Hearing Screener Certification Training

Participant Guide

Table of Contents

SECTION 1:

ADHS Screening

Notes

Office of Children's Health Responsibilities

- Administering the Sensory Screening Program
- Overseeing the training of individuals as trainers and screeners
- Collecting hearing and vision screening reports from all public, private, charter, and other schools as defined in the Arizona Revised Statutes

Notes


Hearing Screening Overview
ADHS Office of Children's Health
Sensory Screening Program

Notes

Training Overview

Purpose

- Provide training to participants per the Hearing Screening Rules
- Certify participants as Hearing Screeners for children enrolled in a public, charter, accommodation, or private school as
- Increase the number of quality hearing screenings.

Audience

This training is available to all individuals who:

- Conduct early childhood or school-based screenings
- Perform screening in home, community, or school settings
- Hold other responsibilities such as the organization, follow up, or reporting of screenings.

Children Served

All Children (except newborns) According to ARS§36-899 states that the Arizona Department of Health

Screener Requirements

In order to be certified, all hearing screeners must:

- Complete the ADHS training Hearing Screeners.
- Pass a written exam with a score of at least 80%.
- Demonstrate competency on the audiological equipment.
- ADHS Certification for hearing screening is valid for 4 years.

Notes

Knowledge Check

Which of the following are certification requirements for ADHS Hearing Screeners?

- Recertify every 4 years.
- Pass a written exam with a score of at least 80%.
- Demonstrate competency in the use of hearing screening tools/equipment.
- Complete the ADHS approved classroom instruction (in-person or virtually).

Notes

SECTION 2:

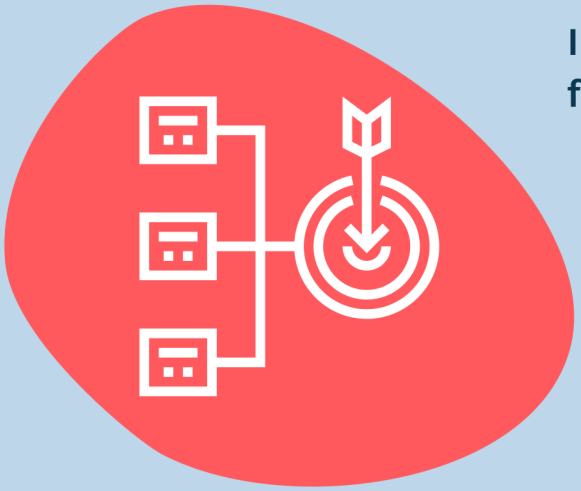
Children’s Hearing

Notes

But how does hearing work and how do we identify hearing loss in children?

Notes

Section 2 Learning Objectives

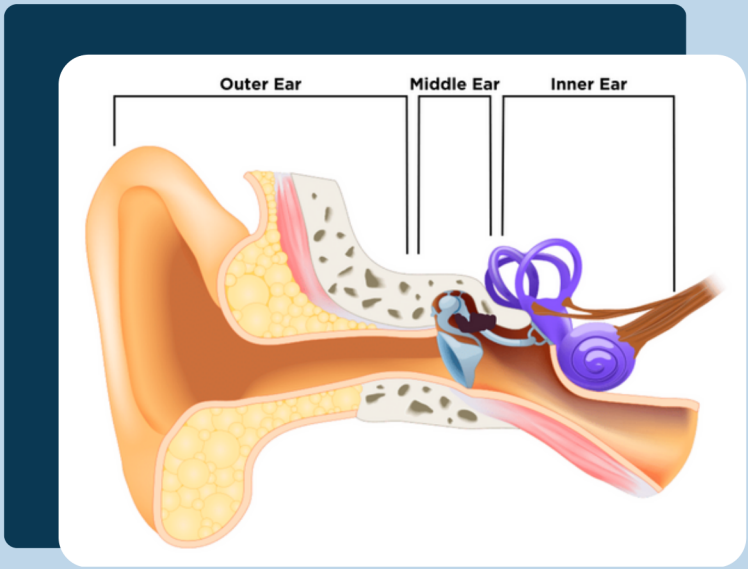


In this module, we will focus on the following objectives:

- Describe the anatomy and physiology of the ear, as well as how hearing works.
- Explain the signs of and risk factors for hearing loss in children.
- Describe methods for preventing hearing loss.

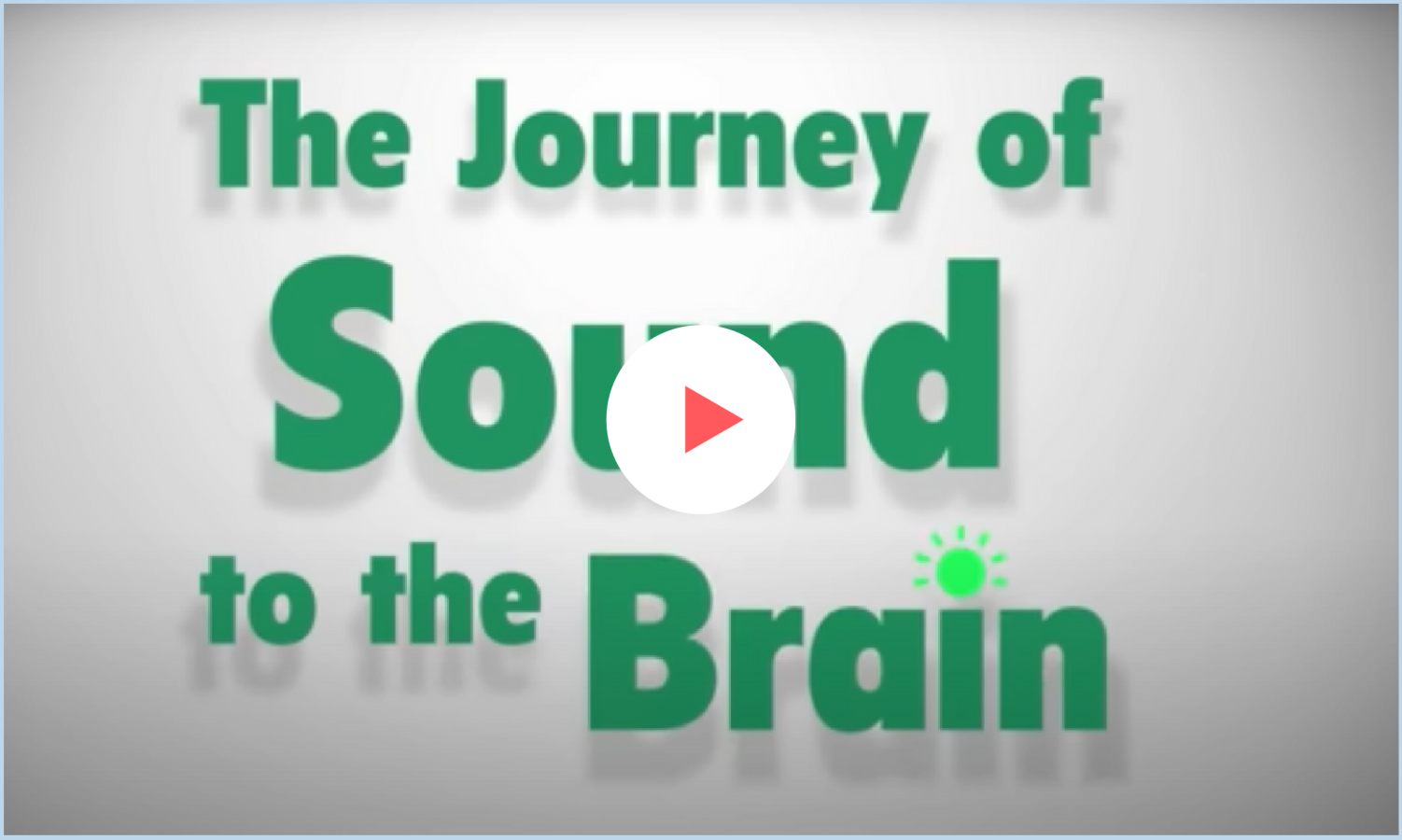
Notes

The Auditory System



Ear structures begin forming in the early stages of embryonic development and most of the middle and inner ear structures are fully formed before birth.

Notes



Notes

Video Summary

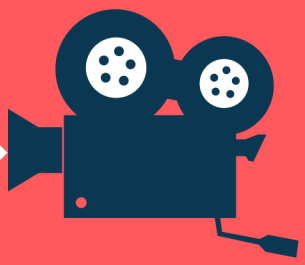
Fact 1 - Catching a Sound Wave

Fact 2 - Good Vibrations

Fact 3 - Cochlear Fluid

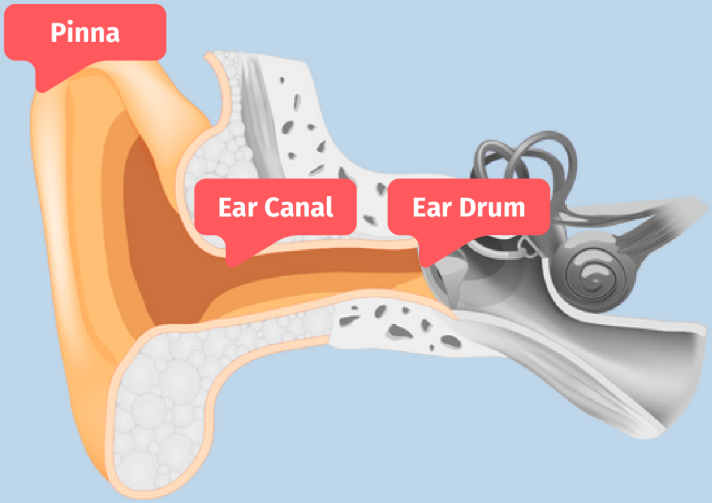
Fact 4 - It's Electric

Fact 5 - Brain Waves



Notes

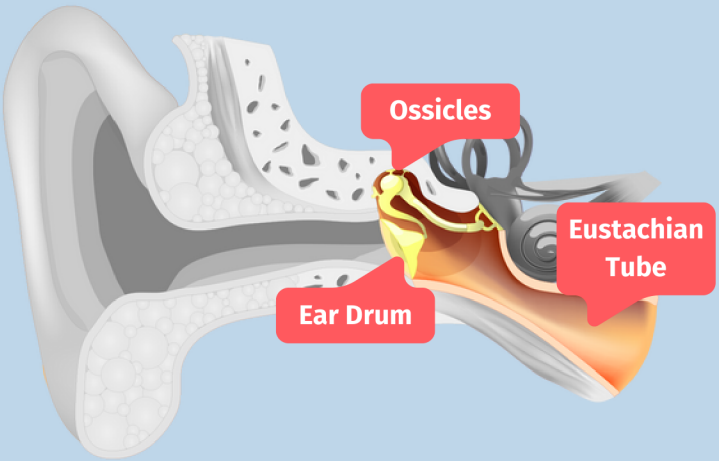
A Closer Look:
The Outer Ear



Anatomy	Function
Outer Ear	• The first section is the outer ear. • It has three parts; the pinna, the ear canal, and the outer wall of the eardrum.
Pinna	• Collects sound waves • Filters sound to help with localization
Ear Canal	• Funnels sound waves to the eardrum. • Earwax helps protect the ear drum and clean the ear canal
Ear Drum (Outer Wall)	• Protects the middle ear • Vibrates when hit with soundwaves

Notes

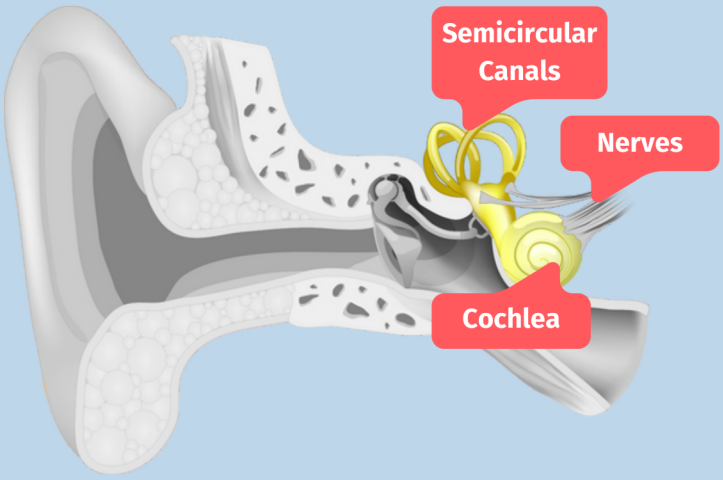
A Closer Look:
The Middle Ear



Anatomy	Function
Middle Ear	• The second section is the outer ear. • It has three parts; the eardrum, the ossicles, and the eustachian tube.
Ossicles	• Moves vibrations from the eardrum to the cochlea
Ear Drum (Inner Wall)	• Connects to the malleus • Vibrations move the ossicles
Eustachian Tube	• Balances pressure on both sides of the eardrum • Drains fluid from the middle ear

Notes

A Closer Look:
The Inner Ear



Anatomy	Function
Inner Ear	• The last section of the auditory system is the inner ear. • It has three parts; the cochlea, the auditory nerve, and the semicircular canals.
Semicircular Canals	• The semicircular canals are are these looped sections. • Their role is related to balance rather than hearing.
Nerves	• Auditory, Vestibular, Facial Nerves • Send electrical signals to the brain
Cochlea	• Changes sound waves into electrical signals • Connects to the auditory nerve

Notes

Knowledge Check

Match each part of the ear to its function.

Part of the ear you see on the outside that collects sound waves.	**Pinna**
Flexible barrier that protects the middle/inner ear. It vibrates when hit by sound waves.	**Ear Drum**
Small bones that move vibrations from the eardrum to the cochlea.	**Ossicles**
Where sound waves are changed into electrical signals. It is full of fluid.	**Cochlea**

Notes

Hearing Loss

CDC data tells us that cases of hearing loss double between birth and school age.

Notes

- Many cases could be identified before students enter preschool or kindergarten.
- Early detection allows for early intervention and increases the chance of successful outcomes.
- If young children aren’t enrolled in a program that performs hearing screenings, parents and caregivers should request one from a pediatrician or audiologist.

Notes

Risk Factors

Genetic/Biological Risk Factors

- Genetic syndromes such as Pendred or Usher syndrome that are associated with late onset hearing loss.

Infection Risk Factors

- Congenital CMV
- Viral or bacterial meningitis
- Mumps or Measles
- Other viral infections that cause a high fever

Other Risk Factors

- Head trauma
- Chemotherapy (especially when combined with radiation)

Notes


Types of
Hearing Loss
ADHS Office of Children's Health
Sensory Screening Program

Notes

Preventing Hearing Loss

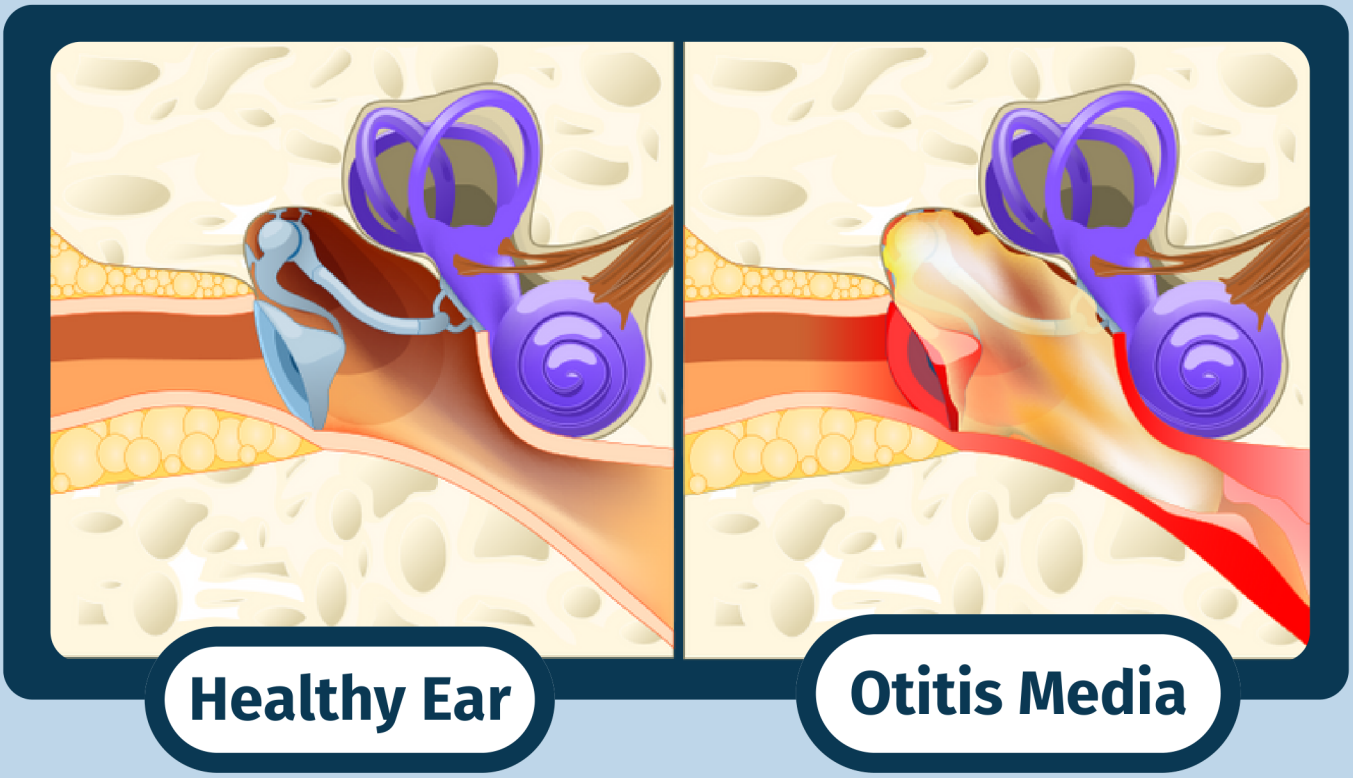
- Sharing information with others on ways to prevent hearing loss
- Maintaining good health practices
- Reducing risks of and encouraging proper care for Otitis Media
- Providing hearing protection

Notes

OTITIS MEDIA

Otitis Media and noise exposure are common causes of hearing loss in children, we will look at those in more depth.

Notes



Otitis media is commonly called an ear infection or middle ear infection. It is one of the most common causes of conductive hearing loss.

Notes

Risk Factors for Otitis Media

Genetic/ Biological Risk Factors

- Cleft lip or cleft palate
- Down Syndrome
- Premature birth
- Male
- Native American or Hispanic

Environmental Risk Factors

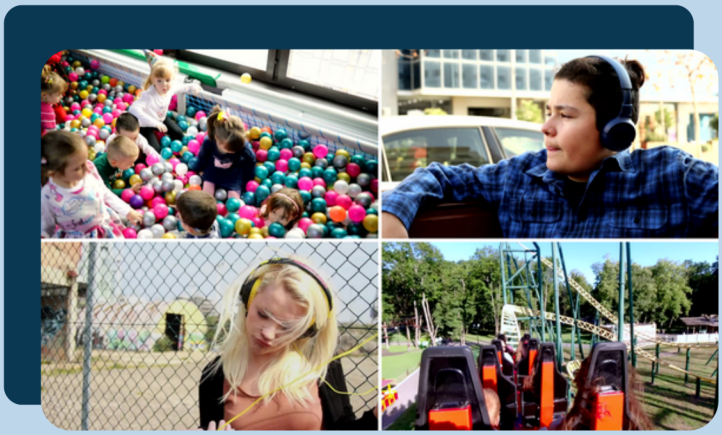
Risk Factor	Prevention Strategy
• Bottle vs Breastfeeding • Reclined feeding position • Second-hand smoke exposure • Compromised immune system • Group child care • Allergies	• Promote breastfeeding • Encourage proper positioning during feedings • Encourage smoke-free environments • Encourage age appropriate immunizations, such as the pneumococcal vaccine which can specifically prevent the development of some ear infections • Encourage good nutrition, adequate sleep, and healthy exercise • Wash hands frequently and appropriately

Notes

NOISE-INDUCED HEARING LOSS

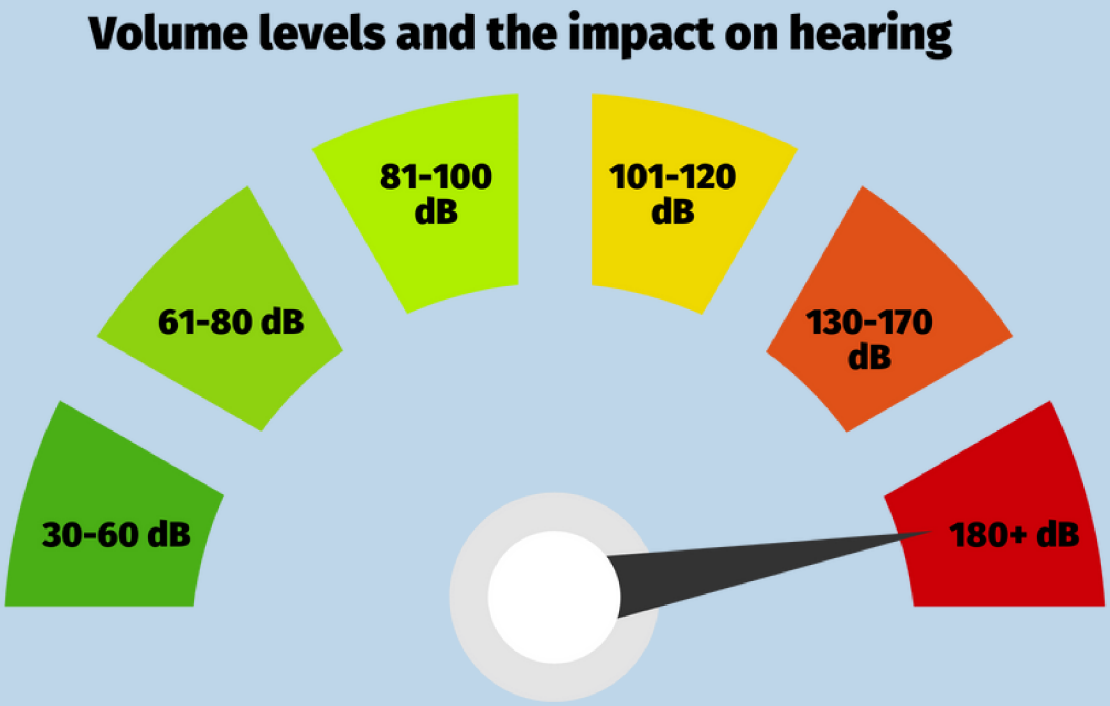
Many normal day-to-day activities can be loud enough to damage hearing. We often don’t realize just how loud our world can be.

Notes



- A major cause of hearing loss in children and especially teens is loud music and other loud noise.
- Noise induced hearing loss can result in symptoms of ringing, roaring, buzzing, or pain in the ears.
- These effects can be temporary or long lasting.

Notes


Volume levels and the impact on hearing
30-60 dB
61-80 dB
81-100 dB
101-120 dB
130-170 dB
180+ dB

Notes

30-60 dB	61-80 dB	81-100 dB	101-120 dB	130-170 dB	180+ dB
Safe listening volume	At 80 dB damage can occur in 8 hours of exposure	At 90 dB damage can occur in less than 8 hours of exposure	Short exposure can cause permanent hearing loss	Any exposure is dangerous	Damage is inevitable
• Soft whisper • Average classroom • Everyday Conversation	• Noisy Toys • Vacuum cleaner • Noisy Restaurant	• Hair Dryer • Motorcycle • Power Tools	• Concerts • Fireworks • Thunder	• Jet take-off • Gunfire	• Rocket launch • Earthquakes

Notes

Preventing Noise-Induced Hearing Loss

Monitor music volume

Use hearing protection

Remove children from noisy areas

Be alert to hazardous noises in the environment.

Notes

Hearing Loss Summary:

- The auditory system is very complex and can be affected in a variety of ways that can impact hearing.
- Hearing loss may be caused by a lot of different factors but some of them are easily preventable.
- All types of hearing loss, no matter how severe or long lasting can have a negative impact on a child's educational outcomes.

Notes

Legislation and Rules

Legislative Media

Hearing Rules

AZ Rulemaking Flowchart

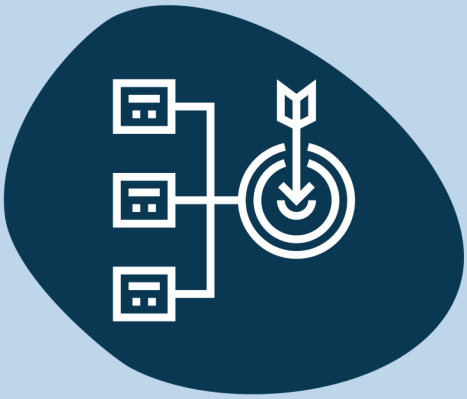
Notes

SECTION 3:

Hearing and Language Development

Notes

Section 3 Learning Objectives



This module will focus on the following objectives:

- Describe typical auditory and language development milestones
- Identify signs of possible hearing loss in children

Notes

Communication Development

Being able to effectively communicate with others depends on the development of a variety of skills.

Notes

Language

Expressive Language

How one produces or expresses information.

Receptive Language

How information is understood

Language development includes both how information is being understood and how it is expressed or produced. development is made up of receptive and expressive language.

Notes

Hearing and Speech

Auditory skill development is the process by which the brain learns to associate sounds with meaning and respond in expected ways. It takes practice and consistent access to sound.

Notes

Communication

Communication barriers can have an impact on other areas of development, which is why knowledge of typical development is important to identify possible hearing concerns early.

Notes

Some of the softest sounds one encounters daily are speech sounds. Even mild hearing loss can limit access to speech sounds.

Notes

Knowledge Check

How can unidentified hearing loss impact communication?

- It can limit acess to speech sounds. ✓
- It can lead to delays in receptive language development. ✓
- It can lead to less understandable speech production. ✓

Notes

Milestones and Signs of Hearing Loss:
Birth to 1 Year

- Seeming to only notice certain sounds
- Failing to react to voices, even when being held
- Not waking or startling in response to loud sounds
- Ceasing making sounds altogether or producing fewer sounds than expected
- Not attempting to locate the source of the sound
- Exhibiting any malformation or absence of the ear at birth

Notes

Birth to 3 Months

Hearing:

- Startles at loud sounds.
- Quiets or smiles when you talk.
- Seems to recognize your voice.
- Quiets if crying.

Spoken Language:

- Makes cooing sounds.
- Cries change for different needs.
- Smiles at people.

Notes

4-6 Months

Hearing:

- Moves their eyes in the direction of sounds.
- Responds to changes in your tone of voice.
- Notices toys that make sounds.
- Pays attention to music.

Spoken Language:

- Coos and babbles when playing.
- Makes speech-like babbling sounds, like pa, ba, and mi.
- Giggles and laughs.
- Makes sounds when happy or upset.

Notes

7 Months to 1 Year

Spoken Language:

- Babbles long strings of sounds, like mimi upup baba.
- Uses sounds and gestures to get and keep attention.
- Points to objects and shows them to others.
- Uses gestures like waving bye, reaching for “up,” and shaking his head no.
- Imitates different speech sounds.
- Says 1 or 2 words, like hi, dog, dada, mama, or uh-oh.
- This will happen around their first birthday, but sounds may not be clear

Hearing:

- Turns and looks in the direction of sounds.
- Looks when you point.
- Turns when you call their name.
- Understands words for common items and people—words like cup, truck, juice, and daddy.
- Starts to respond to simple words and phrases, like “No,” “Come here,” and “Want more?”
- Plays games with you, like peek-a-boo and pat-a-cake.
- Listens to songs and stories for a short time.

Notes

Milestones and Signs of Hearing Loss:
1 to 3 Years

- A smaller vocabulary than expected for their age
- Trouble identifying common objects when asked
- Difficulty following 2-3 step directions
- Not being understood by unfamiliar listeners
- Frustration when they are not understood
- Often listening to music or TV at a loud volume
- Seems withdrawn or easily distracted

Notes

1-2 Years

Hearing:

- Points to a few body parts when you ask.
- Follows 1-part directions, like "Roll the ball" or "Kiss the baby."
- Responds to simple questions, like “Who’s that?” or “Where’s your shoe?”
- Listens to simple stories, songs, and rhymes.
- Points to pictures in a book when you name them.

Spoken Language:

- Uses a lot of new words.
- Uses p, b, m, h, and w in words.
- Starts to name pictures in books.
- Asks questions, like “What's that?”, “Who’s that?”, and “Where’s kitty?”
- Puts 2 words together, like "more apple," "no bed," and "mommy book."

Notes

2-3 Years

Hearing:

- Understands opposites, like go–stop, big–little, and up–down.
- Follows 2-part directions, like "Get the spoon and put it on the table."
- Understands new words quickly.

Spoken Language:

- Has a word for almost everything.
- Talks about things that are not in the room.
- Uses k, g, f, t, d, and n in words.
- Uses words like in, on, and under.
- People who know your child can understand them.
- Puts 3 words together to talk about things.
- May repeat some words and sounds.
- Asks “Why?”

Notes

Milestones and Signs of Hearing Loss:
3 to 5 Years

- Having a smaller vocabulary or frequently mixing-up words, such as confusing words that sound alike
  - Example: “cat” and “cap"
- Difficulty following directions and expressing themselves clearly
- Increased focus on people’s faces and lips when they are talking
- Social immaturity of discomfort in social interactions due to lack of exposure to social cues, slang, or norms
- Inattentiveness, frequent daydreaming, or difficulty in one or more academic areas

Notes

3-4 Years

Hearing:

- Responds when you call from another room.
- Understands words for some colors, like red, blue, and green.
- Understands words for some shapes, like circle and square.
- Understands words for family, like brother, grandmother, and aunt.

Spoken Language:

- Answers simple who, what, and where questions.
- Says rhyming words, like hat–cat.
- Uses pronouns, like I, you, me, we, and they.
- Uses some plural words, like toys, birds, and buses.
- Most people understand what your child says.
- Asks when and how questions.
- Puts 4 words together. May make some mistakes, like “I goed to school.”
- Talks about what happened during the day. Uses about 4 sentences at a time.

Notes

3-4 Years

Hearing:

- Understands words for order, like first, next, last.
- Understands words for time, like yesterday, today, and tomorrow.
- Follows longer directions, like “Put your pajamas on, brush your teeth, and then pick out a book.”
- Follows classroom directions, like “Draw a circle on your paper around something you eat.”
- Hears and understands most of what they hear.

Spoken Language:

- Says all speech sounds in words. May make mistakes on sounds that are harder to say: l, s, r, v, z, ch, sh, and th.
- Responds to “What did you say?”
- Talks without repeating sounds or words most of the time.
- Names letters and numbers.
- Uses sentences that have more than 1 action word, like jump, play, and get. May make some mistakes, like “Zach gots 2 video games, but I got one.”
- Tells a short story.
- Keeps a conversation going.

Notes

Knowledge Check

True or False: By 3-4 years old children learn to hear and tell apart words that sound alike.

True

Notes

Hearing Loss and Noise

- Teaching Kids About Noise Induced Hearing Loss
- Too Loud - Too Long Noise Induced Hearing Loss
- How to Insert Foam Earplugs
- Childhood Onset Hearing Loss
- Hearing Loss Myths
- Hearing Loss Simulation

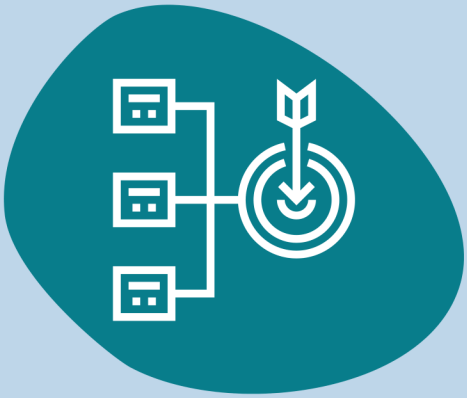
Notes

SECTION 4:

Preparing for Hearing Screening

Notes

Section 4 Learning Objectives



This module will focus on the following objectives:

- Identify when, how, and on whom hearing screening is to be performed.
- Acquire knowledge on how to prepare for a hearing screening.
- Determine the most appropriate location to conduct hearing screening.
- Determine the most appropriate method to use for hearing screening.

Notes

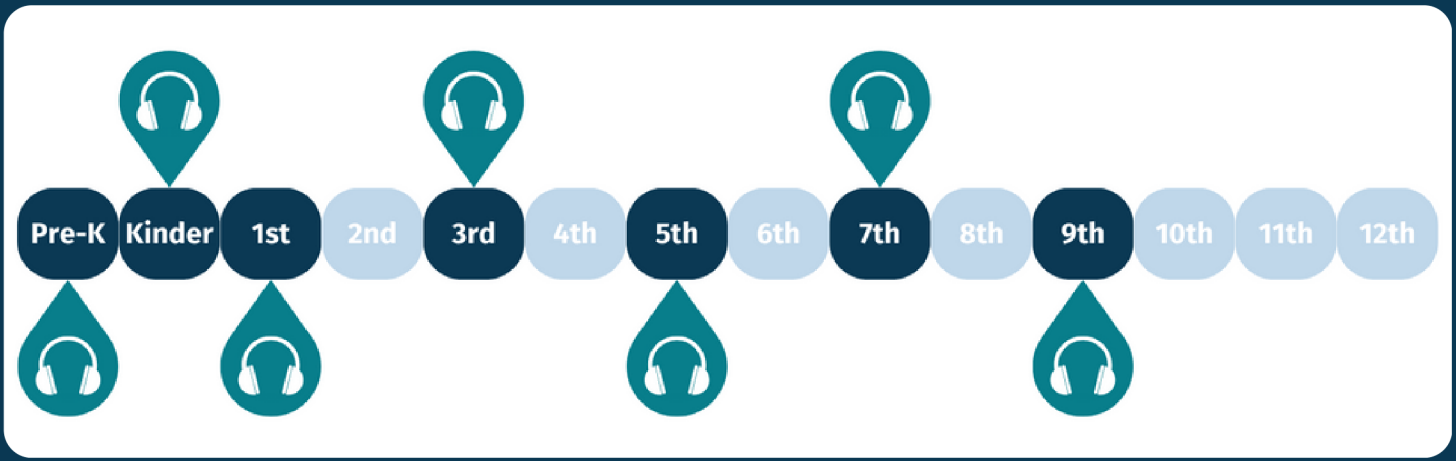
Screening Requirments

As defined by ARS§15-101, all public, private, charter, and accommodation schools are required to perform hearing screenings.

Notes

Required Screening Grades

There are specific grades where each enrolled student should be screened:



Notes

Required Screening Grades

There are specific grades where each enrolled student should be screened:

- **Did Not Pass**

- **New Students**

- **Repeated A Grade**

- **Screening Requested**

Notes

Exclusions for Screening

Circumstances exist where a student should be excluded from the screening population.

Deaf or Hard of Hearing

Current Hearing Evaluation

Parent/Caregiver Objection

Student Request (16+)

Child Care Facility Exemption

Notes

Knowledge Check

Which student should be excluded in a hearing screening?

- A student who is already documented as deaf or hard of hearing.
- A student who are is at least 16 years of age and has requested not to receive a hearing screening.
- A student who has documentation of a hearing evaluation within the last 12 months.

Notes

Preparing for Screening

Identify Students

Communicate with Parents & Guardians

Recruit Certified Screener

Facilitate Documentation

Notes

Screener Tasks

As the screener, before you begin screening, the Hearing Rules state that you will need to complete certain tasks.

Provide Documentation

Verify Students

Determine Screening Type

Prepare Volunteers

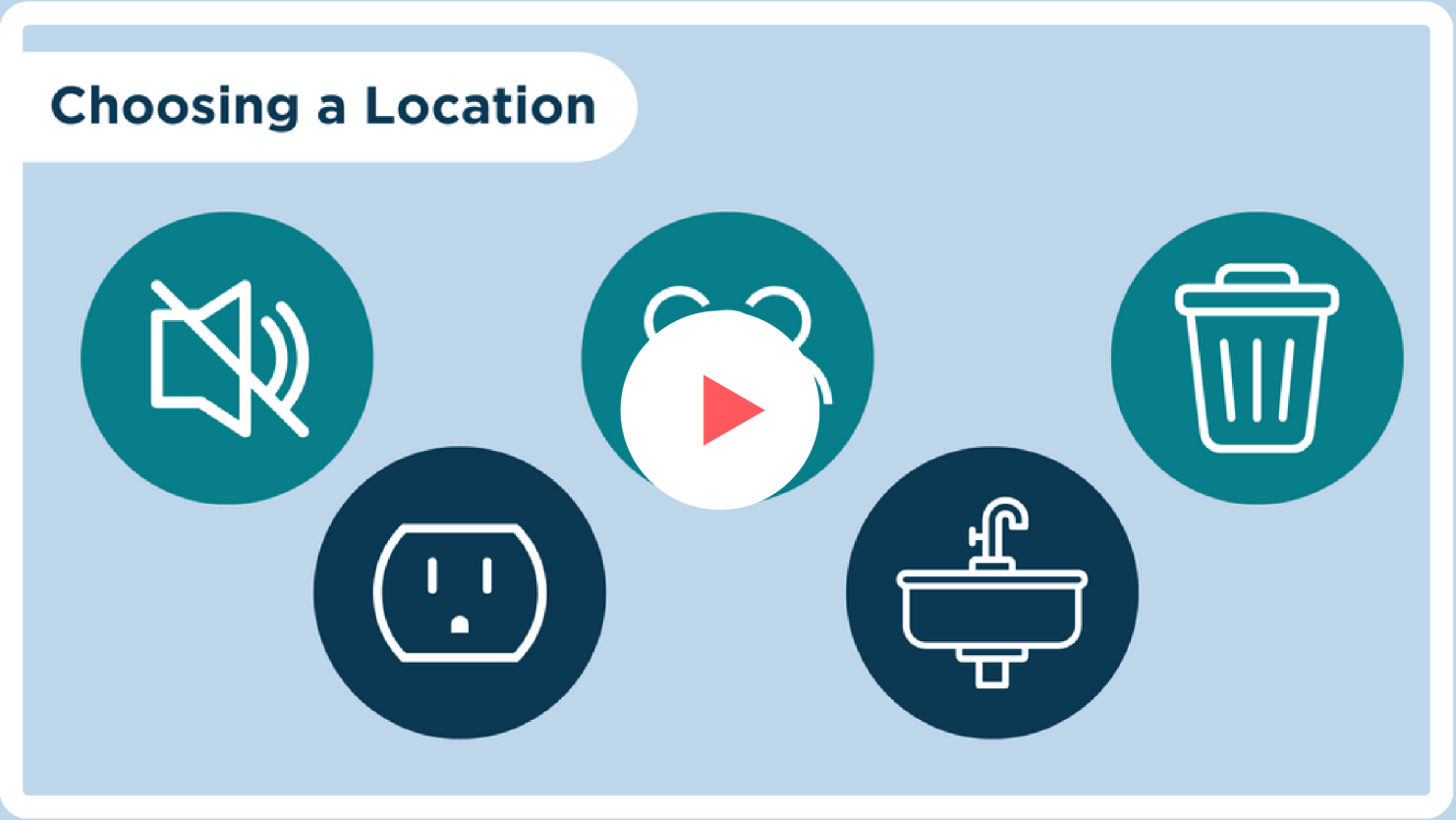
Notes

Knowledge Check

True or False: When starting to organize a hearing screening program, The Hearing Rules state that a school administrator or their designee is not required to provide notification to parents/caregivers of screenings to be held.

False

Notes



Notes

Materials Needed

Notes

Infection Control Measures

1

GLOVE UP

Wear disposable gloves when performing the screening.

2

DISINFECT

Clean and disinfect surfaces with antibacterial solution.

3

COLLECT

Place contaminated items, including your gloves, into a self-closing or twist-tied plastic bag.

4

DISPOSE

Throw this bag away in a trash receptacle which is not accessible to children.

5

SANITIZE

After these steps are complete, be sure to wash your hands.

QUICK-KITS

Prepared “quick kits” are one way to make sure that you always have the items necessary to minimize the spread of infectious diseases. Recommended sanitation items for each kit are several pairs of disposable gloves, paper towels, moistened towelettes or hand sanitizer, and self-closing plastic bags for storage of your used disposable items.

Notes

Additional Considerations

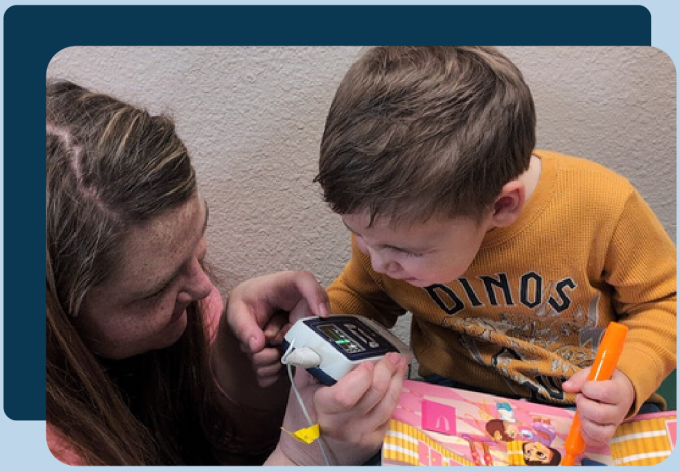
Number of Stations

Noise Reduction

Volunteer Organization

Notes

Reflection



If you have participated in school based screenings in the past, what are some things that have worked? What are some things that could have been done differently?

Notes

Knowledge Check

Which of the following needs to be considered when planning school-based hearing screenings?

- The number of hearing screening stations needed
- Organization of necessary volunteers
- Traffic flow to keep noise to a minimum

Notes

Screening in Other Locations

During a home visit or one-on-one setting, there are fewer moving pieces to consider than during a school visit.

Notes

Screening in Other Locations

Select a Location

Prepare Seating

Administrative Materials

Quick Kit

Notes

Notes

Knowledge Check

Selecting an appropriate screening tool depends on which factors?

- A child's chronological age ✓
- A child's developmental level ✓
- A child's ability to provide a response ✓

Notes

Screening Scenarios

In the following activity, determine which would be the best screening method for the child in each scenario. Remember these key factors for screening methods:

- The child's chronological age
- The child's developmental level
- The child's ability to provide a response

Notes

Scenario One

Angela is a 7-year-old with typical development. Would you use pure tone or Otoacoustic Emissions (OAE)?

A conventional screening is also recommended for this child.

Pure Tone

This is correct!
Given this information, she can be screened using Pure Tone.

OAE

This is incorrect. Given the current information, Angela should be screened using Pure Tone Audiometry. She does not meet the age or cognitive limitations required for use of OAE.

Notes

Scenario Two

Jose is a 3-year-old with a speech and language delay. Would you use pure tone or OAE?

Pure Tone

This is incorrect. Given this information about his age and speech impediment, he may not be able to be successfully screened using the Pure Tone, so the OAE is the better choice.

OAE

This is correct! Given this information about his age and speech impediment, he may not be able to be successfully screened using the Pure Tone, so the OAE is the better choice.

Notes

Scenario Three

Marla is a 16-year-old with typical cognitive skills but moderate muscle control difficulties due to cerebral palsy. Would you use Pure Tone or OAE?

A conventional screening is also recommended for this child.

Pure Tone

This is correct!
Given this information, she can be screened using Pure Tone. She may just need some modification to allow her to easily response.

OAE

This is incorrect.
Given this information, she can be screened using Pure Tone. She may just need some modification to allow her to easily response.

Notes

Scenario Four

Max is a 14-year-old who is visually impaired. Would you use pure tone or OAE?

A conventional screening is also recommended for this child.

Pure Tone

This is correct! Given this information, he can be screened using Pure Tone.

OAE

This is incorrect. Given this information, he can be screened using Pure Tone.

Notes

Scenario Four

Keesha is a 4-year-old child with Down Syndrome. She may be able to respond age-appropriately. Would you use pure tone or OAE?

Conditioned play is also recommended for this child.

Pure Tone

This is correct!
Given this information, she can be screened using Pure Tone.

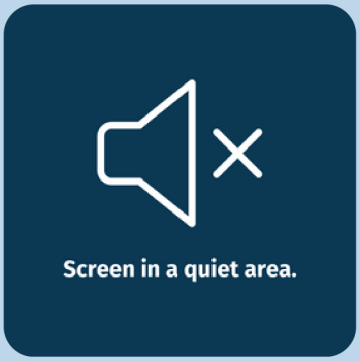
OAE

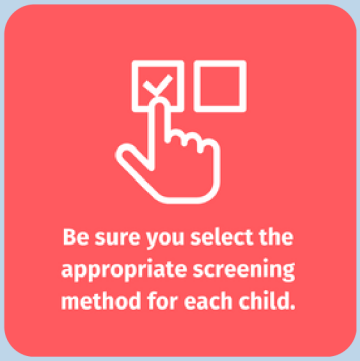
This is incorrect.
Given this information, she can be screened using Pure Tone.

Notes

Summary

In summary, there are specific criteria in the Hearing Rules and important factors to consider when preparing for a hearing screening.





Notes

Making sure that these elements are planned ahead of time will help your screenings be as successful as possible.

Notes

Language Development

Impact of Hearing Loss on Development

Ear Infections and Language Development

Hearing and Language Milestones

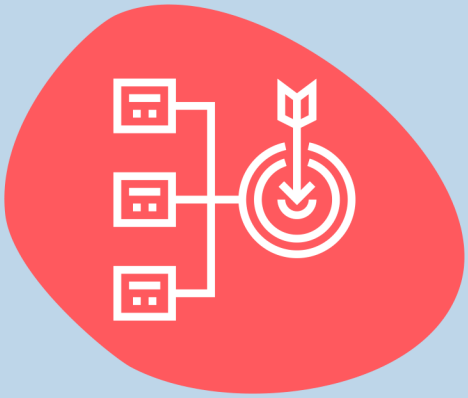
Notes

SECTION 5:

Conducting a Hearing Screening

Notes

Section 5 Learning Objectives



This module will focus on the following objectives:

- Identify the function of Pure Tone Audiometry, Tympanometry, and Otoacoustic Emissions Hearing Screenings.
- Define the criteria for using each type of screening tool.
- Describe specific step-by-step instructions on how to use each screening tool.
- Demonstrate how to correctly conduct a hearing screening.
- Identify passing criteria for each screening tool.

Notes

Pure Tone Audiometry

- To review, Pure Tone Audiometry as the “Gold Standard” in hearing screening tools.
- Pure tone audiometry uses over the ear headphones and requires a child to listen for a sound.
- Usually, when a child hears a noise, they are prompted to raise their hand to acknowledge it, but it modified to meet the needs of children, as appropriate.

Notes

Pure Tone Audiometry

This method is usually attempted first, unless a child does not meet the criteria mentioned in the previous module.

Notes

Parts of the Audiometer

1 - Power Cord

2- Tone Presentation Button

3 - dB Selection Dial

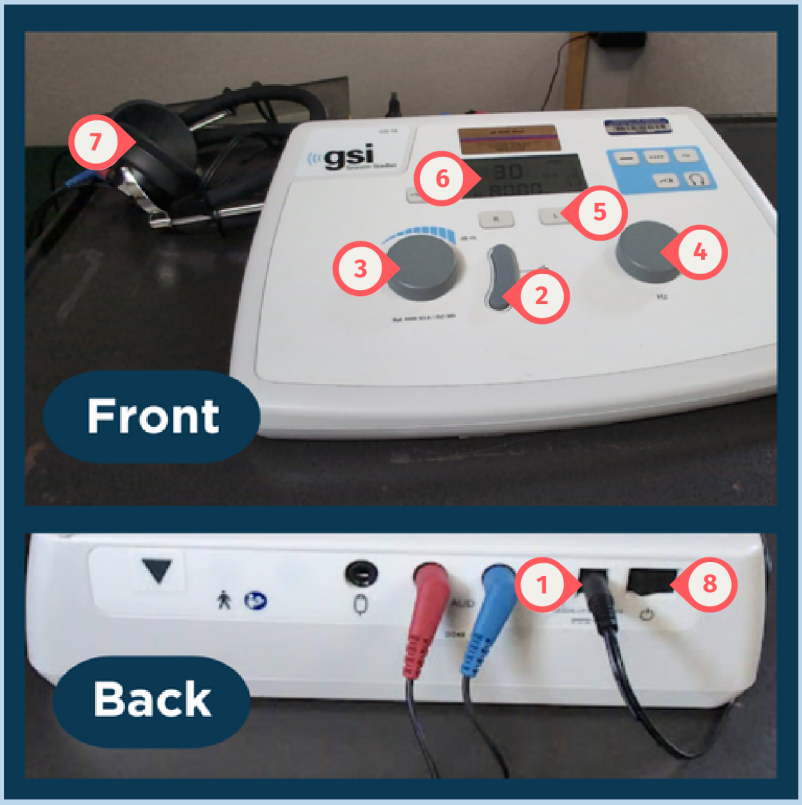
4 - Frequency Selection Dial

5 - L/R Buttons

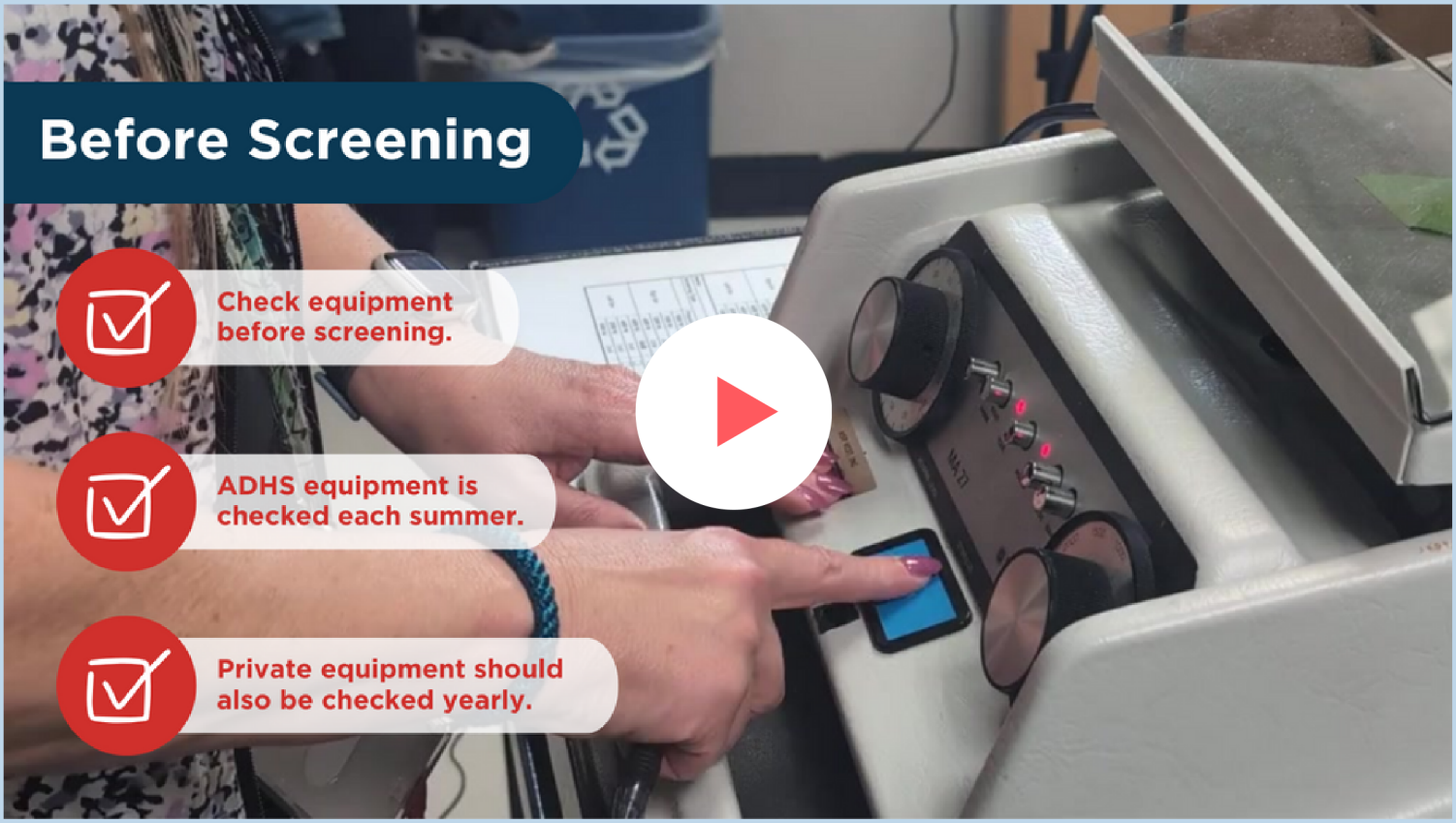
6 - Display Screen

7 - Headphones

8 - On/Off Switch



Notes


Before Screening
Check equipment before screening.
ADHS equipment is checked each summer.
Private equipment should also be checked yearly.

Notes

Step 1: Give Instructions

Seat the child where you will conduct the screening. Instructions for this type of screening can be given individually or at a group level.

Notes

Individual Instructions

1. When working individually, you can show them the devices you are using: the headphones and the audiometer.
2. Explain clearly and and simply: “Raise your hand every time you hear a beeping sound.”
3. Have them practice by making a beep sound and having them raise their hand.

Notes

Instruction in Groups

1. Display the headphones and audiometer.
2. Explain clearly and and simply: “Raise your hand every time you hear a beeping sound”
3. Have the children practice:
    a. For example, you can say “Okay ears up everyone, let’s listen for the beep”
    b. You can proceed to mimic the sound of a tone and wait for everyone to raise their hands.

Notes

Instruction in Groups

1. Do this by offering an alternative activity that is simple but interesting.
    a. Example: Ask the child to drop the legos inside the bucket after they hear each beep
2. Practice doing this with the headphones on the table at 2000 Hz tone at 60 dB so it can easily be heard.
3. Have the child practice a few times without help before using the headphones and screening at the appropriate levels.

Notes

Step 2: Inspect a Child's Ears

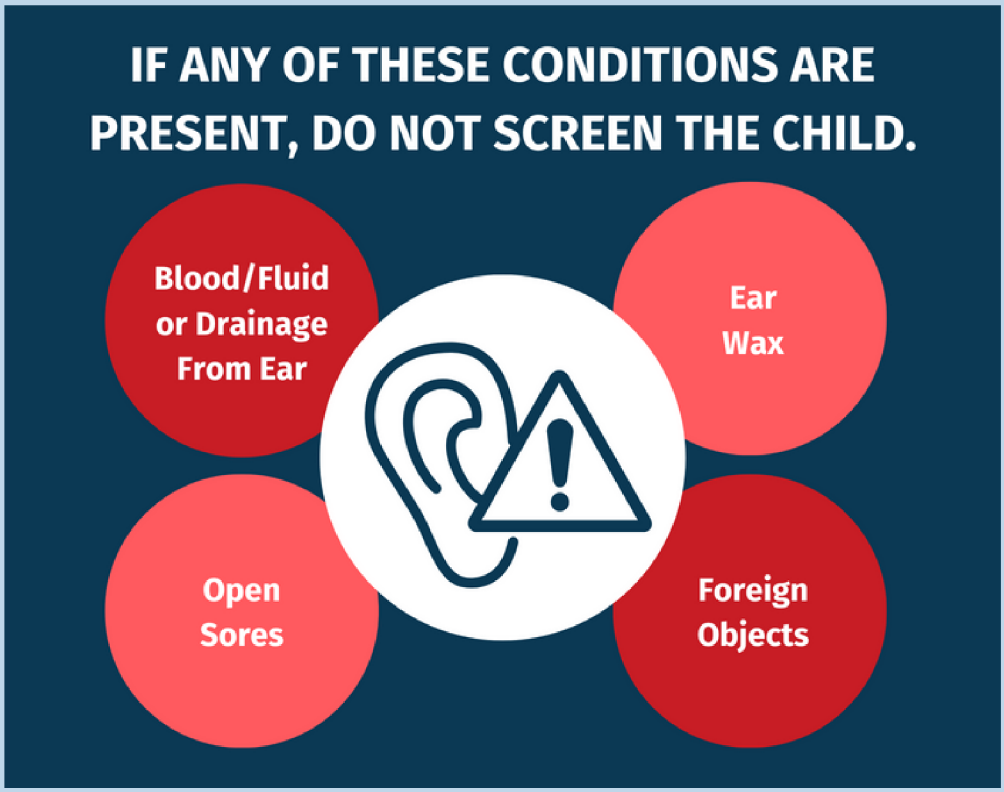
Before conducting a hearing screening it is important to visually inspect a child's ears. You will need to ensure that there is nothing visibly obstructing the ear canal that will prevent sound from passing through.

Notes


Performing A Visual Inspection
Hearing Screening Training

Notes

Four Reasons to Discontinue or Delay Screening



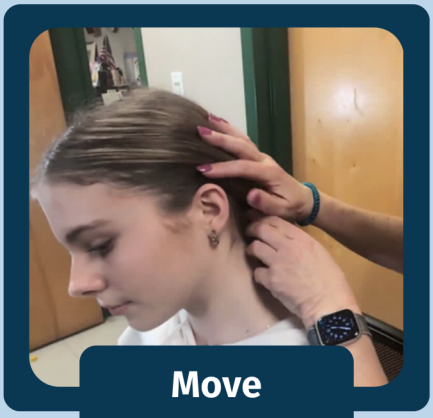
Notes

Step 3: Place Headphones

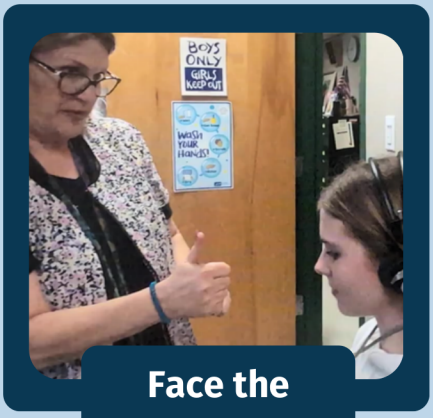
For this next step, we will place the headphones over the child's ears. Before we can do that, we will need to ensure there is nothing blocking proper placement.

Notes

Placing the Headphones

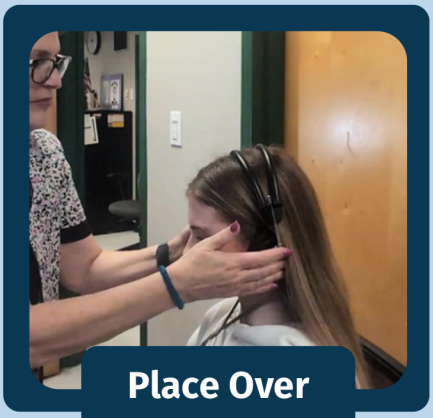


Move Obstacles



Face the Child

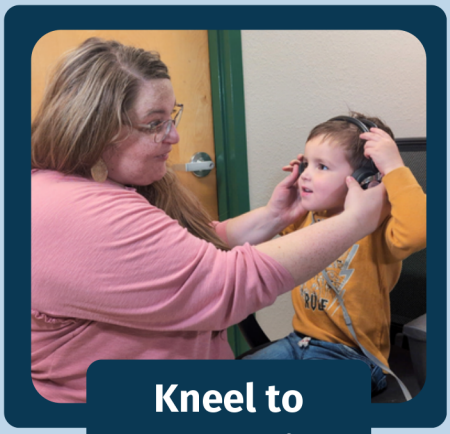
Open Headphones



Place Over Ear Canal

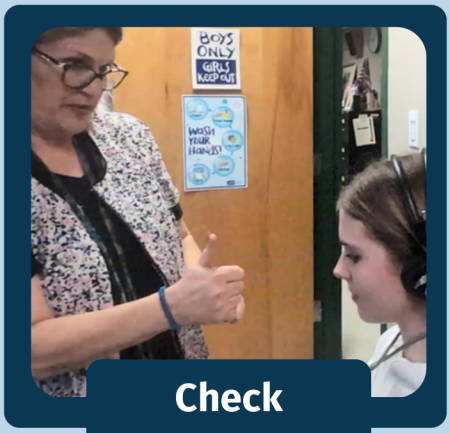
Notes

Placing the Headphones

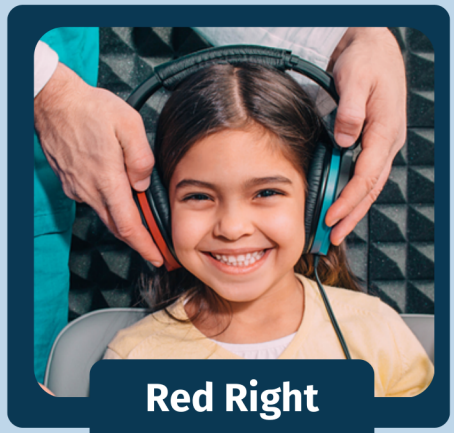


Kneel to Small Child

Tighten Headband



Check Again



Red Right Blue Left

Notes

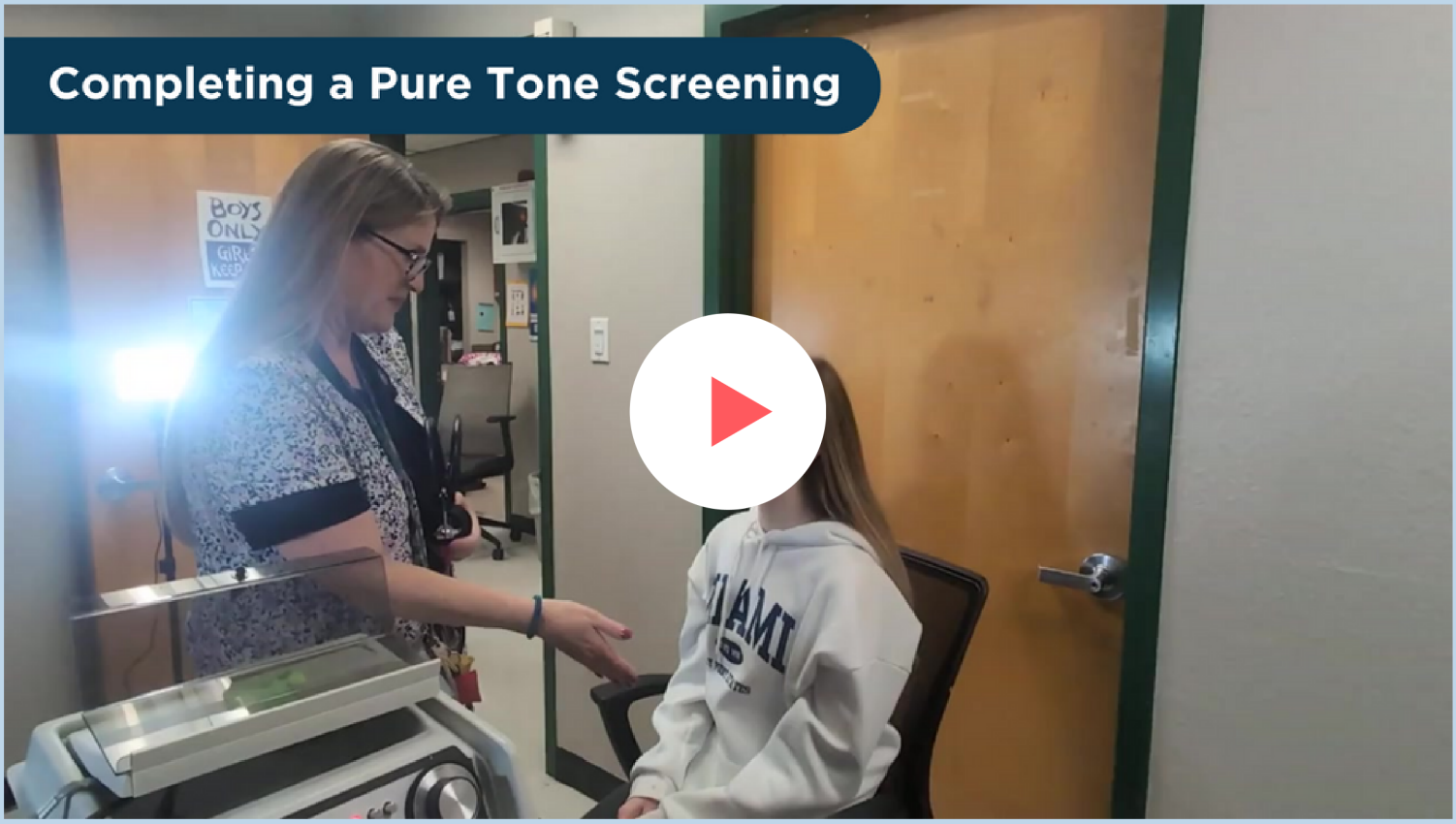
It is important to take time to ensure proper placement of headphones on each child. Improper placement of headphones can cause a child not to pass a screening and be unnecessarily referred for evaluation.

Notes

Step 4: Begin Screening

Watch the video below to see how a screening should occur.

Notes



Notes

Pure Tone Screening

Below will review each step of the screening process for Pure Tone Audiometry.

Step 1

Teaching Tone

Step 2

Begin Screening

Step 3

Increase Frequency

Step 4

Frequency	Volume
1000 Hz	20 dB
2000 Hz	20 dB
4000 Hz	20 dB

Record Results

Step 5

Repeat for the Left Ear

Notes

Rescreening

There may be instances where a screening is not going to be successful. For instance:

- The child is not feeling well or is crying uncontrollably
- The experience becomes frustrating for the child and/or screener
- The child does not learn the task after several trials
- The child continues to give false positive responses (raising hand when a tone has not been presented)

Notes

Pure Tone Audiometry Summary

Select the appropriate location

Provide clear instructions in advance

Ensure proper headphone placement

Document all screening results

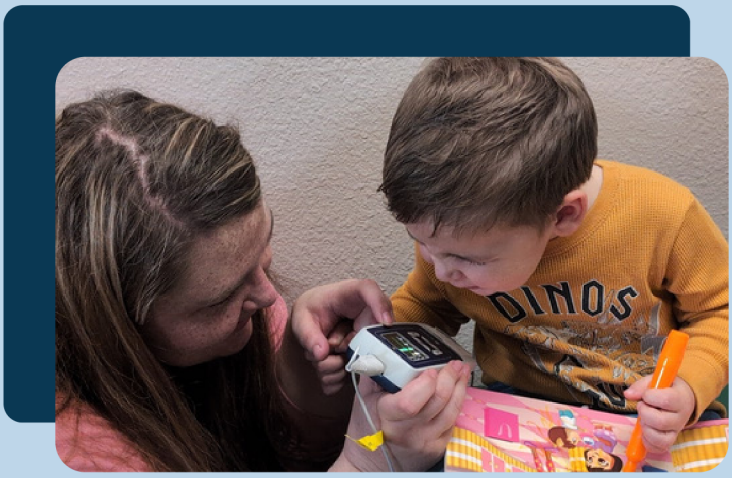
Postpone screening if necessary

Notes

Otoacoustic Emissions Testing (OAE)

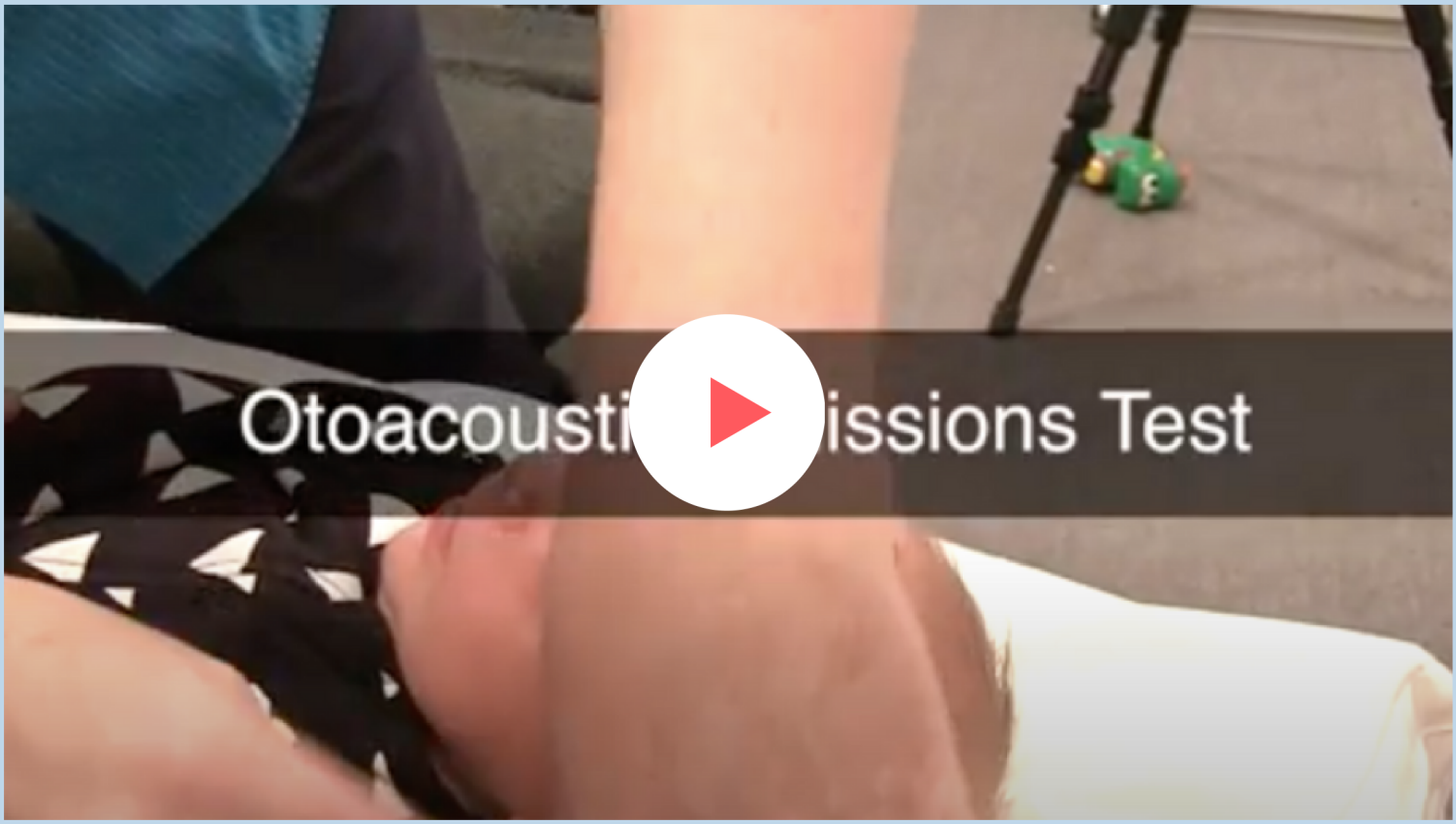
- OAE is an automated screening to test how most of the auditory system is working.
- It is an automatic test that takes seconds to complete.
- It does not require any participation from the child, other than allow the probe to sit in the ear canal during the screening.

Notes



This is an excellent tool to use with infants and young children, and with older students who cannot provide a response.

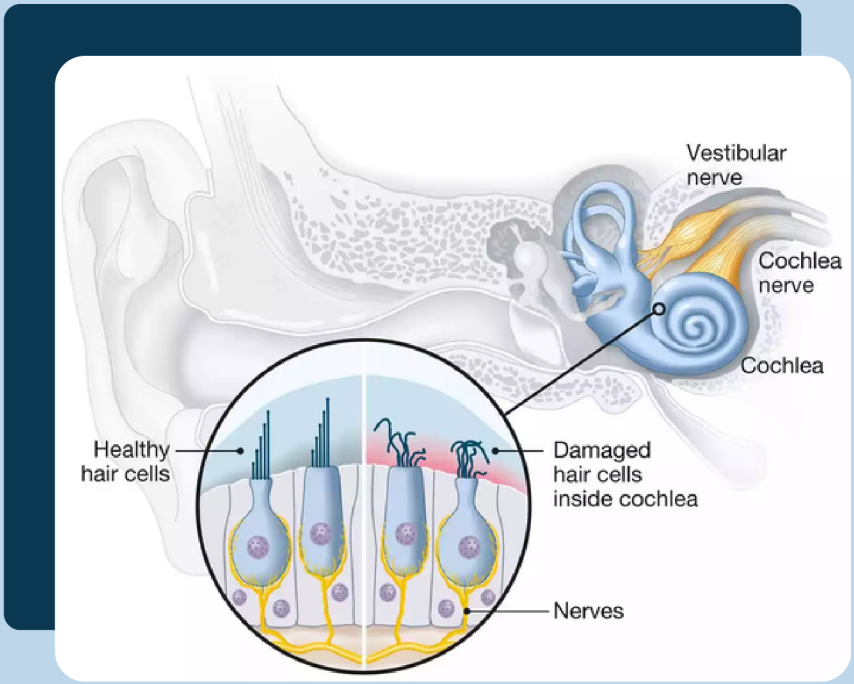
Notes



Notes

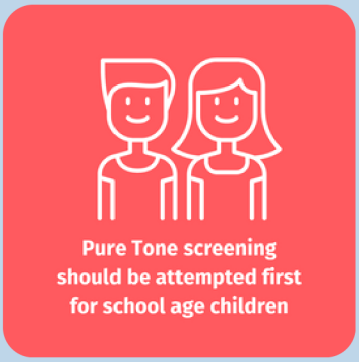
How OAE Works

In this image, the enlarged picture shows the hair cells that are inside the cochlea, nerves, healthy hair cells



Notes

Who Should be Screened with OAE?



Notes

Limitations of OAE

- The test stops at the cochlea
- May not pick up all hearing loss especially those that have less typical configurations
- Does not tell you why the child does not pass
- Pure Tone Testing should always be used first

Notes

OAE Machines

Most OAEs have the same or similar components to them.

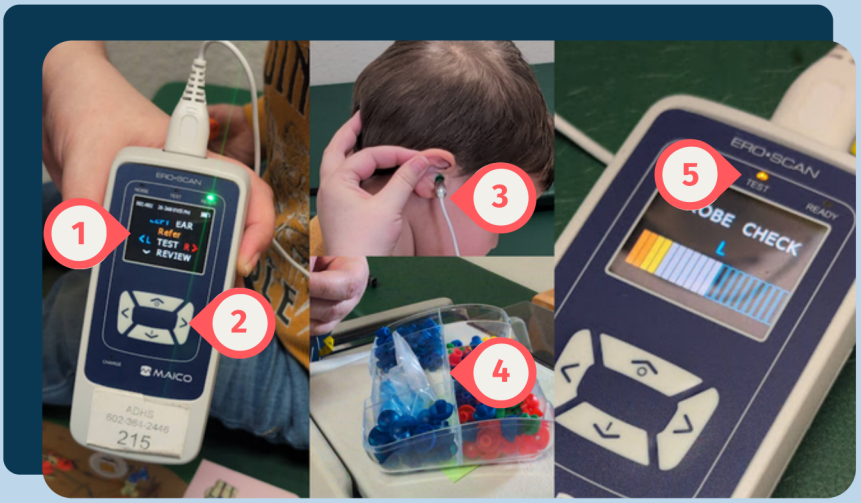
1 - Display Screen

2- Power Source

3 - Probe

4 - Probe tips/ear tips

5 - Regular Checks



Notes

Daily Equipment Checks

It is important to conduct a daily check on each device.

Visual Check	Listening Check
• Power cords and probe cords intact • Probe tip is clean and not blocked • Display screen is working	• Choose a probe tip to fit your ear • Turn on the machine and select screening settings • Insert probe into your ear • Press the button to start screening • Listen for the tones

Notes

Notes

Step 1: Gather Materials

For this screening you will need:

- Chair for the child or the screener
- Distracter for the child
- Container to place used ear tips
- Sanitizer or gloves
- Variety of ear tip sizes

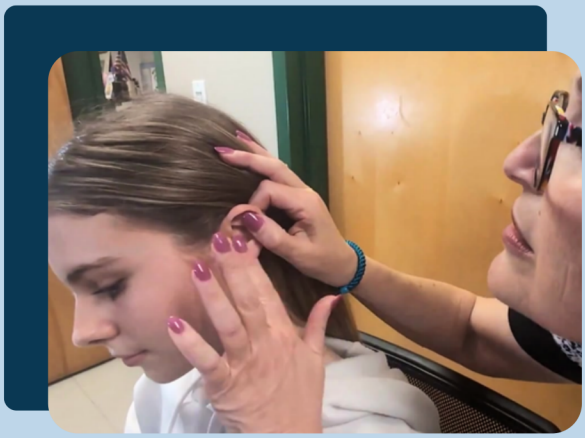
Notes

Step 2: Give Clear Directions

- Remind the child that they will need to sit quietly and still.
- Explain to the child that they will feel a bit of pressure in their ear.
- The screening will be quick.

Notes

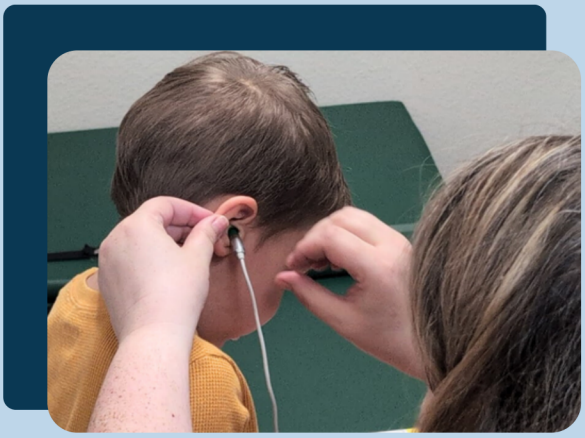
Step 3: Perform a Visual Inspection



- Inspect the child's ear for any drainage or other signs that the child should be referred to a primary care physician before screening.
- You should also use this time to look at the child's ear canal size and determine which ear tip to use for the screening.

Notes

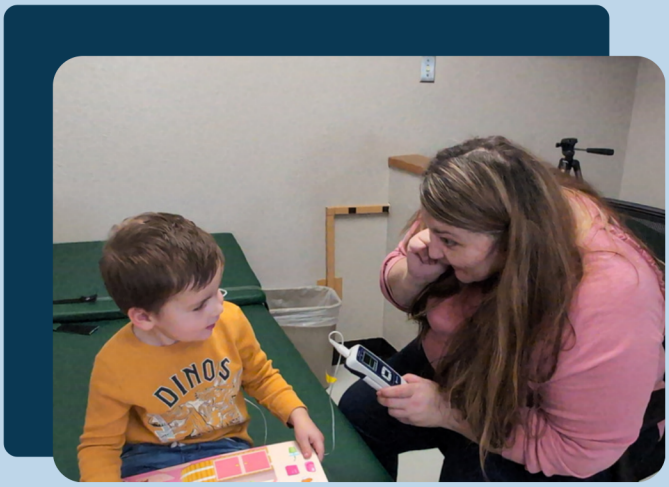
Step 4: Place the Probe



1. Clip probe cord to child's shirt
2. With one hand, gently grasp the ear
3. Pull up/back on the ear to straighten the canal
4. With the other hand insert the probe
    a. Some will go in just slightly
    b. While others will cover the canal
    c. If using a foam tip, compress it first
5. A gentle twist helps achieve a good air tight seal
    a. The probe should NEVER be fully inserted deep into the canal

Notes

Step 5: Complete the Screening

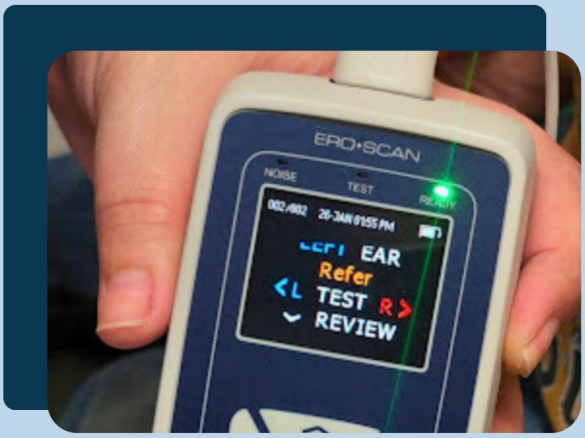


1. Start the probe check by pressing the left or right ear buttons.
2. If there is a good seal, the test will start automatically.
3. Watch the display for indicators of too much noise, or improper probe fit.

Note: It should only take a couple of seconds to complete

Notes

Step 6: Document Using Passing Criteria



- When the screening is complete, the screen will either say "pass" or "refer"
- The device is programed to display "pass" when at least 3 frequencies are measured. You don't need to record the specific frequencies
- Document the result of each ear

If a student refers, then they will need a re-screen within 10-30 school days using the same method as the initial screen

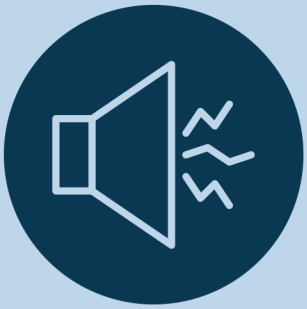
Notes

Summary

- OAEs can be used as a tool to assist with screening children who are not able to reliably respond to pure tone screening.
- It is important to provide an opportunity to screen all children rather than reporting “Could Not Test”.
- Be flexible with your method because some students need more time than others.

Notes

Troubleshooting & Error Messages



Excess Noise

Probe Fit Error

Double Check

Notes

Knowledge Check

True or False:
All children should be screened using OAE in order to get the best possible results.

False

True or False:
A child's ears do not need to be inspected before conducting an OAE screening.

False

Notes

Tympanometry Screening

Tympanometry is a supplemental screening tool - meaning it should be used with another screening process and not on its own.

In fact, this screening tool does not test hearing at all. It uses air pressure to check the function of the middle ear.

Notes

Tympanometry Checks Middle Ear Functions

Ear Canal Volume

The ear drum is bulging and swollen. This decreases the amount of space in the ear canal.

Ear Drum Movement

The ear drum should be able to move back and forth freely.

Air Pressure

The air pressure must be equal on both sides of the eardrum in order for it to vibrate appropriately

Notes

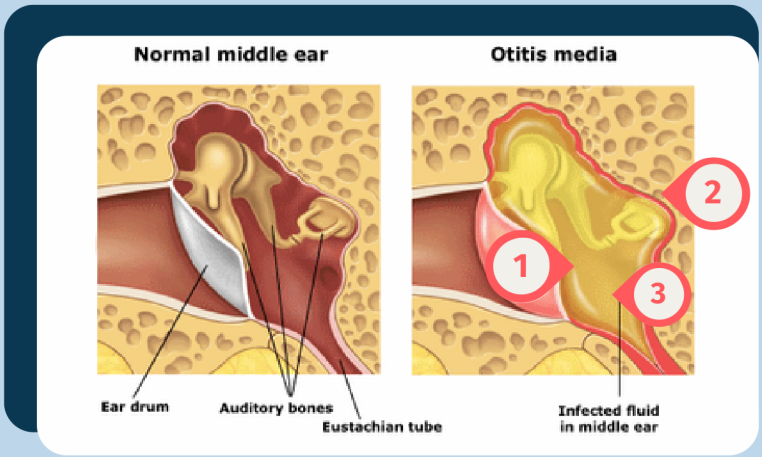
Irregular Middle Ear

Below you will see an example of a middle ear with some of the above mentioned irregularities.

1 - Ear Drum Volume

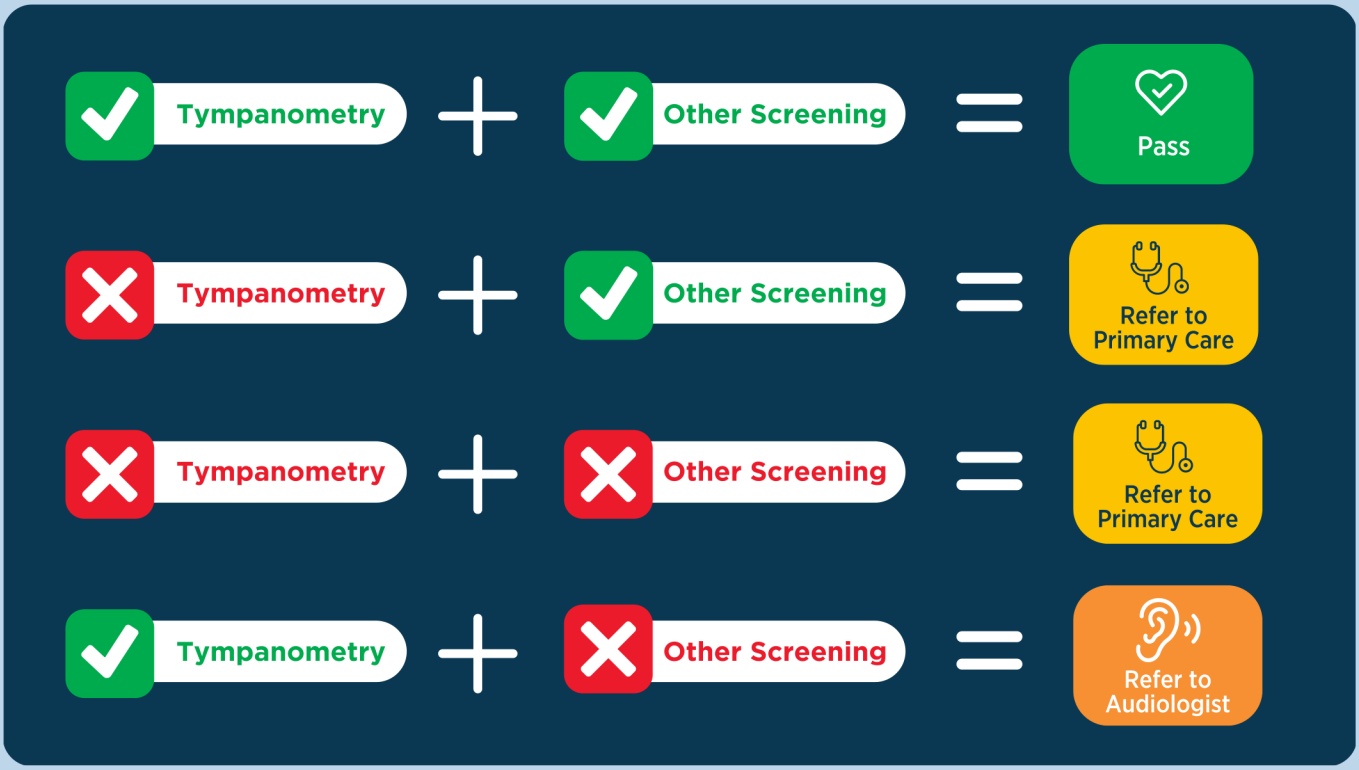
2 - Air Pressure

3 - Fluid in the Middle Ear



Notes

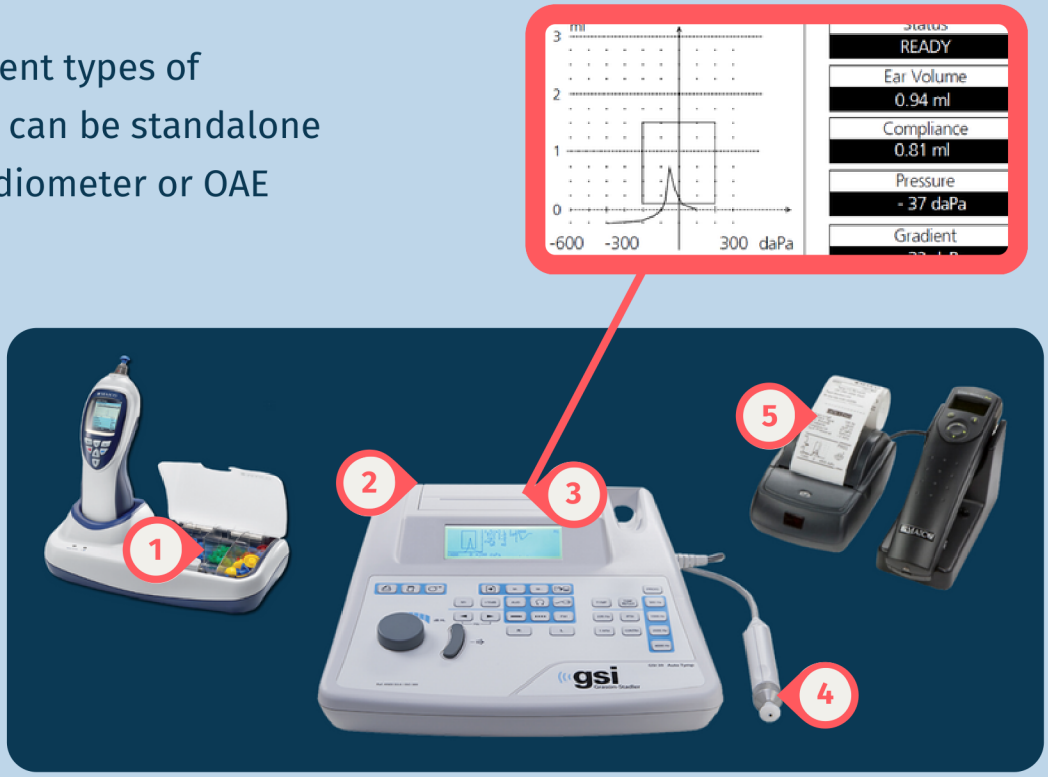
How Tympanometry Supports Other Screenings



Notes

Components of Tympanometers

There are many different types of tympanometers. They can be standalone units or part of an audiometer or OAE screening device.



1 - Probe/Ear Tips

2 - Power Source

3 - Display Screen

4 - Probe

5 - Printer

Notes

Conducting an Equipment Check

For a tympanometer, that requires a two-part inspection:

Visual Check	Listening Check
Before screening, ensure that: • Power cords and probe cords intact • Probe tip is clean and not blocked • Display screen is working	Ensure that you feel that puff of air enter your ear. To do so: • Choose a probe tip to fit your ear canal • Turn on the machine and select screening settings • Insert probe into your ear • Press the button to start screening • Wait for result on screen

Notes

Preparing for a Tympanompetry Screening:

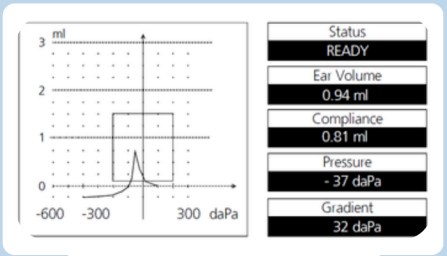
Gather Materials

Give Directions

Visual Inspection

Place the Probe

Complete Screening



Analyze Results

Document

Notes

Knowledge Check

True or False: If a child fails the Pure Tone Audiometry screening then also fails the Tympanometry screening, they should be referred to their primary care physician to have their middle ear checked and not an audiologist.

True

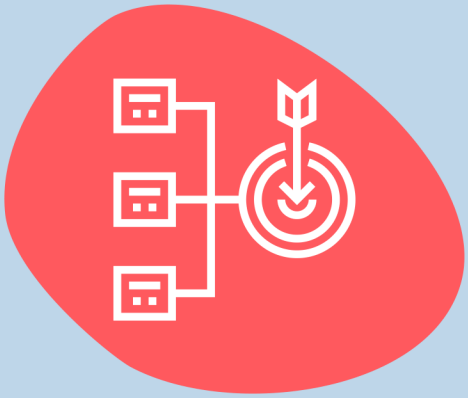
Notes

SECTION 6:

Rescreening, Referral, and Reporting

Notes

Section 6 Learning Objectives



This module will focus on the following objectives:

- Describe the criteria for rescreening children.
- Define the timelines for sending post screening notification and referrals to parents.
- Identify documentation and tracking procedures.
- Describe the process for reporting screening results to the ADHS.
- List available community resources that can be shared with families. .

Notes

Post Screening Notifications

There are some specific cases in which a child's parent/guardian must be notified via letter or phone call.

Not Screened

Medical Ineligibility

Does Not Pass

Passes Second Screening

Notes

Referrals and Communication

If a child does not pass the first AND second screening, they should received a referral.

Notes

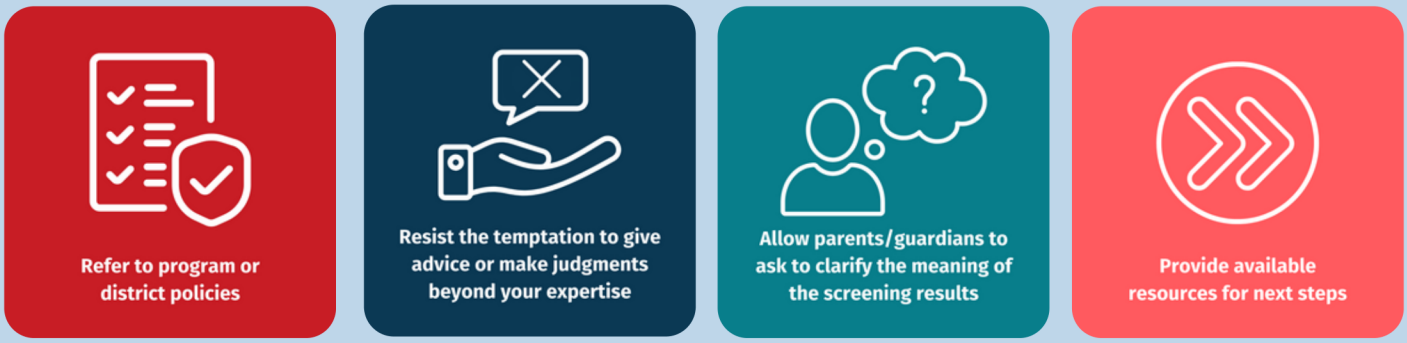
Child Does Not Pass Second Screening

Within 10 Days	Within 45 Calendar Days	Post-Specialist Appointment
Referrals Sent Referrals are sent to the parent/guardian requesting they follow-up with an appropriate specialist: • Audiologist • Physician or Primary Care Provider	**Follow Up Documentation Received by School** The referral sent home with the child from school should have a timeframe of 45 days to receive documentation from the visit with the appropriate specialist. If no response has been received within 45 calendar days, the school must follow-up with the parent/guardian.	**Notification of Diagnosis** If a child receives a diagnosis of a permanent hearing loss after referral, the Administration shall notify: • Each of the child's teachers and personnel who interact with the student • Persons responsible for the school's special education services Results from hearing screenings performed at school are considered educational records and subject to FERPA protection

Notes

Communicating with Parents/Guardians

When communicating with families, there are a few simple guidelines that screeners must follow:



Notes

Documentation:

Records	Reports
Should be maintained by the school for 3 years: • Record of screener qualifications • List of students included in the hearing screening population • Documentation for exclusion from the hearing screening population • Date of screening(s) • Record of post screening notification and referral • Record of diagnoses (if received)	**Schools are responsible for documenting and reporting:** • School Contact Information • Record of screener qualifications • Equipment types and calibration dates • Screening dates • Student screening data by grade level • Number of referrals sent and new diagnosis received

Notes

Documentation:

Records

Should be maintained by the school for 3 years

- Record of screener qualifications
- List of students included in the hearing screening population
- Documentation for exclusion from the hearing screening population
- Date of screening(s)
- Record of post screening notification and referral
- Record of diagnoses (if received)

Reports

Schools are responsible for documenting and reporting:

- School Contact Information
- Record of screener qualifications
- Equipment types and calibration dates
- Screening dates
- Student screening data by grade level
- Number of referrals sent and new diagnosis received

Notes

The ADHS Annual Reporting:

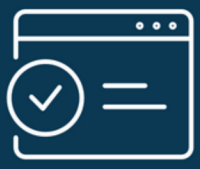
ARIZONA DEPARTMENT OF HEALTH SERVICES

All public, private, and charter schools are required to report results to the ADHS Sensory Screening Program.
All other programs are strongly encouraged to send in their data, even if not mandated to report the information.

Notes

ADHS Sensory Screening Annual Report

Open for online submission April 1. Due by June 30.



Submitted as a Qualtrics survey link

Report should include the number of students classified by grade or age equivalent grade.

Notes

ADHS Equipment Loan Program

If your site or program needs equipment, the ADHS Sensory Screening Program Equipment Loan Program is available to all certified screeners.

Equipment Loan

The program has the following equipment is available in Flagstaff, Phoenix, Tucson, and Yuma:

- Audiometers
- Audiometer/Tympanometer
- OAE/Tympanometer
- OAE Machines
- Spot Vision Screeners

Notes

Additonal Resources

- AZ Healthcare Cost Containment Services
- Kids Care
- Hear for Kids
- AZ Early Intervention Program
- Medical Services Project

Notes

ARIZONA DEPARTMENT OF HEALTH SERVICES

Completing Your Certification

In order to complete your certification, you will complete a two-part final assessment. *The Certification is valid for four years.*

- **Exam:**
  - The first part is a multiple choice exam that covers the content from all 6 modules. You must pass with 80% or better.
    - You will have 2 opportunities to complete this assessment.
    - A second failed attempt will require retaking the course.

- **Competency Assessment:**
  - The second part requires a demonstration of what you have learned. You will be required to set up and conduct each type of screening. Directions for scheduling this portion of the assessment will be provided to you upon successful completion of the exam.

Next Steps

After completing this ADHS Vision Screener course, you are now required to demonstrate a hands-on competency of the vision screening equipment.

Sign-Up Form

Please fill out the Sign-Up Form and the Sensory Program will contact you to schedule an individual hands-on competency assessment. Once your assessment is complete your Vision Screener Certification will be emailed to you.

ADHS Certification Sign-Up Form

ADHS