

Illinois Infant Hearing Loss

Infant hearing loss

About 500 babies who are deaf or hard of hearing are born in Illinois each year. Approximately 1/1000 babies is born deaf and 3 to 4/1000 babies are born with a mild to moderate hearing loss. Ninety percent of babies who are deaf or hard of hearing are born to hearing parents who have no experience with hearing loss.

Identifying hearing loss in newborns

Newborn infant hearing screening was mandated December 31, 2002. Now 100% of Illinois birthing hospitals consistently screen over 99% of all infants born in the facilities. Hospitals use one of two objective, physiologic methods to screen for hearing loss: Otoacoustic Emissions (OAE) and Automated Auditory Brainstem Response (AABR). Factors such as a screener's training, noise in the room, a quiet baby, clean ear canals, and appropriate probe fit can impact results. The American Academy of Pediatrics recommends a refer rate of 4 percent or less which hospitals, overall, are achieving.

REFER results

A REFER result indicates that an infant did not pass the hearing screen in one or both ears. Newborns who refer on the hearing screening have a 1/10 to 1/20 chance of having a hearing loss, depending upon the type of technology used to test them.

PASS results

A PASS result means an infant passed the hearing screen in both ears. However, because the sensitivity of OAE and AABR is not 100 percent accurate, some children with hearing loss may be undetected by both methodologies. If a child who passes the hearing screen has hearing loss risk factors, providers should monitor the child.

Causes of infant hearing loss

The etiology of hearing loss is heterogeneous. Of all pre-lingually deaf children, 50 percent of cases are genetic in origin, 25 percent are non-genetic, and 25 percent are idiopathic.

- *Genetic forms of deafness* may include other clinical features (30 percent of cases) or hearing loss may be the only isolated finding (70 percent of cases). More than 400 syndromes have been associated with hearing loss, which imply additional health concerns for the affected child. Most isolated, non-syndromic deafness is autosomal recessive in inheritance (hence, there is not a family history of deafness in the majority of these cases).
- *Non-genetic causes of deafness* can result from pre or post-natal infection (i.e. cytomegalic virus, bacterial meningitis etc.), ototoxic medications, and severe hyperbilirubinemia. Other non-genetic risk factors include hypoxia, very low birth weight, assisted ventilation, and low Apgar scores.

Provider responsibilities

- Be familiar with your hospital protocol.
- Re-screen babies with a REFER result by **1 month of age**. If the second screen is also a REFER, then refer for audiologic assessment by **3 months of age**.
- Assure referral to early intervention services.
1-800-323-GROW
- Refer the child and parents to the University of Chicago Division of Specialized Care for Children for assistance with: locating an audiologist, funding options and care coordination. **1-800-322-3722**
- Refer the child for genetics, ENT, and ophthalmology evaluations as appropriate.

Managing infant hearing loss

- Learn who to refer to for information about hearing aids or cochlear implantation. Understand the importance of early intervention and the screening by **1 month**, diagnostic testing by **3 months** and intervention by **6 months** (1-3-6 model).
- Monitor child development: social, emotional and academic.
- Monitor parental coping strategies and provide support resources.
- Schedule regular appointments with primary care provider (medical home concept).

More information

American Academy of Pediatrics – www.aap.org
Illinois Chapter of American Academy of Pediatrics –
www.illinoisAAP.org
Division of Specialized Care for Children –
www.uic.edu/hsc/dscc/index.htm
Illinois Early Intervention –
www.state.il.us/agency/dhs/earlyint/earlyint.html

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For UNHS Program Information and Resources Contact:

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About 500, or one in every 370 babies in Illinois, is born hard of hearing or deaf each year. Most babies who are born with a hearing loss have parents who have normal hearing and have had no experience with hearing loss.

Identifying hearing loss early is essential for a child's development. About 33 percent of children with a hearing loss have a second disability. Parents who have an infant who is hard of hearing or deaf may need help to find resources and connect their family to services.

Detecting hearing loss in infants

Hearing loss in babies may be found through infant hearing screenings done in the hospital shortly after birth. If a baby does not pass the hearing screening, another screening should be done as soon as possible and before one month of age. If the baby does not pass the second time, the baby should see a hearing specialist, called an Audiologist. An audiologist can help determine the baby's level of hearing. If there is a hearing loss, the audiologist can assist with determining the type of loss, how much of a loss, and intervention options for the family.

Causes of infant hearing loss

There are many things that cause hearing loss in a baby. Doctors may suggest special tests and evaluations to help figure out why a newborn is hard of hearing or deaf.

- Hearing loss can be inherited (passed through a family). About 50 percent of the infants with a hearing loss inherited it from their families. Hearing loss can be genetic even if there are no other family members who were born hard of hearing or deaf.
- Hearing loss can be caused by certain infections, medications, or problems with birth and delivery.
- In many cases, the cause of the hearing loss may not be known.

Problems for infants and children

- A child with a hearing loss is likely to miss important learning experiences.
- A child who is hard of hearing or deaf is likely to have difficulty with speech and language.
- A child is likely to have social, educational, or emotional problems if help for the hearing loss is delayed.

Special needs

Fortunately, there is help for infants and children with hearing loss. Every child is special. By working together, parents along with doctors, audiologists and special educators can find the best solutions for infants with special needs and their families. When hearing loss is treated early, by 3 to 6 months of age, children who are hard of hearing or deaf can develop age appropriate language skills.

The families of any child who is diagnosed with a hearing loss are encouraged to contact the following for further testing and support:

- Primary care physician who will provide a Medical Home for the child.
- An audiologist who can provide assistance with re-testing the child's hearing, fitting and monitoring hearing aids or cochlear implants and providing appropriate referrals.
- Child and Family Connections who can provide EI services.
- Division of Specialized Care for Children who can provide financial assistance for eligible families and care coordination for any family of a child with a hearing loss.
- Pediatric eye care specialist who can monitor the child's vision due to the increased incidence of visual problems in children with a hearing loss.
- Hearing and Vision Connections who can guide and assist families.
- Speech-language pathologist who can provide assessment and therapy.

More information

American Academy of Pediatrics – www.aap.org

Illinois Chapter of American Academy of Pediatrics – www.illinoisAAP.org

Division of Specialized Care for Children – 1-800-322-3722
www.uic.edu/hsc/dscc/index.htm

Illinois Early Intervention – 1-800-323-GROW
www.state.il.us/agency/dhs/earlyint/earlyint.html

Hearing and Vision Connections – 1-877-731-8184
<http://morgan.k12.il.us/isd/hvc/>

Illinois Deaf and Hard of Hearing Commission –
1-877-455-3323 www.idhhc.state.il.us

Contacts:

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