



Sound **Beginnings**

Early Hearing Detection & Intervention

A Kansas Resource Guide



**For Families with Infants and Toddlers
Who Are Deaf/Hard of Hearing**

Quick Facts

- *Hearing loss is the most common congenital anomaly found in newborns*
- *Each year 12,000 Children are born with hearing loss in the United States.*
- *Almost all of these children are born to parents who have normal hearing.*
- *Most hospitals screen all newborns for hearing loss.*
- *There are different types and degrees of hearing loss. Babies with every kind of hearing loss can be helped.*
- *Some babies are born with normal hearing, but lose their hearing later.*
- *There are many services and programs to help all children with hearing loss. For children under 3 years of age, there is early intervention. After that, there are special education services.*
- *Any degree of hearing loss can be educationally handicapping for children. Even children with mild to moderate hearing losses can miss up to 50% of classroom discussions. Unmanaged hearing loss in children can affect their speech and language development, academic capabilities and educational development, and self-image and social/emotional development.*
- *37% of children with only minimal hearing loss not using hearing aids fail at least one grade*

Preface

Over 12,000 children are born every year in the United States with some level of hearing loss. Studies have shown that the earlier a child is identified with a hearing loss and begins early intervention, the more likely they are to develop language and communication skills on par with their peers, and go on to lead full and productive lives. Newborn hearing screening makes a difference for all children and their families: information about hearing and typical hearing milestones is valuable for all parents in the care of their child.

Kansas enacted legislation, effective July 1, 1999, to provide screening for the early detection of hearing loss in newborn infants. Our nation's goals are 1) All newborns will be screened for hearing loss before one month of age, preferably before hospital discharge, 2) All infants who screen positive will have a diagnostic audiological evaluation before 3 months of age, and 3) All infants identified with hearing loss will receive appropriate early intervention services before six months of age. Early detection of hearing loss in an infant, early medical management as needed, and the initiation of early intervention and treatment before six months of age has been shown to be highly effective in promoting a child's development. Early intervention services, as desired by the family, should begin as soon as possible.

Sound Beginnings provides tracking of infants from hospital screening to the infant's primary care physician, to the audiologist, and to the agencies that provide early intervention.

With this in mind, the resource guide was created with the following beliefs as it's foundation:

A child with a hearing loss and his or her family should have access to:

- _ Assessment, diagnosis, and intervention as early as possible
- _ Family-centered programs that provide early language acquisition
- _ Information about where to receive health and medical services
- _ Natural language development through the visual and/or auditory channels as early as possible
- _ A linguistically rich environment. Qualified personnel who are proficient in the family's preferred mode of communication and primary language
- _ Children and role models who share the family's preferred communication mode and primary language
- _ An early intervention program that embraces high expectations, standards, and evaluation criteria
- _ An early intervention program planned and delivered by qualified personnel in collaboration with the family
- _ The most current resources and assistive technology

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INTRODUCTION

You may have just found out your child has a hearing loss. The period of time after the diagnosis of hearing loss can be highly emotional for parents. Keep in mind that as every child grows, they give a family unique opportunities and challenges. A child with hearing loss is no different. Much can be done to help your child communicate and be successful. Understanding your child's hearing loss and the options available will be very helpful to you as your child grows.

You likely have a lot of questions. This guide was designed for you to read at your own pace, to understand your child's hearing loss, and begin to explore the choices available for your child and family.

You will have to make many decisions about your child. There is no one "right" choice for everyone. You will need to decide what works best for your family. As your child grows, your needs will change. You may decide to make other choices later on. Take time to learn about all of your options.

Some of the information in this guide may be helpful now, and some will be helpful later.

You can use this Resource Guide to find out about:

- Dealing with feelings
- Community support systems, resources, and programs
- Hearing, hearing testing, hearing loss, and amplification
- Choices for communication
- Resources for financial assistance

"Now I know there are so many ways to say 'I love you' that don't have to be heard."

**Mother of two children,
moderate to profound hearing loss.**



DEALING WITH FEELINGS

“Hearing is the only thing your child can’t do today, that you thought he could do yesterday.”

Most people do not know much about hearing loss and what it means for their child and family. As the professional who delivered this news talked to you further, you may not have heard much of what he or she was saying. In your mind, questions may have started to churn:

“Can it be corrected?”

“What caused it?”

“Will it get better?”

“Will it get worse?”

“Can he learn to talk?”

“Can she go to regular school?”

“If we have more children, will they have a hearing loss, too?”

“Can he get married?”

“Will she be able to get a job?”

The answers to some of these questions may not be what you want to hear. You want the best for your child, but now you may not know what to do.

“There is not a day that goes by that I am not reminded that my child has a hearing loss – but there is also not a day that goes by that I am not thankful for all the joy she gives me by little things she does that so many other parents get to take for granted.”

In the days and weeks following the confirmation of your child’s hearing loss, you may feel as if you are on a roller coaster. Your feelings may swing from despair to hope, from sadness to anger, from feeling incompetent to feeling confident. As you carry out your daily routines – finishing a chore or arriving at a destination – you may realize that your mind was somewhere else, thinking about your child and what you should do. You may also find within yourself unexpected sources of strength to do what has to be done in spite of your feelings. Working through your feelings takes time. You are likely to continue to have feelings about your child’s hearing loss, but many of these feelings will change over time.

“One of my first questions was ‘Will he be able to talk?’ – My husband’s was ‘Will he be able to participate in sports?’”

Family members may also be experiencing these same feelings of confusion and helplessness. Each person will react differently to the news that your child has a hearing loss. For some there is a feeling of loss, and for others, denial. Keep in mind that most families need time to adapt to the changes that the diagnosis of hearing loss will present and that each will react in a different way. Recognizing and sharing feelings is usually the best way to deal with them, and support is available from many sources, including family, friends, and professionals.

“Our audiologist became like one of our family. She cried and laughed with us and made sure we knew there were no limitations for our baby.”

The professionals who evaluate your child’s hearing will have recommendations for you. As you follow these recommendations, you will meet people who can help answer your questions and explain the decisions you must make. The information they give and the opinions they express may also create more confusion for you.



Though your child has a hearing loss, it is important to talk, sing, read, and play with your child. Along with being fun, this early interaction provides a solid foundation for learning to communicate. The rest will all come in time – along with joys and surprises you might not imagine today.

What Do We Do Today?

The first few weeks and months after you have learned about your child's hearing loss can be a busy and overwhelming time. Here are some ideas to help you:

INTERACT AND COMMUNICATE WITH YOUR CHILD.

Some parents find that talking to their child feels "different" because they aren't sure how much their child is hearing. You don't have to wait to start working on communication. Communicate with your baby as you normally would.

- Use a natural voice.
- Babies do respond to the special intonation patterns and facial expressions we reserve just for them.
- Lots of eye contact, touch, hugs, and kisses help babies learn how to interact.
- Face-to-face conversations are good for all babies, but especially for babies with hearing loss.
- Your child needs to watch your mouth move, and watch your facial expressions.
- Be sure to stay close and face-to-face when communicating with your child.

Babies learn from routines you have and the things you do and say in everyday life. Your child will benefit from your communication as you do tasks such as change a diaper, give a bath, and play games like peek-a-boo.

SEEK SUPPORT FROM FAMILY AND FRIENDS

People who are close to you can be a great support. Your friends and family may share your feelings and opinions about what is best for your child. They may also have differences. Invite the support people in your child's life to participate in visits to the audiologist, early intervention visits, and parent group meetings.

KEEP A JOURNAL

A journal is a place where you can write down important things about your child.

- Write down sounds that your child responds to or new vocalizations your child makes. As your child changes and grows, you will be able to see how far she has come!
- Write down questions to ask professionals when you meet them.
- Write down the feelings and experiences you are having.
- A notebook such as one that holds this guide is a great place for keeping copies of clinical reports and important forms for your child. When you go to appointments, it will be easy to show others results or have them make copies if needed.

WHO CAN HELP?

You will meet many new people as a result of your child's hearing loss. These people could be audiologists, early intervention specialists, medical professionals, and parents and caregivers of children with a hearing loss. Here is a brief description of ways in which each of these groups may be of help to you.

AUDIOLOGIST

The audiologist may help by:

- Having the skills and equipment for infant hearing testing.
- Recommending amplification (hearing aids, FM systems), or cochlear implants to meet the needs of your child.
- Providing audiological follow-up, monitoring and maintaining your child's amplification system including well-fitting earmolds.
- Testing your child with and without amplification and discussing your child's responses to sounds.
- Providing information about early intervention program options and working with you and early intervention specialists.

EARLY INTERVENTION SPECIALIST

(May be a Speech-Language Pathologist, Teacher of the Deaf, Audiologist, Early Childhood Special Educator, Occupational Therapist, Physical Therapist, etc.).

The Early Intervention Specialist may help by:

- Describing the supports and available services through early intervention programs and your family's participation.
- Discussing your observations and concerns about your child.
- Answering your questions about the effects of your child's hearing loss on communication, and participate in family activities and learning.
- Helping to assess both your child's and family's strengths and needs.
- Providing a comprehensive family centered early intervention program that will help your child with listening and communication skills.
- Working with you and the audiologist to help your child learn to use amplification and make sure it functions properly.
- Documenting records of your child's progress in communication and developmental areas.
- Working with you to plan your child's educational needs when at age 3, your child is ready to transition from the early intervention program.
- Providing opportunities for networking with adults and children with hearing loss.

“When we found out he was deaf, we were devastated. But all of the stress of going through the process of getting help was worth it when we heard him speak the words ‘I love you mom’”

Mother of a deaf son

PEDIATRICIAN/FAMILY PRACTITIONER

Your child's primary care physician may help by:

- Coordinating care as well as address other medical conditions that may be associated with hearing problems.
- Working with an audiologist experienced in infant hearing testing.
- Providing information about medical and/or surgical treatment for the various types of hearing loss.
- Referring promptly for amplification and early intervention upon confirmation of a hearing loss.
- Referring to early intervention programs and specialist counseling (*i.e.* ENTs, Geneticist).
- Treating your child – or referring to an ear specialist – when your child has a middle ear infection that may increase the degree of hearing loss.
- Referring for specialist counseling (*i.e.*, ENTs, Geneticist).

OTOLARYNGOLOGIST or EAR, NOSE, THROAT (ENT) PHYSICIAN

The ENT may help by:

- Confirming the nature of the hearing loss.
- Answering your questions about medical or surgical treatment for different types of hearing loss.
- Authorizing the use of hearing aids for your child.
- Evaluating your child's need for ventilation tubes.

PARENTS OF CHILDREN WHO ARE DEAF OR HARD OF HEARING (D/HH)

Parents (hearing/deaf) may help by:

- Sharing experiences they have had with professionals and early intervention programs.
- Telling you about people and resources they have found useful.
- Listening to you.
- Sharing their initial feelings related to parenting a child with hearing loss and how feelings change over time.
- Telling you about their child's achievements.
- Getting your children together for playtimes.

ADULTS WHO ARE DEAF OR HARD OF HEARING

Adults who are Deaf or Hard of hearing may help by:

- Sharing life experiences.
- Serving as a role model.
- Serving as a language model.

You Can Help Your Child

You are your child's most important teacher.

Parents and family members may help by:

- Learning as much as you can about hearing loss and communication.
- Keeping all your appointments.
- Committing to follow through with any recommendations you have accepted from the professionals working with you and your child.

“Parent’s expression have a way of describing when words cannot be heard.

Use all of your senses to communicate”



“It is the rare parent who doesn’t care about their children, but we all have different resources and responsibilities. People do the best they can with what they have.”

Mother of a child with profound deafness

HEARING AND HEARING LOSS

THE PARTS OF THE EAR

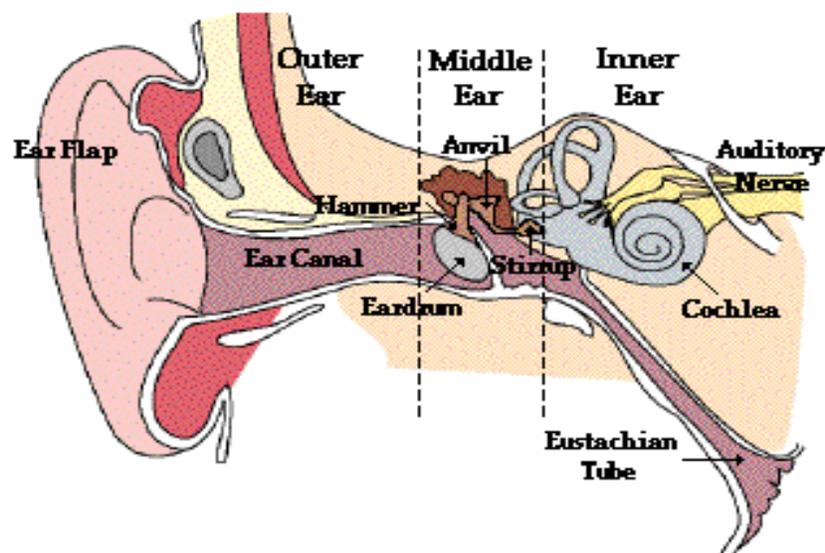
The ear is divided into three main sections: the outer ear, the middle ear, and the inner ear. Sound passes through all three sections of the ear before it goes to the brain. The brain interprets the sound and tells us what we are hearing. It tells us if we are hearing music, noise, a voice, a car horn, a dog, or other sounds.

Sound goes into the **outer ear**. The part of the outer ear that we can see is called the **pinna**. It catches sound. Sound travels from the pinna through the **ear canal**. The sound pushes against our eardrum (tympanic membrane). The eardrum is a membrane which separates the outer ear and the middle ear. Sound hits the eardrum and makes it vibrate back and forth.

The **middle ear** contains the three smallest bones in the body. They are so small, they could fit on a dime. Together these bones are called the **ossicles**. Individually they are called the malleus, the incus and the stapes. They are often referred to as the hammer, anvil and stirrup because of their shapes. When the eardrum moves, it makes the three bones move.

The **inner ear** is in the skull bone on the side of your head. This part of the ear contains the **cochlea** and the **hearing nerve**. The cochlea is shaped like a snail and contains thousands of tiny nerve endings called **hair cells**. These hair cells are tuned somewhat like the keys on a piano. Some of the hair cells respond to low pitch sounds, and some respond to high pitch sounds. These hair cells lead to the hearing nerve, which connects the cochlea to the brain.

The three sections of the ear work together to help us hear. As sound hits the eardrum, it causes the eardrum to vibrate. The vibrations make the hammer, anvil and stirrup move. This causes the nerve endings in the cochlea to move. The nerve endings send a message to the hearing nerve which carries the message to the brain. The brain tells us what we are hearing.



TYPES OF HEARING LOSS

CONDUCTIVE HEARING LOSS can occur if the structures of the outer or middle ear do not work correctly. Some causes of conductive hearing loss include impacted wax, perforation (hole) in the eardrum, or middle ear fluid and/or infection. These losses are generally perceived as a decrease in loudness and are more likely to respond to medical or surgical intervention.

SENSORINEURAL HEARING LOSS (this is sometimes referred to as nerve deafness) can occur if inner ear structures do not work correctly. Examples of sensorineural hearing loss are hair cell damage or malformation of the cochlea. Sensorineural losses are generally perceived as a loss of clarity of sound, but not necessarily a decrease in loudness, and are more likely to be permanent.

MIXED HEARING LOSS is a combination of conductive and sensorineural hearing loss. An example of a mixed hearing loss is a child with permanent sensorineural loss and a temporary conductive loss due to middle ear fluid.

The types of hearing loss described above may present themselves in a variety of ways. If only one ear is affected, this is referred to as a **unilateral hearing loss**. When both ears are affected it is known as a **bilateral hearing loss**. It is possible that the child's hearing loss may never change, however some children will have a **progressive hearing loss**. Over time the hearing may become progressively worse in one or both ears.



AUDIOLOGICAL ASSESSMENT OF INFANTS AND TODDLERS

As of July 1, 1999 birthing facilities in Kansas are required to screen the hearing of infants within the few days of life. If an infant does not pass a hearing screening, additional testing is needed to determine 1) if the infant has a hearing loss; 2) whether the hearing loss is medically treatable; 3) the degree (amount) of hearing loss; and 4) the configuration (shape) of the hearing loss. Several sessions are usually necessary in order for the audiologist to complete the testing.

<p>OTOACOUSTIC EMISSIONS (OAE)</p>	<p>This test measures the response of the sensory cells in the cochlea to sound. A soft click is presented through a small probe placed in the infant's ear canal. The probe measures an echo that is returned from the infant's cochlea. The presence of an echo (an OAE) indicates a normally functioning cochlea. No echo indicates a 30dB HL or greater conductive or sensorineural hearing loss. OAE testing is for all ages.</p>
<p>AUDITORY BRAINSTEM RESPONSE (ABR or BAER)</p>	<p>This test measures the response of the auditory system to sound. A soft (low level) click is presented to the ear through an earphone, insert earphone, or via bone conduction. Surface electrodes, placed on the infant's head, record the response as the signal travels from the ear through the auditory nervous system to the brain. Brainstem responses are measured in the form of waves on a graph. For testing purposes, the infant must be quiet, sleeping, or perhaps sedated. ABR testing is for all ages.</p>
<p>TYMPANOMETRY</p>	<p>Tympanometry is not a test of hearing, but of middle ear function. A small probe is placed in the infant's ear canal. Using varying air pressure, the movement of the tympanic membrane (ear drum) is measured. Results of this test indicate the status of the middle ear. Abnormal results suggest that the infant may have a medically treatable condition (e.g., a hole in the tympanic membrane, fluid in the middle ear (e.g., otitis media), or abnormal movement of the small bones (ossicular chain) of the middle ear) and should have a medical referral. Tympanometry is for all ages. However, cautious interpretation is required when used with infants younger than four months of age.</p>
<p>ACOUSTIC REFLEX</p>	<p>This test uses the same probe as used in tympanometry. A loud sound is presented and contraction of the muscles in the middle ear (a reflex) is measure. The reflex occurs when the hearing is normal. The reflex does not occur when there is middle ear disease or a sensorineural hearing loss of greater than 40 dB HL. Acoustic reflex testing is for all ages. However, cautious interpretation is required when used with infants younger than four months of age.</p>

<p>AIR CONDUCTION TESTING</p>	<p>This test measures hearing sensitivity to sounds (e.g., speech, or pure tones) presented from speakers or earphones through the outer, middle, and inner ear to the brain. Visual reinforcement audiometry or conditioned play audiometry are techniques used by the audiologist to determine that the child has heard the sound. In pure tone air conduction testing, a range of frequencies is presented at different loudness levels in order to determine the child's hearing thresholds. Additional testing must occur to determine whether a hearing loss is sensorineural, conductive, or mixed. Air conduction testing is for all ages where reliable responses can be obtained.</p>
<p>BONE CONDUCTION TESTING</p>	<p>This test measures hearing sensitivity to sounds presented through a bone oscillator (small vibrator) placed on the bone behind the ear. Sound vibrations travel through the skull to the inner ear and brain. Visual reinforcement audiometry or conditioned play audiometry are techniques used by the audiologist to determine that the child has heard the sound. In pure tone bone conduction testing, a range of frequencies is presented at different loudness levels in order to determine the child's hearing thresholds. This test determines the sensorineural component of the hearing loss. Bone conduction testing is for all ages where reliable responses can be obtained</p>
<p>SPEECH AWARENESS THRESHOLD (SAT)</p>	<p>This test measures <i>awareness</i> to speech presented through speakers, insert earphones, earphones, or a bone oscillator. The purpose of this test is to obtain a speech threshold (i.e., the softest level at which the child is aware of speech). The audiologist compares these results with those of the air conduction and bone conduction tests. Some very young children will respond to speech before they will to pure tones. Speech awareness testing is for all ages where reliable responses can be obtained.</p>
<p>SPEECH RECOGNITION THRESHOLDS (SRT)</p>	<p>This test presents speech through speakers, insert earphones, earphones, or a bone oscillator in order to determine a threshold to <i>recognized</i> words. The child must know names of some common objects in order to participate in this test. The audiologist presents words (e.g., bathtub, or cowboy), and is looking for the softest level at which the child repeats the word or points to a picture or toy correctly. Speech recognition testing is for all ages where reliable responses can be obtained</p>



HOW DO INFANTS AND TODDLERS RESPOND TO SOUND DURING HEARING TESTS?

The purpose of audiometry is to determine the softest level (threshold) at which the infant/toddler responds to a range of frequencies (pitches). Just as an adult is asked to raise a hand or push a button when a sound is heard, an infant/toddler can be “conditioned” to make a behavioral response to a stimulus.

FIVE MONTHS TO TWO YEARS OF DEVELOPMENTAL AGE

Visual Reinforcement Audiometry (VRA)

The infant must be able to sit with minimal support and turn his/her head. The goal of VRA is for the infant to look at a toy spontaneously after hearing a sound.

- Your baby will be seated on your lap in a special testing area called a sound treated booth. An audiology assistant will sit facing you in the booth to maintain the baby’s attention and observe his/her response.
- The audiologist in the testing area will present sounds (speech or pure tones) through the speakers in the booth, through insert earphones or through earphones placed on your baby.
- When your baby shows a change in behavior (*e.g.*, looking around or stopping movement) after the sound is presented, the audiologist reinforces this change in behavior by activating a moving or specially lit toy. The assistant may initially show your baby the toy.
- After the assistant regains your baby’s attention, the audiologist will present another sound.
- When your baby learns to respond reliably to the sounds by looking at the toy, the audiologist will begin the hearing test.

TWO YEARS AND OLDER

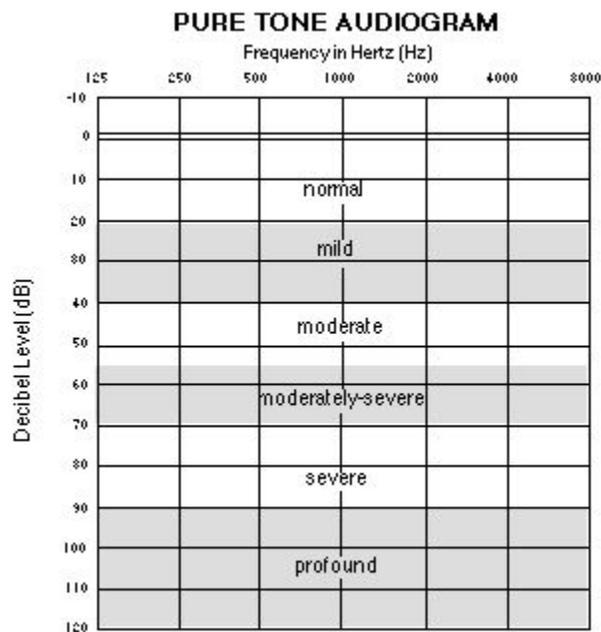
Conditioned Play Audiometry (CPA)

The child must be able to manipulate objects such as blocks or stacking rings. The goal of the CPA is for the child to “play the game” (*e.g.*, place the block in the container or stack the rings on the spindle) immediately after hearing the sound (a conditioned response).

- Your child may be on your lap or in a chair in a sound treated booth.
- The audiologist in the testing area will present sounds (speech or pure tones) through the speakers, insert earphones or through earphones place on your child.
- After the sound is presented, your child is taught to place the block in the container. The audiologist reinforces this behavior by praising the child.
- When you child learns to respond reliably to the sounds by manipulating the toy, the audiologist will begin the hearing test.

WHAT IS AN AUDIOGRAM?

An audiogram is a graph depicting hearing sensitivity. The **degree** or amount of hearing loss is determined by finding the **hearing threshold** which is the amount of sound just barely heard, and is measured in **decibels (dB)**, not in percentages and is found down the left side of the graph. Zero (0) dB is the softest sound that can be heard by the average ear. The sounds at the top of the graph are soft and the sounds at the bottom are loud

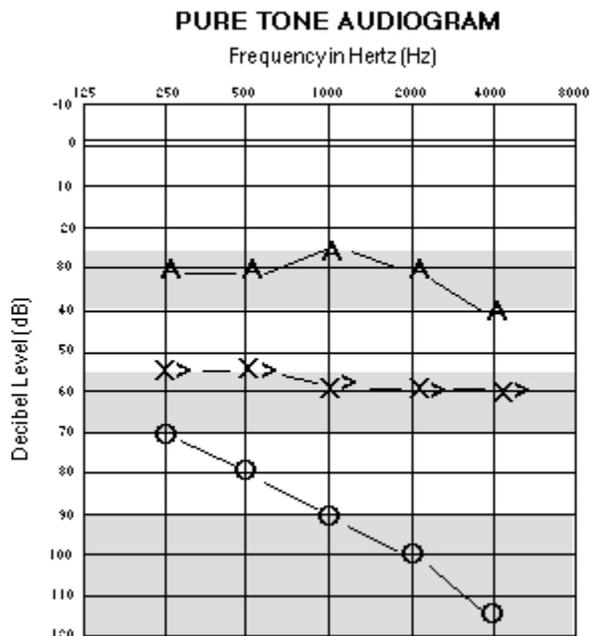


In addition to the degree of loss, the **frequency** or pitch is also plotted on the audiogram across the top of the graph. Frequencies are measured in **Hertz (Hz)**. For example, the sounds made by a bullfrog are “low” frequency sounds between 125 and 250 Hz. The sounds made by a cricket are “high” frequency sounds between 4000 and 8000 Hz. The frequencies are organized like a piano keyboard. The low tones are on the left and the high tones are on the right

WHAT DOES AN AUDIOGRAM TELL ME?

An audiogram tells several things:

1. Do both ears have the same thresholds or do the thresholds differ?
2. What is the degree (amount) of hearing loss?
3. Is there more hearing loss for some frequencies than others?
4. Is there a difference between the air conduction and bone conduction thresholds (air-bone gap)?
5. What are the thresholds with hearing aids?



KEY: X = left ear conduction O = right ear conduction
> = bone conduction response A = aided response
S = Sound field testing (Speakers)

The audiogram above shows a moderately-severe hearing loss in the left ear (X). It has a “flat” pattern, i.e. the low and high frequency hearing is nearly the same. The bone conduction (>) and air conduction results are equal in the left ear indicating a sensorineural hearing loss rather than a conductive or mixed hearing loss. The right ear (O) exhibits a severe to profound hearing loss. It has a “sloping” pattern, i.e. there is more hearing loss in the high frequencies than in the low frequencies. The aided thresholds (A) on the audiogram show how loud the signal must be before it can be heard when hearing aids are worn. (S) on the graph would indicate that child was tested using speakers.

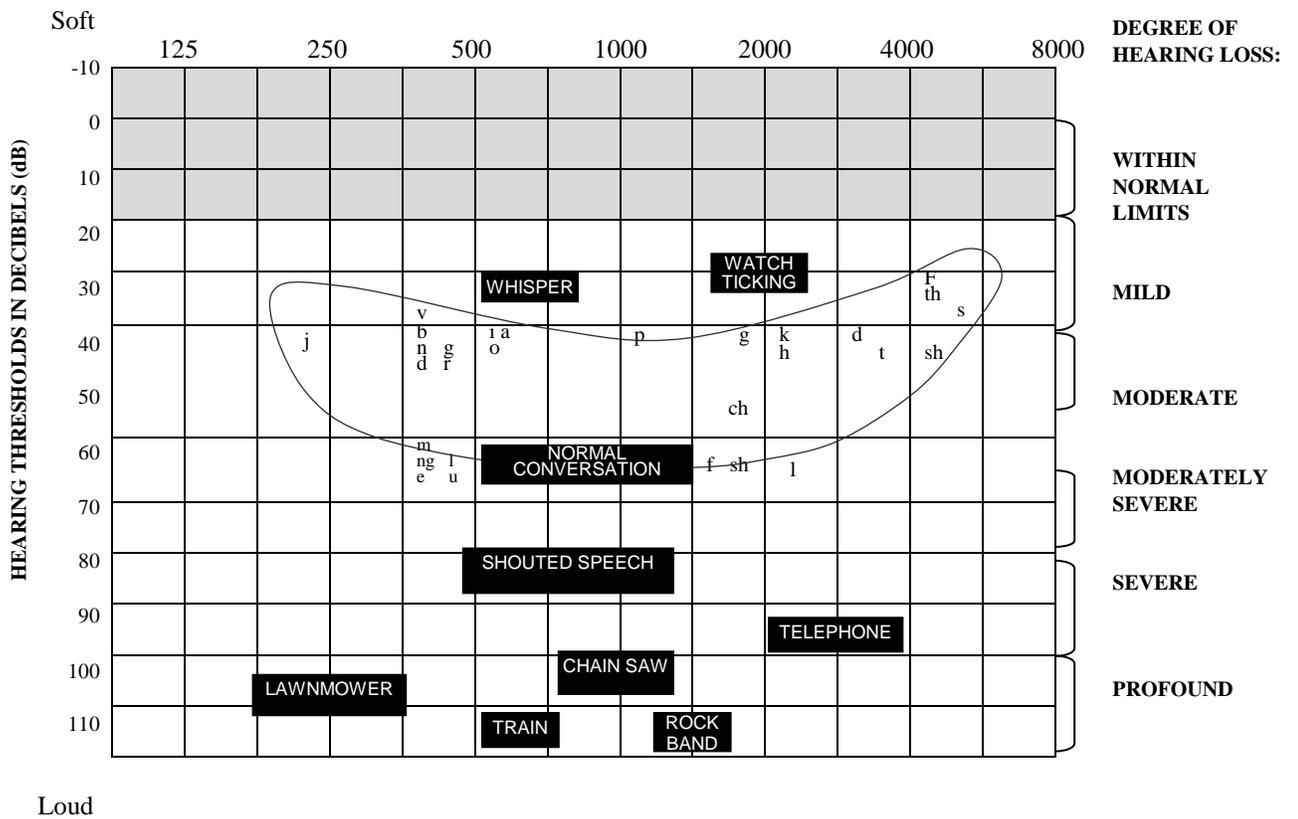
SPEECH BANANA

When the pitch and loudness of the many conversational speech sounds are displayed on an audiogram, they appear in the shape of a banana. Thus the term “speech banana” is used to refer to the location of conversational speech sounds on an audiogram.

Audiogram with Various Environment and Speech Sounds

FREQUENCY IN HERTZ
Low Pitch

High Pitch



EFFECTS OF DEGREE OF HEARING LOSS WITHOUT AMPLIFICATION

DEGREE OF HEARING LOSS (Average hearing for 500, 1000 & 2000 HZ)	EFFECTS ON SPEECH UNDERSTANDING
Normal Hearing 0 – 20 dB HL (hearing level)	
Mild Hearing Loss 21 – 40 dB HL	Will have trouble hearing faint or distant speech and understanding speech in a noisy environment. Many children with undiagnosed mild hearing loss experience language delays and read at grade level equivalencies below those of their normal hearing peers.
Moderate Hearing Loss 41 – 55 dB HL	Can understand only loud speech. Has difficulty in group discussions. Own speech may have errors. Has vocabulary limitations and deficiencies in language comprehension and usage.
Moderate-Severe Hearing Loss 56 – 70 dB HL	Will be able to hear only very loud speech close to the ear. Can identify only loud environmental sounds. May be able to discriminate vowels, but not consonants. Language development will be seriously deficient. Own speech has many errors.
Severe Hearing Loss 71 – 90 dB HL	Will hear only if shouted in the ear. Will not be able to discriminate words without visual cues. If hearing loss is present during first year of life, understanding of spoken language and use of speech will not develop spontaneously. Own speech is mostly unintelligible.
Profound Hearing Loss 90 dB HL or greater	May be able to hear very loud sounds but may be more aware of vibrations than tonal patterns. Will rely on vision rather than hearing as primary sensory channel for communication. Own speech is unintelligible.

FREQUENTLY ASKED QUESTIONS ABOUT HEARING LOSS

What Percentage of Hearing Loss Does My Child Have?

Hearing loss is difficult to describe in terms of percentage. Because hearing loss can range greatly between frequencies, it is usually defined in terms of type and degree of hearing loss, and the configuration of the hearing loss. If someone refers to your child's hearing loss as a percentage, talk to your audiologist for a better description.

Will My Child's Hearing Loss Get Better or Worse?

This is difficult to determine. If your child has a conductive loss, it sometimes gets better. If your child has a sensorineural hearing loss, it will probably not get better. Some hearing losses can get worse over time. These are called **Progressive Hearing Losses**. Checking your child's hearing on a regular basis helps to make sure that the hearing is not getting worse, and that she/he are getting appropriated amplification. Your ENT doctor or pediatrician may be able to give you more information about the chances of your child's hearing loss getting worse over time.

What Caused My Child's Hearing Loss?

Over 50% of infants born with hearing loss have no known risk factors for hearing loss. Some of the risk factors for hearing loss are:

- Family History of hearing loss.
- A syndrome that is known to have hearing loss
- Craniofacial abnormalities, such as a cleft lip, palate, ear pits, or ear tags.
- Certain infections in the mother during pregnancy such as CMV (cytomegalovirus), toxoplasmosis, herpes, and rubella.
- Admission to a neonatal intensive care unit for more than 48 hours.
- Bacterial Meningitis.
- Recurrent ear infections.

These are some of the most common risk factors of hearing loss. Your audiologist or doctor can give you more information about other risk factors and causes of hearing loss.

Does My Child Need Hearing Aids?

Hearing loss greatly decreases the amount of sound your child's ears and brain receive. If your child is not able to hear speech, then she/he will have difficulty learning spoken language.

- An infant can be fit with hearing aids at any age.
- If the communication method you choose requires your child to wear hearing aids, the sooner you get hearing aids the sooner your child can begin hearing important speech sounds.
- Some parents may choose a communication method that uses only sign language, and does not require the use of hearing aids. The majority of parents who choose signing also choose for their child to use hearing aids or cochlear implants.

Will My Child be Able to Talk?

This is a difficult question to answer. It can depend on the severity of your child's hearing loss, how well your child is able to use his residual (remaining) hearing, and other factors.

- Children with more severe hearing losses will have more difficulty learning to talk. They may need to use some form of sign language, in addition to hearing aids and speech therapy, to help them communicate.
- Many children with mild and moderate losses learn to talk well with the help of hearing aids and speech therapy.

HEARING AIDS

Hearing aids help some children by making sounds louder and clearer. The hearing aid is “fit” to match a child’s hearing loss. The aid is usually worn behind the ear. It collects sounds and sends them into the ear through a small earpiece. Many parents are surprised to learn that even a one-month-old baby can wear hearing aids.

Some things to know about hearing aids:

- The first hearing aid fitting should happen right away. Over time, the audiologist must adjust the hearing aid to keep up with a growing child.
- The hearing aid needs to be worn all day, every day. Children learning spoken language need daily access to sound.
- The hearing aid should be checked every day. It runs on small batteries that have to be changed often.
- Hearing aids are not a “quick fix”. A child will still need lots of help to develop speech, language, and communication skills.

WHICH HEARING AID IS BEST FOR INFANTS AND YOUNG CHILDREN?

Most infants and young children are fitted with two (binaural) behind-the-ear (BTE) hearing aids. Some children with special needs may benefit from wearing body aids, which provide them with more gain without feedback or whistling problems. In-the-ear (ITE) and canal type instruments are not practical until the child rate of growth has slowed.

Digital hearing aids have the benefit of being more flexible if the child’s hearing thresholds should change. Many adults who have worn conventional hearing aids in the past have switched to programmable or digital technology because of superior sound quality in the advanced technology. Improved sound quality makes these instruments excellent for fitting infants and young children who are acquiring language.

Hearing aids are not a one time purchase. The functional life of a hearing aid is four to six years. Hearing aids may need to be replaced due to being stepped on, chewed on by the family pet, or lost. A new hearing aid which is technologically advanced may better meet the individualized needs of the child. Hearing aids also require repair due to a variety of circumstances (e.g., humidity, normal wear, perspiration)

WHAT ARE IMPORTANT FEATURES OF HEARING AIDS FOR INFANTS AND YOUNG CHILDREN?

The hearing aid should:

- Provide sufficient amplification to allow the child to hear speech sounds. When the child has such a profound hearing loss that even the most powerful aid does not allow speech to be heard, parents may want to explore other options. (See Cochlear Implants.)
- Have “Direct Audio Input” (DAI) and microphone-telecoil (M-T) switching options. These options allow the hearing aid to be coupled with a FM system (see FM Systems).
- Have flexibility in making changes in tone, gain, and output limiting so adjustments can be made as more information is obtained about the child’s hearing thresholds and responsiveness to sound.
- Have tamper resistant battery compartment and controls. *Hearing aid batteries are toxic and their use should be monitored closely.*
- A microphone that is most appropriate for the listening needs of the child. Directional microphones enhance sounds coming from the front and may be beneficial to an infant or child who is held much of the time. Omnidirectional microphones pick up signals from all directions and may be more beneficial to a child who is mobile.
- Have comfortable well-fitting earmolds. Earmolds may need to be replaced every three to six months for a very young child because of the fast growth rate. The earmolds may last up to a year for older children.

Talk with the audiologist regarding other accessories such as battery testers, hearing aid stethosets, safety clips, and dehumidifiers.

WHAT IS THE PROCESS FOR GETTING HEARING AIDS?

The process to fit your child with hearing aids will take a few weeks. This may seem like a long time, but several steps must happen first.

1. Your child must have approval, or “medical clearance” from a Primary Health Care Provider to wear hearing aids. Medical clearance is required by law.
2. The audiologist must make impressions of your child's ears. These impressions will be used to make custom earmolds for your child.
3. Your child must have a special measurement called the RECD (Real Ear to Coupler Difference) made with his earmolds in place. Your child's RECD measurement helps the audiologist adjust her hearing aids. The RECD measurement should be made before or at the time of the fitting of your child's hearing aids.
4. Sometimes, your child may have medical clearance and earmolds, but you may still be waiting for funding for the hearing aids. In these cases, your child's audiologist may fit your child with a “loaner” hearing aid during the waiting period. This is because it is important that your child start wearing amplification as soon as possible.

TIPS FOR KEEPING HEARING AIDS ON INFANTS AND SMALL CHILDREN

Keeping hearing aids on your small child can be a challenge, especially at first. As your child gets accustomed to his hearing aids, and learns that he hears better with them on, it will get easier. Here are a few tips that can help:

- You should be in control of when and where your child wears the hearing aids. Make sure to teach your child that only adults are allowed to take off the hearing aids.
- Give your child reinforcement for wearing her hearing aids. Have a reward, such as a special toy or game that your child can only have with the hearing aids on.
- Little hands like to pull out hearing aids. Things such as Huggie Aids, alligator clips, hats and headbands can help keep the hearing aids on. Your Audiologist can help you choose something that works for your child.
- Sometimes putting the earmold in your child's ear can be tricky. Using a special lubricant and having good technique can help. Your audiologist can teach you proper technique and help you get special lubricant. (Use a water-based lubricant. Do not use Vaseline.)
- Try to have your child wear the hearing aids whenever he is awake. This way, hearing sounds will become part of his daily routine. You may need to start with small amounts of time and build up to longer periods.

ISSUES YOU MIGHT ENCOUNTER WITH YOUR CHILD'S HEARING AIDS

Be sure to talk with your audiologist if your child has any of the problems listed below, or if you have other questions about your child's hearing aids.

FEEDBACK

Feedback is a high-pitched squealing sound. Before turning down the volume to control feedback, be sure to talk to your audiologist. The hearing aid needs to be set at a certain volume to work best for your child. Talk to your audiologist if there are problems with feedback. Some causes of feedback can be:

- An earmold that is not inserted all the way into your child's ear.
- An earmold that fits poorly, or that your child has outgrown.
- An earmold, tubing or earhook that is damaged.
- A hat or blanket that covers the hearing aid and microphone (feedback will stop when you remove the hat or blanket).
- A hearing aid that is damaged.
- An earmold or an ear canal blocked by wax or discharge from an ear infection.

SORE SPOTS

Sometimes new earmolds may have some uneven areas that can cause redness or a sore spot in your child's ear. If this happens, your audiologist can often file the earmold smooth. Check your child's ears for redness whenever she gets new earmolds. A sore spot may be the reason your child does not want to wear her hearing aids.

EAR INFECTIONS

If your child has an ear infection she may not want to wear her hearing aids because her ears hurt. If you think your child has an ear infection, be sure to talk to your child's doctor or audiologist. They may recommend that your child doesn't wear her hearing aids until the infection clears. If your child's ears are actively draining, remove the hearing aids until the ear infection clears.

OVERAMPLIFICATION

Over amplification means that a hearing aid is too loud. Your audiologist should use a technique called real ear measures to find the settings that are appropriate for your child. If your child repeatedly pulls the hearing aids out of his ears, or blinks more than normal with his hearing aids on, they may be too loud. Loud sounds should be loud with hearing aids, but even very loud sounds should not cause discomfort for your child. Talk to your child's audiologist if you think he is being over amplified.

KANSAS INFANT/TODDLER HEARING AID LOANER BANK

Serving Infants and Toddlers Birth to 36 months

History

The Kansas Infant/Toddler Hearing Aid Loan Bank was established in July 2007 after Sound Beginnings suggested to the Kansas legislature in 2006 that funding be secured to establish a hearing aid loan bank for infants and toddlers, birth to 36 months of age, who are identified with hearing loss. At the request of Sound Beginnings, the Kansas School for the Deaf administers the Kansas Infant/Toddler Hearing Aid Loan Bank.

Purpose

The purpose of the loan bank is to provide audiologists with hearing aids for short term loan on newly identified infants and toddlers up to 3 years of age with no waiting on preauthorization, deductibles, cochlear implant approvals or other preapprovals which may delay acquiring hearing aids.

Audiologists should refer the child's family to the local *tiny-k* network to begin early intervention and help families find funding for personal hearing aids when the hearing loss has been identified.

The Kansas Infant/Toddler Hearing Aid Loan Bank will provide hearing aids only to the audiologist. It is the audiologist's responsibility to appropriately fit and manage the child's amplification. The audiologist should obtain fitting software for the hearing aid devices by contacting the manufacturer directly. Earmolds are not provided or funded through the loan bank.

Requests

To request hearing aids from the loan bank, audiologists should complete the **Kansas Hearing Aid Loan Bank Application Form***

Fax, mail or email the completed application to:

Kansas Infant/Toddler
Hearing Aid Loan Bank
Administrator
c/o Kansas School for the Deaf
450 E. Park
Olathe, KS 66061
Fax: 913.324.0601
Email: gsprecher@ksdeaf.org

*Application forms may be obtained by request at the above contact.

FM SYSTEM HEARING TECHNOLOGY

Children who use hearing aids often have difficulty hearing speech in a noisy background or when the speaker is a distance greater than three feet away. For these situations, a wireless FM system may be beneficial.

An FM system has two primary components, the amplifier/receiver worn by the child and the microphone/transmitter worn by the talker. The receiver may be either a body-worn unit or a behind-the-ear unit. The receiver functions like a traditional hearing aid and has the capability of picking up a radio signal that is sent out by the microphone. The receiver and microphone must be set to the same radio frequency so that the talker's signal can be received by the child.

The system is designed to amplify the signal from the microphone/transmitter louder than the signal received from the microphone of the amplifier/receiver. This allows the talker's signal to be louder than any competing background noise at all times as if the talker were only inches from the listener. Some children may use the FM system as the primary amplification system while others may use it only in particularly noisy settings.

OTHER LISTENING DEVICES

Closed Captioning

This device can either be attached to a television or built into the television. It provides written text of the spoken words at the bottom of the television screen.

TTY

TTY stands for teletypewriter. You may also see it called a TDD (Telecommunications Device for the Deaf). A TTY allows a person with hearing loss to use a telephone by typing rather than speaking. A person using a TTY can call another TTY user direct, or use a relay service to call someone who does not have a TTY.

Telephone Amplifier

This device makes the telephone signal louder. It can be used with or without a hearing aid.

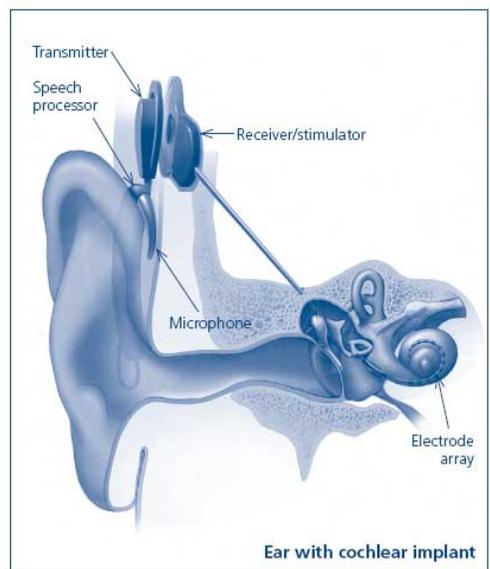
Alerting Devices

These devices can help alert your child of sounds such as the doorbell or telephone ringing. They might provide a visual signal, such as flashing light, or a tactile signal, such as a pocket receiver that vibrates. Some of the most common devices used are alarm clocks, smoke alarms, door knockers, bed vibrators, and phone flashers.

COCHLEAR IMPANTS

Children who do not benefit from hearing aids may be helped by a cochlear implant. A cochlear implant is very different from a hearing aid. During surgery, a device is placed, or “implanted,” in the inner ear (cochlea) and under the bone behind the ear.

A microphone and speech processor are worn externally, usually behind the ear. They pick up sound and send it to the transmitter that is held in place by a magnet. The receiver inside the head picks up the signals and sends them to the nerve that connects with the brain. This allows sound to bypass the damaged parts of the ear.



Some things to know about Cochlear Implants:

- Cochlear implants are usually not done on babies under 8 months of age.
- The cochlear implant is adjusted to how the child responds to sound. Regular visits to the audiologist are needed to adjust the implant to the child’s changing needs.
- The part of the implant that fits on the outside of the head should be worn all day, every day. Children learning spoken language need daily access to sound.
- The implant should be checked every day.
- A cochlear implant is not a “quick fix”. A child will still need lots of help to develop speech, language, and communication skills.

COMMUNICATION CHOICES

HOW WILL MY CHILD COMMUNICATE?

Helping your child and family communicate is extremely important. You will find a lot of information and many opinions about what is best for your child. This section will give you the information you need to begin to learn about the options for your child and family. There are many approaches to communication. The method you choose should provide your child with full access to communication. It should also use the primary language that is spoken in your home (such as English, Spanish, American Sign Language, etc.). Your family will need to commit to using the method you choose. When choosing a method, keep in mind that no method is best for all children. You can always make a different decision later if your child's needs change.

Research shows that early communication is related to the development of positive self-esteem and to later language-learning abilities. Responding to your child and encouraging him or her to respond to you is the key to your child's language development. There are different ways to communicate and different philosophies about communication. As you think about how your family now communicates with your child and how you would like to communicate with him in the future, you are thinking about communication "methods".

HOW HEARING LOSS AFFECTS COMMUNICATION

Hearing loss in a young child is different from hearing loss in an adult. This is because a child has not yet learned speech and language. Adults with hearing loss already know the rules of language and can apply them to daily conversations. For a child of parents who use spoken language in the home, even a mild hearing loss can affect his ability to develop speech and language. Children need to hear all of the sounds of their language to learn how to talk. Similarly, a child of Deaf parents who use sign language to communicate will learn language through being exposed to sign language.

When spoken language is used in the home, a child with hearing loss will be affected in terms of his access to communication. How much the hearing loss affects access for your child depends on factors such as:

- The type of hearing loss.
- The degree of hearing loss.
- The configuration of the hearing loss.
- Your family's involvement in your child's communication development.
- The age at which your child's hearing loss occurred.
- The age at which your child's hearing loss was identified.
- The age at which intervention was started, how much was provided, and the quality of the intervention provided.
- Other health conditions your child may have.

A decision facing a family with a child who is deaf or hard of hearing is choosing a communication method. One of the first questions you might ask is “What is the best communication method for my child?” People may tell you **their** method (oral, cued speech, American Sign Language, Bilingual-Bicultural, Manually Coded English, etc.) is **best**. Keep in mind that no one method has been proven to be best for all children who are deaf and/or hard of hearing. For some children a combination of communication methods may be beneficial.

Decisions regarding communication should be based on your own observations of the needs of your child and family. Ask questions, talk to adults who are deaf and hard of hearing, and families with children who have a hearing loss. Discuss, read, and obtain as much information as you can about the various choices. Remember, no decision is irreversible. Monitor your child’s progress and reevaluate decisions about your choice. Consider the following questions when choosing a communication method:

- Will the communication method enable all of your family to communicate with your child?
- Is the communication method in the best interest of your child? Should it allow your child to have control over his/her environment, to share his/her feelings and concerns, and participate in the world of imagination and play?
- Will the communication method enhance your relationship with each other as a family? It should promote enjoyable, meaningful communication among all family members and enable your child to feel part of your family and know what is going on.

*“I’m not so sure that **how** we communicated was as critical as **that** we communicated.”
Mother of a child with profound deafness*

The following pages provide a brief description of some of the different communication options available to you and your family. This is just a beginning point. These approaches represent a range from spoken English to American Sign Language.

COMMUNICATION TERMINOLOGY

American Sign Language (ASL)

American Sign Language is a visual language. It is a unique, signed language different from English. ASL is composed of precise handshapes and movements. Children who learn ASL as their first language will later be taught English as they learn to read and write.

Auditory – Oral

The Auditory-Oral method of teaching spoken language stresses the use of amplified residual hearing (through hearing aids or a cochlear implant), speech, and oral language development. Some programs utilize a multisensory approach (hearing, vision, touch) while others use a unisensory approach without the benefit of speechreading. Both approaches teach children to talk through listening without utilizing a formal sign system.

Auditory – Verbal

The Auditory-Verbal method, much like the auditory-oral method, this method relies on the principle that children with any degree of hearing loss deserve the opportunity to learn to listen and talk in the mainstream community. Auditory-Verbal therapy is conducted jointly by parents and the auditory-verbal therapist. Emphasis is placed on learning to listen without the use of speechreading or a sign system.

Bilingual Approach

Bilingualism is the knowledge and regular use of two languages: American Sign Language and English (speech, listening, reading, and writing).

Conceptually Accurate Signed English (CASE)

This communication style uses conceptually accurate signs in English word order. Signs are based on American Sign Language.

Cued Speech

Cued Speech helps children hear and “see” speech. Teachers and parents make a special hand shape, or “cues,” near their face while they are speaking. This helps children tell the difference between words that can sound or look alike.

Signed English Systems

Signed English Systems apply to a variety of systems that use signs, fingerspelling, or gestures separately or in combination to represent English manually (e.g., Signing Exact English [SEE II], Signed English).

Total Communication

Total Communication combines a sign-language system with spoken language. Children are encouraged to use their eyes, ears, voices, and hands to communicate.

INFANT-TODDLER SERVICES IN KANSAS

Your Individualized Family Service Plan (IFSP)

Children from birth up to three with a confirmed hearing loss are eligible to receive professional help through Infant-Toddler Services. Statewide community-based early intervention networks provide multidisciplinary services at no cost to families for infants and toddlers with hearing loss. These services are designed to meet the special, individualized needs of your child and family. Private agencies, outside this statewide system, are also available to assist families if they so wish.

Once your child's hearing loss has been confirmed by your audiologist, the audiologist will put you in touch with an agency that provides early intervention services in your area. In the Infant-Toddler Services system, your Family Service Coordinator (FSC) will assist you in obtaining coordination of services, access to community resources, and information about hearing loss. The FSC, and perhaps other service providers, will work with you to develop an individualized family service plan (IFSP). You may have family members, friends, parents of other children, and other professionals attend the IFSP meetings if you wish.

The IFSP is a written plan that identifies the outcomes that you want your child to work toward and describes processes (services and activities) to help achieve those outcomes. Through the ongoing process of planning and adjusting of outcomes, services and activities to meet the changing needs of your child and family, the IFSP serves as a guide for you and the professionals working with you and your child. You, as parents, are essential participants in the development and revisions of the plan.

IFSP meetings will be conducted in your native language and cultural preferences of you and your family will be respected.

Your IFSP includes:

- Results of the evaluation of your child.
- Family information (Optional). Information you wish to share about your family's resources (e.g., family members who can help carry out intervention activities), priorities (e.g., outcomes for your child that are most important to you), and concerns about your child.
- Outcomes you want for your child.
- A description of the services and activities which will help toward achieving these outcomes.
- When early intervention services and activities should start and end, and where and how often the child and family will participate in these services and activities. Services and activities are to be natural learning experiences occurring in natural environments.
- Who will be responsible for providing the services and activities (e.g., family, extended family members, friends, professional services providers, etc.)?
- The name of the Family Service Coordinator working with you.
- How the services will be paid for (e.g., funding sources such as insurance, federal and state funds, local funds). Infant Toddler Services is the payor of last resort.
- A transition plan to help you and your child when you are moving to another community, changing programs, or moving out of the Infant-Toddler Services system to other services when your child is age three. Contact Families Together, Inc., for family support/additional information about transition.

Infant-Toddler Early Intervention Services Available:

- Assistive Technology (includes hearing aids, earmolds, and batteries)
- Audiology
- Family Service Coordination
- Family Training, Counseling, and Home Visits
- Health (does not include surgical services, hospitalization and health services to treat a medical condition, or immunizations)
- Medical (for diagnosis or evaluation)
- Nursing
- Nutrition
- Occupational Therapy
- Physical Therapy
- Psychological Services (related to your child's behavior)
- Social Work
- Special Instruction
- Speech-Language Pathology
- Transportation and/or related costs as related to the IFSP
- Vision
- Sign Language / Cued Language Services
- Early Identification, Screening & Assessment

INFANT-TODDLER SERVICES NETWORKS

Arrowhead West, Inc.

401 Edgemore
Dodge City, KS 67801
(620) 225-5177
Area Served: Barber, Clark, Comanche,
Edwards, Ford, Gray, Harper, Hodgeman,
Kingman, Kiowa, Meade, Ness and Pratt

Bright Beginnings

Butler County Infant-Toddler Services

409 N Main Street
El Dorado, KS 67042
(316) 320-1342
Area Served: Butler

Children & Families Network

Russell Child Development Center
714 Ballinger
Garden City, KS 67846
(620) 275-0291
Area Served: Finney, Grant, Greeley,
Hamilton, Haskell, Kearney, Lane, Morton,
Scott, Stanton, Wichita and Stevens

Clay – Washington Infant Toddler

PO Box 219 (412 Park St.)
Greenleaf, KS 66943
(785) 747-7903
Area Served: Clay and Washington

Cloud - Republic Infant –Toddler Services

1502 Lincoln St
Concordia, KS 66901
(785) 243-1977
Area Served: Cloud and Republic

tiny-k Early Intervention (Douglas County)

2619 W 6th Street Ste B
Lawrence, KS 66049
(785) 843-3059
Area Served: Douglas

Early Childhood Committee Dream Team

Atchison Hospital Association
800 Raven Hill Rd.
Atchison, KS 66002
(913) 360-5550
Area Served: City of Atchison

Flint Hills Special Education Coop

1700 W 7th Ave
Emporia, KS 66801
(620) 341-2260
Area Served: Chase, Lyon, Morris, and
Greenwood

Geary County Infant-Toddler Services

USD #475, Geary County Schools
123 N. Eisenhower
Junction City, KS 66441
(785) 717-4130
Area Served: Geary, USD #475 and Fort Riley

Harvey County Infant Toddler Program

Cooper Early Education Center
816 Oak
Newton, KS 67114
(316) 284-6510
Area Served: Harvey

Hays Interagency Coordinating Council

Hays Area Children's Center, Inc.
94 Lewis Drive
Hays, KS 67601
(785) 625-3257
Area Served: Ellis and part of Rush

Infant-Child Development

Salina Regional Health Center
501 S. Santa Fe Ste 210
Salina, KS 67401
(785) 452-6050
Area Served: Dickinson, Ellsworth, Ottawa,
and Saline

Infant Toddler Services Network of Riley County

PO Box 471 (2600 Kimball Ave)
Manhattan, KS 66505
(785) 776-6363
Area Served: Riley

Jewell/Lincoln/Mitchell County ICC

PO Box 583 (1720B N. Hersey)
Beloit, KS 67420
(785) 738-3055
Area Served: Jewell, Lincoln, and Mitchell

Johnson County Infant-Toddler Services

6400 Glenwood Ste 205
Overland Park, KS 66202
(913) 432-2900
Area Served: Johnson County

Kid-Link/DSNWK

509 Main
Stockton, KS 67669
(785) 425-6766
Area Served: Norton, Osborne, Phillips,
Rooks, Russell, Smith

Lakemary Center Infant Toddler Program

501 S Hospital Dr. Ste 400
Paola, KS 66071
(913) 294-4343
Area Served: Anderson, Linn, Miami, part of
Franklin

**Leavenworth County Infant-Toddler Serv.
Nurturing Families, Inc,**

1276 Eisenhower Rd.
Leavenworth, KS 66048
(913) 250-1111
Area Served: Leavenworth

Marion County Early Intervention Services

1500 E. Lawrence
Marion, KS 66861
(620) 382-2858
Area Served: Marion

Marshall County Infant-Toddler Services

1017 Broadway Ste 8
Marysville, KS 66508
(785) 562-5502
Area Served: Marshall

**MCKIDS (McPherson County, KS, Infant
Development Services)**

1106 Hospital Drive
McPherson, KS 67460
(620) 241-9595
Area Served: McPherson

Northeast Kansas Infant-Toddler Services

PO Box 320 (601 Woodson)
Lecompton, KS 66050
(785) 887-6004 ext 3
Area Served: Brown, Doniphan, Nemaha, and
Jackson, USD 322 in Pottawatomie Co, USD
343 in Douglas Co

Northwest KS Education Service Center

703 West Second Street
Oakley, KS 67748
(785) 672-3125 Ext. 111
Area Served: Cheyenne, Decatur, Graham,
Gove, Logan, Rawlins, Sheridan, Sherman

Osage County ICC Infant-Toddler Services

1318 N Topeka Avenue
Lyndon, KS 66451
(785) 828-3113
Area Served: Osage and W. Franklin

Ottawa-Wellsville Infant –Toddler Program

416 S. Main Street
Ottawa, KS 66067
(785) 242-0910
Area Served: Part of Franklin (boundaries of
USD289 and USD290)

Parents and Children Together, Inc. (PACT)

PO Box 573 (150 Plaza Drive)
Liberal, KS 67905
(620) 624-2222
Area Served: Seward

Pottawatomie/Wabaunsee Infant-Toddler Services

Special Services Cooperative, USD #320
510 E Hwy 24
Wamego, KS 66547
(785) 456-7366
Area Served: Pottawatomie and Wabaunsee

Shawnee County Infant-Toddler Services

TARC
2701 SW Randolph Ave
Topeka, KS 66611
(785) 232-0597
Area Served: Shawnee

Prairie Band Potawatomi Indians

15380 K Road
Mayetta, KS 66509
(785) 966-2707
Area Served: Potawatomi Reservation

Southeast KS Birth to Three Program

SEKESC
2601 Gabriel
Parsons, KS 67357
(800) 362-0390 Ext. 1765
Area Served: Allen, Bourbon, Chautauqua,
Cherokee, Crawford, Elk, Labette,
Montgomery, Neosho, Wilson, and Woodson

REACH tiny-k Infant Toddler Services

800 Main Place, Ste 304
Winfield, KS 67156
(620) 229-8304
Area Served: Cowley

Sumner County ICC

Futures Unlimited, Inc.
2410 North A
Wellington, KS 67152
(620) 326-8906 ext. 224
Area Served: Sumner

Reno County Infant Toddler Network

303 East Bigger
Hutchinson, KS 67501
(620) 615-5850
Area Served: Reno

Sunflower Early Education Center

1312 Patton Road
Great Bend, KS 67530
(620) 792-4087
Area Served: Barton, Pawnee, Rice, Rush,
Stafford

Sedgwick County Early Childhood Coordinating Council

Rainbows United, Inc.
2258 N Lakeway Circle
Wichita, KS 67205
(316) 945-7117
Area Served: Sedgwick

Wyandotte County Infant-Toddler Network

4911 State Ave
Kansas City, KS 66102
(913) 287-8851 Ext. 147
Area Served: Wyandotte

Kansas Infant-Toddler Services

www.ksits.org

785-296-6135

YOUR RESPONSIBILITIES AS A PARENT

Just as you have rights as the parent of a child with special needs, there are many ways you can help make sure your child's rights are respected and protected. These suggestions may be helpful:

LEARN AS MUCH AS YOU CAN ABOUT YOUR RIGHTS AND THE RIGHTS OF YOUR CHILD

The more you know about your rights under federal law, the better you can make sure your child's school is honoring them. If you have any questions about your rights as a parent, ask your Family Resources Coordinator, school or educational agency.

BECOME A PARTNER WITH YOUR CHILD'S PRESCHOOL, SCHOOL, OR EDUCATION AGENCY

Because you know your child better than anyone, you are a key member of a team whose job it is to help your child get the best education possible. Your input is an important resource to the educators and other professionals who work with your child.

UNDERSTAND THE PROGRAM IN YOUR CHILD'S IFSP OR IEP

Ask questions until you are sure you understand. Don't sign the IFSP until you are sure you understand all of it.

KEEP TRACK OF YOUR CHILD'S PROGRESS

If your child is not progressing as well as you think he should, talk with his teacher or providers. You have the right to ask for a review of your child's educational program at any time.

KEEP RECORDS

Each year, keep a notebook to write down questions or comments about your child's progress or educational program. Take notes whenever you meet with staff, talk on the phone, or send notes to teachers or other staff. Write down dates, times, what happened, and the names of the people involved. These notes can be a helpful reminder for you and for your child's educators.

TALK WITH YOUR CHILD'S SCHOOL OR AGENCY WHEN YOU HAVE CONCERNS

It is important to make sure that the professionals who work with your child understand your concerns. Often, problems can be easily resolved once your concerns are made known.

QUESTIONS TO ASK

Department of Health and Human Services • Centers for Disease Control and Prevention

MEDICAL PROFESSIONAL QUESTIONS

Your child's medical professional oversees your child's overall growth, health, and development. This person will coordinate all areas of your child's medical care. In addition to receiving routine care, a child with hearing loss may need to see specialists who will look at the child's specific needs. These Specialists may look at eyes, language or speech needs, genetics, or other areas. Your medical professional will help decide which specialists your child should see and when to see them.

Questions to ask you medical professional

1. Do you know why my child has a hearing loss? Could the hearing loss be related to any other medical conditions? Could it be genetic?
2. Are there specialists who are knowledgeable about childhood hearing loss that my child should see?
3. How do I get the referrals for the specialists? Do I need to make an appointment with your office first or can I request them by calling your office?
4. How will the specialists we see share their findings with you? How long does that process usually take? How am I involved in the communication between the specialists and will I get copies of the reports?
5. Have you already received any reports about my child's hearing loss (e.g., from audiology, ENT)?
6. Will my child need more tests because of the hearing loss? For example, brain scans (CT, MRI) or blood or urine tests? What will these tests tell you about my child's hearing loss?
7. If I have problems with the referrals, or if my insurance company has questions, what should I do? Can your office help me?
8. Are there any medications that may have harmful affects on my child's hearing?
9. Will ear infections or fluids in the ears affect my child's hearing loss? Should the infections or fluid be treated differently because of my child's hearing loss?
10. Other than my child's hearing loss, do you have other concerns about my child's development? Is she/he meeting the developmental milestones as they should?
11. Can you tell me about early intervention services that are available in my area?
12. Do you know of any community resources or support groups for my family?
13. Is there anything more I should know or consider about my child's hearing loss or general health?

EAR NOSE & THROAT (ENT) QUESTIONS

An ENT can tell you if there is a medical condition in your child's outer, middle, inner ear that is causing the hearing loss by asking some questions and doing a medical examination. The doctor can also answer your questions about medical or surgical treatments. This will help ensure that intervention occurs within the "1-3-6" timeline (screening before 1 month of age, hearing diagnostic audiological evaluation before 3 months of age, and early intervention before 6 months of age)

Questions to ask your ENT

1. Do you have experience evaluating and treating babies and children with hearing loss?
2. Do you have the most recent report from my child's audiologist (hearing specialist)?
3. What type of hearing loss does my child have (sensorineural, conductive, or mixed)? Please explain the terms.
4. Should I make appointments with other health professionals? For example, an eye doctor or a geneticist.
5. Would you suggest genetic counseling for our family?
6. Are there other tests that my child needs? For example brain scans (CT, MRI); heart tests (EKG); and blood or urine tests. What will these test tell you about my child's hearing loss?
7. Can you tell if my child's hearing loss will change or get worse?
8. Is there some cause for my child's hearing loss?
9. How do I describe these results to family members?
10. What treatments are available? For example ear tubes, other surgery, or cochlear implants?
11. Would my child benefit from a hearing aid? If so, how?
12. Do I need a form signed by a health care professional to allow my child to be fitted with hearing aids?
13. Is my child a candidate for cochlear implant? Where can I go for more information?
14. How often will we meet with you, one time or ongoing?

Audiologist Questions

An audiologist can help find a hearing loss, describe hearing test results, and test to see if amplification devices will help your child. An audiologist may sell and fit hearing aids, give suggestions about hearing aids, and provide you with information about intervention strategies.

Questions to ask your Audiologist about your child's hearing loss

1. How much hearing loss does my child have? Explain terms: sensorineural, conductive, mixed, mild, moderate, severe, profound, auditory neuropathy.
2. Is the loss permanent?
3. Can you tell if my child's hearing loss will get worse or change?
4. Do both ears have the same hearing loss?
5. How will the hearing loss affect my child's speech and language development?
6. What could have caused my child's hearing loss?
7. Would you suggest genetic counseling for our family?
8. May I have a copy of the hearing test results? Explain the audiogram or other information on this form.

Questions about hearing aids & cochlear implants

1. Does my child need a hearing aid? What are my choices? Should she/he have a hearing aid in both ears?
2. How much do hearing aids cost? Can I get help to pay for hearing aids?
3. Can you help me contact a program that can lend me hearing aids?
4. What will my child hear with the hearing aids?
5. How often will my child need new hearing aids or parts?
6. What are the parts of a hearing aid that may need to be replaced?
7. What should I do if my child does not want to wear the hearing aid?
8. With my child's hearing loss, should I consider cochlear implant? Where can I go for more information?

Questions about communication options and education

1. Can you help me learn about the different types of communication options (total communication, oral, sign language)?
2. When should I begin early intervention, school, speech, and other therapy, or classes for my child? What is available in this area?

Questions about support

1. Is there a parent group in my area? Where? Who should I contact?
2. Can you help me meet another parent of a child with hearing loss that is similar to my child?
3. Can you tell me about other ways I can learn about hearing loss – books, audio-visuals, films, websites, and courses?
4. How do I describe the results of the hearing test to family members?
5. What are some tips for working with my child at home?

Early Intervention Questions

Early intervention services support families to help their children reach their full potential. These services are offered through public or private agencies. Each state has an agency that serves infants and toddlers with hearing loss or other special needs. Once your child has been diagnosed with hearing loss, an early interventionist or someone from the state should call you. If you do not receive a call, or would like to know more information, you can call the state office and ask to speak with the agency that serves children with special needs.

Questions to ask about Early Intervention Services

1. What is early intervention? What can you do for my child? What services do you provide?
2. Why is it important for my child to start intervention early?
3. How much will early intervention services cost?
4. How can my child learn to communicate? Can you tell me about sign language? Can you tell me about different ways my child can learn to talk?
5. How are hearing aids and cochlear implants different?
6. How will I know if my child should get hearing aids or a cochlear implant?
7. Does your program have staff trained to work with very young infants and toddlers with hearing loss for all communication methods?
8. Will you send progress reports for our child to his or her doctors and the state EHDI program?
9. How much time will we spend in early intervention activities?
10. Where will the intervention activities be provided?
11. Where can I learn more about children with hearing loss? How can I meet other families who have young children with hearing loss?
12. What will happen when my child is too old for your program?

Speech-Language Pathologist Questions

The speech-language pathologist (SLP), sometimes called a speech therapist, will help your family decide the best therapy approach for your child. The therapy approach used with a child who does not hear sound differs from those used with a child who hears but has difficulty with speech and/or language. Some SLPs focus on spoken language only, while others focus on spoken language and sign language.

Questions to ask your Speech-Language Pathologist

1. What kind of training and experience do you have working with children who are deaf or hard of hearing? What age group of children have you worked with?
2. What communication option(s) do you use in therapy (for example: Signing Exact English (SEE), American Sign Language (ASL), Cued Speech, Auditory-Verbal, etc)? What is your experience and comfort level using these communication options?
3. How will you test the progress of my child's speech and language development? How often will you test my child's progress? What tests will you use?
4. How will I participate in my child's therapy sessions?
5. How do you decide how much time my child will spend on speech production, language (spoke or signed), and auditory (hearing) training?
6. What are my costs for the different types of therapies? What resources are available to help me with these costs?
7. Can I observe a speech therapy session with another child who has hearing loss?

Questions to help family and child at home/school

1. Can you tell me about other ways I can learn about the different types of communication options – books, audio-visuals, films, websites, and courses?
2. What suggestions do you have for supporting my child's use of communication at home (i.e., spoken and/or sign language)?
3. How should I work with my child's team of professionals to ensure that all of our efforts are coordinated?
4. What other resources do you offer? Can you suggest any other resources in the community for our family?

Genetics Team Questions

Members of the genetics team will ask you questions and give your child a thorough physical exam to try to find the cause of your child's hearing loss. They may recommend that your child have a blood test. They may ask that the parents have a blood test. They may suggest that your child see another doctor or specialist to help them better understand the cause of the hearing loss. They might also give you and your family information about the chance of having other children with hearing loss. Sometimes the cause of hearing loss cannot be found.

Questions to ask you Geneticist

1. Will a genetic exam and genetic testing tell me what the cause of my child's hearing loss? What are some common genetic causes of hearing loss?
2. Why should I try to find out the cause of my child's hearing loss? How can this information help my child?
3. What will the results of genetic testing tell me? Does a negative test results mean that my child's hearing loss is not genetic?
4. Can the results of the genetic testing tell me if my child's hearing loss will get better or worse?
5. How will genetic tests be done? What other kinds of tests might be done to find out the cause of my child's hearing loss?
6. Will my child need to come back to your office after testing? If so, why?
7. Why is it important to know if members of my family have had hearing loss and what type they had? How can hearing loss be inherited?
8. If no one in my family has hearing loss, how can my child's hearing loss be genetic?
9. Should my other children have genetic testing too? Why?
10. If I have another child, what is the chance that he or she will also have hearing loss?
11. Should I share test results with other members of my family? Could other people in my family also have children with hearing loss?
12. Where can I learn more about genetic testing for hearing loss? How can I meet other families who have children with hearing loss?
13. How will the information obtained from genetic testing be protected? Will this information be distributed to insurers or potential employers?

RESOURCES IN KANSAS

Assistive Technology for Kansans Project

2601 Gabriel
Parsons, KS 67357
1-620-421-8367 V/ TTY

Disability Rights Center of Kansas (DRC)

635 SW Harrison St., Ste. 100
Topeka, KS 66603
(877) 776-1541 V
(877) 335-3725 TTY
www.drckansas.org

Families Together, Inc.

501 Jackson Ste 400
Topeka, KS 66603
(785) 233-4777
www.familiestogetherinc.com

***Hartley Family Center**

University of Kansas Medical Center
3901 Rainbow Blvd.
Kansas City, KS 66160-7605
(913) 588-5750 V/TTY
www.kumc.edu/hfc

***Herndon Speech-Language-Hearing Clinic**

Fort Hays State University, Albertson Hall
600 Park Street
Hays, KS 67601-4099
(785) 628-5366
www.fhsu.edu/herndon-clinic

Kansas Commission for the Deaf and Hard of Hearing

915 SW Harrison St., 9-North
Topeka, KS 66612
(800) 432-0698 V/TTY
1-866-588-1368 Videophone
www.srskansas.org/kcdhh

Kansas Association of the Deaf

PO Box 10085
Olathe, KS 66051
www.deafkansas.org

Kansas Department of Health and Environment Children's Developmental Services

1000 SW Jackson St. Ste 220
Topeka, KS 66612
(785) 296-6135
www.kdheks.gov/cds

Sound Beginnings Early Hearing Detection and Intervention

www.soundbeginnings.org

Infant-Toddler Services

**Children with Special Health Care Needs
Make a Difference Information Network**
(800)332-6262 V/TTY

Kansas Department of Education

Special Education Services
120 SE 10th Ave
Topeka, KS 66612
(785) 296-6338
www.ksde.org

Kansas Relay System

734 Vermont
PO Box 863
Lawrence, KS 66044
(800) 766-3777
Caption Telephone Line 1-877-243-2823

***Kansas School for the Deaf**

450 E. Park Street
Olathe, KS 66061
(913) 791-0573
www.ksdeaf.org

Kansas Speech-Language-Hearing Assoc. (KSHA)

6001 Cherokee Dr.
Fairway, KS 66205
(800) 248-5742
www.ksha.org

Kansas Assistive Technology Cooperative (KATCO)

625 Merchant, Ste. 205
Emporia, KS 66801
(866)-465-2826
www.katco.net

***Kansas State University**

Hearing & Speech Center
139 Campus Creek Complex
Manhattan, KS 66506
(785) 532-6879
www.he.k-state.edu/speech

***Rainbows United**

Infant Toddler Services
340 S. Broadway
Wichita, KS 67202
(316) 267-5437
www.rainbowsunited.org

***St Joseph Institute for the Deaf/Kansas City Campus**

8835 Monrovia
Lenexa, KS 66215
(913) 383-3535
www.sjid.org

Telecommunication Access Program (TAP)

4848 SW 21st St., Suite 201
Topeka, KS 66604
(785) 234-0200 Voice
(785) 234-0207 TTY
www.kansastap.org

***University of Kansas**

Schiefelbusch Speech-Language-Hearing Clinic
2101 Haworth Hall
Lawrence, KS 66045
(785) 864-4690
www.splh.ku.edu

***University of Kansas Medical Center**

Hearing & Speech Department
3901 Rainbow Blvd.
Kansas City, KS 66160
(913) 588-5937
www.hearing.kumc.edu

***Wichita State University**

Evelyn Hendren Cassat Speech-Language-Hearing
Clinic
1845 Fairmount
Wichita, KS 67260
(316) 978-3289
www.wichita.edu/clinic

*** Provides Early Intervention Services**



NATIONAL RESOURCES

Alexander Graham Bell Association for the Deaf and Hard of Hearing

3417 Volta Place, NW
Washington, DC 20007
(202) 337-5220
nc.agbell.org

An international organization comprised of parents, professionals, and oral children and adults who are D/HH; provides newsletters, journals, and information relating to oral education.

American Society for Deaf Children (ASDC)

800 Florida Ave. NE, # 2047
Washington, DC 20002
(800) 942-2732
www.deafchildren.org

Prints the Endeavor (parent newspaper) and provides parent support.

Beginnings for Parents of Children Who are Deaf or Hard of Hearing, Inc.

302 Jefferson St., Ste 110
Raleigh, NC 27605
www.ncbegin.org

A resource and reference organization that produces materials and videos oriented toward helping families make choices about communication methods.

Boys Town Research Hospital-Center for Childhood Deafness

425 North 30th St.
Omaha, NE 68131
(402) 452-5000
www.babyhearing.org
www.boystownhospital.org/hearingloss

Provides information on childhood hearing loss to parents, deaf and hard of hearing children, other family members, and the public at large.

Hands & Voices

PO Box 3093
Boulder, CO 80307
(303) 492-6283
www.handsandvoices.org

A nationwide non-profit organization dedicated to supporting families and children who are deaf or hard of hearing, as well as the professionals who serve them. We are a parent-driven, parent/ professional collaborative group that is unbiased towards communication modes and methods.

Provides free home study program on teaching spoken language to infants and young children who are D/HH, plus clinics – all for parents. (Available in Spanish.)

John Tracy Clinic

806 West Adams Blvd.
Los Angeles, CA 90007
(213) 748-5481
www.jtc.org

Provides free home study program on teaching spoken language to infants and young children who are D/HH, plus clinics – all for parents. Available in Spanish.

Marion Downs Hearing Center Foundation (MDHC)

1793 Quentin St., Unit 2
Aurora, CO 80045
(720) 848-3042
www.mariondowns.com

The Marion Downs National Center for Infant Hearing was established in 1996 through a Maternal and Child Health Grant awarded to the University of Colorado. The goals of the grant are to implement statewide systems of newborn hearing screening, audiologic assessment, and early intervention.

National Cued Speech Association

5619 McLean Dr
Bethesda, MD 20814
800-459-3529
www.cuedspeech.org

A resource and reference organization providing information on services, up-coming events, certification requirements, camps, affiliated centers and organizations, and publications

Laurent Clerc National Deaf Education Center

Gallaudet University
800 Florida Avenue NE
Washington, DC 20002
(202) 651-5051
www.gallaudet.edu/clerc_center.html

Centralized source of information on topics dealing with deafness and hearing loss. Disseminates information on deafness, hearing loss, services, and programs available throughout the United States related to people with hearing loss.

SEE Center for the Advancement of Deaf Children

PO Box 1181
Los Alamitos, CA 90720
(562) 430-1467 V/TTY
www.seecenter.org

Provides information on services for deaf children nationwide, parent information packets, workshops, and videotapes on Signing Exact English.

FUNDING RESOURCES

Health insurance may not cover hearing aids or assistive technology. You may wish to speak with your audiologist or family service coordinator to access funds available. Some programs may be based on financial need or availability. This list does not include all resources, it is a starting point.

Audient Alliance/EPIC Hearing Services

17870 Castleton St., Ste 320
City of Industry, CA 91748
(866) 956-5400
www.audientalliance.org

Children's Miracle Network

St. Francis Hospital-Topeka (785) 295-8181

Via Christi-Wichita (316) 946-5028

University of Kansas Medical Center-Kansas City
(913) 588-9105

Children with Special Health Care Needs

Curtis State Office Building
1000 SW Jackson, Suite 220
Topeka, KS 66612
(785) 296-1313

Easter Seals

233 South Wacker Drive, Suite 2400
Chicago, IL 60606
800-221-6827
www.easterseals.com

First Hand Foundation

2800 Rockcreek Parkway
Kansas City, MO 64117
(816) 201-3009
www.firsthandfoundation.org

Hear Now

Starkey Hearing Foundation
6700 Washington Ave South
Eden Prairie, MN 55344
(866) 354-3254
www.starkeyhearingfoundation.org

Make-A-Difference

You may receive a referral to: Medicaid, Healthwave, Children with Special Health Care Needs, and Infant Toddler Services.
(800) 332-6262

Miracle Ear-Children's Foundation

PO Box 59261
Minneapolis, MN 55429
(800) 234-5422
www.miracle-ear.com/childrenrequest.aspx

Shriner's International Headquarters

2900 Rocky Point Drive
Tampa, FL 33607
813-281-0300
www.shrinershq.org

United Cerebral Palsy

1660 L Street, NW., Ste 700
Washington, DC 20036
(800) 872-5827 (V)
www.ucp.org
Services may include financial assistance and/or equipment loan programs.

***Some programs may be based on financial need.**

SERVICE CLUBS THAT MAY PROVIDE FINANCIAL ASSISTANCE*

Business and Professional Women's Foundation

1718 M St. NW, # 148
Washington, DC 20036
(202) 293-1100
www.bpwfoundation.org

Civitan International

1 Civitan Place
Birmingham, AL 35213
(205) 591-8910
www.civitan.com

Shriner's International Headquarters

2900 Rocky Point Dr.
Tampa, FL 33607
(813) 281-0300
www.shrinershq.org

Kansas Infant/Toddler Hearing Aid Loan Bank

450 E. Park St.
Olathe, KS 66061
(913) 324-0600

Kiwanis International

3636 Woodview Trace
Indianapolis, IN 46268-3196
(317) 875-8755
sites.kiwanis.org

Lions Club International

300 West 22nd St.
Oak Brook, IL 60523
(630) 571-5466
www.lionsclub.org

Pilot International

102 Preston Court
Macon, GA 31210
(478) 477-1208
www.pilotinternational.org

Quota International/We Share Foundation

1420 21st St., NW
Washington, DC 20036
(202) 331-9694
www.quota.org

Rotary International

One Rotary Center
1560 Sherman Avenue
Evanston, IL 60201
(847) 866-3000
www.rotary.org

Sertoma International

1912 E. Meyer Blvd.
Kansas City, MO 64132
(816) 333-8300
www.sertoma.org

*There may be other service clubs in your community or you may be referred to a local service club.

DEAF CULTURE RESOURCES

Kansas Association of the Deaf

PO Box 10085
Olathe, KS 66051
www.deafkansas.org

National Association of the Deaf

8630 Fenton Street, Suite 820
Silver Springs, MD 20910
(301) 587-1788 V
(301) 587-1789 TTY
www.nad.org

Deaf Cultural Center

William J. Marra Museum of Deaf History and Deaf Culture
455 Park Street E.
Olathe, Kansas 66061
913-782-5808 V/TTY
www.kefdcc.org

DEAFBLIND RESOURCES – NATIONAL AND STATE

American Foundation for the Blind Headquarters

2 Penn Plaza, Suite 1102
New York, NY 10121
1-800-AFB-LINE
www.afb.org

Kansas School for the Blind

1100 State School
Kansas City, KS 66102
(913) 281-3308
www.kssb.net

American Association of the Deaf Blind

8630 Fenton Street, Suite 121
Silver Spring, Maryland 20910-3803
(301) 495-4402 TTY
(301) 495-4403 Voice
www.aadb.org

Kansas State Department of Education

Special Education Services
120 SE 10th Avenue
Topeka, KS 66612
(800) 203-9462
www.ksde.org

Assistive Technology

2601 Gabriel, PO Box 738
Parsons, KS 67357
(620) 421-8367
www.atk.ku.edu

National Family Association of Deafblind

141 Middle Neck Rd
Sands Point, NY 11050
(800) 255-0411
www.nfadb.org

COCHLEAR IMPLANT CENTERS

Colorado

Colorado Hearing and Balance

Colorado Springs Office
Printers Park Medical Plaza
175 S. Union Blvd., #330
Colorado Springs, CO 80910
Ph 719.442.6984
www.coloradoear.com

Denver Office

Sky Ridge Medical Center Campus
Aspen Medical Building
10103 RidgeGate Pkwy., #125
Lone Tree, CO 80124
Ph 303.662.8600
www.coloradoear.com

Rocky Mountain Cochlear Implant Center

Rocky Mountain Ear Center
Medical Plaza I
601 E. Hampden Ave
Suite 530
Englewood, CO 80113
Phone: 303-783-9220
www.rockymountainearcer.com

University of Colorado Hospital

Audiology Center
1665 Aurora Court
Aurora, CO 80045
720-848-2800
www.uch.edu

Kansas

University of Kansas Medical Center

KUMC Audiology Clinic
3031 HC Miller
3901 Rainbow Boulevard
Kansas City, KS 66160
Phone: 913-588-5730
TDD: 913-588-7963
www.kumc.edu/audiology

Wichita Ear Clinic

9350 E. Central
Wichita, KS 67206
800-794-7230
www.wichitaearclinic.com

Missouri

Saint Luke's Midwest Ear Institute

4200 Pennsylvania Suite 100
Kansas City, MO 64111
816-932-1660
www.saintlukeshealthsystem.org

Nebraska

Boys Town National Research Hospital

Boys Town Medical Campus-Downtown Clinic
555 North 30th Street
Omaha, NE 68131
(402) 498-6540
www.boystownhospital.org

Boys Town Medical Campus-Pacific Street
Clinic
14040 Boys Town Hospital Road
(139th & Pacific)
Boys Town, NE 68010
(402) 778-6800
www.boystownhospital.org

Ear Specialists of Omaha

9202 W Dodge Rd # 200
Omaha, NE 68114
(402) 933-3277
www.earspecialists.com

Ear Specialists of Omaha-Bellevue Office
3512 Sampson Way
Suite 130
Bellevue, NE 68123
(402) 933-3277
www.earspecialists.com

Ear Specialists of Omaha-Fremont Office
415 East 23rd Street
Fremont, NE 68025
(402) 933-3277
www.earspecialists.com

University of Nebraska Medical Center
Durham Outpatient Center
ENT Clinic
600 S. 42nd St
Omaha, NE 68198
(402) 559-5208
www.unmc.edu/ent

Oklahoma

Hough Ear Institute
3400 Northwest 56th Street
Oklahoma City, OK 73112
(405) 943-1716
www.houghearinstitute.com

Hearts for Hearing
3525 NW 56th St # 150A
Oklahoma City, OK 73112
(405) 548-4300
www.heartsforhearing.org

National Organizations and Support Groups

<p>Advanced Bionics Corporation Advanced Bionics Headquarters 28515 Westinghouse Place Valencia, California 91355 (877) 829-0026 US and Canada (800) 678-3575 (TTY) www.advancedbionics.com</p>	<p>Cochlear Implant Association, INC. (CIAI) 5335 Wisconsin Avenue NW, Suite 440 Washington, DC 20015 (301) 657-2248</p>
<p>American Speech-Language-Hearing Association 2200 Research Blvd. Rockville, MD 20852 (301) 296-5700 www.asha.org</p>	<p>Cochlear Implant Education Center Laurent Clerc National Deaf Education Center Gallaudet University 800 Florida Ave, NE Washington, DC 20002 202-651-5638 (V/TTY) www.gallaudet.edu/clerc_center.html</p>
<p>Center for Hearing Loss in Children Boys Town National Research Hospital 555 North 30th St. Omaha, NE 68131 (402) 498-6511 www.boystownhospital.org</p>	<p>Hands & Voices PO Box 3093 Boulder, CO 80307 (303) 492-6283 www.handsandvoices.org</p>
<p>Central Institute for the Deaf School 825 S Taylor Ave. St. Louis, MO 63110 (877) 444-4574 www.cid.edu</p>	<p>MED-EL Corporation, North America 2511 Old Cornwallis Rd., Suite 100 Durham, NC 27713 1-888-633-3524 (V/TTY) www.medel.com</p>
<p>Clarke Schools for Hearing and Speech The Mainstream Center 47 Round Hill Road Northampton, MA 01060 (413) 584-3450 www.clarkeschool.org</p>	
<p>Cochlear Americas 13059 E Peakview Ave. Centennial, CO 80111 (800) 523-5798 (V/TTY) www.cochlearamericas.com</p>	

WEBSITE RESOURCES

Alexander Graham Bell Association for the Deaf and Hard of Hearing	nc.agbell.org
American Society for Deaf Children	www.deafchildren.org
Beginnings for Parents of Children who are Deaf or Hard of Hearing	www.ncbegin.org
Boys Town National Research Hospital/ My Baby's Hearing	www.babyhearing.org
Deaf Children & Parents	www.deafchildrenandsigning.com
Deaf Digest	www.deafdigest.org
The Deaf Resource Library	www.deaflibrary.org
Deaf/Hard of Hearing	www.familyvillage.wisc.edu/lib_deaf.htm
Early Hearing Detection & Intervention	www.cdc.gov/ncbddd/ehdi/CDROM
Gallaudet University	www.gallaudet.edu
Hands and Voices	www.handsandvoices.org
Hearing Health Magazine	www.hearinghealthmag.com
Hearing Loss Association of America	www.hearingloss.org
Help Kids Hear	www.helpkidshear.org
John Tracy Clinic	www.jtc.org
National Center for Hearing Assessment and Management	www.infanthearing.org
National Association of the Deaf (NAD)	www.nad.org
Raising Deaf Kids	www.raisingdeafkids.org

NEWSPAPERS/MAGAZINES

Deaf Life

c/o MSM Productions LTD.
PO Box 23380
Rochester, NY 14692
www.deaf.com

Volta Voices

Alexander Graham Bell
3417 Volta Place, NW
Washington, DC 20007
(202) 337-5220 (Voice)
(202) 337-5221 (TTY)

The Broadcaster

The National Association for the Deaf
8630 Fenton St., Suite 820
Silver Spring, MD 20910
(301) 587-1788
www.nad.org

Hands & Voices Communicator

PO Box 3093
Boulder, CO 80307
(303) 492-6283
www.handsandvoices.org



VIDEOTAPES/CD/DVD

Signing Time – www.signingtime.com

“An Introduction to the Deaf Community” -- Sign Media, Inc. *A culturally-sensitive overview of social, cultural, and communicative facets of the lives of Deaf people.*

“DEAFOLOGY 101” -- Deaf culture as seen through the eyes of a Deaf humorist, Ken Glickman (1993). *Many situations unique to the world of the Deaf are explored.*

Dreams Spoken Here – Oberketter Foundation, visit www.oraldeafed.org. Shows the oral education process, impact of technology, and human interest stories.

Make a Joyful Noise – Oberketter Foundation, visit www.oraldeafed.org. Shows oral education process with several deaf children, their families, and teachers.

Families With Deaf Children – Boys Town Press, E-Mail: BTPress@boystown.org. You are hurt, confused, and like most parents, you have lots of questions. The best role models are parents of deaf children.

Families With Hard of Hearing Children - Boys Town Press, E-Mail: BTPress@boystown.org. Designed to provide answers when you need them. The best guides are other parents of hard of hearing children and professionals from different settings.

Home Total Communication Video Tapes - Shows over 1000 signs, available from Hope, Inc. 1856 N.1200 East North, Logan, Utah 84341, (435)-245-2888.

Parent Sign Series – Designed for parents of deaf children. Each tape has three parts: situation-specific interactions and conversation, review sentences, and vocabulary enrichment. 9 videotapes. Sign Media, Inc. 1-800-475-4756.

Sign With Me – Family Sign Language Curriculum. M. P. Moeller, M.S., and Brenda Schick, Ph.D., Center for Hearing Loss in Children, Boys Town National Research Hospital, Omaha, NE. (Video)

Auditory-Verbal Therapy for Parents & Professionals – Introduces AV therapy, speech-language development, etc., via parent stories and taped therapy sessions. A. G. Bell.

Becoming a Proficient Cued – Offers lessons and workbook skills for beginning cued. Available from A. G. Bell. (202) 337-5220.

PARENT LIBRARY

Caring for Young Children - Beginning Sign Language Series – Garlic Press.

Your Child's Hearing Loss: What Parents need to Know (2005). Debby Waldman

Choices in Deafness: A parent's Guide to Communication Options (2007). Sue Schwartz

For Families: A Guidebook for Helping Your Deaf or Hard of Hearing Child Learn to Listen and Communicate. (1998). Schuyler, V., & Sowers, J. Infant Hearing Resource.

Keys to Raising a Deaf Child. (1999). Frazier-Maibald, V., & Williams, L. Barron's Educational Services.

Children with Hearing Loss: Developing Listening and Talking Birth to Six (2007). Elizabeth B. Cole and Carol A. Flexer.

A Journey into the Deaf World (2007). Harlan Lane.

Raising and Educating a Deaf Child: A Comprehensive Guide to the Choices, Controversies, and Decisions Faced by Parents and Educators (2007). Mark Marschark.

Legal Rights, 5th Ed.: The Guide for Deaf and Hard of Hearing People (2000). By National Association of the Deaf.

Cochlear Implants (2006). Huw Cooper.

The Source for Children with Cochlear Implants (2005). David J. Ertmer.

Teach your Tot to Sign: The Parent's Guide to ASL (2005). Stacey A. Thompson.

Handy Stories to Read and Sign (2009). Donna Jo Napoli and Doreen DeLuca.

Songs for Listening! Songs for Life! (2003). Warren Estabrooks, M.Ed., Dip. ED. Deaf

My Turn to Learn (2006). Lane, S., Bell, L., & Parson-Tylka, T. Surrey, BC: Elks Family Resource Center.

A Parent Guidebook: ASL and Early Literacy (2004). Kristen Snoddon, Anita Small & Joanne Cripps.

People of the Eye: Deaf Studies Talking (2002). Rachel McKee.

Inside Deaf Culture (2006). Carol Padden and Tom Humphries.

CHILDREN'S LIBRARY

Going Out (2006). Anthony Lewis

Meal Time (2006). Anthony Lewis

First Signs (2006). Tina Jo Breindel & Michael Carter.

Where is Baby (2007). Michelle Cryan.

Animal Signs. A first book of sign language, picture board book. Slier.

Holidays and Celebrations (1999)

Foods Signs (2002) Beginning Sign Language Series – Garlic Press.

Happy Birthday!: A Beginner's Book of Signs (Board Book). (1997). Bednarczyk, A., & Weinstock, J. Star Bright Books.

Hooray for Harold: Dealing with Hearing Loss. (1997). Dr. Wellbook Collection. Children's book.

Sign and Sing Along: Twinkle Twinkle Little Star (2005).

Opposites: A Beginner's Book of Signs (Board Book). (1997). Bednarczyk, A., & Weinstock, J. Star Bright Books.

Emma and Egor Learn Shapes & Colors (2007). Stacy L. Eldred & Michael R. Prather.

More Please (2008). Nancy Cadjen

Finding Fido the Feline (2004). Barbara A. Palmer.

Max Learns Sign Language (2007). Andria F. Klein.

Baby Fingers: Hello & Goodbye (2008). Lora Heller.

Songs to Sign (1995). S. Harold Collins

***Read, read, read books to your children, no matter what the communication method you choose.**

LENDING LIBRARIES

Connecting Point Rainbows United

3223 N Oliver
Wichita, KS 67220
(316) 267-5437, Ext. 158
www.circleofinclusion.org

Early Childhood Resource Center

2601 Gabriel
Parsons, KS 67357
(620) 421-6550, Ext. 1651
(800) 362-0390, Ext. 1651
www.kskits.org/ecrc

Hartley Family Center

University of Kansas
Hearing & Speech Department
3901 Rainbow Blvd., 3031 Miller Bldg.
Kansas City, KS 66160
(913) 588-5750
www.kumc.edu/hfc

Kansas Deaf-Blind Loan Library

Kansas School for the Blind
1100 State Avenue
Kansas City, KS 66102
(913) 281-3308 Ext., 418
(800) 572-5463
dbl.kssb.net

Kansas School for the Deaf

450 E. Park Street
Olathe, KS 66061
(913) 791-0573
ksdeaf.org/RelatedServices/lendinglibrary.php

St. Joseph's Institute for the Deaf

8835 Monrovia
Lenexa, KS 66215
(913) 383-3535
www.oraldeafed.org

DIRECT ORDER FOR RESOURCES

ADCO

4242 S. Broadway
Englewood, CO 80113
(800) 726-0851
www.adcohearing.com

Alexander Graham Bell Association

3417 Volta Place NW
Washington, DC 20007
(202) 337-5221 V/TTY
www.agbell.org

Butte Publications, Inc.

PO Box 1328
Hillsboro, OR 97123-1328
(866) 312-8883
www.buttepublications.com

Gallaudet University Press

800 Florida Avenue, NE
Washington, DC 20002
(202) 651-5488
www.gallaudet.edu

Harris Communication

15155 Technology Drive
Eden Prairie, MN 55344-2277
(800) 825-6758
www.harriscomm.com

COMMON TERMINOLOGY

AUDITORY BRAINSTEM RESPONSE (ABR):	A non-invasive test that measures auditory responses at the level of the brainstem in response to auditory stimuli. This test can indicate whether or not sound is being detected, even in an infant. This test may also be referred to as BAER or BSER. AABR refers to automated ABR screening devices.
ACOUSTICS:	Pertaining to sound, the sense of hearing, or the science of sound. Often used to refer to the quality of the sound environment.
ACQUIRED HEARING LOSS:	A hearing loss that is not present at birth. Sometimes referred to as adventitious loss.
ADVOCACY:	This term refers to the role parents or guardians play in monitoring their child's development. Advocating for your child means a) that rights are assured you by the law and b) actively participating in the decision-making process to ensure that the services are delivered in line with your goals for your child's development.
AMPLIFICATION:	The use of hearing aids and other electronic devices to increase the loudness of a sound so that it may be more easily received.
ASSISTIVE LISTENING DEVICES (ALD):	Assistive listening devices are amplification systems designed specifically to help people hear better in a variety of difficult listening situations.
ASSISTIVE TECHNOLOGY:	Devices and systems (e.g., TTY's, visual alert systems) which improve communication and enhance the listening environment.
AUDIOGRAM:	A graph on which a person's ability to hear different pitches (frequencies) at different volumes (intensities) of sound is recorded.
AUDIOLOGIC ASSESSMENT:	A comprehensive evaluation of hearing which identifies the type and degree of hearing loss.
AUDIOLOGIST:	A person who holds a degree and license in audiology and is a specialist in testing hearing.
AUDITORY TRAINING:	The process of teaching a child in the use of residual hearing for awareness, identification, and interpretation of sound.
AURAL HABILITATION: (auditory training)	Numerous teaching methods designed specifically for improving a child's auditory speech perception performance. Methods include auditory experiences of spoken language that are meaningful and appropriate to the child's age and interests.

BABY SIGN:	Young children who are hearing do not say all their words correctly; they use a baby talk (ootie means cookie). Young children who are using sign language do not make the signs correctly; they use baby signs (one finger on chin instead of five fingers for the sign “mother”).
BILINGUAL/BICULTURAL (BIBI):	Being fluent in two languages and participating in two cultures. For example, hearing (spoken English language) and the Deaf culture (sign language).
BILATERAL HEARING LOSS:	Hearing loss in both ears.
BINAURAL AMPLIFICATION:	Hearing aids worn on both ears.
BODY AID:	An amplification unit that is worn on the body. Primarily used only in special situations where behind-the-ear hearing aids cannot be used.
BONE CONDUCTION:	Sound received through the bones of the skull.
CHRONOLOGICAL AGE ADJUSTED AGE:	Chronological is how old the infant or child is based on his/her date of birth. It is referred to when comparing him or her to other children born at that same time. If a baby was born prematurely, however, his/her development may be measured at his/her adjusted age. Adjusted age takes into account the time between premature birth and the actual due date of a full term pregnancy. Doing this gives a more accurate reflection of what the baby’s developmental progress should be.
CLOSED CAPTION:	TV or movie text presented on the screen.
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.
COGNITIVE:	Refers to the ability to think, learn, and remember.
CONDUCTIVE HEARING LOSS:	Hearing loss due to failure of sound waves to reach the inner ear through the normal air conduction channels of the outer and middle ear.
CONGENITAL HEARING LOSS:	Hearing loss present at birth or associated with the birth process, or which develops in the first few days of life.
DEAF:	A hearing loss that is so severe that the child is unable to process linguistic information through hearing alone. (Also see Deaf Culture).

DEAF COMMUNITY:	A group of people who share common interests and a common heritage. Their mode of communication is American Sign Language (ASL). The Deaf community is comprised of individuals, both deaf and hearing, who respond with varying intensity to particular community goals which derive from Deaf cultural influences. The Deaf community in the United States may have a wide range of perspectives on issues, but emphasis remains on Deafness as a positive state of being.
DEAF CULTURE:	A view of life manifested by the mores, beliefs, artistic expression, understandings and language (ASL) particular to Deaf people. A capital "D" is often used in the word Deaf when it refers to community or cultural aspects of Deafness.
DEAFBLINDNESS:	Developmentally significant combined loss of vision and hearing.
DECIBEL (dB):	The unit of measurement for the loudness of a sound; the higher the number of the dB, the louder the sound.
EARMOLD:	A custom-made piece which fits into the outer ear and connects to a hearing aid.
ELIGIBILITY:	A child must be determined eligible for early intervention or special education services based on specific disabilities and/or developmental delay (see Part B & Part C). Children with hearing loss are eligible for early intervention services.
ENT:	A medical doctor who specializes in the ears, nose, and throat (ENT); sometimes referred to as an otolaryngologist or otologist.
FINGERSPELLING:	Fingerspelling is a standardized series of handshapes to form letters.
FM SYSTEM:	An assistive listening device that amplifies the speaker's voice transmitted via radio waves. The device reduces the problem of background noise interference and the problem of distance between speaker and deaf and hard of hearing (D/HH) listener.
FREQUENCY:	The number of vibrations per second of a sound. Frequency, expressed in Hertz (Hz), determines the pitch of the sound.
GAIN:	The amount of amplification provided. For example, a child with unaided hearing at 70 dB who, when amplified hears at 30 dB, is experiencing a gain of 40 dB.
GENETIC COUNSELING:	Counseling for individuals with birth defect/genetic disorders which may involve hearing loss. Genetic counseling includes recurrence risk information for individuals with hearing loss and their families.
HARD OF HEARING:	A hearing loss, whether permanent or fluctuating, which adversely affects an individual's ability to detect and decipher some sounds.

HEARING AGE/AIDED AGE:	Age is measured from the time the child begins wearing hearing aids or a cochlear implant consistently.												
HEARING SCREENING:	Testing of the ability to hear selected frequencies at intensities above normal hearing. The purpose is to identify individuals with potential hearing loss, with minimal time expenditure, and to refer them for further testing.												
HEARING LOSS:	The following hearing levels are typically characterized as follows: <table border="0" style="margin-left: 40px;"> <tr> <td>Normal/Hearing</td> <td>0 dB to 20 dB</td> </tr> <tr> <td>Mild Loss</td> <td>21 dB to 40 dB</td> </tr> <tr> <td>Moderate</td> <td>41 dB to 55 dB</td> </tr> <tr> <td>Moderate/Severe</td> <td>56 dB to 70 dB</td> </tr> <tr> <td>Severe Loss</td> <td>71 dB to 90 dB</td> </tr> <tr> <td>Profound</td> <td>91 dB or more</td> </tr> </table>	Normal/Hearing	0 dB to 20 dB	Mild Loss	21 dB to 40 dB	Moderate	41 dB to 55 dB	Moderate/Severe	56 dB to 70 dB	Severe Loss	71 dB to 90 dB	Profound	91 dB or more
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Profound	91 dB or more												
HEARING IMPAIRED (HI):	A term sometimes used to describe any degree of hearing loss.												
HEARING AID:	An electronic device that conducts and amplifies sound to the ear.												
HUGGIES:	The brand name of a plastic-ringed device designed to “hug” the hearing aid to the ear. Popular for infants and toddlers whose ears may be too small to hold the hearing aid snugly in place.												
I.D.E.A.:	The Individuals with Disabilities Education Act, Public Law 105-17; formerly known as PL 94-142 and PL 99-457.												
INDIVIDUALIZED FAMILY SERVICE PLAN (IFSP):	The IFSP is a written plan developed by parents or guardians with input from a multidisciplinary team to meet the individualized needs of the child (birth through 2) with developmental delays/disabilities and the child’s family.												
INDIVIDUALIZED EDUCATION PROGRAM (IEP):	The IEP is a written plan developed by an educational team with the parents to meet the educational needs of the child (ages 3-21).												
INFANT-TODDLER SERVICES:	A statewide community-based program which identifies infants and toddlers who have a developmental delay or disability, or who have conditions which lead to a developmental delay or disability, and which provides early intervention services to meet the individualized needs of those children and their families. Infant-Toddler Services provides service coordination, screening, evaluation, assessment, and intervention.												
INTENSITY:	The loudness of a sound, measured in decibels (dB).												
INTERPRETER:	A person who facilitates communication between persons who are hearing and those who are deaf or hard of hearing.												
INTONATION:	The aspect of speech made up of changes in stress and pitch in the voice.												

LEAST RESTRICTIVE ENVIRONMENT:	A basic principle of Public Law 105-17 (IDEA), which 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. All services and educational placements must be individually determined (pertains to children ages 3 to 21) in light of each child's unique abilities and needs.
MONAURAL AMPLIFICATION:	The use of one hearing aid.
MULTIDISCIPLINARY EVALUATION:	The child's development is evaluated by two or more qualified professionals to determine if there are any delays or conditions that would indicate the need for early intervention or special education services.
NATURAL ENVIRONMENT:	Defined by the Individuals with Disabilities Education Act (IDEA) as: "Settings that are natural or normal for the child's age peers who have no disabilities. To the maximum extent appropriate to the needs of the child, early intervention services must be provided in natural environments, including the home and community settings in which children without disabilities participate."
ORAL:	A term that is used when referring to individuals with a hearing loss who talk but do not necessarily use sign language. Emphasis is placed on use of residual hearing, lipreading, and contextual cues to communicate using spoken language.
OTITIS MEDIA:	Fluid that is present in the middle ear, with or without infection, may cause temporary hearing loss. Children with recurring episodes may experience fluctuating hearing loss and may be at risk for speech-language delays.
OTOACOUSTIC EMISSIONS (OAE):	An audiological test that verifies cochlear activity, often is used in screening for hearing loss and in evaluating infants suspected of hearing loss.
OTOLOGIST:	A physician who specializes in medical problems of the ear.
PART B:	The section of Public Law 105-17 (IDEA) that refers to special education services available to eligible children aged three through twenty-one in the public schools.
PART C:	The section of Public Law 102-119 (IDEA) that refers to early intervention services available to eligible children from birth through two years of age and their families.
PHONEMES:	Individual speech sounds.

PLAY AUDIOMETRY:	The audiologist tests hearing using play and a conditioned response. For example, when the child is presented with a sound, he or she is to drop a block into a container, indicating that the sound was heard. Sometimes referred to as conditioned play audiometry (CPA).
POSTLINGUAL HEARING LOSS:	Hearing loss which occurs following the acquisition of speech and language.
PRAGMATICS:	The social use of pre-symbolic (crying, pointing) and symbolic language (speech, sign) to comment, request, deny, question, etc.
PRELINGUAL HEARING LOSS:	Hearing loss which is present at birth or occurred prior to the development of speech and language.
PRESYMBOLIC COMMUNICATION:	Behaviors (eye contact, touching, crying, gesturing) a child uses to communicate wants and needs before symbols (speech/sign) are used.
REAL-EAR MEASUREMENT:	An audiological test that measures the actual output of the hearing aid in the ear canal. It assesses how effectively sound is actually being amplified by the hearing aids in the ear.
RELAY SERVICES:	Relay Service/Relay Network – A service which involves an operator “relaying” conversation between a TTY/TDD user (generally a person with a hearing loss and/or speech disorder) and a hearing/speaking individual using an ordinary, non-adapted phone.
RESIDUAL HEARING:	Auditory abilities of an individual with a hearing loss (i.e., the amount of usable hearing).
SEMANTICS:	The use of language in meaningful referents, both in word and sentence structures.
SENSORINEURAL:	A type of hearing loss caused by damage that occurs to the inner ear (cochlea) and/or the nerve of hearing. Sensorineural damage is usually irreversible.
SIGN BABBLING:	Infants who are hearing put sounds together (babble) before they talk. Infants who are exposed to sign language put handshapes together (sign babble) before they sign.
SIGNESE:	Families who are hearing talk to their infants in a special way called motherese or parentese. Families who are deaf sign to their infants in a special way called signese.
SPEECH AWARENESS THRESHOLD (SAT):	This is the faintest level at which an individual detects speech 50% of the time.
SPEECH BANANA (SPEECH ZONE):	The area on an audiogram where most conversational sounds of spoken language occur. It is called the “speech banana” because of the shape.

SPEECH-LANGUAGE PATHOLOGIST:	A professional who works with individuals who have specific needs in the areas of speech and language.
SPEECH RECEPTION THRESHOLD (SRT):	This is the faintest level at which an individual identifies 50% of the simple spoken words presented.
SPEECH INTELLIGIBILITY:	The ability to be understood when using speech.
SPEECHREADING (LIPREADING):	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.
SUPRASEGMENTALS:	Parts of speech that include breath control, loudness, pitch, and duration. There are corresponding parts in sign production.
SYNTAX:	The way in which words are put together to form sentences, clauses, and phrases.
TACTILE AIDS:	A type of assistive communication device that emits a vibration or “tactile” signal to indicate the presence of sound(s). It is worn on the body and triggers the sense of touch or feeling to draw attention to information that cannot be heard by the individual with hearing loss.
TELECOMMUNICATION DEVICES: (TTY/TDD)	Originally and often still called TTY’s, these electronic devices allow the deaf and hard of hearing to communicate via a text telephone system. This term appears in ADA regulations and legislation.
TYMPANOGRAM:	A “pressure” or “impedance” test that tells how the ear canal, eardrum, Eustachian tube, and middle ear bones are working. It is not a hearing test.
UNILATERAL HEARING LOSS:	A hearing loss in one ear.
VISUAL REINFORCEMENT AUDIOMETRY (VRA):	A method of assessment in which the child is conditioned to look at a toy that lights each time he or she hears a sound.