HEARING

Designated Service Coordinator Training

Supporting Families who have children who are deaf, hard of hearing, visually impaired, blind or deaf-blind


JCIH
JOINT COMMITTEE
on INFANT HEARING
A background on JCIH
Joint Committee on Infant Hearing

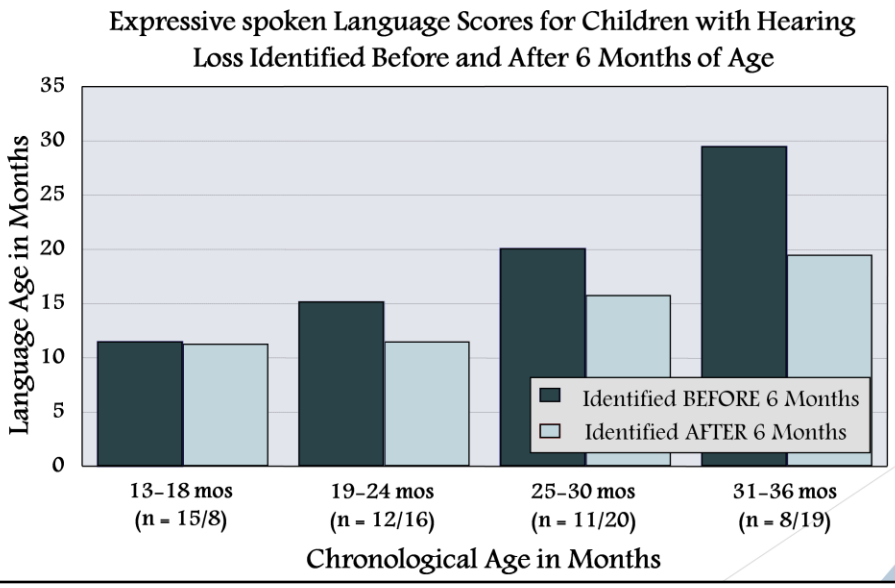
JCIH Position Statement: The Joint Committee on Infant Hearing (JCIH) endorses early detection of and intervention for infants with hearing loss. The goal of early hearing detection and intervention (EHDI) is to maximize linguistic competence and literacy development for children who are deaf or hard of hearing. Without appropriate opportunities to learn language, these children will fall behind their hearing peers in communication, cognition, reading, and social-emotional development. Such delays may result in lower educational and employment levels in adulthood.[1] To maximize the outcome for infants who are deaf or hard of hearing, the hearing of all infants should be screened at no later than 1 month of age. Those who do not pass screening should have a comprehensive audiological evaluation at no later than 3 months of age. Infants with confirmed hearing loss should receive appropriate intervention at no later than 6 months of age from health care and education professionals with expertise in hearing loss and deafness in infants and young children. Regardless of previous hearing-screening outcomes, all infants with or without risk factors should receive ongoing surveillance of communicative development beginning at 2 months of age during well-child visits in the medical home.[2] EHDI systems should guarantee seamless transitions for infants and their families through this process.

This is why it is critical that we screen and rescreen and stay on top of what children hear. Based on the research of Christine Yoshinaga Itano from Colorado it has been identified that there is a brief six month window where we have optimum opportunity to begin the acquisition of language and have appropriate supports in place. If a child does not have access to a complete language by 6 months age, there will be language delays

. In order to prevent this delay we must identify, amplify, and begin to educate and support children and their families by 6 months of age.

This information was used to assist in formulating the Joint Commission on Infant Hearing recommendation in 2007. This recommended the of screening and infant's hearing by 1 month, identifying the hearing loss by 3 months and beginning remediation by 6 months. This includes fitting of hearing aids and hopefully providing early intervention services.

Expressive Language Scores for Children who are deaf and hard of hearing:



When the researchers compared the expressive spoken language attained by deaf and hard of hearing infants identified and provided intervention BEFORE 6 months of age versus those deaf and hard of hearing children who were identified and provided intervention AFTER 6 months of age, the gap becomes apparent as the two groups of children grow.

As the children developed, early identified children continued to make great strides language over their later identified deaf and hard of hearing peers. What is also exciting about the results illustrated here, is that the infants who received early diagnosis of their hearing loss and early intervention gained a language age in months that fell very close to age appropriate language for children who have normal hearing.

This research talks about spoken language but there are different modes of communication such as American Sign Language, Sign Exact English, Cued speech. It is the parent choice which mode of communication is used and therapists proficient in the area should be provided.

ANDREA I DIDN'T SEE ANY INFO ON TINA'S WEBSITE REGARDING THIS AND I DON'T HAVE DR. YOUNGS BOOK SO I AM NOT SURE WHAT THE UPDATE INFO IS. I AM NOT SURE THIS INFO HAS CHANGED.
I WILL LET YOU WORK "CONTROVERSIAL PART" AS I AM SURE YOU CAN DO IT BETTER THAN I

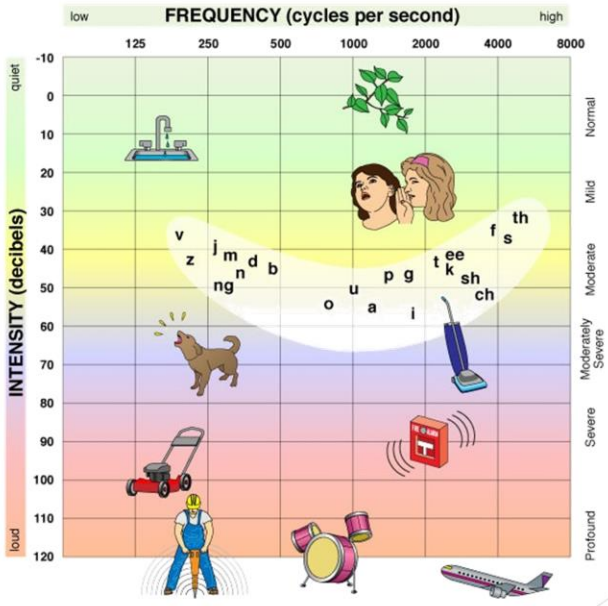
Recommendations by JCIH:

- Timely referral to EI
- Timely start of services by knowledgeable providers who have knowledge and skill in deafness,
- Infusion within the system of partnerships with parents as well as professionals who are D/HH,
- Longitudinal developmental assessments for monitoring the child's development,

Later recommendations were made by JCIH which I know you are familiar with.

- Data management systems that include developmental outcomes
- A process to monitor the fidelity of the intervention
- Appropriate services for children with additional disabilities, those from non-English speaking families, and those from special populations, including unilateral hearing loss and auditory neuropathy/ dysynchrony.

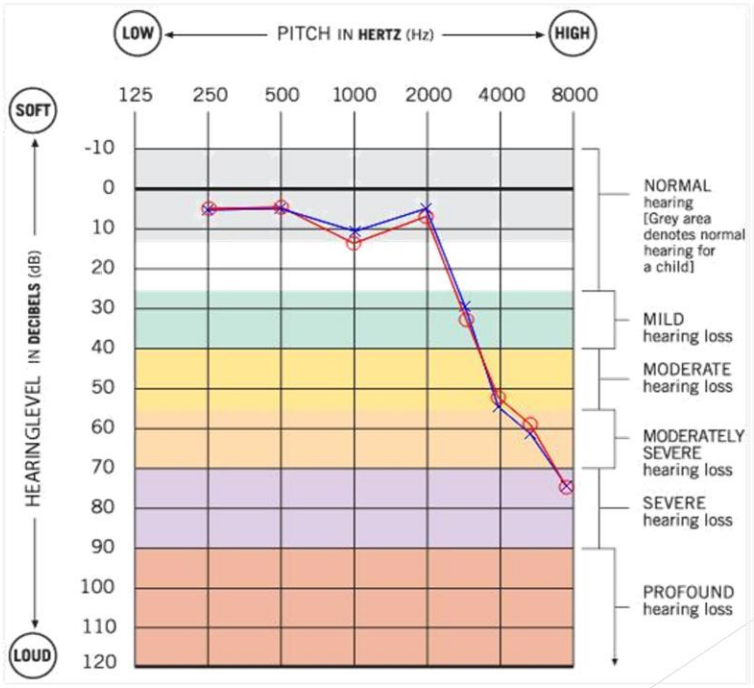
Degrees of Hearing Loss



As we saw in the video earlier sound has two characteristics: pitch measured by frequency and volume measured in decibels. When we test hearing it is tested by frequency and decibel. We find the lowest level a child can hear at each pitch. This is called a hearing threshold.

Hearing thresholds are then marked on a chart, called an audiogram. The audiogram is a visual representation of hearing. Here you can see what is called an Audiogram of familiar sounds. Many pediatric audiologists use these to try and explain to parents what their child can and cannot hear. It shows the location of common sounds as well as speech sounds.

We use terms like mild or profound to describe the amount or degree of loss. Hearing loss is identified by degrees:
Minimal
Mild
Moderate
Severe
Profound



Remember when testing hearing we look for the lowest level the child can hear at each frequency, called the threshold.
This threshold is mapped onto the audiogram using symbols. Red circles for the right ear and blue x's for the left ear.
The higher the thresholds are on the audiogram the better the hearing and anything below the mark cannot be heard.

From Screening to Diagnostic Testing:

- Every baby is screened in the hospital by a person specially trained to do so. Sometimes this may be nurse but often is a screener.
- If the baby does not pass in both ears they will be screened again before discharge.
- If they do not pass again they will return one more time for screening usually a couple of weeks later.
- If they do not pass they are referred for diagnostic Audiological testing.

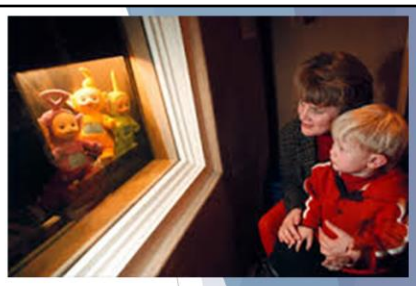
In 1993 Newborn hearing screening legislation passed in Illinois and now every baby is supposed to be screened prior to leaving the hospital. This screening can be performed using Automated systems such as automated Auditory Response testing or Automated Oto-acoustic emissions.

Many hospitals now hire screening services who test the babies such as Pediatrix and Natus. These screeners a specifically trained to do the testing, talk to parents and follow up to provide referral sources and rescreening.

If the baby does not pass in both ears, they will be retested again before discharge and if they do not pass again the parents should return within 2 weeks for a final screening….so 3 total.

If they do not pass the third time, screening is over and the family is referred to a pediatric audiologist for a full diagnostic evaluation.

Diagnostic Audiological Evaluation:



- Performed by a pediatric Audiologist with the skill set to perform the testing.
- Should involve evaluation of the whole hearing system (outer ear to top of the brainstem)
- Hearing thresholds in infants is assessed using Auditory Brainstem Response Testing (ABR).
- Older babies (6months +) are assessed using behavioral measures.

When the baby does not pass on the third screening they are referred to a pediatric audiologist who has the skill set to perform the evaluation.

They will examine the outer ear, canals and eardrum visually. Check for middle ear fluid, see if s special reflex is present in the ear, check for the presence or absence of Otoacoustic Emissions.

Lastly they will perform a diagnostic Auditory Brainstem Response test or ABR test. This allows the audiologist to see if the type and amount of hearing loss if present.

Children older than 6 months can be assessed with ABR but usually they are sedated. So the preferred method is to evaluate them using behavioral methods such as Visually Reinforced Audiometry where the children are rewarded for looking towards the sound with a lighted toy or video.

The ENT only looks in the ears and gives medical clearance for fitting of devices. The ENT does not determine nor approve the type of earmolds, hearing aids or batteries fit. This is done by the Audiologist in the letter of necessity.

Who's Who in the Field?

- Audiologist
- Otologist, Otolaryngologist, Otorhynolaryngologist–ENT
- Developmental Therapist/Hearing
- Teacher of the Deaf and Hard of Hearing Speech Language Pathologist
- Auditory Verbal Therapist
- Language Mentor for the Deaf (Deaf Mentor)
- ETC…

When a child is diagnosed with HL it means the door will be opened to many professionals.
Of course the audiologist is necessary to monitor hearing, fit devices and ensure the child has access to all soft speech sounds. Or perhaps they will refer for cochlear implantation if the child's' audiological needs are not met with hearing aids.

The child must be seen by an Otolaryngologist or ENT for short. They may give medical clearance for HA's and may investigate the nature or etiology of the hearing loss. It is important to investigate why the child has HL as often HL can come along with other syndromes or disorders. This is called concomitance.

The child should be referred for evaluation by a DTH or DTV to monitor and help enhance the child's' developmental skills

When a child reaches the preschool age they will be transitioned to a TOD perhaps at a therapeutic day school such as CV, or in a school district DHH program or sometimes with a Hearing Itinerant that provided services in the classroom.

A speech pathologist, preferably one that has training in working with children with HL can provided services and testing in the home.

An AVT maybe requested by those parents who wish their child to use a listening and

spoken language approach and they focus on enhancing those skills.

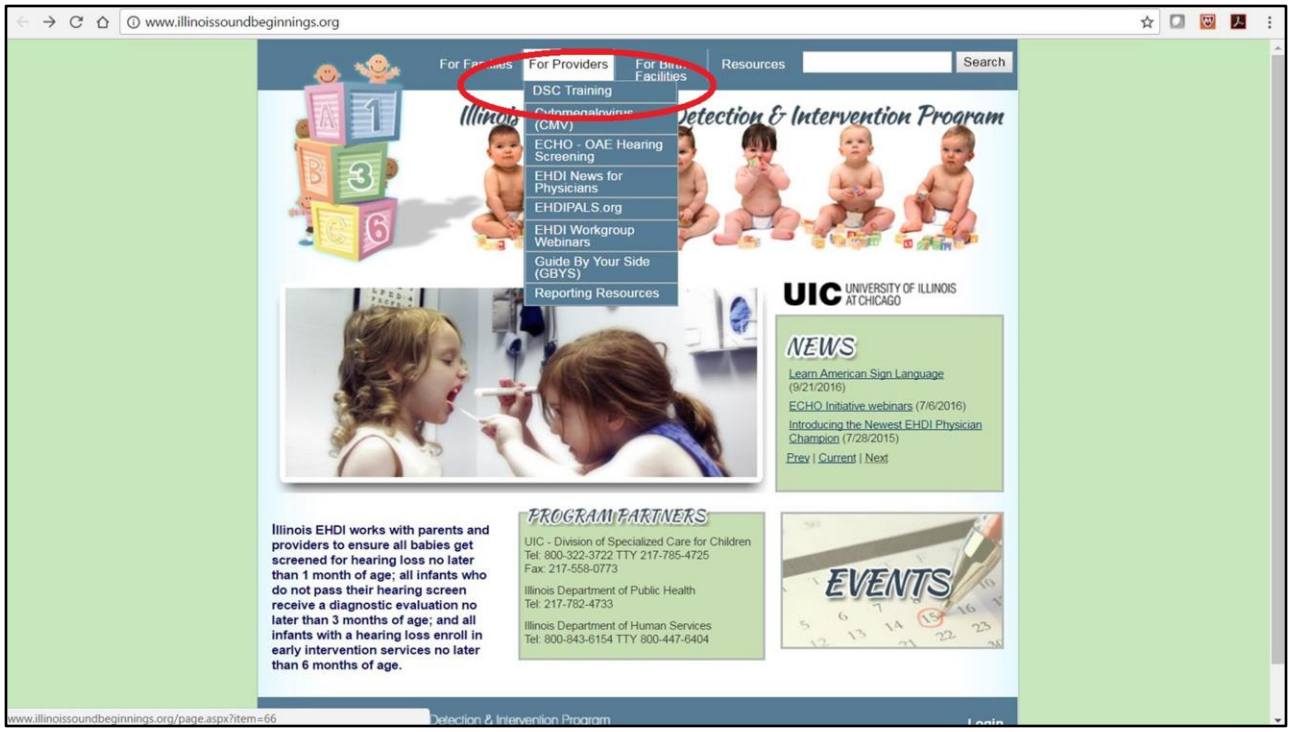
A language mentor for the deaf or a deaf mentor may provide parents and the child will guidance from their perspective growing up deaf.

- Support Contact:
  - Andrea Marwah
  - 708-409-8800
  - Andrea.marwah@illinois.gov
  - www.soundbeginnings.com

Website Link

This is where all your training materials will be housed.

http://www.illinoissoundbeginnings.org/


www.illinoissoundbeginnings.org
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NEWS
Learn American Sign Language (9/21/2016)
ECHO Initiative webinars (7/6/2016)
Introducing the Newest EHDI Physician Champion (7/28/2015)
Prev | Current | Next
Illinois EHDI works with parents and providers to ensure all babies get screened for hearing loss no later than 1 month of age; all infants who do not pass their hearing screen receive a diagnostic evaluation no later than 3 months of age; and all infants with a hearing loss enroll in early intervention services no later than 6 months of age.
PROGRAM PARTNERS
UIC - Division of Specialized Care for Children
Tel: 800-322-3722 TTY 217-785-4725
Fax: 217-558-0773
Illinois Department of Public Health
Tel: 217-782-4733
Illinois Department of Human Services
Tel: 800-843-6154 TTY 800-447-6404
EVENTS
www.illinoissoundbeginnings.org/page.aspx?item=66
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