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A Guide for Parents and Educators of Deaf or Hearing Impaired Children

Ohio Coalition for the Education of Children with Disabilities

The Ohio Coalition for the Education of Children with Disabilities (OCECD) is a statewide, nonprofit organization that serves families of infants, toddlers, children and youth with disabilities in Ohio, and agencies who provide services to them. OCECD works through the coalition efforts of more than 35 parent and professional disability organizations which comprise the Coalition.

Established in 1972 and staffed primarily by parents of children and adults with disabilities, persons with disabilities, and education professionals, the Coalition's mission is to ensure that every Ohio child with special needs receives a free, appropriate, public education in the least restrictive environment to enable that child to reach his/her highest potential. Throughout Ohio, the Coalition's services reach families of children and youth, birth through twenty-six, with all disabilities.

OCECD's programs help parents become informed and effective representatives for their children in all educational settings. In addition, youth are assisted to advocate for themselves. Through knowledge about laws, resources, rights and responsibilities, families are better able to work with agencies to ensure that appropriate services are received for the benefit of their sons and daughters.

OHIO COALITION FOR THE EDUCATION OF CHILDREN WITH DISABILITIES

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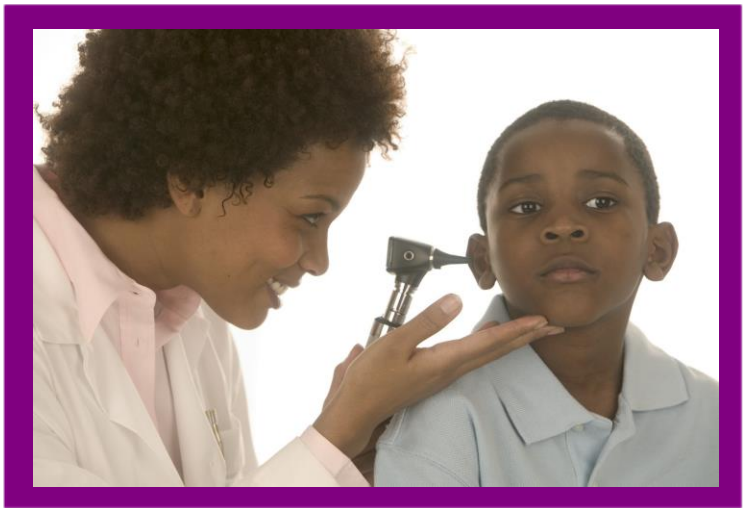
Table of Contents



A GUIDE FOR PARENTS AND EDUCATORS OF DEAF OR HEARING IMPAIRED CHILDREN

Preface

Sometimes parents just do not know where to begin once their child has been diagnosed as deaf or hearing impaired. This booklet will help answer some of the questions these parents might have.

A resource section has been included for parents and professionals on pages 43-44, for future reference.

One of the most important things to remember is that, once a child has been diagnosed, it is extremely important to have the child evaluated in order to determine the proper amplification that he or she will need and to get services in place so that the child can start using the hearing that they may have. This is extremely important for language development to take place.

A couple of facts to remember…..facial expressions and body language provide important clues in communication. Only 30 to 50 percent of spoken English is distinguishable on the lips, even for avid lip readers.

A person who has deafness or hearing impairment may seem to be acting dramatically at times. It is a way of expressing themselves when they are happy, sad, excited, etc. As easy as it will be for others to be able to "see" their emotions, it will be twice as easy for them to "see" or "read" other people's emotions.

People who have deafness or hearing impairment pick up on visual cues very easily. Remember, it might not be "what" is said, but "how" it is said, and with what kind of body language and facial expressions. Be careful so that the person with deafness or hearing impairment does not misinterpret information.

Early Screening Guidelines

In 2003, Ohio implemented the Universal Newborn Hearing Screening (UNHS). All birthing hospitals, children's hospitals and free-standing birthing centers are required to provide these screenings before the child is sent home from the hospital.

This law was fully implemented in June, 2004. Currently, 46 states have Early Hearing Detection and Intervention (EHDI) laws or voluntary compliance programs that screen for hearing, Ohio is one of them.

If only babies that are considered to be high risk are screened, about 50% of babies with a hearing loss are not identified. Be thankful that Ohio screens all newborns!

DEVELOPMENTAL MILESTONES

As a child develops, they will reach many milestones. If a child has not demonstrated these developmental milestones, parents should make arrangements to have their child evaluated immediately for a possible hearing impairment or deafness.

By the time a child is **7 months of age**:

- Turn their head when their name is called
- Smile back at people
- Respond to sound by making sounds themselves
- Enjoy playing games such as peek-a-boo

By the time a child is **1 – 2 years of age**:

- Use gesture, like waving bye-bye
- Make sounds, "ma" or "da"
- Respond to "no"
- Pretend play (talk on toy phone)
- Point to objects they are interested in
- Use several single words without prompting
- Use 2-4 word phrases
- Follow simple instructions
- Become more interested in other children
- Point to objects or pictures when named

By the time a child is **3 years + of age**:

- Show affection
- Use 4-5 word sentences
- Imitate adults and playmates
- Play make-believe with their toys

By the time a child is **4 years + of age**:

- Use 5-6 word sentences
- Follow 3-step directions
- Cooperate with other children

The best early intervention a child possibly can have their parent. Parents need to talk, talk, talk to their child. Sing to them, read to them, play games, surround them with language just as you would a child with normal hearing. Make things come alive for them. Since most hearing impaired children are visual learners, make things as visual for the child as possible.

GETTING THE DIAGNOSIS

I suspect that my child may have a hearing loss. What should I do?

As a parent, one of the first things you can do is to do some simple tests to see if your child responds to sound. Try banging things together or turning the volume up on the television or radio. You may want to try these things while the child is asleep to see if noise startles them. If your child is awake and you bang things together or clap your hands, be very careful the child does not see you. Deaf and hearing impaired children are very visual. They also are very sensitive to feeling the movement of air. If your child did not respond to the sound, immediately contact your child's physician to express your concerns and ask for a referral. You also may refer to the list of Developmental Milestones on page 6 in this booklet. This will give you an idea of what your child should be doing at their age. If you do not believe that your child has demonstrated some of the skills listed for his/her age, you should share that information with your child's physician as well as with the physician or audiologist that will evaluate your child's hearing.

What will happen once the referral has been made to evaluate my child's hearing?

Your child probably will be referred to an Audiologist or a Pediatric Audiologist for a hearing evaluation. A hearing test by an audiologist will determine if your child has a hearing impairment or deafness. Different types of hearing tests may be used:

- **OAE (otoacoustic emissions)** determines if the ear is blocked or if the cochlea is damaged.
- **ABR (auditory brainstem response)** determines if sound is getting to the brain.

These tests may be used on children younger than 6 months of age. The child will need to lie still during the test, therefore, these tests may be done while the child is asleep. If the child is awake, he/she will be given medication to make them sleep. These tests will tell you if your child's ear is working properly.

My child just has been diagnosed as Deaf or Hearing Impaired. What do I do now?

There are several things that need to be considered at this stage.

- Make sure you have had your child evaluated by a professional and that you are in agreement with their findings. Do not be afraid to request a second opinion.
- Discuss what amplification system would work best for your child based on the evaluation results.
- Explore your options: Hearing Aids, Cochlear Implant, what type of communication method you want to use; and if your child is school age you need to investigate various programs available in your area and special education options.
- Take your time sorting through information; check out different services. Your audiologist should be able to help direct you to services that will help you and your child.
    - Some agencies to consider…
        - Regional Infant Hearing Program
        - BCMH (Bureau for Children with Medical Handicaps)
        - SSI (Social Security Income)
        - Early Intervention Program (Help Me Grow)
        - Speech and Language Therapy
            - Look for a therapist that has experience working with children who have deafness or hearing impairment.
- Make some decisions about how you will approach teaching your child to communicate.
    - Sign Language (ASL-American Sign Language or SEE-Signed Exact English)
    - Auditory-Oral
    - Total Communication (Sign & Oral)
    - Auditory-Verbal
    - Cued Speech
    - Visual Phonics

The sooner you make these decisions, the sooner your child can begin to learn language, learn to communicate, and learn to be a part of the world around them.

TYPES OF HEARING LOSS

There are two different types of hearing loss.

- **Conductive Hearing Loss**
- **Sensorineural Hearing Loss**

Conductive Hearing Loss means the sounds are not loud enough to be heard well. It is not always a permanent loss, sometimes it might be caused by fluid in the middle ear. Sometimes surgical procedures can restore all or partial conductive hearing losses. A conductive loss is the result of an abnormality in the outer or middle ear.

Some causes of conductive hearing loss include:

- **Otitis Media-** infection in the middle ear
- **Perforated eardrum-** a hole in the eardrum
- **Cholesteatoma- a cyst in the middle ear**
- **Otitis Externa-** infection in the ear canal
- **Otosclerosis-** disease resulting in calcification of stapes (stirrup) in the middle ear
- **Excessive or impacted wax** which causes a blockage in the ear canal
- **Collapsed ear canal**

The second type of hearing loss is **Sensorineural.** This loss happens when the cochlea is damaged or destroyed, or the connection between the ears and the brain is not working. This means the loss is in both loudness and clarity. There is no medical or surgical help available to correct this type of hearing loss; however, digital hearing aids and Cochlear Implants help significantly.

Your child's hearing loss will be referred to as either Bilateral or Unilateral.

Bilateral Hearing Loss - loss of hearing that involves **both** ears.

Unilateral Hearing Loss - loss of hearing that involves **one** ear.

PROGRAMS and SERVICES

Regional Infant Hearing Program (RIHP)

The Ohio Department of Health's Division of Family and Community Health Services and Bureau of Early Intervention Services provides services through the Regional Infant Hearing Program (RIHP).

RIHP has two primary responsibilities:

1. When a child does not pass their newborn hearing screening, RIHP keeps track of the infant and provides follow-up evaluations.

2. RIHP provides appropriate habilitative services from birth-3 years of age for a child that has been identified as deaf or hearing impaired and for their families.

The RIHP uses the SKI-HI family centered curriculum. Any family receiving services from RIHP also must be enrolled in Help Me Grow. (www.skihi.org)

For contact information regarding your local RIHP, call your local health department. (www.odh.ohio.gov)

Bureau for Children with Medical Handicaps (BCMH)

BCMH is a program provided through the Ohio Department of Health. Local offices are located in your county Health Department. BCMH has both medical and financial criteria that must be met in order to qualify for services. BCMH covers a wide range of services, but it is important to remember that all services your child requires may not be covered, nor may your child's particular diagnosis be covered.

The health department within your county will have a nurse that oversees the BCMH program and he/she will guide you through the process of applying for and understanding BCMH.

You also may contact BCMH at (614) 466-1700 or BCMH@odh.ohio.gov.

Help Me Grow

Help Me Grow is a program that is operated through the Ohio Department of Health. There are 88 county Help Me Grow Programs that serve families with children birth through three years of age.

Help Me Grow provides families with many opportunities that include, support, training, and service coordination. Families have a trained person that may come to their home and offer them the support that is needed to help locate services, equipment, and sometimes financial assistance to help with the cost of services that their child may need.

As your child approaches his/her third birthday, Help Me Grow will be there to help make the transition to preschool a smooth process for you and your child.

Contact your local Help Me Grow office in your county for further details. (www.ohiohelpmegrow.org)

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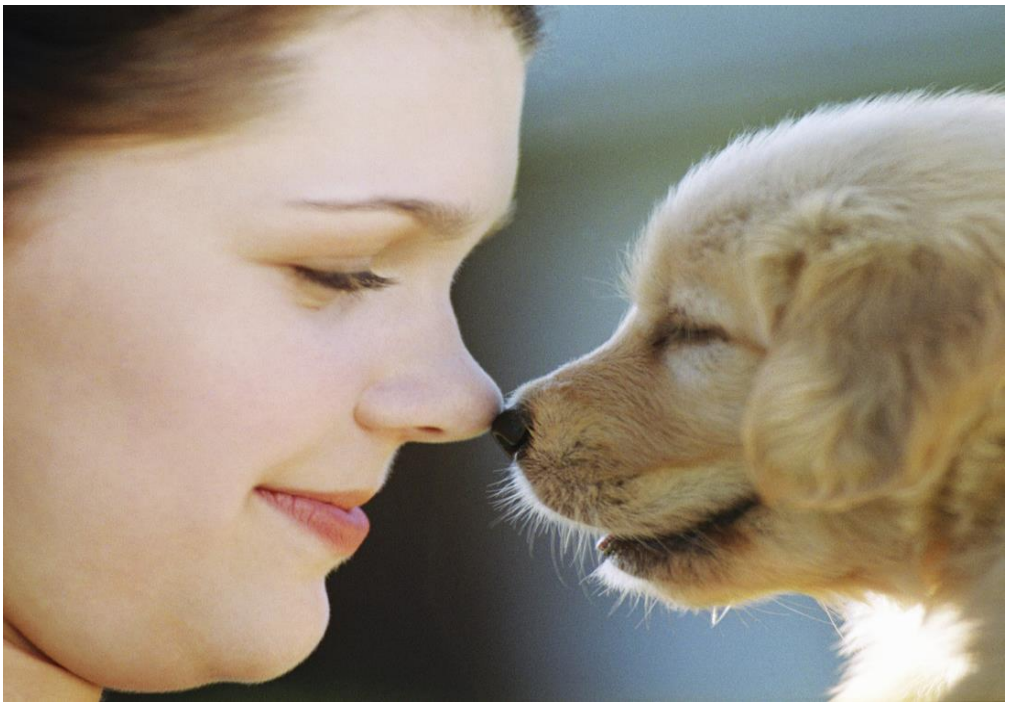
Hearing Dogs/Dogs for the Deaf

Just as people with vision impairments use Seeing Eye dogs, people who have deafness or hearing impairment may have the opportunity to use a Hearing Dog.

There are different training centers throughout the United States and there normally is a waiting list due to the animals having to go through intense training.

These canine buddies are trained to respond and to alert the deaf or hearing impaired person to such sounds as a fire/smoke alarm, telephone, door knock, doorbell, oven timer, alarm clock, and name call. In some cases, the dog might be trained to alert when a baby cries.

They also help the deaf and hearing impaired person in the area of emotional needs. The person is less likely to become depressed or lonely because the dog provides companionship. A service dog will help keep the person motivated by requiring the person to get up each day to take care of their dog and exercise them.



DEGREES OF HEARING LOSS

It is recommended that your child's hearing evaluation be conducted by an Audiologist. Some parents prefer that their child see a Pediatric Audiologist. They are knowledgeable about the latest assistive technology devices and may make recommendations to the school district.

On the following page you will see what is called an Audiogram. Once the Audiologist has completed the hearing evaluation, he will chart the results on the Audiogram. This will allow you to see what degree of hearing loss your child has at different frequencies and it will be charted according to decibel levels.

The area that is outlined in the shape of a banana is referred to as the "speech banana". This area shows where typical speech sounds occur.

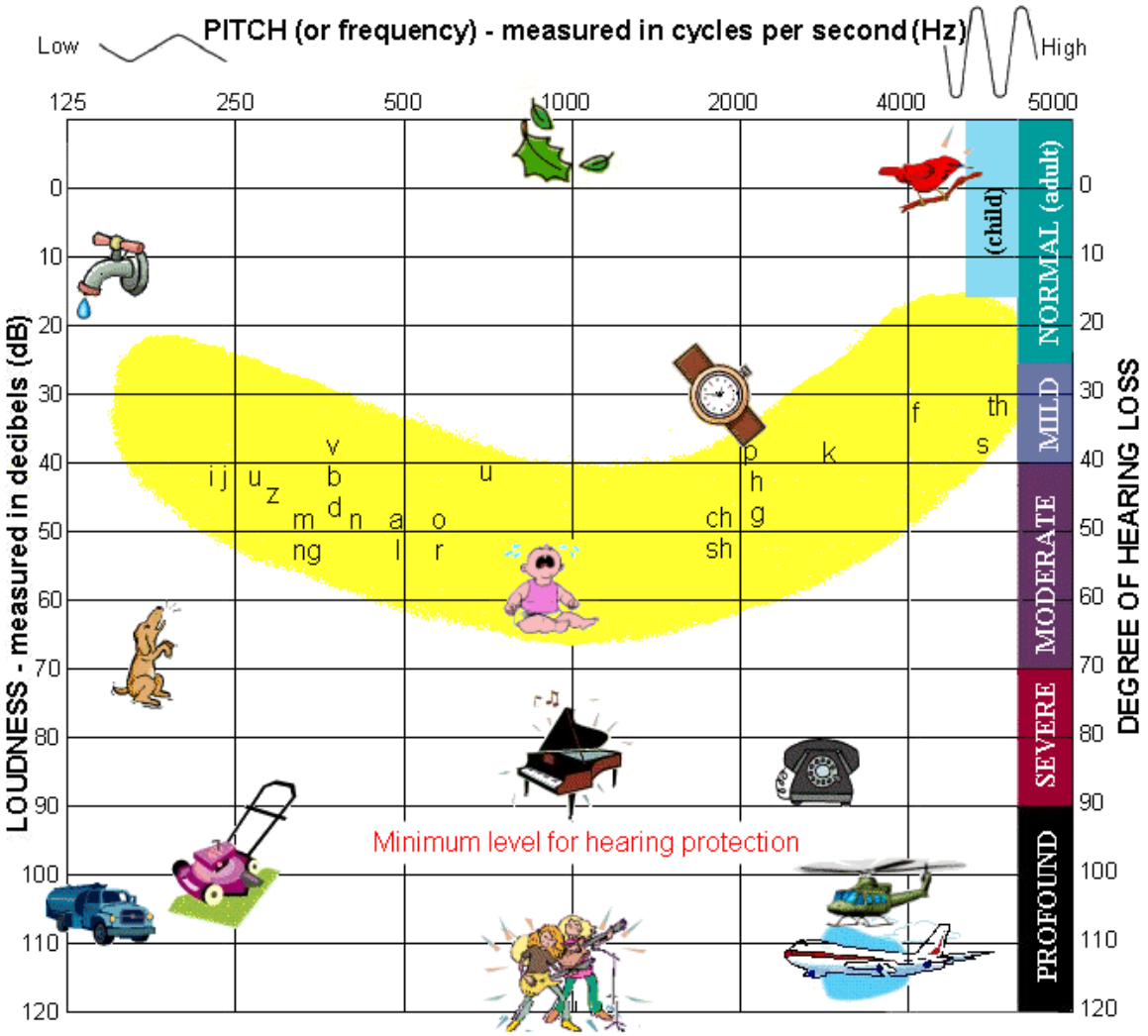
One thing to keep in mind is that these tests are performed in a soundproof test booth, not a noisy classroom. Therefore, you can expect your child to hear differently in different environments where the acoustics vary.

It is a good idea to keep your child's audiograms from year to year so you can track any fluctuation in his/her level of hearing.

Below is a list that describes the degrees of hearing loss and the decibel measurements of loss.

Normal Hearing Sensitivity	0 to 15 dB
Minimal or Slight Hearing Loss	16 to 25 dB
Mild Hearing Loss	26 to 40 dB
Moderate Hearing Loss	41 to 55 dB
Moderately Severe Hearing Loss	56 to 70 dB
Severe Hearing Loss	71 to 90 dB
Profound Hearing Loss	91 dB or greater

Audiogram with Speech Banana



*Each picture represents the approximate loudness and pitch of that object

*Banana represents range of conversational speech

Source: American Academy of Audiology at www.audiology.org

Common Sounds in Decibels

Sounds	Decibels	Maximum weekly time limits
Leaf rustling	10 dB	
Breathing	10 dB	
Ticking watch	20 dB	
Quiet whisper	30 dB	
Humming refrigerator	40 dB	
Library	40 dB	
Moderate rainfall	50 dB	
Washing machine	60 dB	
Normal conversation (3ft)	60-70 dB	
Piano practice	60-70 dB	
Vacuum cleaner	70 dB	Annoying
Telephone dial tone	80 dB	Possible ear damage (8 hours)
Alarm clock (2ft)	80 dB	
City traffic, inside the car	85 dB	40 hours
Violin	88-110 dB	<20 hours

Earplugs needed
Industry monitoring standards begin at 85-90 dB
Regular sustained exposure may cause damage at 85 dB

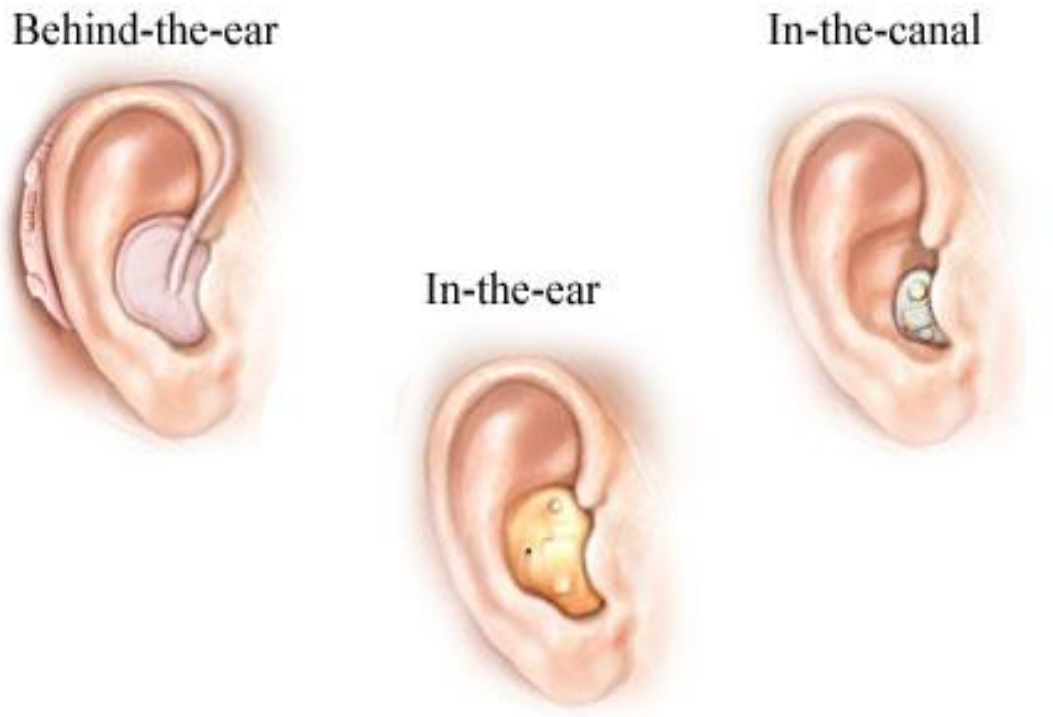
Power lawn mower	91 dB	< 10 hours
MP-3 player (third vol.)	94 dB	5 hours
MP-3 player (half vol.)	100 dB	1.25 hours (serious damage)
Chain saw	110 dB	10 minutes
MP-3 player (full vol.)	115 dB	< 5 minutes
Thunderclap	120 dB	Human pain threshold
Amplified rock music (4-6 ft)	120 dB	Need ear protection
Pain Begins	125 dB	
Firecracker	140 dB	
Jet engine	140 dB	
Rock music (peak level)	150 dB	Eardrum rupture

Intensity, or loudness, is measured in decibels (dB). A person with hearing within the normal range can hear sounds ranging from 0 to 140 dB. Conversations are usually around 60 to 70 dB. Sounds at or louder than 120 dB can be painful and may result in temporary or permanent hearing loss.

AMPLIFICATION DEVICES

What type of amplification is available for my child?

Behind-the-ear (BTE) hearing aids are what most young children are fitted with. They come in many colors and in different sizes. The BTE is anchored in the ear by an ear mold. A mold will be made of your child's ear so it will fit comfortably and help to hold the device in place. New molds will need to be made as your child grows. The ear molds may be made in different colors also.



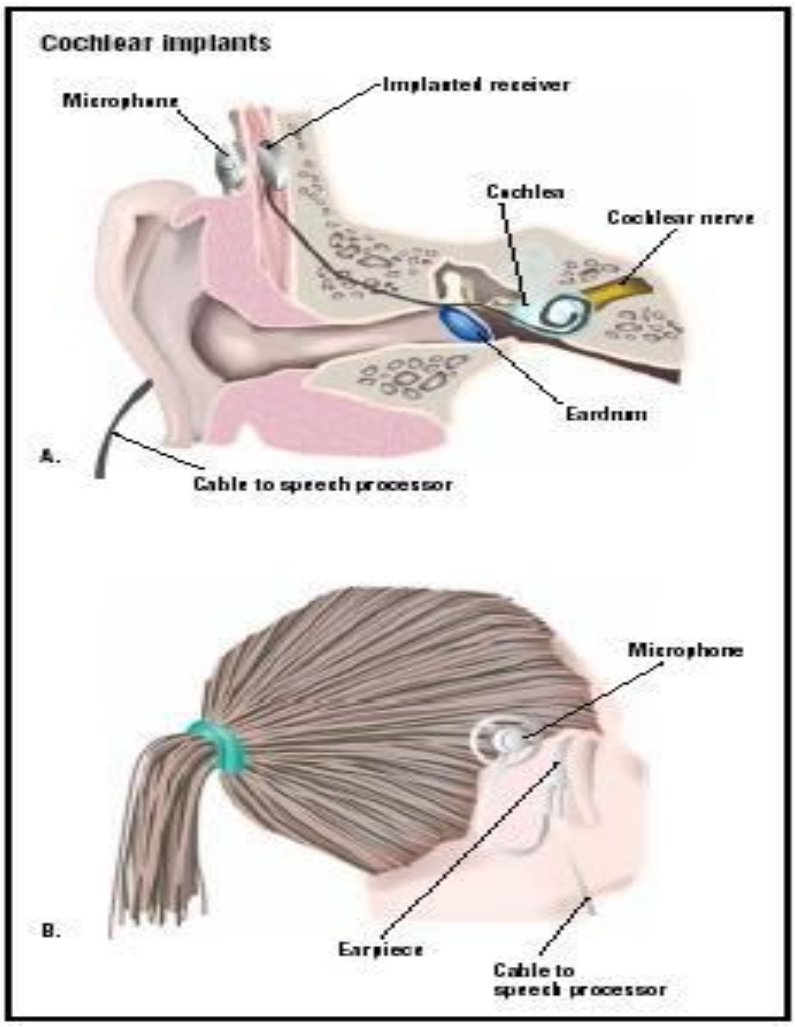
In-the-ear/In-the-canal (ITE) hearing aids are usually for those with a moderate hearing loss. Since they fit in the ear, no ear mold is needed. These devices are normally small and are for older children and adults. They usually are not recommended for children nor for someone with a severe hearing loss.

Cochlear Implant is a device that may be recommended for someone with a severe to profound hearing loss.

The cochlear implant consists of two devices. The first component is the Sound Processor, the external device that captures sound, converts it into digital signals, and sends it to the internal implant.

The second component, the Electrode Array, is surgically implanted into the cochlea. It converts signals into electrical energy, sending it to the electrode array. The electrodes will stimulate hearing nerves and the brain perceives signals as sound.

Currently, children are being implanted before one year of age to catch the early years of language development. Bilateral implantation also is being done.



FM Systems are extremely helpful in the classroom and at home. They pick up speech signals from the source (teacher, parent) and sends sounds directly to the child's ear by way of a hearing aid or cochlear implants. There are two standard types of FM Systems:

1. Personal FM System – when used in the classroom, the teacher wears the speaker and it transmits the sound directly to the student wearing the receiver.
2. Sound Field FM System – The speaker wears the transmitter and sound goes to speakers placed around the room. This has been proven to not only help those students with hearing impairment, but also students with other disabilities, especially those with AD/HD.

LANGUAGE AND COMMUNICATION OPTIONS

Suggestions on How to Make Things Visual for Your Child

Label things throughout your home: chair, stove, refrigerator, etc. Your child will begin to memorize the word with the object which will increase their reading skills as well as their language.

Take your child's favorite book and make it come "alive" by acting it out, copying the book and labeling parts of the pictures. Break down the book into small sections and go over and over them with your child. Let them tell you the story. It does not have to be perfect. This also will help identify any issues with comprehension.

Make maps, posters, and do experiments, not only with your child's academic subjects, but with fun stuff around the house.

If you are trying to teach your child the difference between the words "soft" and "rough", gather objects that are both soft and rough and let your child feel them so he/she can experience the difference between the two. These activities work with children with normal hearing who Also are visual learners.

Be creative. Do as many **hands-on learning** activities with your child as you possibly can. It has been said that a hearing impaired child needs to be exposed to a word over 300 times in order for that word to become a part of their expressive language, versus a hearing child who only needs to be exposed to that same word less than 20 times.

If the words "drops" and "cracks" appear in the same story, you would be surprised what a child can learn by dropping an egg and watching it crack! It has been done and it works.

How will my child learn to communicate? What are my options?

American Sign Language (ASL) - This is a manual, signed language that is not based on the English Language. This is the language that is used most among the deaf community. Parents should have intensive ASL training.

Auditory-Verbal - This method teaches the child to develop listening skills through one-on-one therapy. It teaches the child to use the hearing that they have with the aid of amplification. It is usually recommended that NO sign language or any type of manual communication be used with the student when using the Auditory-Verbal approach. The student will learn communication skills necessary to communicate in the hearing community. The family is primarily responsible for the child's language development and the parents are expected to seek training. A language rich environment needs to be provided for the child, and sounds need to be made meaningful for the child. The parents will need to work closely with the child's teacher and therapists in order for everyone to be working toward the same goals.

Cued-Speech - This is a mode of visual communication using 8 hand shapes or cues that represent sounds of speech. The speaker uses these cues while speaking. These cues help the student distinguish sounds that look the same on the lips. The student will still need to use their amplification system to maximize their hearing potential. Cued speech can be learned through classes taught by a trained therapist. It takes some time and lots of practice to learn cued speech and to become proficient.

Oral Auditory - This is a program that helps the child learn to use their remaining hearing to the maximum extent possible through the amplification device: hearing aids, cochlear implant, and/or FM system. The student will need to be taught to lip read as well. Manual or sign communication is not used with this program; some natural gestures can be used. The family primarily is responsible for the child's language development, and they are encouraged to work closely with the child's therapists and teachers so they can carry over training at home. The child will be taught to listen and identify sounds, as well as, be taught to speech-read and work on speech skills.

Total Communication - This option uses every and all means to teach communication with deaf children. This might include sign language, fingerspelling, natural gestures, speech- reading, body language, oral speech and the use of amplification. The goal is to teach language by whatever means that is effective for the child. Family members should learn the chosen sign language system that they chose to use with their child. Learning sign language is a long term commitment. As your child grows and matures to different levels their language needs will change and you will need to increase your sign vocabulary in order to provide your child with a stimulating language learning environment. Parents should sign consistently as they speak with their child.

Many community centers as well as colleges and universities offer classes in sign language.

Parents can also find books and videos available from lending libraries to help with the cost of purchasing so many materials.

Lip Reading/Speech Reading

Lip Reading as defined by Wikipedia:

> A technique of understanding speech by visually interpreting the movement of the lips, face and tongue with information provided by the context, language, and any residual hearing.

It is estimated that 30-40% of sounds in the English language are not distinguishable by sight alone. For example, "where there's life, there's hope" could "look" like "where's the lavender soap?"

When speaking to a person that is a good lip reader, it is not helpful to exaggerate your mouth movement because it makes it more difficult for them to read your lips.

A person that lip reads also will use visual cues from the environment, and knowledge they have about what is being discussed.

Not all deaf and hearing impaired people are good lip readers. For some, it just comes easy but for others it has to be taught and even then it might not work for them. Being able to lip read might be considered a "gift" or a "talent".

Visual Phonics

Visual Phonics was created by a mother of 3 deaf children. It is a system of 45 hand signs that look like and feel like the sound that they represent. There also is a written symbol that looks like the hand sign. Visual Phonics help students learn to read, spell and speak.

Visual Phonics is a way that helps students learn the difference between the letter and the sound. They will learn the letter, and then they will learn the sound the letter makes along with the symbol which gives them a visual in relationship to the sound.

Visual Phonics has three parts:

1. **Sign system for sounds**. The hand will mimic the mouth to help the child SEE how the sound is made.

2. **Written symbols**. The written symbols will look like the hand motion used to imitate the mouth and how the sound is made.

3. **Pictures for the words**.

The learning process uses multiple senses which increases retention.

How much is retained in learning?

What you read	10%
What you hear	20%
What you see	30%
What you see and hear simultaneously	50%
What you say as you talk	70%
What you say as you do something	90%

How long is information retained?

	Recall 3 hours	Recall 3 days
Lecture	70%	10%
Showing used alone	72%	20%
Blend of showing & telling	85%	65%

Source: Socony-Mobile Oil Co./Alphabetic Phonics Teacher Training

If I cannot learn the way you teach me…..Teach me the way I learn!!!

Visual Phonics also is multisensory. It uses visual, tactile and kinesthetic movements. The child can **FEEL** the sound with his hands and **SEE** the sound with his eyes.

Visual Phonics also can be used with students with learning disabilities, developmental delays, speech and language impairments, as well as, with children who are deaf or hearing impaired.

Visual Phonics helps facilitate reading, spelling and speech. It also helps the student to analyze and not memorize.

Visual Phonics is not a curriculum. Teachers may use it according to how it best fits the needs of their students.

Visual Phonics is different than Cued Speech. In Cued Speech, the sounds are represented by a combination of hand shapes and positions in conjunction with the mouth movements. In English, Cued Speech requires eight hand shapes in four different locations in combination with the natural mouth movements of speech.

Visual Phonics, however, differentiates each sound by representing it with a different hand shape and movement that mimics how the sound is produced. It is not used with spoken conversation. The goal is to clarify the sound symbol relationship between spoken English and print.

One of the greatest benefits of using Visual Phonics is that it allows deaf students to see the sound of the English language, and in doing so, helps them to develop better reading skills.

EDUCATION

What qualifies a child under the Individuals with Disability Education Act 2004, (IDEA) and the Ohio Operating Standards for Ohio Schools Serving Children with Disabilities?

IDEA 2004 and The 2008 Ohio Operating Standards define "Hearing Impaired" and "Deafness" as follows:

"Hearing Impaired" means an impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness in this rule.

"Deafness" means a hearing impairment that is so severe that the child is impaired in processing linguistic information through hearing, with or without amplification, and that adversely affects a child's educational performance.

According to the Ohio Operating Standards 3301-51-06 (J):

(J) A group of qualified professionals and the parents of the child may determine the child has deafness or a hearing impairment if the child exhibits:

(1) An average pure tone hearing loss of fifty decibels or greater, according to the "American Speech-Language-Hearing Association (ASHA) Guidelines for the Audiologic Assessment of Children From Birth to Five Years of Age" (2004) for children from birth to five years of age or according to the "American Speech-Language-Hearing Association (ASHA Guidelines for Manual Pure-Tone Threshold Audiometry" (2005) for children six through twenty-one years of age, for the frequencies five hundred, one thousand, and two thousand hertz in the better ear;

(2) An average pure tone hearing loss of twenty-five decibels or greater (ASHA) for the frequencies five hundred, one thousand and two thousand hertz in the better ear, which has an adverse effect upon the child's educational performance related to documented evidence of:

(a) A more severe hearing loss during the developmental years than is currently measured;

(b) A history of chronic medical problems that have resulted in fluctuating hearing, presently or in the past; or

(c) A delay in diagnosis, provision of amplification, or initiation of special programming.

(3) A hearing loss in excess of twenty-five decibels (ASHA) for the frequencies one thousand hertz through eight thousand hertz in the better ear, resulting in such poor auditory discrimination that it has an adverse effect upon the child's educational performance.

What type of services will a child need on their IEP to be successful?

Related Services – speech therapy, audiology services, ear molds, equipment servicing and repairs, daily checking of equipment, plus counseling and guidance for parents and teachers.

Interpreting Services – oral transliteration, cued language transliteration, sign language and interpretation services.

Assistive Technology – peer note takers (especially in middle and high school), sign language interpreters, sound field/personal FM Systems (also may be used during assemblies, gym, music class and on field trips).

Modifications and/or changes probably will need to be made in the classroom for the child to be successful. Sometimes it is as simple as the way the room is arranged, or it might mean a change in teaching style, be open to whatever it might be. These changes may help others within the classroom, too.

Modifications and accommodations for deaf or hearing impaired students may be a little different from what IEP teams are used to placing on an IEP, but keep in mind….the "I" in IEP means individualized! The IEP team, which includes the parent, will decide what specific services will be written into the IEP in order for the child to be successful in the classroom.

Tips for Teachers of Children Who Are Deaf or Hearing Impaired for Positive Communication in the Classroom

- Do not speak with your back to the class. This eliminates the opportunity for the student to speech-read.
- Speak in a clear and natural way.
- Get the student's attention by taping them on the shoulder or waving your hand before you begin to speak.
- Always repeat any questions or comments made by others in the classroom, especially if made by a student that might be sitting behind the deaf or hearing impaired student, also point out who is talking to the deaf or hearing impaired student.
- Avoid standing in front of the light source. The glare from the light can make it very difficult to read lips.
- Do not chew gum or obstruct the area around your mouth with anything, such as, your hands or pencils.
- If there are any changes in the schedule or in the assignments, make sure the student is aware of them by writing them on the blackboard or giving them a handout.
- Always communicate directly with the deaf or hearing impaired student, not the student's note taker or interpreter.
- Eliminate as much noise as possible in the classroom. You might want to consider putting tennis balls on the chair legs to help cut down on the noise.
- Involve the student in some small group discussions. It will help them to be able to better participate.
- Do not expect a deaf or hearing impaired student to listen for long periods of time.
- Make sure that the student receives a written copy of any verbal announcements that are made throughout the day.

REMEMBER, two students may have almost identical hearing losses but still function very differently, on different levels.

Accommodations for the Classroom

- Provide the student with an outline of the topic being discussed beforehand so the student can go over it with their interpreter, aide or speech therapist. Some of the vocabulary may need to be pre-taught.

- Use visuals aids as much as possible, such as, pictures, videos, or overheads.

- Make sure any movies that are shown are closed captioned versions.

- Provide a note taker, especially if the student is watching an interpreter. A student cannot watch the interpreter and take notes at the same time.

- Write important instructions on the blackboard, give the student a written copy of them or email/text them to the student.

- Write key vocabulary on the blackboard or give the student a written copy of the words ahead of time.

- Reduce the student's distance from the speaker, when possible.

- Assign a hearing buddy to the student, if appropriate.

How Teachers and Parents Can Help with Reading

Reading may be the most difficult skill for a student who is deaf or hearing impaired due to their language delay. Where you live in Ohio may determine how big the gap will be in language and vocabulary. Not all areas, especially the rural areas, have access to services from people that have experience working with deaf or hearing impaired people. Also, not all speech therapists have the experience or the expertise to work with children who are deaf or hearing impaired.

It is very important to explain a new word to the student as you introduce it. New vocabulary needs to be explained using words that the child already understands. If the child has an aid or interpreter, they could work on new vocabulary with the student before it is introduced to the whole class because it may take them longer to comprehend the word than his/her peers. Plus, there might be words within the meaning of the new word that will have to be broken down for the student to help him/her better understand its meaning.

Do as much pre-teaching of new words and concepts as possible; make things as visual as you can. Words that *sound* the same but have different meanings and words that are *spelled* the same but have different meanings are very confusing, as well as idioms.

Provide the student with a variety of different materials on the subject. You may have to locate materials at a lower grade level, depending on the student's ability. Send home any books or information you are covering in the classroom so that parents can review the information with their child.

Do hands-on activities or experiments to make things as visual as possible for the deaf or hearing impaired student.

Reading and language should be the top priority for students who have deafness or hearing impairment. It will affect all aspects of their lives.

The student may need Assistive Technology in the classroom and at home, too. For example a FM System or Closed Captioning device for the TV at school might need to be used at home for homework for the child to actively participate with their family.

Using an Interpreter in the Classroom

The role of the interpreter may vary depending on the age of the student and their level of performance. Make sure that the other students in the classroom understand why the interpreter is there and describe the interpreter's job.

Make sure you speak to the student, not the interpreter, and make sure the student understands that they need to respond to you and not to the interpreter, as well. Try to speak clearly and slowly to give the interpreter time to interpret the information. Depending on the student's level of understanding and vocabulary, sometimes information has to broken down for the student to comprehend it.

It may take the student time to adjust to having an interpreter, to learn how to use an interpreter properly, and to understand that person's role. The teacher will be the disciplinarian of the student, not the interpreter. Since the student must stay focused on their interpreter, they may lose bits and pieces of information. Allow them to take short breaks throughout class time, without consequences.

Social Issues for Children Who Have Deafness or Hearing Impairment

Communication barriers, especially with their peers, may cause isolation, depression, and low self-esteem in children who have deafness or hearing impairment. Therefore, they sometimes have a difficult time fitting in socially. It is helpful, especially if the child uses sign language, for parents to notify teachers and other staff members so they may learn some basic sign language. This will help the child to feel included in the school environment. If possible, the parent or teacher may start a sign language club in the building.

Sometimes children who have deafness or hearing impairment are socially immature. These students might use a word in the wrong context, causing them to look as if they do not know what they are talking about. It also may cause great difficulty among their peer group, when they use words inappropriately. Sometimes opposites are words that get confused, for example, they might use the word "on" when they mean "off", or "under" when they mean "above". It also is very typical for a child who has deafness or hearing impairment to agree with a statement that has been made, or to pretend that they understand something. It is confusing for those working with the child.

If a parent sees that their child is not functioning socially the way he/she should be, it is time to address these issues with the school and the IEP team. Talk with the child about it. Get them involved in sports, clubs, or youth activities to increase their social interaction with their peers. Parents may have to advocate for their child to be part of a team or club because some people are afraid they will not be able to communicate effectively with the child. The parents need to educate them about how their child's participation will benefit the group.

Emergency Situations at School

This is extremely important!!! Do not forget these students have unique needs in an emergency situation. They need to be taught prior to an actual emergency situation how to respond…what to do…where to go, in the event of a fire, tornado, etc.

To be in compliance with the American with Disabilities Act (ADA), there must be flashing exit strobe lights in every school building. Parents may want to consider them at home.

A buddy may need to be assigned to make sure the child is with someone responsible. There should be a plan in place as to "who" is going to do "what" in an emergency situation. That way, if the student is older and changes from class to class, they know who to go to for help and assistance.

ADVOCATING FOR YOUR CHILD

Most importantly, **ALWAYS** remember that you know your child better than anyone. You have information that no one else has.

Knowledge is power! Become the best advocate for your child that you possibly can. Here are some ways to help you advocate for your child:

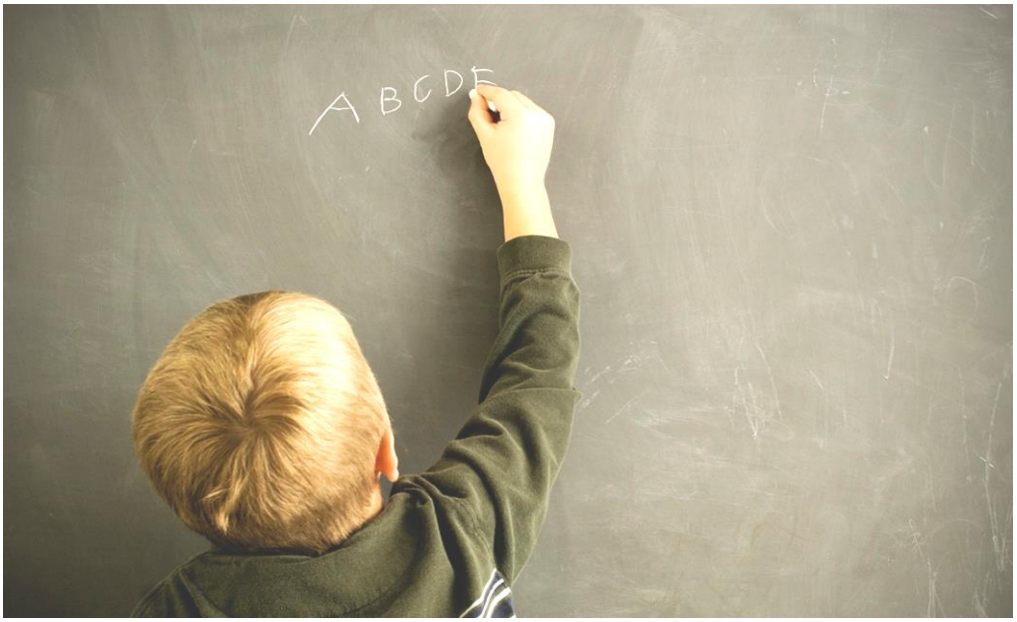
- **Gather Information**-Learn as much as possible about your child's deafness or hearing loss.
- **Plan and Prepare Ahead-**Know ahead of time what your child's needs are; get recommendations from professionals that have evaluated your child, and, know what your child's rights are.
- **Keep Written Records-**Documentation is the key! Keep everything. Keep a log of whom you talk with, the date, time, and what you discussed. It is important to ALWAYS make your requests to the school district in writing. No matter what the request is or how minor it might seem, put it in writing and keep a copy. You will have the documentation if you ever should need it.
- **Identify Any Problems-**Do not wait! Do this as soon as you see a potential problem. Make sure that you ask questions and get answers. Listen to the answers you receive. If you have solutions to the problems at hand, make sure you propose those solutions, and do so in writing.
- **Plan for Your Child's Future-**You may not be there with them in the future. This is why transition planning is such an important piece of the IEP process. Talk with the IEP team about putting a transition plan in place, as soon as your child turns 14. Make sure it is not overlooked.

Some items you might want to purchase to get started:

- 3-hole punch
- highlighters
- lots of different sizes of sticky notes
- stamps and envelopes
- small tape recorder
- journal
- notebook/3-ring binder
- calendar for each child with a disability

SAVE your calendars from year to year. Document meeting dates and contacts on your calendars. Keep a log of ALL conversations, whether in person, by phone, e-mail, letters or notes. Any contacts between you and the professionals working with your child need to be documents. If you keep records/documents on your computer, remember to back it up.

Glossary Of Terms



This section provides readers with clear definitions and descriptions of terms used in the education of children and youth who are deaf or hearing impaired.

ACOUSTICS: Pertaining to sound, the sense of hearing, or the science of sound. As used in this document the term refers to the qualities of an auditorium, classroom or other space that determine how well sounds can be heard (American Heritage Dictionary, 1976).

ACOUSTIC ROOM TREATMENT: The use of sound-absorbing materials (such as carpets and acoustical tile) to reduce room noise and reduce the signal-to-noise ratio, thus enhancing the usefulness of hearing aids and other listening devices.

ACQUIRED HEARING LOSS: An acquired hearing loss is one not present at birth. It is sometimes referred to as an adventitious loss.

AIR CONDUCTION: Sound from the air is delivered through the ear canal, the eardrum and middle ear to the inner ear.

AMBIENT NOISE: Ambient noise is background noise that competes with the main speech signal.

AMERICAN SIGN LANGUAGE (ASL): ASL is a visual/gestural language used by deaf people in the United States and Canada with semantic, syntactic, morphological and phonological rules that are distinct from English.

AMPLIFICATION: The use of hearing aids and other electronic devices to increase the loudness of sound so that it may be more easily received and understood.

ASSISTIVE LISTENING DEVICES: Any and all types of electronic hearing aids including personal aids, frequency modulation (FM) systems, infrared, special inputs for telephone or television and amplified alarms and signals.

AUDIOGRAM: A graph on which a person's ability to hear different pitches (frequencies) at different volumes (intensities) of sound is recorded.

AUDIOLOGICAL ASSESSMENT: A hearing test consisting of identifying pure-tone thresholds, impedance testing, speech recognition and speech discrimination measurements that shows the type and degree of hearing loss.

AUDIOLOGIST: A person who holds a degree in audiology and is a specialist in testing hearing and providing rehabilitation services to persons with hearing loss. The American Speech-Language-Hearing Association is the only organization that certifies audiologists.

AUDITORY NEUROPATHY/DYSYNCHRONY: A hearing loss that is present in the hearing system beyond the outer hair cells of the cochlea. A person with auditory neuropathy/ dysynchrony has difficulty at a higher level in the auditory system. Students with this diagnosis appear to hear sounds, yet have varying abilities in understanding the sounds available to them (Hood, 1998). Students with auditory neuropathy do not present with one single profile. Just as there is a range of hearing levels with sensorineural hearing loss, there is also a range of

functioning with auditory neuropathy. While students may "hear" sounds, they may not necessarily make sense of sound for communication. Abilities to understand sound have been noted to fluctuate. Some students with this condition may demonstrate improvement in their ability to understand sound related to maturation of the auditory system while for others the condition is permanent. People with auditory neuropathy may have normal hearing or hearing loss ranging from mild to severe. They always have poor speech perception abilities, which means they have trouble understanding speech clearly. A person with auditory neuropathy may be able to hear sounds, but has difficulty recognizing spoken words. Sounds may fade in and out for these individuals and seem out of sync (National Institute on Deafness and Other Communication Disorders, 2005).

AUDITORY/ORAL: This communication methodology encourages children to make use of the hearing they have (called residual hearing) through the use of appropriate technology (e.g., hearing aids, cochlear implants, FM systems) and educational intervention. While many auditory/oral educational programs have a strong "auditory" component, the use of vision (e.g., speech reading, sometimes called lip reading) may be used to supplement speech information that may or may not be available through residual hearing. In this approach, children learn to listen and speak, but do not learn sign language.

AUDITORY TRAINING: The process of training a person's residual hearing in the recognition, identification and interpretation of sound.

AUDITORY/VERBAL EDUCATION: The development of speech and verbal language through the maximized use of residual hearing.

AURAL HABILITATION: Training designed to help a person with hearing loss to make productive use of residual hearing. Sometimes it includes training in speechreading.

BICULTURAL: Membership in two cultures, such as deaf culture and hearing culture.

BILATERAL versus UNILATERAL: Bilateral hearing loss means both ears are affected. Unilateral hearing loss means only one ear is affected.

BILINGUAL: Being fluent in two languages. For some deaf children, this will include the use of ASL and English.

BILINGUAL-BICULTURAL: Bilingual-Bicultural refers to the establishment of an environment in which ASL and English through print are utilized so that the deaf or hard-of-hearing child has full visual access to both languages. ASL is used for language acquisition and instruction. Print English is used for literacy development.

BINAURAL HEARING AIDS: Hearing aids worn in both ears.

BONE CONDUCTION: Sound received through the bones of the skull.

C-PRINT: C-Print ® is a speech-to-text system developed at the National Technical Institute for the Deaf (NTID at the Rochester Institute of Technology (RIT) as an access service option for some deaf or hard-of-hearing students in educational environments. The basis of C-Print is

printed text of spoken English displayed in real time, which is an effective means of acquiring information for some individuals who are deaf or hard of hearing.

CAPTIONIST: The person who provides real-time captioning for a student using either C-Print or CART (communication access real time translation).

CART: The instantaneous translation of the spoken word into English text using a stenotype machine, notebook computer and real time software and displaying the text on a laptop computer, monitor or screen. CART service is often provided in classroom settings for a student who is deaf or hard of hearing.

CENTRAL AUDITORY PROCESSING DI FFICULTIES (CAPD): A condition that impacts a person's ability to decode the sounds they hear. CAPD, however, appears to result from a dysfunction in the centers of the brain that process sound. Auditory neuropathy (AN) is different than CAPD in that the problem in AN appears to actually lie in the hearing system. Depending on how severe this condition is, students may require educational programs that include the use of sign language. FM systems may also be beneficial for some students with auditory neuropathy.

COCHLEAR IMPLANT: An electronic device surgically implanted to stimulate nerve endings in the inner ear (cochlea) in order to receive and process sound and speech.

CONCEPTUALLY ACCURATE SIGNED ENGLISH (CASE): CASE refers to a signing system in which semantic rules follow the structure of ASL and the syntactic rules follow the structure of spoken English. CASE is not a language.

CONDUCTIVE HEARING LOSS: A conductive hearing loss is caused by a problem in the outer or middle ear. Sound has difficulty being "conducted" to the nerves in the inner ear. In a purely conductive hearing loss, the actual nerves of hearing are intact and ready to accept incoming sounds. Sound, however, does not adequately reach these nerves as something is blocking the sounds from being adequately "conducted" to the nerves. Sounds are, therefore, heard at a reduced level. The amount of loss depends on the nature of the problem that is causing the sound conduction issue.

CONFIGURATION OF LOSS: The configuration or shape of the hearing loss refers to the extent of hearing loss at each frequency and the overall picture of hearing that is created. For example, a hearing loss that only affects the high frequencies would be described as a high-frequency loss. Its configuration would show good hearing in the low frequencies and poor hearing in the high frequencies. On the other hand, if only the low frequencies are affected, the configuration would show poorer hearing for low tones and better hearing for high tones. Some hearing loss configurations are flat, indicating the same amount of hearing loss for low and high tones.

CONGENITAL HEARING LOSS: Hearing loss present at birth or associated with the birth process, or which develops in the first few days of life (Davis and Silverman, 1970).

CONSULTATION: A process based upon an equal relationship characterized by mutual trust and open communication, joint approaches to problem identification, the pooling of personal resources to identify and select strategies that will have some probability of solving the problem

that has been identified and shared responsibility in the implementation and evaluation of the program or strategy that has been initiated.

CRITICAL MASS: The term has been borrowed from the field of physics and is intended to mean a sufficient number of children functioning in the same language or communication mode, or age group, to ensure that appropriate opportunities for social and intellectual interaction occur.

CUED SPEECH: In this system, children learn to both "see" and "hear" spoken language. They focus on the movements that the mouth makes when one talks. This is combined with: (a) eight hand shapes (DEAF: A hearing impairment that is so severe that the individual is impaired in processing linguistic information through hearing, with or called cues) indicating groups of consonants; and (b) four positions around the face, indicating vowel sounds. Some sounds look alike on the lips - such as "b" and "p" - and others cannot be seen on the lips - such as "k." The hand cues help the child tell what sounds are being voiced.

DEAF: A hearing impairment that is so severe that the individual is impaired in processing linguistic information through hearing, with or without amplification, that adversely effects educational performance [34 CFR §300.5]. It is also defined as a prelingual, primarily sensorineural, bilateral hearing loss of 91 dB or more (Quigley & Kretschmer, 1982). The term means that the person's communication development and current primary communication mode is visually based (either sign language or speech reading). Residual hearing (if any) is a secondary and supplemental sensory avenue; vision is the major channel for receiving information (Ross, 1990).

DEAFBLIND: Educationally significant loss of vision and hearing.

DEAF COMMUNITY: The community of people whose primary mode of communication is signed language and who share a common identity, a common culture and a common way of interacting with each other and the hearing community.

DEAF STUDIES: The study of the history, culture, language and literature of the deaf and the cross-cultural relationship between the deaf and hearing communities.

DECIBEL (dB): The unit of measurement for the loudness of sound. The higher the dB, the louder the sound.

DECODER: An electronic device or computer chip that can display closed captions encoded in television programs, cable television programs and video cassettes. Also called a Telecaption Adapter.

DEGREE OF HEARING LOSS: Degree of hearing loss refers to the severity of the hearing loss. There are seven categories that are typically used. The numerical values are based on the average of the hearing loss at three frequencies, 500 Hz, 1000 Hz, and 2000 Hz in the better ear without amplification. Some people may use slightly smaller or slightly larger numbers for each of the following categories:

- Normal range or no impairment = -10 to 15 dB
- Slight Loss/Minimal loss = 16 to 25 dB
- Mild loss = 26 to 40 dB

■ Moderate loss = 41 to 55 dB
■ Moderate/severe loss = 56 to 70 dB
■ Severe loss = 71 to 90 dB
■ Profound loss = 91 dB or more (www.ASHA.org)

EAR MOLD: A custom-made plastic or vinyl piece that fits into the outer ear to interface with a hearing aid.

EDUCATIONAL INTERPRETER: A professional member of the educational team, fluent in the languages used by deaf and hearing persons, who works with the team to implement the IEP. The educational interpreter uses sign language/communication systems and spoken languages in public school settings for purposes of providing access to the general curriculum, classroom dynamics, extracurricular activities and social interactions. This team member must document appropriate academic training, demonstrate the interpreting competencies and knowledge sets necessary to provide quality interpreting services in public schools and be appropriately credentialed through state and/or national evaluation systems.

ENGLISH SIGN SYSTEMS: Sign systems developed for educational purposes that use manual signs in English word order; sometimes with added affixes that are not present in ASL. Some of the signs are borrowed from ASL, and others have been invented to represent elements of English visually. Signing Exact English and Seeing Essential English are two examples of invented systems.

FINGERSPELLING: Representation of the alphabet by finger positions in order to spell out words or longer strings of language.

FLUCTUATING versus STABLE HEARING LOSS: Some hearing losses change-sometimes getting better, sometimes getting worse. Such a change commonly occurs in young children who have hearing loss as a result of otitis media or fluid in the middle ear. Other hearing losses will remain the same year after year and would be regarded as stable.

FM SYSTEM: An assistive listening device that transmits the speaker's voice to an electronic receiver in which the sound is amplified and transmitted to the student's ears via small earphones on the student's personal hearing aids. The device reduces the problems of background noise interference and distance from the speaker.

FREQUENCY: The number of vibrations per second of a sound. Frequency, expressed in hertz (Hz), determines the pitch of sound.

FULL INCLUSION: All students, regardless of disability, are in a general education classroom/ program full time. All services are provided to the child in that setting.

GESTURE: Movement of any part of the body to express or emphasize an idea, an emotion or a function. Not part of a formal communication system.

HARD OF HEARING: A hearing impairment, whether permanent or fluctuating, that adversely affects a child's educational performance, but which is not included under the definition of "deaf" [34 CFR §300.5]. The person's linguistic development is primarily auditorally based, with vision

serving as a secondary and supplemental channel (Ross, 1990). No satisfactory definition has been drawn between deaf and hearing impaired, other than a behavioral one, because hearing loss exists on a continuum and is influenced by many other external factors (Moores, 1978).

HEARING IMPAIRED: Refers to persons with any degree of hearing loss, from mild to profound, including deaf or hard-of-hearing persons. This term is losing acceptance by deaf persons because of the term "impaired."

HEARING AID: An electronic device that conducts and amplifies sound to the ear.

HEARING LOSS: Hearing loss was originally defined in medical terms before the development of modern audiology. Today, professionals tend to use the consistent, researched-based terminology of audiology, as well as less defined educational and cultural descriptions.

HEARING SCREENING: A hearing screening is an audiometric testing of the ability to hear selected frequencies at intensities above the threshold of normal hearing. The purpose is to identify individuals with significant hearing loss, with minimal time expenditure, and to refer them for further testing.

IDIOSYNCRATIC LANGUAGE: As applied to the education of children who are deaf, an invented communication form developed within a small group of individuals (e.g., invented signs used in the home prior to formal sign language instruction).

INDIVIDUALIZED EDUCATION PROGRAM (IEP): A team-developed, written program that identifies education and therapeutic goals and objectives needed to appropriately address the educational needs of a student with disability.

INCLUSION: Inclusion is a commitment to educate each child, to the maximum extent appropriate, in the school and classroom he or she would otherwise attend if not disabled. It involves bringing the support services to the child (rather than moving the child to the services) and requires only that the child will benefit from being in the class (rather than having to keep up with the other students). The general education teacher takes primary responsibility for the student's education.

INDIVIDUALIZED FAMILY SERVICE PLAN (IFSP): A team-developed, written plan for infants and toddlers that addresses: (1) assessment of strengths and needs and identification of services to meet such needs; (2) assessment of family resources and priorities, and the identification of supports and services necessary to enhance the capacity of the family to meet the developmental needs of the infant or toddler with a disability; and (3) a written individualized family service plan developed by a multidisciplinary team including the parent or guardian [§636(d)].

INFLECTION: Inflection is a change in the pitch of the speaking voice to add meaning or emphasis to a word or phrase.

INTENSITY: Intensity is the loudness of a sound measured in decibels (dB).

INTERPRETER OR TRANSLITERATOR FOR THE DEAF: A person who facilitates communication between hearing and deaf or hearing impaired persons through interpretation into a signed language or ASL, or transliteration of a language into a visual/phonemic code by an oral interpreter or Cued Speech interpreter. An EDUCATIONAL INTERPRETER specializes in classroom interpreting.

INTERPRETATION: The process of conveying a message from one language into another.

INTERVENER: An intervener is a paraprofessional who is specifically trained to work with deafblind children. This person is responsible for facilitating access to environmental information usually gained through vision and hearing, assisting with the development of receptive and expressive communication skills and fostering a trusting relationship with the child that promotes social and emotional well-being.

INTONATION: The aspect of speech made up of changes in pitch and stress in the voice. The voice may go higher or lower during speech to emphasize certain words or parts of words more than others.

INVENTED ENGLISH SIGN SYSTEMS: Sign systems developed for educational purposes that use manual signs in English word order with added prefixes and suffixes not used in traditional sign language. Some of the signs are borrowed from ASL and others have been invented to represent elements of English visually. Signed English and Signing Exact English (SEE) are two examples of invented systems.

ITINERANT TEACHER: An itinerant teacher generally provides direct services to students and consultation services to classroom teachers and staff. The itinerant teacher may provide services in the general education classroom or on a pull-out basis, usually one-to-one. The level of service that the itinerant teacher provides varies from everyday to once a month. An itinerant teacher typically works in more than one school and often in more than one district. When providing consultation services, the itinerant teacher may collaborate with general education teachers, related service personnel, administrators, parents, interpreters, captionists and instructional assistants. Itinerant teachers may provide more consultation than direct instruction.

LEAST RESTRICTIVE ENVIRONMENT (LRE): A basic principle of IDEA 2004 that requires public agencies to establish procedures to ensure that to the maximum extent appropriate, children with disabilities are educated with children who are not disabled, and that special classes, separate schooling, or other removal of children with disabilities from the general educational environment occurs only when the nature or severity of the disability is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily [IDEA 2004 §612(a)(5)].

MAINSTREAMING: Generally, mainstreaming refers to the selective placement of special education students in one or more general education classes. Special education supports may be provided in the general education classroom or in the special education classroom. The special education teacher maintains primary responsibility for the student's education.

MANUALLY CODED ENGLISH: A term applied to a variety of systems that use signs, finger-spelling or gestures separately or in combinations to represent English manually.

MIXED HEARING LOSS: A mixed hearing loss has a combination of characteristics associated with both a conductive and a sensorineural loss.

MONAURAL AMPLIFICATION: The use of one hearing aid instead of two.

MORPHEME: A linguistic unit of relatively stable meaning that cannot be divided into smaller meaningful parts (American Heritage Dictionary, 1976).

NATIVE LANGUAGE: The language used in a child's home, (e.g., the native language of children who are deaf with parents who are deaf is often ASL).

NATURAL LANGUAGE: Language acquired primarily through the least impaired sensory channel.

OPHTHALMOLOGIST: A physician specializing in the treatment of diseases of the eye.

ORAL EDUCATION: A philosophy of teaching deaf or hearing impaired individuals to make efficient use of residual hearing through early use of amplification, to develop speech and to use speech reading skills.

ORAL INTERPRETER: Communicates the words of a speaker or group of speakers to an individual who is deaf by inaudibly mouthing what is said so that it can be read on the lips.

OTITIS MEDIA: Infection of the middle ear. Children with hearing loss have a higher incidence of otitis media than the rest of the population. Children with recurrent attacks may have fluctuating hearing loss and be somewhat at risk for acquiring permanent hearing loss.

OTOLOGIST: A physician who specializes in medical problems of the ear.

PARAPROFESSIONAL: In special education, it is common for a noncertified person to be assigned to assist a student with a disability in the general education classroom or in more restrictive settings. This person works under the direction of a qualified professional (e.g., a certified teacher) and is expected to carry out teacher-planned instruction, implement positive behavioral support plans, assist students with personal care needs, provide supervision in group settings and help with clerical tasks.

PARENT INFANT PROGRAM: A parent infant program provides parent education and infant intervention that stresses early exposure to language and attention to developmental processes that enhance the learning of language. Some programs include early exposure to amplification and the use of hearing aids to stimulate the auditory channel.

PIDGIN SIGN ENGLISH (PSE): A variety of sign language that combines some features of ASL and English. It is sometimes called Contact Signing.

PORTFOLIO ASSESSMENT: A collection of a student's work that demonstrates achievement, efforts and progress over a period of time.

POSTLINGUAL DEAFNESS: Hearing loss acquired after learning a first language.

PRAGMATICS: The appropriateness of language use to the situation, the speaker and the audience in regard to logic and validity.

PRELINGUAL DEAFNESS: Refers to hearing loss that is present at birth or shortly thereafter and occurs prior to the acquisition of language.

PROGRESSIVE versus SUDDEN HEARING LOSS: A progressive hearing loss is a hearing loss that becomes increasingly worse over time. A sudden hearing loss is one that has an acute or rapid onset and therefore occurs quickly, caused by occurrences such as head trauma or a tumor in the auditory nerve.

RESIDUAL HEARING: The amount of usable hearing that a deaf or hard-of-hearing person has.

RESPONSE TO INTERVENTION (RtI): RtI is the practice of (1) providing high-quality instruction/intervention matched to student needs and (2) using learning rate over time and level of performance to (3) make important educational decisions.

REVERBERATION: Prolongation of a sound after the sound-source has ceased. The amount of reverberant energy in a room depends on the absorption coefficient of the surface of the walls, floor and ceiling.

ROCHESTER METHOD: A mode of communication in which spoken English is supplemented with simultaneous fingerspelling of each spoken word.

SEEING ESSENTIAL ENGLISH: Seeing Essential English was designed to use ASL signs plus signs invented to represent both root words and the inflectional system of English.

SEMANTICS: The use in language of meaningful referents, in both word and sentence structures.

SENSORINEURAL HEARING LOSS: A sensorineural hearing loss is caused by damage to some or all of the nerves in the cochlea of the inner ear. The hearing loss is permanent and generally cannot be reduced or eliminated by medication or surgery. Sensorineural hearing loss causes both distortion and decreased loudness of sounds. This occurs because some or all of the hair cells or nerves in the inner ear responsible for sensing sounds of different pitches are damaged. The extent of hair cell and nerve damage will cause varying degrees and configurations of hearing loss.

SIGN LANGUAGE: There are two basic types of sign language: (a) Signed Exact English (SEE) and (b) American Sign Language (ASL). SEE is an artificial language that follows the grammatical structure of English. ASL is a language that follows its own grammatical rules. It is often taught as the child's first language. English may then be taught as a second language.

SIGNAL-TO-NOISE RATIO: The difference in the intensities of the speech signal (such as the teacher's voice) and the ambient (background) noise.

SIGNED ENGLISH: The Signed English system was devised as a semantic representation of English for children between the ages of 1 and 6 years of age. ASL signs are used in English word order with 14 sign markers being added to represent a portion of the inflectional system of English.

SPECIAL EDUCATION DUE PROCESS HEARING: Whenever there is a dispute between the parent and the school district over the district's proposal or refusal to initiate or change the identification, evaluation, proposed IEP or portion thereof, the implementation of the IEP, educational placement, or the provision of a free appropriate public education (FAPE), the parent/adult or student has the right to request a due process hearing. An alternative dispute resolution option is mediation.

SPEECHREADING: Speechreading is the interpretation of lip and mouth movements, facial expressions, gestures, prosodic and melodic aspects of speech, structural characteristics of language and topical and contextual clues.

SPEECH PERCEPTION: The ability to recognize speech stimuli presented at suprathreshold levels (levels loud enough to be heard).

SPEECH INTELLIGIBILITY: The ability to be understood when using speech.

SPEECH AND LANGUAGE IMPAIRMENT: One or more of the following communication impairments that adversely effects educational performance: articulation impairment, including omissions, substitutions or distortions of sound, persisting beyond the age at which maturation alone might be expected to correct the deviation; voice impairment, including abnormal rate of speaking, speech interruptions and repetition of sounds, words, phrases or sentences that interferes with effective communication; one or more language impairments (e.g., phonological, morphological, syntactic, semantic or pragmatic use of aural/oral language as evidenced by both a spontaneous language sample demonstrating inadequate language functioning, and test results) on not less than two standardized assessment instruments or two subtests designed to determine language functioning, that indicate inappropriate language functioning for the child's age).

SPEECH/LANGUAGE SPECIALIST: A professional who works with individuals who have specific needs in the area of speech and language.

STANDARDS: Content standards designed to encourage the highest achievement of every student by defining the knowledge, concepts and skills that students should acquire at each grade level.

SYMMETRICAL versus AYSMMETRICAL: Symmetrical hearing loss means that the degree and configuration of hearing loss are the same in each ear. An asymmetrical hearing loss is one in which the degree and/or configuration of the loss is different for each ear.

SYNTAX: Defines the word classes of language (nouns, verbs, etc.) and the rules for their combination (which words can be combined, and in what order to convey meaning).

TELECOMMUNICATION DEVICES FOR DEAF PEOPLE (TDDs): Originally and often still called TTYs. These electronic devices allow deaf or hard of hearing people to communicate by telephone. Also referred to as TTs (text telephones).

TOTAL COMMUNICATION: In this communication system, methods are combined. Children learn a form of sign communication. They also may use fingerspelling, speechreading, speaking and either hearing aids or cochlear implants.

TRANSITION: A coordinated set of activities that may address, among others, the assessment, planning process, educational and community experiences for youth with disabilities as they turn age 14. The intent of transition is to create opportunities for youth with disabilities that result in positive adult outcomes for life, including raising expectations, assessing interests, utilizing community supports, becoming involved in school and community activities and fostering leadership development.

TRANSLITERATING: The process of facilitating communication between persons who are hearing and persons who are deaf or hard of hearing. In this form of interpretation, the language base remains the same (e.g., the transliteration of spoken English to a signed English system, or to a form which can be read on the lips).

UNILATERAL HEARING LOSS: A mild to profound loss of hearing in one ear. Unilateral loss is now thought to adversely affect the educational process in a significant percentage of students who have it.

UNIVERSAL DESIGN: Originally developed by Ron Mace at North Carolina State University, the purpose of universal design is to develop at the design stage accessible structures by addressing the communication and mobility needs of persons with disabilities. Curb cuts and captioning for television and movies are examples of universal design (Rose, Meyer, and Hitchcock, 2005).

UNIVERSAL DESIGN FOR LEARNING: Using the knowledge that has been gained from brain research coupled with significant improvements in technology, universal design for learning calls for more flexibility and diversity in teaching to accommodate different styles and modes of learning. It provides access for students to practice skills and strategies using a variety of media and improves the accuracy and meaningfulness of the assessment of student learning (Rose, Meyer, and Hitchcock, 2005).

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RESOURCES

John Tracy Clinic
806 West Adams Blvd., Los Angeles, CA 900071-800-522-4582 TTY 1-213-747-2924
www.jtc.org John Tracy Clinic's Distance Education for Parents of Young Children with Hearing Loss provides materials on: Exploring listening, Building language, Developing speech and Enjoying learning. Three different courses at no cost to parents are available online and by mail if needed. The easy-to-use format allows parents to move around within the Courses and focus on their interests. Parents can choose how much to read, how many ideas to try and how often to submit comments. Experienced educators reply to parent concerns with individualized suggestions. The emphasis is on language learning for children ages birth to five who are deaf or hard of hearing.

Alexander Graham Bell Association for the Deaf and Hard-of-Hearing
3417 Volta Place, N.W., Washington, DC 20007 (202) 337-5220 (voice/TTY)
www.agbell.org The Alexander Graham Bell Association for the Deaf and Hard-of-Hearing (AG Bell) is an international membership organization comprised of parents of children who are deaf and hard of hearing, adults with hearing loss, and professionals who serve children with hearing loss. AG Bell is the largest organization in the US, focused on the needs of hearing impaired children who use auditory approaches to communicate, and offers a wide variety of member-oriented programs, publications, and financial aid programs. AG Bell also sponsors a large convention every other year.

American Society for Deaf Children
P.O. Box 1510, Olney, MD 20830 (800-942-ASDC (voice/TTY)
www.deafchildren.org This nonprofit parent-helping organization promotes a positive attitude toward sign language and Deaf Culture and provides information, encouragement, and support to families with Deaf and hard-of-hearing children.

American Speech-Language Hearing Association
10801 Rockville Pike, Rockville, Maryland 20852 (310) 897-0457 (voice)
www.asha.org The mission of the American Speech-Language-Hearing Association is to promote the interests of, and provide the highest quality services for, professionals in audiology, speech-language pathology, and speech and hearing science, and to advocate for people with communication disabilities.

The Classroom Acoustics Coalition
www.nonoise.org/quitnet//qc/index.htm The Classroom Acoustics Coalition provides important background information/research on the nature and scope of the problems caused by bad acoustics in classrooms, and offers practical planning strategies and methods to avoid or to correct bad acoustics in existing or planned educational facilities.

Handspeak - www.handspeak.com A sign language dictionary on-line.

Listen-UP Website - www.listen-up.org/
This site was created by a parent of a child with a hearing impairment and contains parent friendly resources and information. There is also a list serve that is designed to help parents advocate for the rights of their children.

National Cued Speech Association (NCSA) - www.cuedspeech.org
23970 Hermitage Road, Shaker Heights, OH 44122 800-459-3529 (voice/TTY)
The NCSA provides awareness and education, through instructional programs, publications, exhibits and conferences, regarding the use of cued speech.

National Information Center for Children and Youth with Disabilities (NICHCY)
P.O. Box 1492, Washington, DC 20013 800-695-0285 (voice)
www.nichcy.org NICHCY is the national information and referral center that provides information on disabilities and disability-related issues for families, educators, and other professionals.

National Technical Institute for the Deaf (NTID) - www.rit.edu
Rochester Institute of Technology, One Lomb Memorial Drive, P.O. Box 9887, Rochester, NY 14623 (716) 475-6000(voice/TTY)
Provides technological postsecondary education for Deaf and Hard of Hearing students. Disseminates informational materials and instructional videotapes on issues related to Deaf and Deaf culture.

Oral Deaf Education - http://www.oralDeafed.org
This website includes information for parents who are interested in the oral approach to assist their children who are Deaf and Hard-of-Hearing. Includes links to oral Deaf education schools.

Self Help for Hard of Hearing People (SHHH) - www.shhh.org
7910 Woodmont Ave., Suite 1200, Bethesda, MD 20814 (301) 657-2248 (voice)
SHHH's mission is to "open the world of communication to people with hearing loss by providing information education, support and advocacy."

SKI-HI Institute - www.skihi.org
Their primary purpose is to identify and respond to real needs of young children who are deaf/hard of hearing, blind/visually impaired, deafblind, multi-disabled, or who have special needs. Provides innovative family-centered, home-based programs.

US Department of Education: Office of Special Education (OSEP)
U.S. Department of Education, 400 Maryland Avenue, SW, Washington, D.C. 20202
1-800-872-5327
www.ed.gov/offices/OSERS/OSEP OSEP's mission and organization focus on the free appropriate public education (FAPE) of children and youth with disabilities from birth through age 21.

REFERENCES

American Academy of Audiology - www.audiology.org

American Speech-Language-Hearing Association - www.asha.org
1-800-638-8233 Voice or TTY

Auditory Oral Children Center, 5475 Brand Rd., Dublin, OH 43017
www.auditoryoral.com

Beginnings for Parents of Children Who Are Deaf or Hard-or-Hearing, Inc.
www.ncbegin.com

Nationwide Children's Hospital, Columbus, OH - www.nationwidechildrens.org

Help Kids Hear - www.helpkidshear.org

Johnson, C.D., (2008) PARC: Placement and Readiness Checklists. Available from Cheryl@colorado.edu

Laurent Clerc National Deaf Education Center, Gallaudet University
www.clerccenter.gallaudet.edu

Mainstreaming the Student Who Is Deaf or Hard of Hearing, January, 2002.
www.handsandvoices.org/pdf/mainst_cal.pdf

Meeting the Needs of Students Who Are Deaf or Hard of Hearing, Educational Services Guidelines, National Association of State Directors or Special Education, Inc., July 2006
www.nasde.org/projects/DeafEducationInitiative/tabid/412/default.aspx

Operating Standards for Ohio Educational Agencies Serving Children with Disabilities, Ohio Department of Education, 2008 - www.ode.state.oh.us or www.edresources.org

Oral Deaf Ed., 1-877-672-5332 www.oraldeafed.org

Phonak Hearing Systems, My Child Has A Hearing Loss, A Guide for Parents.
www.phonak.com - www.hear-it.org

Raising Deaf Kids- www.raisingdeafkids.ogs

SKI-HI Institute - www.skihi.org

PARENT AS ADVOCATE

Remember, you know your child better than anyone.

Gather and share information.

Keep good records – document everything!

Identify problems – do not wait!

Plan for your child's future.

NOTES

OHIO COALITION FOR THE EDUCATION OF CHILDREN WITH DISABILITIES
165 WEST CENTER STREET, SUITE 302 · MARION, OHIO 43302 · 1-844-382-5452
www.ocecd.org