

So for those of you who have signed on early, you're in the right place for this Hearing Screening Practices for Children Ages 0-5: Refine Your Skills and Address Your Questions.

We're going to be starting at the top of the hour in about 15 minutes.

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So, you can just get your volume adjusted to your liking now; and we'll get started at the top of the hour.

(Dr. William Eiserman) [STAND BY FOR LIVE CAPTIONS]

Terry Foust, if you have a moment to check your e-mail, I would love your input on what I sent.

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DR. EISERMAN: For those of you who have just signed on, you're in the right place for today's webinar, building on your experience with evidence-based hearing screening practices for children, birth to 5 years of age.

We're going to start at the top of the hour.

(A pause), That's in about ten minutes from now.

So for now, just get yourself comfortable; and, your volume adjusted to your liking, You'll notice that there is a live transcript option on your screen, that's a way, to -- activate the captioning for today's Presentation, if that would be of benefit to you.

(A pause), an electronic voice: Recording in progress.

Dr. Eiserman: We have people signing in at a fairly rapid pace right now, so we're going to be patient as people sign-on here....

And we had over 1300 people register for this Webinar from all across the Country; so, we are delighted at that response.

>> Dr. William Eiserman:

(After a pause), Today's webinar is going to allow you an opportunity to type in some questions when we get to the point in our webinar, where we will be responding to those questions, so, we invite you to hold tight for now.

Given the large numbers of people that we have on here, we hope that we'll be able to handle all of the questions that come in; but, I think we're able to anticipate a lot of the issues that you wanted to get us to respond to; and, for those of you who submitted questions, In advance, we have been able to incorporate a lot of that information into today's Webinar.

>> DR. EISERMAN: We are just getting started.

We haven't started quite yet.

This webinar is being recorded; and that means that it will be available for you, to review, or to share

with others.

In the next couple of days.

And it will be available on infanthearing.org, so know that you'll be able to share this information at another -- after our webinar is over.

But, again, for right now, if you wouldn't mind, holding your questions, we don't have the bandwidth to respond to everybody right now, so, unless you have a technical issue --

and please, if that's the case, then, by all means: Let us know and our technical person who is on, will be able to assist you with that.

We're going to start here shortly.

(A pause), notice that there is a Live Transcript option, on your screen, which will allow you to look at captioning, if that is helpful to you, during today's Presentation.

So, you can click on that.

If that is of use to you.

>> DR. EISERMAN: And then you can adjust the proportion of things as they get displayed on your screen.

-- (a pause), Terry, can I do a sound check with you

>> TERRY FOUST, AUD: Yes, Hi, one two, three, this is Terry, thank you, William

>> DR. EISERMAN: Sounds good.

Thank you.

DR. EISERMAN: As I mentioned a moment ago, we have people signing on at a very rapid pace right now.

And we had well over 1300 people register for today, so I just --

I'm going to hold off just another minute to get started; so that, everybody has a chance to shift gears from whatever they were doing, up until this moment.

Get settled in.

Adjust their volumes, and take a deep breath.

We sure appreciate everybody who has registered for today's Webinar.

And hope that we can provide some useful information.

As I mentioned a moment ago, today's webinar is being recorded.

And what that means:

is that, on infanthearing.org, you'll be able to go, and review today's webinar, again, share it with others, who weren't able to attend live with us today.

So if anything distracts you or takes your attention away during today's webinar, never fear, you'll be able to view this again, and -- give us a couple of days to get it posted, and then it will be up there.

Infanthearing.org, is where that will be.

(A pause), I'm going to continue to just speak, for a bit, so that everybody has a chance to adjust their volumes while they get settled in.

I'm going to give it two more minutes, and then we'll get started.

DR. EISERMAN: As I mentioned a moment ago, we are going to open up the Floor for questions,

twice, during today's webinar.

And so -- we ask you to hold your questions until we do that.

I'm hoping we can anticipate some of your questions, and, thereby, forego the need for you to type it in.

For those of you who submitted some questions in advance, we appreciate that, and, have attempted to build-in answers to those questions.

In our presentation.

But if there's something we didn't address, or something that comes up for you, during today's conversation, you'll be able to do it at that time.

So...

I think we should get started.

Honor everybody who is here on time.

>> DR. EISERMAN: I'm William Eiserman, and I am the Associate Director of the National Center for Hearing Assessment and Management.

And, the Director of the Early Childhood Hearing Outreach Initiative also known as the ECHO Initiative at UtahState University.

Before I go any further, I just want to cover a few, of the logistics for today.

Today's Webinar for those of you who have just signed on, is being recorded.

So that means, that, in the next couple of days it will be available for you to review again, or to share with people, who aren't attending live.

On our Web site, infanthearing.org, so jot that down.

And, you'll know that you can go there, and if something takes your attention away, during today's webinar, never fear, you'll be able to review it again in a couple of days.

(After a pause), at the end of today's webinar, you'll have an opportunity to give us an evaluation, feedback, very quickly, that will also generate a Certificate of Attendance for today's webinar.

So if that is important to you, be sure to not sign off too early, because at the end, that link to that survey, and, Certificate-generator will appear for you to use.

And, we will be opening up the Floor twice today, during -- for typed-in questions that we will, then, respond to.

So, hold your questions, until we invite them, if you would so that we can be as efficient as possible, and, hopefully, we'll address your question before you even have to ask it.

So... I'm going to turn off my video.

So that you can focus your attention on the slides.

They're much prettier to look at, than I am.

[LAUGHTER].

>> DR. EISERMAN: And so let me do that, and then, I will proceed.

So as I said, my name is Will Eiserman, and I'm the director of the ECHO Initiative at UtahState University, which is housed in the National Center for Hearing Assessment and Management.

NCHAM currently serves as the early-hearing detection, and intervention, National Technical

Resource Center, which is funded through a cooperative agreement with maternal and child health bureau; starting in 2001, for about 20 years, the ECHO Initiative served as a national resource center on early hearing detection, with a focus on supporting early-Head Start, and Head Start staff, in implementing evidence-based hearing screening and follow up practices and we are delighted to be able to continue to make our resources, and other learning opportunities, like this one, Available-to-staff in headstart programs as well as to anyone, from, other early parent education settings who can put these resources and learning opportunities, to use.

>> DR. EISERMAN: Now I'm joined today by Dr. Terry Foust who is a pediatric audiologist, and a speech-language pathologist, who we have been lucky enough, to have as our consultant, and, stand-by trainer and good friend of the ECHO Initiative since our very beginning, so Terry, say a few words for us!

>> DR. FOUST: Thank you, William, I appreciate that.

It's been, a real, privilege to be associated, and be part of the ECHO program.

And, as William said, he and I, along with other ECHO team staff, as well as many local collaborators have provided training in nearly every state.

And it's amazing to think that it's really involved thousands of staff, from early Head Start, Head Start, American Indian, Alaska Native and migrant Head Start, and many other early, care and education programs over the years.

We are always encouraged, as we are today, by the huge amount of interest that there is, in establishing, evidence-based hearing screening programs, so that children with hearing-related needs can be identified, And served.

(A pause), DR. EISERMAN:

Today's webinar is primarily intended for those of you, who already have some experience in implementing, evidence-based hearing screening for children, either in the birth to three age range, the 3 to 5 age range, or both.

We're delighted that we have well over 1300 people registered for today's webinar; and, many of you have submitted questions, in advance.

And are responses to which we've tried to incorporate into what we have planned for you today.

We should have, ample time to take additional questions, if others come up, during our Presentation, so, if something comes up, while we're chatting, Jot a note, and if we don't answer your question, then you can share it with us, when we invite you to do so.

>> DR. EISERMAN: (After a pause), so, we also notice that some of you, are folks that are new to doing evidence-based hearing screening, and if that's you, by all means, we welcome you to stay throughout today's webinar.

But we also want to alert you, to the fact that, on February ninth, we are having an Introductory Webinar, that will present the topic of "evidence-based hearing screening for children throughout the birth to 5 age range", starting at the very beginning.

So, you'll see the link here, for registering for this webinar.

We'll put it in the chat, as well, Gunnar, if you can do that, that would be great.

And we invite you, to -- to come to that instead, or in addition to today's webinar; and by all means, share it with other people who you think would benefit from this.

If you do have introductory questions...

That's the webinar, where we will be focused on those.

So, today, we're going to organize our time around many of the questions, you all submitted.

We will present some information about each of these topics.

After each topic, we will check in with you to see, if you have any additional questions, before we move on.

We're going to start with a brief review, for our newcomers, to evidence-based hearing screening, on the purpose of hearing screening, (an electronic tone), and what the recommended methods are.

We will, then, turn our attention, to a review of issues, pertaining to using Puretone Audiometry, and to questions submitted by those of you who are screening children 3 to 5 years of age, with that method.

Since many of you, are getting involved with doing screenings for a bulk of children, this -- this spring, we'll go over some of the key steps you want to complete, to prepare for this.

We'll, then, review the steps and the procedure, and address the questions you raised, about puretone screening.

After we address any questions you have about puretone screening, we'll, then, address otoacoustic emissions or OAE screening, since many of you, are also....

Doing this screening, we're going to overview the steps, one more time.

As you prepare to do a group of children.

We'll, then, review the procedure.

Offer some helpful hints for screening.

And then, we'll delve into your questions about children who may be challenging, to screen.

And other issues, you've raised.

That will be your next opportunity to ask some additional questions if you have any.

>> DR. EISERMAN: Next we'll talk about the follow up protocol which relates to everyone, regardless which screening method you use.

It's the same recommended protocol for -- by the way, for those of you for when a children -- when a child doesn't pass a screening.

Regardless of which method you're using.

We'll address the follow up steps, and, the questions you raised about how to communicate with parents about screening results; how to appropriately-encourage follow up action; and how to address interfaces with healthcare providers.

(After a pause)

>> DR. EISERMAN: Oops.

We're going to wrap up by reviewing resources we have online to help you further, and address many questions that you have.

I'm going to have this sidebar appear throughout the session today, to help you -- help remind you of

the topic areas that we are talking on, at that moment.

So that you can target your questions, to be addressed at the right moment.

So, let's get started.

You've likely seen this graphic before, we like 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 being served in early-childhood education, in healthcare settings often without their hearing-related needs being known.

Hearing loss is, an invisible condition.

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

And which may not?

(After a pause)

>> TERRY FOUST, AUD: William the short answer to that question is that early care and education providers can be trained to conduct evidence-based hearing screening which you see depicted here in these photos.

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

So you'll recognize the procedure on the left is being otoacoustic emissions or OAE hearing screening and that's the recommended method for children, birth to three years of age.

And increasingly recommended for children 3-5 years of age as well.

Now, 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 years of age and older.

And you'll still see it in many early-care, and education settings, and providers, using that.

Now, as William said, we'll be talking about both these methods, both of these methods today.

Keeping in mind, that the hearing screening process does not diagnose hearing loss.

But it does identify children who need further follow up either by a healthcare provider, or an audiologist, with that ultimate aim of diagnosing a hearing loss, if in fact, that exists; and that can -- connecting these children to the interventions services that they need.

So your screening process is the first important step in that process.

>> DR. EISERMAN: Some of you have asked, do I need to be certified to do screenings?

That tends to be a state-specific issue.

We don't know of any states that require that.

But there are some state guidelines that can influence your practices so we always encourage you to check that out.

A good way to do that is by contacting your state's newborn hearing screening office.

Or, what's called "the early-hearing detection, and intervention coordinator", also known by acronym as the EHDI, or EHDI (eddy), coordinator, we have a link to those offices on our Web site, which I'll be showing in just a bit. Some of you have also asked about how you can 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 child's

hearing can change at any time often without us even recognizing it.

About three children in a thousand, are born with a 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 doubles between birth and school-age; from 3 in a thousand, at birth -- to about 6 in a thousand by the time children enter school.

>> TERRY FOUST, AUD: So we really can't only screen for hearing loss at birth.

We need to screen throughout early childhood, because hearing loss can occur at any time, as the result of illness, physical trauma, or environmental, or genetic factors.

This is often referred to as "late onset hearing loss."

Simply meaning, that it's acquired after the newborn period.

And, again, similar to the subtle changes that can occur in vision, in any of us, a child, can also experience a change in hearing ability that we want to identify, we want to identify it so they have full access, to language, and all of the information that they are exposed to as they learn and grow.

>> DR. EISERMAN: And so that information is really helpful to share with parents, if you're trying to encourage them to do follow up.

(After a pause)

>> TERRY FOUST, AUD: Yes, so, again, screening is simply that first step in the process of identifying a disability, such as a hearing loss.

And since no screening method is 100% effective in identifying possible areas of concern, parent or caregiver concerns always overrides a passing screening result, no matter what screening method is used.

(A pause)

>> DR. EISERMAN: Any conversation we have about screening, and follow up should always begin with a reminder.

That hearing screening methods aren't perfect.

and that whenever a parent or a caregiver expresses a concern about language, or hearing, children should be referred for a more thorough evaluation.

Even if -- as Terry said, the Child passed the hearing screening and that is true, even with the highly-reliable hearing screening methods we're talking about today.

>> TERRY FOUST, AUD: Yes, and it's also important for us to acknowledge, right upfront, that for any number of reasons, there will be an occasional child that you just simply can't manage to screen.

After you've tried everything you can do.

And you've had a colleague try as well, if possible.

You'll be faced with that dilemma of what to do.

Just -- we'll get that hard-to-complete screening child once in a while.

So here's our recommendation about that question, which some of you raised: If you aren't successful

screening a child, refer that child to someone who can.

Often that will be a pediatric audiologist.

Keep in mind that sometimes the children you may have difficulty screening are actually the very ones who have a hearing loss, so we really don't want to skip them and just try next year.

>> DR. EISERMAN: So we just mentioned having a pediatric audiologist in the picture.

A pediatric audiologist, if you don't know, is a person 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.

We recommend that all programs consult with a local audiologist to help develop and oversee your hearing screening and follow up activities.

They can help you with equipment questions you might have.

Consult with you about specific children who aren't passing your screenings; and, importantly:

Maybe one of your resources, when you need to refer a child for further evaluation.

Or, one of those children, that are difficult to screen, as Terry was just mentioning.

Now, on our Web site, kidshearing.org, you'll find the link for find an audiologist.

Which should help you.

(A pause)

>> TERRY FOUST, AUD: Now, some of you submitted some really great, but very specific questions about the error messages on your particular equipment.

And, while I acknowledge that...

It's important to get answers to that, that's difficult for us to address, in a group setting remotely like this.

And so, we recommend that you pose those questions -- those specific questions about error messages on your equipment -- to your -- the person who sold you that equipment.

While equipment distributors and salespeople are not who you should look to for the comprehensive training you need to develop your screening program, they can absolutely help you understand your equipment's functions; its error messages, and things like that.

So having access to both a pediatric audiologist and your sales rep, can be really helpful for different reasons.

So we encourage you to have their contact information ready for when you need it.

And sometimes, the equipment manual is really helpful, as well.

>> DR. EISERMAN: And when we're talking about error messages, we're pretty much referring to OAE equipment, Of which there are a number of different brands, and models.

And that's why we can't get into the -- the nitty-gritty, but one thing to keep in mind -- is that, most of those error messages, are responded to in the same way -- and that is -- try again!

And -- and we'll be talking about all of the steps you want to check, before you try again, but....

Those error messages aren't quite as different in their actual meaning, as they seem to suggest they are.

Now, Terry, while we're on the topic: Some people submitted questions about screening children, with PE tubes; so let's just answer that question right now!

>> TERRY FOUST, AUD: Yes, yeah, that's great.

So, yes, you can absolutely and should -- screen children, whom you know, have PE tubes.

It's, actually, one way to find out, if those tubes are doing the job that they have been put in to do.

So children with PE tubes should pass hearing screenings, if the rest of their auditory system is functioning normally, so for those of you who are using the OAE screening method, you'll want to look at your equipment manual, just to make sure, if you have to do an extra button-push, to adjust the setting for screening an ear that has PE tubes.

Most do not need that adjustment, but there are a couple of pieces that do.

So be sure to check that out.

Some equipment as I said, just requires a temporary adjustment, while the other brands do not, but, yes, you can and should screen children with PE tubes.

>> DR. EISERMAN: Okay, so we have two screening methods that we want to talk about today.

By way of big picture, if you're responsible for children who are under three years of age, the recommended method is OAE Screening, which you see on the left here, (referring to PowerPoint) and if you're responsible for screening children 3 years of age, or older, historically, puretone Audiometry has been considered the recommended method for that age group.

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

>> TERRY FOUST, AUD: Several of you have asked about why some programs that you're aware of, are no longer using Puretone Audiometry with that three-to five-year-old population.

And, you've seen them switch to OAEs.

And I think that's because, there's a growing recognition that although the puretone 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 -- the research has shown, that about 20 to 25% of children, in that three to 5 age group can't be screened with this methodology because they aren't developmentally-able to follow the directions reliably.

And that's really been our experience, as well.

And in those instances, then, OAE screening is the preferred method for those children.

And this was emphasized a moment ago, we want to screen every child, even the ones that we find challenging the screen, right?

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

Or....

Alternatively, You'll need to have a means for systematically-referring all of those children to audiologists, who can perform the screening, which, frankly -- can be a bit challenging, in its own right, if you're referring 20% of your children to an audiologist for a screening.

(A pause)

>> TERRY FOUST, AUD: Yeah, so I think, just to simplify things....

More and more audiologists are recommending the use of OAEs uniformly with all children three years of age and older, it's quicker than puretone screening both to learn to do and to actually implement and it's far more likely to be a method that will work across the board, with all of the children in that three to 5 age group that you would be screening.

And it's equally as effective.

>> DR. EISERMAN: If you, or your program are still undecided, or are grappling, again, with the question of which method to use, primarily, for children in that 3 years of age, and older group -- we encourage you to carefully-review a document that we have on our Web site that compares OAE screening, and the puretone screening method, for this population.

Now, here's an important note:

Some states -- some of you have asked about regulations --

Some states have regulations about what methods are to be used.

Based on age.

Requiring puretone for children three years and older.

At least as the primary method.

So, you need to check with your state, if you're considering OAEs for the 3 to 5 age group.

And you can do that by contacting your states at newborn hearing screening program I mentioned before.

You'll find the link to that state office on our Web site.

And, on another note: We had a question about whether there are any other recommended evidence-based methods, that should be considered.

So Terry, what's your response to that?

>> DR. FOUST: Currently, these two procedures -- or screening procedures that we've talked about, these methods, otoacoustic emission screening and Puretone Audiometry screening -- are still the recommended methods to be used for hearing screening, so the short answer is, no, there aren't any other recommended evidence-based methods that should be considered for these age groups.

into our first screening method and review it.

So let's look at puretone audiometry screening.

To conduct puretone screening:

We are, first, going to take a look at the ear, the outer ear -- to make sure that there's no visible sign of infection or blockage.

And, by the way, you'll always want to do this first, regardless of which method you use.

And then if the ear appears normal (next slide), then use the screener, going to instruct or condition the Child, how to listen for a tone, and then respond by raising a hand, or placing a toy in a bucket.

Once you -- once you have seen or observed that the child reliably responds to the sounds that are being presented, just as you instructed and you see that response, then the actual screening has started.

During the screening process:

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

On each ear, and we note the Child's response, or lack of response, after each tone is presented.

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

(A pause), during the screening process, this listen-and-respond-game is repeated at least twice.

Again, at three different pitches on each ear; noting the Child's response or lack of response after each tone is presented.

And then, if the Child responds appropriately, and consistently to the range of tones presented to each ear, then the Child passes the screening.

>> DR. EISERMAN: We want to remind you of some of the things you'll want to be able to be sure to address, as you get ready to start screening a group of children.

To begin with -- and this goes for everyone, regardless of which method you're using -- be sure to refresh yourself on the resources that are available on our Web site, kidshearing.org, (an electronic tone), this is the landing page for kidshearing.org, where you'll find a range of resources in -- including general information, if you're -- if you're needing to acquaint new Staff or refresh yourself -- so, we'll just go through these -- this page for a minute, and see what we have here, (scrolling), We have big-picture resources, you know, getting the introductory information covered.

You'll see where to find an audiologist right underneath the big picture resources, and then information about screening equipment.

(After a pause), then, we have information about accessing training, where you can go to get online training for either of those methods.

(A pause),

>> DR. EISERMAN: In the next category of resources, there's a variety of things for preparing to screen, checklists for how to get ready for a day of screening.

That, I think, is useful, if you -- if it's been a few days since you've screened the last time.

The protocol Guide is there --

we'll be talking about the Protocol in a bit here.

Forms you can download and use.

And -- resources, for sharing the results with parents, healthcare providers, or audiologists.

And then last, our tracking tool and tools for monitoring your program's quality; so, be sure to review those periodically, make sure you're putting what you can use to best use.

(A pause),

>> Dr. Eiserman: As you prepare for a round of screenings, here's the checklist for puretone screening, that you would want to work through, You'll want to go through each of these steps, there are a lot of steps to puretone screening, so you really want to make sure you are following these steps,

exactly.

For those of you who only do OAE screening: You can really sympathize with people who are doing puretone screening, because it's not an automated process, the screeners have to step through the functionality of their equipment manually.

(A pause), so, in getting ready, you'll want to prepare a quiet environment.

You'll really want to look at the sound level and do a sound level check on your room.

Most smartphones have apps you can download, a -- a sound meter from, to -- to check the decibel level.

you'll look for the documentation forms.

The screening toys that you need.

And any universal precautions that you want to have in place from a hygiene perspective, You'll want to get your equipment out, and the seating arranged for the Child so that they can't see the screener's hands directly; and to also be sure that there are no reflective surfaces in the room that might inadvertently cue the Child on when they are to respond.

That's a really important one.

You'll want to condition -- look at the condition of your cords, the jacks and the headphones, and make sure that it's all intact.

And you'll want to clean those headphones, and then do a -- a listening-check on yourself.

To make sure that the headphones are working as you would anticipate they are.

And you'll want to do that before each screening session.

For the day.

Not before each child, but at the beginning of a round of screening.

You'll want to look at yourself -- yourself listening-check, you want to --

look at the tone type, and make sure it's set to either the pulse warble or frequency modulated....

And that you have the tones presented to the right ear, First, and then the left ear.

>> Dr. William Eiserman: And then you'll want to set the tone type to a steady state, tone presented, continuously, to the right ear, while cords are moved or manipulated to check to see if there's a sound break or a crackle in the -- or distortions, based on the condition of those cords.

And you want to do that for both ears.

(a pause),

>> DR. EISERMAN: So have a look at this Puretone Screening Checklist, and work through each of those items as you do your screening.

(A pause), Terry, we've pointed out that the conditioning process in puretone screening, is essential. Some people, on today's webinar, have asked how long the conditioning process should take.

As a part of the total screening.

Can you comment on that?

>> DR. FOUST: Yes.

So children -- children, who are going to be successfully-screened using the puretone method, they ought to be able to be screened in about 10 to 15 minutes maximum.

So that conditioning should not take much more than five minutes, even 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 there.

You can also try, on another day, if you have the flexibility to do that.

Just remember that if you can't screen the Child, then we'll need to do an OAE or refer the Child, to someone who will be able to successfully screen the Child.

And most likely that would be a pediatric audiologist.

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

So one way or another we want to be sure that we get every child screened.

(A pause), Now once the Child is conditioned....

You want to start the actual screening process.

And during the screening process, as we mentioned, this listen-and-respond-game, is repeated and it's repeated at least twice, at three different pitches on each ear.

And we note the Child's response.

Or the lack of the response --

after each tone is presented.

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

(A pause) and it really is critical, as William mentioned that you follow these steps exactly, and we recommend always starting with the right ear, just to avoid confusion for yourself, if that becomes a habit.

The goal of the screening process is to test the Child's hearing at 3 pitches, or frequencies.

And those are 2000, 4,000, and a thousand hertz; and we screen them in that order.

The volume level during the screening must be set, it needs to remain at the 20dB level, that's the screening level, for all of the tone presentations.

You'll screen the right ear first; and then the left.

And, again, in order for each to obtain a pass result for each frequency, the Child needs to indicate the correct response at least two times.

And we don't want to give the Child more than four tries to get it right.

In order for the Child to pass the screening, overall, they need to get a pass on every pitch, on both ears.

So if this is unclear, or if you need a refresher, then we really encourage you to seek some additional training, and to practice with this, because it's critical that we all understand it.

The training resources that William mentioned, linked --

that are linked to on kidshearing.org -- they will also go into detail on all of this.

So, what you see here, on your screen, is an example of the actual screening steps, that need to be documented, for each ear, as you screen.

And, again, based on these results, the screener determines if each ear passes or not.

The device, itself, won't produce that result as is the case, with OAE screening.

And then we always want to be sure that we document the results as we go; just as you see here.

Our screening form permits you to do just that.

(A pause),

>> DR. EISERMAN: Now, this is the screening form you'll find on our Web site that you can just download and use, if you want.

It takes you, step by step, through all of the processes of the puretone screening that Terry just outlined: Helping you follow these steps exactly.

You'll notice that the form also includes the rules for obtaining passing results over on the right, so if you don't remember the rules, just look at the form.

Terry, one of the questions from our participants was, what if a child does fine in responding at first? But then becomes distracted, or, you observe is no longer engaged, in the screening, say, after the first couple of pitches.

What do you do?

>> TERRY FOUST, AUD: Yes, sure, that can happen.

So you want -- you want to document as far as you've got.

And then you can do one of several things: You can go ahead and use your back up method, if you have OAEs instead; or you can come back to this child on another day, and continue where you left off.

Just making sure, however, that you always start by repeating the conditioning process, we want to make sure they understand that the best that they can before you continue with the actual screening steps, where you left off.

>> DR. EISERMAN: And you have to do the same thing, if there was a sudden increase in, say, environmental noise that is outside of your control, too, right?

Terry?

If --

>> Terry: Yeah

>> DR. EISERMAN: If you can't continue to screen at that time, you've got to come back at another time, picking up where you left off

>> TERRY FOUST, AUD: Yes, absolutely

>> Dr. Eiserman: If a child completes the screening and meets the past criteria, you're done with that child.

If they don't pass, then you'll be referring to the follow up protocol, that we'll be going over in a moment, and which incidentally, again, is identical, for both puretone, and OAE methods.

All right.

Let's pause for a moment and see if those of you who are using the puretone method have any other questions, specifically about the use of the puretone method.

preparing the screen; conditioning; conducting the actual screening; documenting the results.

Do we have any -- any questions about -- about Puretone Screening that we can address here?

(A pause), And if not, we'll proceed, and talk about OAE screening.

>> (A pause), DR. EISERMAN: So the first question is can you go back to retest the puretone?
I'm not exactly sure what that means.

Terry, do you --

>> TERRY FOUST, AUD: Yeah, thank you, I -- I'm wondering about this, in two ways.

One (1), is if you were not feeling confident in the results and you wanted to go back and retest --
absolutely, go back, and retest.

If you weren't confident in the Child's conditioned response for example, you can go back and retest,
and then, also as we just mentioned (2), that if you got reliable responses, say, at one pitch, and then
perhaps, the lawn mower started and you weren't in a -- in a conducive environment anymore, then
you might come back and retest, so, yes, you can retest

>> DR. EISERMAN: Great, thanks, Terry, the next question is, I've been trained in my district to screen
at 25 decibels.

Is 20 decibels, or 20DB the standard we should be using?

>> TERRY FOUST, AUD: 20Db, is the consistent standard and recommended by the American
academy of audiology as well as the American Speech Language Association, we know that on
occasion that some guidelines have been adjusted in the past, because of, noise-levels, perhaps in
certain rooms, And we -- we always want to be careful with that, but the -- I guess the bottom line
answer is that 20dB is the --

Is there -- benchmark standard.

>> DR. EISERMAN: The next question is, can you explain why the order is 2000, then 4,000 then
1,000?

>> TERRY FOUST, AUD: Sure, because, in most cases, the Child will condition easier, to -- to 2000
hertz.

And, real quick answer is that most hearing loss will be high frequency, or, may affect 4,000 first, so it's
-- if they had a -- a hearing loss, we want to screen, in a frequency, where they're most likely to hear
and not have -- so that we can get the test.

But the -- the bottom-line answer is it's the frequency that they are most likely to successfully condition
at versus the other two.

>> DR. EISERMAN: Great, thanks, Terry.

So coming back to the -- to the individual who asked the question about 25DB, versus 20; what does
that mean, then, if we are screening at 25dB?

Does -- is that considered not passing?

What -- what do we do about that?

>> TERRY FOUST, AUD: You know, if we stay with the benchmark-levels of 20DB, then a 25 would
not be a pass; and, I would probably see if there's a review and -- do a literature review, and reassess,
what those passing levels are for your particular program.

>> Dr. Eiserman.

The next question is also related to that.

What about screening at the 25dB level at 500 hertz?

>> TERRY FOUST, AUD: 500 hertz is not necessarily -- it's not included in most screening protocols. And so, as you can see on our form here, we screen at 1, 2, and 4, some programs have included 500 hertz.

It's a more difficult level to screen because the noise ambient noise in the background often referred to as the noise floor often has energy concentrated around 500 hertz.

And so -- but the recommended protocols don't include it.

I know some programs have added it.

(A pause),

>> DR. EISERMAN: So the next question, is, would you attempt puretone screening first before OAEs on three to five-year-olds?

Or, just do one or the other?

>> Dr. Foust: It depends on what equipment you do have.

And -- -- and, so, if -- if you have only puretone screening, of course, you'll do that.

If you have OAEs but your children, are -- seem developmentally appropriate and well-functioning, you can -- you can do your puretone screening, and have the OAE as a back up.

(A pause),

>> DR. EISERMAN: So -- are you saying, that they have to raise their hand twice for each frequency? To pass at each frequency?

>> TERRY FOUST, AUD: What we're saying is we need a good, reliable response, paired with the presentation of the stimulation; and that needs to be reliable, at least twice, to pass.

>> DR. EISERMAN: Yeah, so right here, you see the rules for each frequency, and they -- they need to have two passes, two right --

you know, raising their hand, twice out of a total of four attempts.

Once they have done it twice, you can move on.

Like, in that -- that lower right hand -- thousand hertz you see that they responded to the first two attempts, and so they didn't mean to keep trying at that one.

At that level.

But, yes, that's -- the correct protocol.

And this is one of the challenges of doing this screening, is, you know, going through all of these repeated attempts, to validate a child's responsive.

.

/* response, if you're unclear about this, I would encourage you, at the end, we'll show you, again, where our training --

resources, are.

That go into this, in much greater detail; so, this is what implementing evidence-based practice is all about, and we --

we appreciate the challenges that this represents.

-- and maybe, that sinking feeling, if you haven't been doing it quite correctly -- as you learn, but you're

learning.

And this is an important step in that process.

(After a pause)

>> DR. EISERMAN: The next --

and I think the final question for this -- and then we're going to move on -- is, what about screening at 25, when you've got background noise?

We screen high school students in bulk, at their prep day, and there is often a lot of background noise.

So do you change the level, Terry, when you've got background noise?

>> DR. FOUST: Yeah, thank you, there's a lot of emerging research on the effects of slight to mild, moderate hearing loss -- the reason that, the American Academy of audiology, and the American Speech Language Association is screening at those levels is they do want to screen for those low-levels of hearing loss.

And, then they add subjectivity to it, when we just decide, you know, to raise our levels without, you know, measurements of what that background noise is, et cetera.

And I know this is a difficult conversation, or -- it makes things a little bit harder, because it's hard to control those screening environments.

But, those are the recommended levels.

And so I would encourage your programs to maybe, you know, rediscuss those, and -- and make those decisions according to your program, and your health advisory committees.

-- and --

>> DR. EISERMAN: It's really important here, for us to circle back at our goal.

And our goal is not to pass children.

Our goal is to have them screened.

-- as rigorously as we can.

So that those who might have a permanent hearing loss, can be referred to an audiologist, to have it fully-evaluated.

So you're -- having children that don't pass, is not a bad thing.

It's a helpful thing.

so, having a rigorous standard is the goal.

I know that we've been in some workshops, where, we've had people say to us, "I know how to pass every child!" "I just turn the volume up", that's not the goal.

and so, keep that in mind.

We want children to succeed.

But in this case, we want to just know how they're hearing.

And, we don't want to influence that outcome.

Now, one final question for you to remark on, Terry, we've got a colleague of ours --

From the UK, who works in the --

in Uganda of all places!

-- who says that the World Health Organization has recently recommended 30dB as the pass

threshold, And Terry, what do you make of that contradiction between, the standards that are being recommended here within the American Academy of Audiology, and the American Speech Language Hearing Association, and, what our friend is telling us about the World Health organization?

?

>> I think even as we've just seen within programs here, with the questions today, that there is -- there's variability.

Some of that variability has to do with the availability of various pieces of equipment.

Those that are trained.

A lot of factors.

So -- and those, they look at worldwide standards, There.

And, you know, there's going to be some variability.

But I can tell you that 30dB will miss the slight, to mild hearing losses that occur between 20 and 30.

One reason it's important to note that, too, is because we get a child on a regular monitoring schedule so that if that slight to mild hearing loss is progressive, we'll be watching it, and watching for it.

(Terry Foust) so I do know there's some different standards.

But, that's the bottom-line for us: Is that we want to catch kids that may be at risk.

>> DR. EISERMAN: It all comes down to what are you screening for?

And if you only wanted to screen for children who were severely-profound -- severe to profound, (pause), profoundly Deaf, you would screen differently, but we're not really screening only for those cases.

We want to screen for mild hearing loss as well.

And, we have the ability to respond to those identifications, in this country to be able to support children with mild hearing loss.

So, back to our Web site: This is where you'll find some resources related to puretone screening.

(Scrolling) We encourage you to take a look, and get acquainted with these particularly, the -- the training resources that are available, under puretone audiometry screenings; so, check that out.

As well as these others that we talked about before.

>> DR. EISERMAN: There's a checklist for screening skills, that go over all of these steps that we've just been talking about which you'll find on the Web site as well.

So, take a look at that, and make sure you're following all of those, because this is not an automated process.

This checklist is really good to check yourself on.

Maybe, have an observer watch some of the screenings to make sure that you're sticking to this checklist.

And, it's a great evaluation, and retraining refresher tool as well.

>> DR. EISERMAN: All right, let's shift our attention over to OAE screening, as we've already said, this is the recommended evidence-based method for children birth to three years of age.

Terry, walk us through this process quickly here, if you can

>> DR. FOUST: Yes, so to conduct an OAE screening: We, first, are going to take -- just like we did

before, a thorough look at the outer part of the ear.

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

And then if the ear appears to be normal and healthy, then a small probe on which a disposable cover is in place, is, then, inserted firmly into the ear canal, and then there's a button, on your equipment that's pushed to start the automated screening process.

Now, the probe that sits --

It sits independently in the ear, that probe delivers a low-volume sound stimulus to the ear.

And in the cochlea or the inner snail-shaped portion of the ear that you see here, a cochlea that is functioning normally will respond to this sound by sending a signal to the brain; while, also, producing an acoustic emission, and this emission, is analyzed by the screening unit.

And then approximately, 30 seconds or so, a result appears and it appears either as a pass... or a refer.

And every normal, healthy inner ear produces an emission that can be recorded in this way.

>> DR. EISERMAN: So as you prepare to do OAE screening you'll find resources related to that, just as you do for puretone screening on our Web site.

So, again, just take a look at what we have available there.

Again, access to training, and, all of the other kinds of resources.

Are available there.

There's also a checklist.

For OAE screening.

So you can work through those.

If you haven't had your equipment calibrated in the last year or so, you'll want to make sure you do that.

To make sure it's working properly.

Regardless of what screening method you'll be using, you want to make sure you communicate with parents and other program staff, whose cooperation you're seeking.

>> DR. FOUST: Some of you have also asked about how to prepare children for hearing screening, and our main recommendation: Is to just keep it as fun as you can, regardless of which method you're using.

And rather than referring to the activity as screening, or a hearing test, call it a listening game, and, you can engage teachers or parents in some activities that include noticing the Child's body parts, like their ears, and then maybe expand on the idea of what animals have ears, as well.

>> Dr. Eiserman: We have a little listen-up song in fact, on our Web site that you can find there, that basically, you know, is used with the -- the slightly-older children, to get them excited about the day they get to have their ears screened, and played with.

So take a look at that.

>> DR. EISERMAN: This is, again, where you'll find all those resources.

I just keep pointing out, go here.

We have lots of things, that programs have shared with us, that you're able to download, and just use

for free.

So before you create something, check it out here, to see if it doesn't already exist.

>> DR. EISERMAN: Under the screening resources -- you'll find that -- that checklist for getting ready to screen, you'll find a handout for parents about screening, in English and Spanish.

A handout for parents.

I mean, a handout for teachers.

A letter that you can send to healthcare providers about what you're doing; and that's where you'll also find that -- that listen-up song that I just mentioned.

(A pause), Like many skillful tasks, competent screeners can make it look easy and we know that's the case.

But no matter how much experience you have, I know that you've had challenges.

We all have.

A number of you have submitted questions about children you struggle to screen for various reasons, so let's talk, for a minute, about some of those strategies, let's start by taking a good look at these pictures right here.

These children you see here are all being screened using the OAE Method.

What do you notice about where they're being screened?

They're not being pulled out into a foreign environment, that might be frightening or unusual to them.

They're being screened, in everyday educational and home environments where they're already happily-spending time.

And those doing the screening are people they know.

They're teachers, they're home visitors, or health specialists.

That right there, is a really important part of having success.

>> DR. EISERMAN: (A pause), And, in fact, the screening works the best when children are familiar and comfortable with the adult who's doing the screening, where they can play with a toy, be held, or -- or even sleep, while the screening is conducted.

So, we have lots of options.

Now, some equipment is more efficient than others, when attempting to screen, in these various natural environments; but most of them can work, just fine, under these conditions.

Now, there are several keys to successful screening to -- to keep in mind.

Terry you want to go over these four keys of screening?

>> DR. FOUST: Yeah, thank you, William.

I -- I apologize, I've been freezing up here, just a little bit.

But, the four keys to successful screening are -- are here: It's 1) good probe fit, 2), we want to minimize movement 3) and we want to minimize internal noise, and 4) minimize external noise in the environment.

(Sound of click),

>> Now, the goal with proper placement -- is that you have....

A really snug fit.

You want to seal out all of the noise from the environment.

And that means you need to select, as large a possible probe cover, so that when you insert the probe into the Child's ear, you can totally let go of it.

And it will stay in place.

In fact, you have to let go, because if you hold on to it, your touch can loosen it, allowing more noise to get in and disrupt the screening process.

So as you select probe covers, always aim for the biggest ones that will fit in the child's ear canal -- there's no great secret aside from experience and being able to make a good probe cover selection.

>> DR. EISERMAN: Some brands of OAE equipment have a compressable foam probe cover, which, tends to be the easiest, to achieve success with; so, if foam covers are an option, you'll want to try those.

Especially, if you're having trouble with getting that good, snug fit that allows you to let go

>> DR. FOUST: Let me interject William a little aside about probe covers: You can only use the probe covers that are intended for your device.

Even though you may see others on the market, you can only use those made for your brand of equipment.

They're made specifically, and calibrated for -- those, and if you don't, you'll get inaccurate results.

>> DR. EISERMAN: Now, some of you have expressed a concern that you're worried that you could hurt a child by inserting the probe.

(A pause)

>> DR. FOUST: We understand that concern.

But I want to assure everybody that these probe lengths have been carefully-designed so that you don't do that.

So that it's not possible.

Now, a child with an active ear infection may experience pain with a probe insertion, you know, putting that probe in --

but it's one of the reasons why we want to carefully-inspect the ear prior to doing a screening.

But otherwise, probes will not go in deeply enough to harm the Child's ear.

>> Dr. Eiserman.

So you'll find videos on our Web site that review exactly how to do this, so you might want to look at that again and make sure that you insert the probe and you are always able to let go.

>> DR. FOUST: That's right, you always let go and it should stay put; and, you also want to make sure that the cord has been clipped to the Child's clothing so the weight of the cord doesn't pull the probe out of the ear.

Those are two essentials for getting and keeping a good probe fit.

DR. EISERMAN: Of course, as you screen, there will be times when you get an error message as we referred to before.

An error message, or a refer.

And as I said, don't worry too much about what the error message says, because, regardless, you're

going to do the same things, and then try again.

You're going to reposition the probe; you're going to reduce external noise; you're going to check the probe for wax and cleaning it, or replacing it with a new cover.

You're going to quiet and reduce the movement of the Child.

And, you're going to use a unique, quiet toy, to distract the Child.

So don't get too disturbed about what the error message is, just repeat the process.

(After a pause), and you can always elicit the help of somebody else if you're still not having success.

>> TERRY FOUST, AUD: So we've received a number of questions asking for suggestions on how to screen children, that are just challenging to sit still, or for whom you can't seem to complete a screening.

We'll go over some strategies, and then if you have some additional questions we can take them.

There are several strategies that will help make it a positive experience for the children, and for you.

And those are, that we want to create a fun feeling around that screening activity.

So, position the Child, yourself, and other helpers in a way that's comfortable, and that allows the Child's behavior to be naturally-directed.

Use toys, distracters and other rewards effectively and then document the screening results accurately.

Now, let's look at each of these for a moment.

(A pause), in creating a fun feeling --

And William, my slides are slow to advance, so let me know, if I'm jumping ahead

>> Dr. Eiserman.

Yeah, yeah,

>> Dr. Foust.

Okay, so in creating a fun feeling around the screening, that involves establishing rapport with the children, for example, you may tell a child, 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 can hear the birdie sing.

Or if you're working with a group of children, ask the teacher, for suggestions about which child might be the most cooperative and should be screened first, in order to set a good example and a tone for the other children to follow VRMENT .

I just want to say here, that in our experience, this is what I really think you are all great at.

We can teach technical skills, but that natural ability, you all have to work well with children, is really, something I have admired, when we've worked with many of you.

>> DR. EISERMAN: Now, when listening to children's cooperation, you still want to tell them, what you're going to do, rather than ask, if they want to participate; that is really very important: Don't give them the opportunity to say no.

You direct the screening.

You may even suggest to the other children, that they have to wait their turn.

Just like they would with any other fun activity, so, set it up, as a fun activity, and that they get to

participate and be next.

We want to use terms that describe the activity as "fun" and "interesting", avoiding phrases like "test your ears", or -- or saying something like, "It won't hurt." Or, "It won't be painful" because you're likely to get a response that you don't want if you actually bring up some of those -- those kinds of words. You want to position yourself to the side of, or, slightly behind the Child.

Which gives good access to the ears to facilitate probe insertion.

So, you may want to sit on the floor, at the child's level so really think strategically about how you're going to position that child.

You want to have toys and distracters available, and it's really good to have toys that the child hasn't ever seen before, or, only rarely, so that you can really capture their interest.

And present those -- those toys strategically, right when you need them, to be the quietest, and the stillest.

Sometimes you can distract them by just touching them gently on their forehead or on the back of their hand, that -- that will redirect their attention from their ear, to this other thing, that you're doing with them.

Introducing something that captures their attention, through another sense, can distract them, just long enough, so that you can get the screening done.

(A pause)

>> TERRY FOUST, AUD: And also consider playing a child's song on a portable music device by presenting the earbud to the ear not being screened

>> DR. EISERMAN: Yeah, that's another strategy, and now, once you're complete, you want to reward the children with praise, no matter, if they passed or not.

And, you know, it can be really helpful to screen in teams, where one adult is managing the Child, while the other is focused on completing the screening.

(Pause), So... offering choices.

You don't want to offer the Child of choice of whether to be screened or not.

But you can offer a choice about what toy they want to play with; or where they want to be screened.

You can familiarize the Child with the probe, because sometimes there's a little resistance, especially if they have had some prior ear infections, and pain in their ear; have them touch the probe.

Rub -- you can gently rub it on their face, so that they know, that it's soft.

You might want to even -- even simulate the screening on a -- on a doll or a stuffed animal.

To just get them comfortable with that.

>> Now, sometimes, the Child will cry, when the probe is inserted.

You don't have to automatically remove the probe when a child cries.

Even though that may be your impulse.

Instead: You can let the Child relax with the probe still in the ear; and have your ear -- or have your finger, close to the start button, ready to start the moment the Child is silent.

Sometimes you complete the screening from that moment.

Even if the Child continues to be a little fussy.

A child can -- can cry on and off sometimes and the screening may even proceed as long as the probe is still in the ear.

Terry what about aural distracters?

What do you think about those?

>> DR. FOUST:

-- DR. EISERMAN: I'll jump in here, if a child is uneasy about being screened, they can be soothed with a pacifier or even a snack, and you can attempt to screen while the Child is sucking or chewing; this does, however, introduce noise.

So, if you get a refer when you're using one of those aural distracters, you need to rescreen that child, again, without the sucking or chewing going on, Before you can have confidence in that refer result.

Another strategy you might consider, is screening in groups, this can help some children, who may be fearful, about screening, get comfortable with the process, as long as they're seeing others having a positive experience.

So, you want to start, with a child, that you or the teacher is fairly-confident will be cooperative.

And, set an example, that you're hoping for, that it's -- a pleasant enough process.

So if you can create that moment, that can create your efficiency.

Now, sometimes children who have been treated repeatedly for ear infections, or -- or a condition -- other conditions may be reluctant to being screened, and those are the children that you want to either spend some time getting comfortable with, or maybe, have them screened while they're sleeping.

In fact, you don't have to have a reason, to screen them while they're asleep, that can just be a great strategy for screening, especially some of the littlest ones that you're screening.

>> DR. EISERMAN: Remember:

That, if you do not get a passing result, as long as the Child is cooperative, you want to try the ear again right then and there.

Making sure that you get a good probe fit; and a minimized internal and external noise.

Of course, it's very important that once the screening is complete, you're sure, to document the results.

Completely.

And accurately.

Now, in documenting the results:

You want to make sure that if you have an ear that does not pass, you're sure to accurately-indicate which ear did not pass.

And as you'll see in a moment, the -- these forms that we have available for you, to use, directly-correspond with the recommended follow up protocol, helping you know exactly what the next step is in the process when a child doesn't pass until the Child's screening -- and perhaps, the evaluations -- after the screening, are completed.

(A pause), DR. EISERMAN: So we've had some questions about screening children, who have autism; and other developmental delays, Terry, are you with us?

>> GUNNAR THURMAN: This is Gunnar, looks like Terry is having Internet issues so I'm working with him to get him back in

>> DR. EISERMAN: Okay, great, I have a feeling that may have occurred.

So one of the questions we got earlier, was about whether there are any other....

Methods that are recommended, for children, with autism.

And, as with all children:

Really, the OAE Method is -- the best method that you can go with.

And if you can't screen a child with autism, successfully with OAEs, then you would want to refer that child to an audiologist, remember that child with autism, can have a hearing loss also, and that would be really helpful to know.

In some rare instances, there are children, who have been identified with autism, who, actually, didn't have autism, but had a severe hearing loss.

So you want to make sure those children have the benefits of a quality-screening, and if you can't do that, to make a referral for a complete audiological evaluation.

(A pause),

>> Dr. William Eiserman: Now, as you screen children, think about how to arrange the environment to support your screening.

You know, you'll want to have some toys available, other manipulatives, And that can really help.

(Pause), so, our best screening efforts, are only worthwhile, if we implement effective follow up.

So, let's take a quick look at the follow up protocol, to make sure you understand this, and if you have any questions, about that -- and then we'll open up for our last round of questions.

About OAE screening and the protocol, now, one of the good things to remember is that the steps of the protocol, are the same regardless of which screening method you're using.

Puretone or OAEs.

So, these -- this protocol applies to both.

There's one main rule to remember: 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 gotten the results.

Anything else is a child who is in the process of being screened or followed.

So let's walk through the screening protocol, the screening and follow up protocol and the accompanying forms --

Are all available on our Web site, so I'm going to just move through this quickly, and then you can go through the tutorial, and you can look through these documents, really carefully, if you're still unclear about this.

So, we screen the -- we screen the ear; and if the ear passes, then the process is complete.

For that ear.

If the ear doesn't pass, after several attempts, remember we're going to try it again --

During the same initial screening session, we're not exactly sure why.

So, it could be sometimes due to screening error, or maybe a temporary condition like a -- a head cold.

And, it wouldn't be practical to -- to refer every child, who didn't pass the screening the first time to a healthcare provider.

They -- they would be overwhelmed.

So, what do we do?

We screen the Child again, in two weeks.

And if the ear passes at that point, the Child passed.

And they're done.

If, however, the ear still doesn't pass the screening, then further evaluation is needed, and we expect especially in the younger groups of birth to 3-year-olds, about 8% of the children, won't pass this second screening; and will need to have their ears checked by a healthcare provider, using tympanometry or pneumatic otoscopy to see if they have a middle ear condition, maybe an infection nobody knew about.

It's not uncommon, that wax blockage or fluid in the middle ear, has prevented the screening of a middle ear from being completed.

Now, at this point, you'll want to intensify your monitoring of the child's follow up.

Closely-consult with the healthcare provider, to find out the results of the middle ear evaluation and, any treatment that is being provided.

You always document the results of that middle ear evaluation.

You keep in mind that since the ear hasn't yet passed the screening, we still don't know if the inner ear or the cochlea is functioning properly; Most healthcare providers don't have hearing and screening equipment, and therefore, they can't complete the screening process on their end, so you'll want to confer with the healthcare provider about when the ear should be considered healthy, and ready to be rescreened.

After the middle ear evaluation, we conduct a rescreen.

And if the Child's ear passes, it's complete.

And if the ear still doesn't pass, the Child should be referred for a pediatric evaluation from a pediatric audiologist.

>> Less than 1% of the children you'll be screening, will typically go this far into the protocol; but it's helpful to inform the healthcare providers who are involved in middle ear evaluations that they may need to make a referral to the audiologist, should the ear not pass the rescreen after they have been to the healthcare providers.

Be sure to support the parent in getting the audiological evaluation completed provide the audiologist with all of the screening and follow up health-related outcomes, and, obtain a complete report of the audiologist's evaluation.

>> DR. EISERMAN: So that gives you an overview of the complete screening, and follow up protocol, again, 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 gotten the results.

-- remember, although screening can lead to the identification of the most common types of --

of permanent hearing loss, what you're doing, is only a screening.

Any time a parent or a caregiver, or a teacher expresses concerns about a child's hearing or language development --

Referral for an audiological evaluation, is warranted.

>> DR. EISERMAN: So...

Let's see, if you have any other questions here.

About anything we've talked about so far.

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remember our Web site here, we hope, after we're done today, you can go and spend some time looking at the resources that are available here.

You can find access to training there, if you're needing more or if you have new staff, refresher training, That's all available there.

And then, other practical tools for implementing quality-screening.

Remember, having the device isn't what makes it evidence-based.

It's using these devices appropriately.

That make what you're doing evidence-based.

So spending some time to ensure that you're following these checklists; regardless of which method you're using --

Is the key to being sure that you're implementing evidence-based practices.

So if you have more questions here, (pause), Is Terry on yet, Gunnar?

>> GUNNAR THURMAN: He is not, his Internet went completely out.

It looks like

>> DR. EISERMAN: (Laughing), okay.

All right.

So, I will attempt to answer whatever technical questions I can.

I'm not the audiologist.

Terry is.

But I think I can answer a lot of these questions.

So the first clarification question, is -- I'm on the kidshearing.org Web site, is this the correct Web site?

For the resources you've shown?

Yes, it is.

It's a part of the infanthearing.org Web site.

So, both of those Web sites are -- are siblings to each other.

And you'll find at kidshearing.org, it takes you straight to the early-childhood resources.

If you want to find the recording for today -- today's webinar, you can find that on infanthearing.org.

The next question is:

In my experience, the OAE screening does not work with even slight background noise, even from a nearby room.

Is that normal?

And what suggestions do you have?

>> Dr. Eiserman.

So, as we mentioned, not all equipment is equally...

Effective.

In working in some of these natural environments.

But most of them do well.

It's one of the things that we always encourage people to consider when they're purchasing equipment, try out the equipment before you pay for it.

Take it for a test-drive.

And try it in these different settings.

Many devices do work fine with the moderate amount of noise.

and so, if -- if you have some screeners who are able to use the device, in that environment, but not others, that would signal to you, that it's not so much the noise of the environment that's problematic; but, probably, your probe-fit.

So getting a good, snug fit of the probe and looking at the strategies that we have in our resources about how to do that --

To, you know, pull the ear back.

Insert the probe.

Give it a little twist.

Make sure, the cord is -- is attached to the Child's clothing, so it doesn't pull the probe loose; and then let go.

All of those things can be really helpful to blocking out, the noise.

From the environment.

But I know that can be really frustrating if you have a device that seems ultrasensitive to noise.

>> DR. EISERMAN: I would encourage you, to try to take your device, when you're not trying to screen.

And, play with it a little bit, to see, if I get a really snug fit on my own ear, and then I create some noise in the environment... does it stop screening?

Or, am I able to do it?

So, you might want to test it on yourself, where you really feel like, that is a good, snug fit.

I can feel the fullness in my ear; And I'm not hearing the background noise, like I would be, if this wasn't in my ear.

>> DR. EISERMAN: And then see.

That would be a really good way to determine whether your piece of equipment is, actually, overly sensitive.

(A pause), Another question, is, "I was reviewing the Child screening form and I noticed that if they have failed two times, they're referred to a healthcare provider.

Can't we just refer to an audiologist?"

Well... you could.

But the most common time -- the most common first step, is that the Child has a middle ear condition, that may need to be treated by a healthcare provider.

And we want to make sure that that is done, so that the Child's middle ear condition, is addressed.

If you refer straight to the audiologist, that audiologist is most likely to refer the Child back to the healthcare provider, so you've actually added a step, not eliminated one.

Keep in mind, that, if we follow the protocol, this way, with the healthcare provider, you're only going to be referring children to audiologists about 1% of the time.

And there aren't that many audiologists, so (pause), that's why, the protocol is sequenced the way that it is.

>> DR. EISERMAN: The next question is, "Doing the OAE, children screening at their comfort zone, doesn't work for me because of external noise.

I am unable to have a correct result."

So....

One of the -- this also relates to the environmental noise question, and I would suggest another scenario, you consider, is to try screening during a naptime.

When there is some control over that external noise.

or at least test the equipment under different noise conditions so that you can determine whether it's the equipment, or whether, perhaps, it's your technique, .

This is when it can be really helpful to have an audiologist come and help you with probe insertion, or by reviewing some of the strategies in the tutorial modules that you can access through the -- training, that's on the Web site.

(A pause),

>> DR. EISERMAN: Here's a QUESTION: Is it normal to get more referrals in the wintertime, due to underlying illnesses, runny noses, et cetera?

Yes.

It is.

Excuse me.

It is.

We -- sometimes, we have to screen at that time of year, but you are going to have more referrals during that time of year.

And that's why we want to have this step -- in the two-week wait after the first and the second screening, because, that gives some time, for those conditions to just change.

And, a child that may not have passed initially, hopefully will have the cold over with, by the time you screen them again.

The next QUESTION: What should we do if there is evident earwax and the ear is just not clean?

>> DR. EISERMAN: Typically, our recommendation, is that, you -- you can screen a child with earwax.

Sometimes it will actually come out on the end of the probe; you can remove it.

Clean the probe.

And, try again.

And you may get a passing result.

You can believe -- you can believe any passing result, you don't have to rescreen.

If the wax is causing what you perceive to be the reason for causing a -- a possible reason for a referring result, then you would want to just refer that child to a healthcare provider, to get the wax removed.

It's never recommended that you do any wax removal yourself.

(A pause), the next question is, what is the pass criteria for OAEs?

Is it DP or TE?

And, our recommendation from our audiology consultants, is, to use the DP, OAE settings on your device.

The next question, is, how long do ear tips last for OAEs?

>> DR. EISERMAN: Well, it depends on what you're asking here.

Now, keep in mind that ear tips, are only to be used, on a single child.

You'll -- they're intended to be disposable, which, I know, is costly.

Now, some people do clean the plastics -- probe covers; however, we don't recommend that.

The probes, themselves, unused will last a long, long time, so, I mean, many, many years so I wouldn't be too concerned about that, if that's what that question is about.

(An electronic tone),

>> How long do we wait after PE tubes are placed?

And then do a hearing screening?

>> DR. EISERMAN: I think you can do it within about six weeks.

But, I, again, would refer to Aa -- a healthcare provider or audiologist about that question.

That is one of the questions I would have asked Terry to chime in on.

So, don't take my word for that answer.

Check with an audiologist, or a healthcare provider.

Or, e-mail me.

And I'll get you the straight-up answer to that question.

>> DR. EISERMAN: And you can e-mail us through our Web site.

(A pause), I think the next question, is, which states in the U.S. mandate the screening procedure puretone or OAE in three to five-year-old?

I don't have the answer to that question.

You would need to look at your state -- individual state recommendations about that.

They're always -- well, they can be changing; so, we would be reluctant to be the ones to advise on that particular Guideline.

>> DR. EISERMAN: Let's see...

we are at our time limit.

So, notice in the Web chat window that there is a link to our -- our Survey that will produce a certificate of attendance today.

And complete that, and you should get a certificate e-mailed to you promptly after you do that.

If there are other questions you have, that you would like us to address, e-mail us, through our Web site, and we'll be happy to respond to you.

We really appreciate everybody's time and attention today, to trying to implement the highest-quality screening for the children in your program.

Remember, kidshearing.org is where you'll find all of our resources.

Including access to training for refresher training, or for those needing their first-time screening training in the use of puretone or OAE screening; that is also available at learntoscreen.org.

These are redundant Web sites that learntoscreen.org, is where you will find the training, directly.

So thank you, everybody -- thank you to our captioner, for your services today.

To our tech support, and, of course, to Terry Foust who was here with us, until his Internet went down.

Thanks, everybody.

Oh!

And remember, February 9th, is our Introductory Webinar for folks you might know who would benefit from the introduction to evidence-based hearing screening practices.

If you go on infanthearing.org -- you'll find that webinar announcement where you can register for it.

Again, on infanthearing.org.

All right.

Thanks everybody.

(Concludes remarks),