerned -- you know, we want as quiet of an environment as possible for OAEs, but one of the beauties of it, is, is that we are able to screen in natural environments, with the relatively, you know -- mild or small amount of noise going on, In fact, we have some exercises that you can do, as you screen yourself, and other adults on our Web site, That will walk you through --

and show you how --

Noise in the environment, noise that's generated from you, or the Child, affects the screening, But if you're in a moderately-noisy environment, and, you have OAEs, I would go ahead and try to screen, because if you get a good seal, and you're able to measure, that emission coming back out, the way we talked about it, and, it's -- able to measure that, and get a passing result --

that's a reliable result and you can count on that.

(A pause), DR. EISERMAN: Okay.

>> Terry Foust, AuD, CCC-A/SLP:

Sorry William, I was just going to that next one.

>> DR. EISERMAN: Go for it.

>> Terry Foust, AuD, CCC-A/SLP:

Yeah, there's a question here that talks about only having access to PureTone audiometry, with barriers to obtaining OAE equipment.

How do we handle that we don't need it mentality?

And so I'm thinking of that in two ways.

1), one is, we don't need OAE or a back up method.

And we -- we really do need a back up method, like we said, those children that are most difficult to screen, are often the kids that actually have hearing loss or are at risk for -- for having hearing loss, and so -- we need to have a back up plan.

And so that either includes OAE, in this case, you've got barriers to obtaining it so then a --

A referral relationship, and consultation with a pediatric audiologist that can figure out and help you outline a back up plan.

But second: If -- if the --

don't need it mentality is, "We don't need OAE", I think, we can talk about that in two ways --

the critical aspect of having a back up plan for children, especially, that 20 to 25% that we can't screen, with PureTone audiometry -- what are we going to do with those?

And that's a high refer rate to -- to send out.

And then, William, we still have our mini grant...

Templates available, that --.

>> Templates.

>> That perhaps could reduce the barrier to obtaining an OAE.

We have had programs that have been successful in writing these small grants, because the equipment's fairly affordable, you can get a grant for under 5,000, for 5,000 or $4,000, to pay for the equipment.

We've had Lion's clubs, and sir Optimus, we have had some local family foundations, we have had some corporations that have been locally based in states, that responded to that grant application, and have helped programs get OAE equipment.

>> DR. EISERMAN: Yeah so Gunnar, could you post the link to that mini grant template that people could use?

It's not plagiarism, by the way, you can just go ahead, and cut and paste, and use that as a grant proposal to any charity --

charitable organization, or, a potential funder to elicit funding for your equipment, or supplies.

Terry Foust, AuD, CCC-A/SLP:

Yeah.

>> DR. EISERMAN: Somebody asked the question, are we able to purchase PureTone equipment if we're not a licensed audiologist?

Terry?

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>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, absolutely, you should be able to purchase that. You know, lots of --

laypeople, learn to be good screeners.

The only thing, would be as we mentioned earlier on in the --

in the webinar, is some states may have some certification or....

Kind of guidelines on who can perform the various screening in their states.

Some states, though, have wonderful training for it.

As well -- and so you could take advantage of the training on our Web site, as well as the resources in the state.

So, but you don't have to be licensed to purchase --

actually, either equipment.

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>> DR. EISERMAN: Terry, another question, what would be your recommended amount of screening attempts once a child has failed or a refer code is given?

>> Dr. Terry Foust, AuD, CCC-A/SLP: Okay, yeah, so I like to think of this screening, rather than, I like to think of it in sessions, so, my first time with a child, is a screening session.

I might get a refer, and I want to be sure that it's not kind of -- I don't want to say "my fault "but kind of factors that I can control, so I'm going to try again.

I'm going to ensure that I got good probe fit; that I was trying to control, for movement, or internal-external noise that could affect this.

So I'm going to try it again, and if I get a refer again, I may, again, just assess -- is it -- is it something here that I can retry?

So I may try two or three times, if my result is still a refer --

Then, I'm going to follow our protocol, and come back in two weeks, and rescreen that child.

so I like to call it a session, I get a refer, if I have the ability, and the -- and the Child's cooperative -- I'm going to try two or three more times, just to make sure that it isn't any other factors such as probe fit, noise, movement, et cetera, in the environment.

(A pause), DR. EISERMAN: Um... let's see... here.

What are some tips, Terry, for choosing the best and right probe cover size?

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>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, that's a really key question, you know, when we first start the process, that very first step, when we're looking in the ear, we -- and I probably neglected to say this, but not only looking in that ear, for -- blockage or drainage or some abnormality that would either say, I could or couldn't -- I should or shouldn't screen -- but I'm also looking at the size of that little ear canal; and, so I want to take a good look there.

And then, I want to go to my probe, covers, and try to make a selection on how that -- that ear looked.

Now, we talked about foam tips, The nice thing, with foam tips, is -- you don't have such a wide selection to pick from; usually you have an adult-sized foam tip.

Pediatric foam tip, and maybe, if you're lucky you'll have one in the middle.

We find that that pediatric foam tip will fit most of those little ear canals in that, say, 0 to four or five-year-old group; however, the other tip that I mentioned earlier is the largest size probe cover that will fit in that ear so that we get a nice, snug fit, and then I would try different sizes in your own ears, so that you get a feel for what a snug one should feel like, and -- and, kind of look -- did you pick a smaller one?

And you had to go up in sizes?

And, just get some experience with that.

But I -- I still, you know, --

over the years of experience, feel that those compressable foam tips, as they expand in the ear canal, they're more stable so that probe fits -- more snuggly and tightly, it's more resistant to movement, and, so, I would try that first.

(Pause), DR. EISERMAN: All right, What would you recommend for screening children with special needs and helping them to be more comfortable?

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>> Dr. Terry Foust, AuD, CCC-A/SLP: That's such a great question.

I think, having a caregiver with whom the Child is really comfortable with, help assist, have them hold the Child, they can even keep their hands busy, they're the ones, that I'll give my toy kit to and they get to present the toys and things to keep them busy, while I may just back right out of sight and kind of behind, and, try to get that screening.

But I also may -- if I have access to the Child, ahead of time, I may come in and meet them, I may massage their ears.

Talk to them, play, I might have the probe tip and run it --

bounce it like a bunny up up the arm, and into their ear without actually screening but I may take time to familiarize them, with not only myself, so they're comfortable but with the probe and the equipment.

And, -- I would -- also, consult with the caregivers, that are really familiar with that child, because, perhaps they know that naptime is here, and the Child is a sound sleeper, I may choose to go screen them while they're asleep.

So -- there's lots of little things, there, that -- that we could do.

Now, often we have a child that comes in and we don't have the luxury of taking several days, or -- or whatever to help them become familiar with this, and that is, then, when I really like to have somebody that they're comfortable with, help assist us.

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>> DR. EISERMAN: So, Terry, this is a really good question -- all of these are --

This one, happens to open up a whole can of worms, so -- living in a rural area, what do -- we do not have access to pediatric audiologists, and, the pediatricians and audiologists follow up for us, and -- often say the hearing is fine, yet the parents will report that the pediatrician does the bell whisper test, and says, "They're fine." Then we're stuck.

Between education versus medical with -- how to support families and going further without a referral from a doctor... how do we deal with this problem?

You know, -- and this is, like, I'll add: Knowing that the bell and the whisper test is not a legitimate hearing screening, even though there may be professionals who continue to think it is.

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>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, this is such a challenge, when there's a shortage, or there's just lack of access to the right professionals, and when I say "the right professionals", I mean, not only those with the

training and the expertise but with the understanding of screening processes, and -- and because, screening, you know, --

we're -- it's, like, sorting things into buckets, but what we do when we screen is we're finding those, children, that --

that are -- at risk, most at risk, for having a hearing loss, and then we need that full evaluation and an assessment to ensure that hearing is fine.

I can really....

Empathize with being stuck between being education versus medical with -- as you say, how to support parents, and going further without a referral from their physician, We have some educational materials, and we even have some letters that go from programs to medical professionals on the Web site, and -- are those easily accessible, if not, just know that they're on our Web site, they're written in a way that helps....

Medical providers understand the.

>> DR. EISERMAN: Yes.

>> Doctor Terry Foust, AuD, CCC-A/SLP: The steps to take, the process, that can also help educate them in the screening.

>> DR. EISERMAN: Yes, on the screen right now, where you see -- where it says, "screening resources", prepare for screening, and then "sharing results," both of those headings have resources for healthcare providers.

We always recommend that when you make a referral to a healthcare provider, you provide some of the facts about what screening you're doing; OAE or PureTone -- and what it is you're looking for them to do.

Usually, that healthcare provider referral, is to ruleout a middle ear explanation for why the Child hasn't passed yet.

So we want the healthcare provider to do an assessment of, whether the Child might have a wax blockage or a middle ear condition that could explain the referring result.

And then, if it's addressed or they don't have that, then we need to rescreen the Child again, once there is no reason, we can see, that the Child wouldn't pass and if they still don't pass, that healthcare provider, may be key in making a referral, for an audiological evaluation, .

>> DR. EISERMAN: So, you'll see, in that referral letters, sharing results -- that we have articulated the need, for why we're going to the healthcare provider, and what it is we're hoping they can provide.

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>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, it's really --

you know, I appreciate this question, in the sense that a lot of us, including our parents, that we work with, we -- we assume there's -- you know, -- been an actual hearing screening done at our provider's office, but they simply --

they -- usually, the vast majority don't have, hearing screening, and equipment.

They don't do a hearing screening, they check the physical structures, they make sure, that -- you know, -- for the middle ear system, for example, they can assess for fluid, or other middle ear health conditions.

And perhaps, they look at wax and remove it.

But, it's precisely because a hearing screening isn't being done in those settings is why programs like yours are so important, you're actually doing that piece of it, And -- but I know it's frustrating when that follow up that is so important has barriers, AndAnd -- and -- I'm sorry, that that's the case.

DR. EISERMAN: Yeah, oh, it's so challenging at times, Sometimes, with children, with tubes in their ears, it's hard with the OAE probe, to find where it needs to be in order for the machine to do its reading.

any suggestions?

Sometimes, I need to hold it, just right for it to start the reading, What do you make of that question, Terry?

>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, you should be able to screen children with P tubes, actually, just like you would any other child.

I don't do anything special with fitting the probe, on the job, that just -- that probe fit is key for all -- all children.

And, so...

If -- if they refer with those tubes in their ears, then, it's most likely, probably, due to middle ear disorder for which the tubes were -- were placed, but we -- we -- it gives us also the opportunity, then, to make that referral and -- and they can ensure that either tubes are functioning working, or if there is still some middle ear health issues, that -- that need to be addressed.

>> Dr. Terry Foust, AuD, CCC-A/SLP: But we should be able to place the probe just like we would for -- for any other child.

And have it function, and get that refer or pass or refer --

just knowing in -- in -- the refer cases, that there's probably a higher probability that it's middle-ear

>> DR. EISERMAN: So this next question comes out of -- a concern, we all share and that has to do with the costs.

Of equipment, and of these disposable, for OAE, the disposable probe covers, are there any places, we can purchase less-expensive ear tips, for the welsh Allen OAE screener, the cheapest is nearly a dollar per ear tip on MEDLINE?, So, there's two pieces to this, question, right?

Terry, the first is a cautionary one, that, you have to purchase the ear tips, that, go with your particular screener, you might see them for another, and think, "Oh, if I had that screener, they're cheaper, I'll buy those." You can't interchange them.

You'll get faulty results if you do that.

So you really do not ever do that.

As far as finding cheaper sources -- Terry, what -- what advice do you have?

>> Dr. Terry Foust, AuD, CCC-A/SLP: Yeah, thank you, so making sure that they are probe covers that are manufactured for your machine, but then, second, I -- you -- I would do some shopping, because, they are -- there is some variability.

There. So, there is -- I would -- you can look at E3 Diagnostics, you could look at School Health, you could look at Booth Medical, but, there -- there's, you know, various vendors that will well sell the supplies, for the --

for this equipment.

I will say, that that Column A, that you -- that it looked like the majority of you were all using -- has probe covers that are sold by some of these other vendors, for that specific machine, so there's probably more pricing opportunity, to look at across those, and, probably, less opportunity as you go further to the right of the chart that William showed you.

But it is worth shopping, For -- like, a across vendors that support otoacoustic emission screening equipment.

>> DR. EISERMAN: We are at the bottom of the hour, which means, we have been on for 90 minutes, now, and I know, many of you have other places to go, and be.

We hope this has been helpful.

If we can be of further assistance, to you, feel free, to message us through our Web site.

Also, note that, next week, on Tuesday, February 27th.

We have an introductory webinar, in which we will be, talking about a lot of these same things, but more from a beginning perspective.

You're welcome to join us there, if you would like, to continue a dialogue.

And encourage people that you need, who need to know more about this, to attend this webinar.

We're really happy, that we're able to provide these services, for you, we're no longer really funded to...

Provide training, or technical assistance, in the way we just have done.

But because we have seen this ongoing need, We are just doing this, because, we want you-all to have success, And to do whatever we can, to help minimize some of the frustrations, that go along with trying to implement evidence-based practice, just because it's evidence-based doesn't mean that it's easy.

And so... if we can -- if we can provide any other support, please let us know, Also, know -- if you go to kidshearing.org, and look at the training options, you'll find ways, to get more information about how to get comprehensive training, in OAE, and PureTone screening, Gunnar.

>> This is Terry, can I interrupt really quick?

>> Yeah.

>> Dr. Terry Foust, AuD, CCC-A/SLP: I just did a price check on the last question and School Health sells the ones, for the Column A, equipment, 100 count for 36.99, so, School Health, could be a resource for those of you that have some of that equipment.

>> DR. EISERMAN: Oh, yeah, that's a really good price, okay, that's great, before you all runoff in the -- in the chat box, there is a link there, to give a quick evaluation.

To today's webinar, and, that will generate a certificate of attendance, so, if you want to document that you were with us today, go, and -- and complete that; and -- thank you, everybody, thank you, to our interpreter and -- interpreters and captioner, thank you, Gunnar for your background technical support, and Terry, of course, as always, thank you.

For being so helpful, we hope we'll see some of your colleagues, next week, February 27th.

In this same place remember this was…