

Hearing Screening at Birth

Birthing facilities in Nebraska have five primary activities related to screening the hearing newborns:

1. The parent(s) of newborns are educated about the hearing screening, the likelihood of hearing loss in newborns, the importance of follow-up, community resources (including early intervention services), and normal auditory, speech, and language developments (Neb. Rev. Stat. §71-4740). If risk factors are present, hospital personnel educate parents to evaluate hearing every six months. Note: The Nebraska Department of Health and Human Services is responsible for educating the parent(s) for newborns not born in a birthing facility (Neb. Rev. Stat. §71-4740).
2. A hearing screening test is part of each birthing facility's standard of care for newborns, effective 12/1/2003 (Neb. Rev. Stat. §71-4742). Following hospital protocol for the procedure, each newborn's hearing in each ear is screened during birth admission using OAE and/or ABR screening techniques.
3. A mechanism for compliance review is established for each birthing facility (Neb. Rev. Stat. §71-4742).
4. Results of the hearing screening for each newborn are reported electronically to the NE-EHDI Program and should be reported to the newborn's Primary Care Provider (PCP).
5. Annual reports are calculated, based on the electronic reports for each occurrent birth, that indicate the numbers of babies born in the birthing facility, recommended for screening, received screening during birth admission, passed screening, did not pass screening, and recommended for monitoring and follow-up (Neb. Rev. Stat. §71-4739).

Confirmatory Testing (Audiology Evaluation)

Newborns who have referred for one or both ears on the inpatient hearing screening should receive an outpatient screening or an audiological diagnostic evaluation to confirm the presence of a hearing loss and to determine the type and degree of the hearing loss. The primary recommended activities that comprise the confirmatory testing component are:

1. An outpatient screening may be conducted within one to three weeks if the baby "refers" on the inpatient first screening. The outpatient screening for those that "refer" during birth admission may occur at the birthing facilities or at a confirmatory testing facility.
2. If the infant "refers" on the outpatient screening, the testing should proceed immediately to a comprehensive diagnostic evaluation. This evaluation minimally includes measures of middle ear functions (high frequency tympanometry), auditory sensitivity (air- and bone-conducted ABR, confirmatory measures (parent observation) and, depending upon the developmental age, behavioral audiological assessment (Visual Reinforcement Audiometry). Other measures may be included as indicated.
3. Depending upon a variety of factors, referrals are made for further evaluation, diagnosis, treatment, and services. These referrals may be made to medical specialists and/or early intervention services.
4. Results of the initial and comprehensive audiological diagnostic evaluation are provided to the Primary Care Physician and the NE-EHDI Program.

5. Annual reports are submitted to the NE-EHDI Program that indicate the number of newborns who return for follow-up testing, the number who do not have a hearing loss, and the number who do have a hearing loss (Neb. Rev. Stat. §71-4739).

Medical Evaluation

The infant's Primary Care Physician (PCP) has the key role in the follow-up for those who "refer" on the initial hearing screening during the birth admission. Building on the concept of a Medical Home (Guidelines for Pediatric Medical Home Providers, American Academy of Pediatrics (<http://www.aap.org>), the PCP has the primary role in identifying and accessing the medical and non-medical services needed to help children and their families achieve their maximum potential. The primary activities that comprise the medical element of the newborn hearing screening system are:

1. Birthing hospital notifies PCP of the newborn's hearing screening results.
2. PCP or designee per hospital procedure informs parents of hearing screening results and need for re-screening or audiologic evaluation.
3. NE-EHDI Program notifies PCP about the hearing screening status and need for follow-up evaluation or outpatient screening.
4. PCP (or PCP staff), hospital, or test provider schedules an appointment for an outpatient screening to be completed in one to three weeks and notifies the parents.
5. Provider of outpatient screening notifies PCP and the NE-EHDI Program of results if the NE-EHDI Program requests results.
6. PCP notifies NE-EHDI Program of outpatient hearing screening results.
7. If "refer," PCP makes referral for comprehensive diagnostic evaluation, educates parents about need for evaluation, and makes referral to Early Intervention Services.
8. If hearing loss is confirmed, PCP or diagnostic evaluator refers newborn/infant for complete medical and/or neuro-sensory evaluation and Early Intervention Services.

Early Intervention

Early intervention is an individualized program of services and supports based on the needs of the individual and family. Part C of the Individuals with Disabilities Act (IDEA) <http://edn.ne.gov> authorizes the creation of early intervention programs for infants and toddlers with disabilities. In Nebraska, the Early Development Network [http://www.nde.state.ne.\(EDN\)provides](http://www.nde.state.ne.(EDN)provides) services coordination for eligible families to identify and link with the needed services and to work with multiple providers to ensure that services are provided. The recommended practices for the primary early intervention activities within the NE-EHDI system are:

1. Upon receiving a referral, the EDN Services Coordinator immediately contacts the appropriate school district to begin the Multi-Disciplinary Team (MDT) process.
2. The Services Coordinator contacts the parent(s)/guardians to explain the importance of having a teacher of the deaf involved early and to obtain support for an initial joint meeting with the family.

3. Upon receiving verbal permission from the parent, the Services Coordinator contacts the Regional Programs for Students Who are Deaf or Hard of Hearing. The Regional Programs coordinator contacts the school district to determine the appropriate teacher of the deaf to attend the joint meeting with the family.
4. The NE-EHDI Program is included on the Authorization of Release of Information form.
5. If the family would like support from organizations for young children with a hearing loss and their families, the following organizations may be included on the "Release of Information" form to allow the parents' contact information to be shared: Regional Programs for Students Who are Deaf or Hard of Hearing <http://nrpdhh.esu9.org/contact.html>, Answers4Families <http://www.answers4families.org/>, PTI-Nebraska www.pti-nebraska.org/, and/or Nebraska Hands and Voices www.handsandvoicesne.org.
6. A NE-EHDI Parent Resource Guide is sent to the parent(s).

Family Support

Providing support for families whose baby has been identified with a permanent hearing loss is becoming an increasingly important component of the EHDI system nationally. Family-to-family support organizations such as Hands and Voices www.handsandvoices.ne.org have chapters in Nebraska. The NE-EHDI Program, in partnership with Boys Town National Research Hospital, provides periodic weekend workshops for families with young children recently identified with a hearing loss. These "Roots and Wings" workshops provide an opportunity for parents to meet other parents, as well as gain information relevant to their child's hearing loss and development. Family support has five areas:



IFS model graphic

parent-to-parent, adults who are deaf or hard of hearing, professionals, existing communities, and information.

Tracking and Surveillance

The NE-EHDI Program is based on the requirements identified in the Infant Hearing Act (Neb. Rev. Stat. §71-4735 - §71-4744) and the NE-EHDI Program Advisory Committee's recommended protocols to "...determine and implement the most appropriate system...to track newborns and infants identified with a hearing loss" and "...to effectively plan and establish a comprehensive system of developmentally appropriate services for newborns and infants who have a potential hearing loss or who have been found to have a hearing loss and shall reduce the likelihood of associated disabling conditions" (Neb. Rev. Stat. §71-4737).

Activities of the NE-EHDI Program include:

1. Develop, implement, and monitor statewide systems to track newborns with a hearing loss or at-risk of hearing loss (Neb. Rev. Stat. §71-4737) and adopt and promulgate rules and regulations to implement the Infant Hearing Act (Neb. Rev. Stat. §71-4742 and §71-4744).
2. Gather required data and generate annual reports (Neb. Rev. Stat. §71-4743).

3. Establish guidelines for referral to early intervention services (Neb. Rev. Stat. §71-4743).
4. Educate parents with out-of-hospital births about newborn hearing screening (Neb. Rev. Stat. §71-4740).
5. Apply for all available federal funding to implement the Infant Hearing Act (Neb. Rev. Stat. §71-4738).