



Oklahoma State Department of Health
Creating a State of Health

The following recommended protocols were developed by the Oklahoma Newborn Hearing Screening Program (NHSP) in collaboration with the Oklahoma Audiology Taskforce (OKAT). These guidelines were created in accordance with recommendations made by the American Academy of Audiology (AAA) and the American Speech-Language-Hearing Association (ASHA). The protocols take into consideration other national organizations such as the Food and Drug Administration (FDA), the Center for Disease Control (CDC), Early Hearing Detection and Intervention (EHDI) Program, and the Joint Committee of Infant Hearing (JCIH). Please reference those materials for further reading.

Protocols are to be implemented by individuals licensed by the State of Oklahoma to practice audiology.

The two protocols included in this packet are as follows:

The OKLAHOMA PROTOCOL FOR INFANT AUDIOLOGIC DIAGNOSTIC ASSESSMENT was developed as a guide for professionals who serve as a referral resource for infants that do not pass newborn hearing screening. The protocol should be used to facilitate the diagnosis of hearing loss, to obtain medical clearance for amplification, and to fit amplification systems on infants with hearing loss by three months of age.

The OKLAHOMA PROTOCOL FOR PEDIATRIC AMPLIFICATION was developed to ensure that Oklahoma children will receive full-time and consistent audibility of the speech signal at safe and comfortable listening levels.

For electronic versions of the protocols or if you have additional questions or comments for the OKAT Protocols Subcommittee, please email newbornscreen@health.ok.gov

Sincerely,

Patricia Burk, M.S., CCC-SLP, LSLS Cert. AVT
Facilitator, Oklahoma Audiology Taskforce (OKAT)
Program Coordinator
Newborn Hearing Screening Program
Oklahoma State Department of Health
Patriciaab@health.ok.gov

Debbie Earley, M.S., CCC-A
Facilitator, OKAT Protocols Subcommittee
Follow-up/Audiology Coordinator
Newborn Hearing Screening Program
Oklahoma State Department of Health
DebbieE@health.ok.gov

CONTRIBUTORS

The following is a list of contributors to the OKLAHOMA PROTOCOL FOR INFANT AUDIOLOGIC DIAGNOSTIC ASSESSMENT and The OKLAHOMA PROTOCOL FOR PEDIATRIC AMPLIFICATION. Contributions consist of writing, reviewing, modifying, and approving these documents:

Christi Barbee, Au.D., CCC-A, F-AAA, Clinical Assistant Professor, Board Certified Audiologist, OUHSC College of Allied Health Department of Communication Sciences and Disorders

Brooke Bennett, Au.D., CCC-A, Audiologist, Hearts for Hearing

Patricia Burk, MS. CCC-SLP, LSLS, Cert. AVT, Program Coordinator, Newborn Hearing Screening Program, Oklahoma State Department of Health

Joan Burns, MA, CCC/A, Audiologist, The Scholl Center for Communication Disorders

Teresa H. Caraway, Ph.D., CCC-SLP, LSLS Cert. AVT, Co-Founder, Hearts for Hearing

Deborah Earley, M.S., CCC-A, Follow-up/Audiology Coordinator, Newborn Hearing Screening Program, Oklahoma State Department of Health

Allison Finch, M.S., CCC-A, Audiologist, Children's Medical Center, LINK Project OSU-Tulsa

Meredith Gatzemeyer, Au.D., CCC-A, Audiologist, The Scholl Center for Communication Disorders

Mary Hudson, Ph.D. CCC-A, Assistant Professor/AuD Program Coordinator, OUHSC College of Allied Health Department of Communication Sciences and Disorders

Heather Kasulis, Au.D., CCC-A, Audiologist, Hearts for Hearing

Beth Martin, M.S., CCC-SLP, Acting Chief, Child Guidance Service, Oklahoma State Department of Health; DSHPSHWA Representative to the Joint Committee on Infant Hearing (JCIH)

Kela Miller, Au.D., CCC-A, Audiologist, Integris Cochlear Implant Clinic

Sandra Over, Au.D., CCC-A Clinical Audiologist Manager, Integris Cochlear Implant Clinic

Sandra Parke, Au.D., Audiologist, Koweta Indian Health Facility

Jacque Scholl, Au.D., CCC/A, FAAA, Audiologist, The Scholl Center for Communication Disorders

Miranda Seal, Au.D., F-AAA, CCC-A, Manager of Audiology/ENT for Chickasaw Nation Division of Health, Chickasaw Nation, Indian Health System

Casey Smith, MPA, Quality Assurance/Data Coordinator, Newborn Hearing Screening Program, Oklahoma State Department of Health

T.Tate Bay, M.S., CCC-A, Audiologist, Allergy Ear Nose and Throat

Brandon R. Vincent, Au.D., CCC-A, F-AAA, Staff Audiologist, Speech-Language Pathology Department, University of Central Oklahoma

OKLAHOMA PROTOCOL FOR INFANT AUDIOLOGIC DIAGNOSTIC ASSESSMENT

Revised: October 2009

The following OKLAHOMA PROTOCOL FOR INFANT AUDIOLOGIC DIAGNOSTIC ASSESSMENT was developed by the Oklahoma Newborn Hearing Screening Program in collaboration with the Oklahoma Audiology Taskforce (OKAT) as a guide for professionals who serve as a referral resource for infants that do not pass newborn hearing screening. It is to be implemented by individuals licensed by the State of Oklahoma to practice audiology. The protocol should be used to facilitate the diagnosis of hearing loss, to obtain medical clearance for amplification, and to fit amplification systems on infants with hearing loss by three months of age.

For infants who did not pass the screening process, all of the following procedures should be completed within the first two months of life by an individual licensed by the State of Oklahoma to practice audiology.

I. PROFESSIONAL QUALIFICATIONS FOR PROVIDERS COMPLETING AUDIOLOGIC DIAGNOSTIC ASSESSMENT

Special Note: A licensed audiologist with experience in the pediatric population is the professional qualified to perform diagnostic audiological assessments for infants. An audiologist who does not have the expertise and/or equipment necessary to evaluate infants and young children should refer to professionals and facilities that provide pediatric diagnostic services.

II. RECOMMENDED PEDIATRIC AUDIOLOGIC DIAGNOSTIC ASSESSMENT:

Special Note: If you do not have equipment to complete all of the above procedures, please contact the Oklahoma Newborn Hearing Screening Program for referral information.

- A. Case history/parent observation report
- B. Otoscopy
- C. Perform Acoustic immittance tympanometry, physical volume and acoustic reflexes (use of a high frequency probe tone such as 1000 Hz is recommended for infants less than 6 months of age).
- D. Perform a click ABR at intensities of 80 to 90 dB nHL. Compare responses obtained to rarefaction and condensation clicks presented using a fast click rate (>30 second). In the case of auditory neuropathy, there will be an inversion of waveforms (e.g., cochlear microphonic) with either no replicable waveforms or very abnormal waveforms.
- E. Obtain a threshold response to 500 Hz, 2000 Hz, and 4000 Hz tone bursts.
- F. Obtain a bone conduction click ABR.
- G. Obtain an evoked otoacoustic emission (TEOAE and/or DPOAE) to further evaluate cochlear function. OAEs should be obtained at a minimum signal to noise ratio of 6 dB for at least 3 frequencies with good repeatability.

III. FOLLOWING ASSESSMENT:

A. Discuss the results and follow-up recommendations with the parents.

1. If hearing loss is confirmed...

- a. Dispense amplification as appropriate. If equipment for amplification is unavailable at your site, refer to a pediatric dispensing audiologist. Contact the Oklahoma Newborn Hearing Screening Program for referral information.
- b. Refer infant to an otolaryngologist for medical evaluation.
- c. Provide information regarding the importance of early intervention and referral to SoonerStart and/or other programs providing intervention services to infants and children with hearing loss.
- d. Provide other referrals that should include genetics, ophthalmology, child development, counseling, speech/language pathology, etc.
- e. Recommend parent support groups

2. If hearing is normal but child is identified as “at risk” for acquired or late onset hearing loss...

- a. Infant should receive audiologic monitoring and follow-up by age appropriate audiologic screening or test procedures at six-month intervals until age three years.
- b. For list of risk factors, please reference the Joint Committee on Infant Hearing (JCIH) 2007 Position Statement (APPENDIX A).

3. If normal hearing...

- a. Notify infant’s primary care physician (PCP)
- b. Provide information to the parents about hearing, speech and language milestones and information regarding risk indicators for progressive hearing loss. Examples of milestones may include but are not limited to the following:
 - www.babyhearing.org
 - www.asha.org
 - www.nidcd.nih.gov

B. Prepare a written report interpreting test results and describing the diagnostic profile.

C. Disseminate written report and other information to the infant’s PCP and to other healthcare providers and agencies as requested by the parents.

D. Notify the Newborn Hearing Screening Program (NHSP) as Oklahoma State law mandates reporting of all infant hearing screening and diagnostic assessments (APPENDIX B).

OKLAHOMA PROTOCOL FOR PEDIATRIC AMPLIFICATION

Revised: September 2010

The following recommended protocols were developed by the Oklahoma Newborn Hearing Screening Program in collaboration with the Oklahoma Audiology Taskforce (OKAT) to ensure that Oklahoma children will receive full-time and consistent audibility of the speech signal at safe and comfortable listening levels. These guidelines were created in accordance with recommendations made by the American Academy of Audiology (AAA) and the American Speech-Language-Hearing Association (ASHA). Please reference those materials for further reading.

I. PROFESSIONAL QUALIFICATIONS FOR PROVIDERS FITTING PEDIATRIC AMPLIFICATION

Special Note: A licensed audiologist is the professional qualified to select and fit amplification devices for children, including personal amplification systems, cochlear implants, frequency modulation (FM) systems, and other hearing assistance technologies (HATs). An audiologist who does not have the expertise and/or equipment necessary to evaluate infants and young children should refer to professionals and facilities that provide pediatric hearing aid services.

- A. The audiologist should have experience with the assessment and management of infants and children with hearing loss and the knowledge and test equipment necessary for use with current pediatric hearing assessment methods and hearing aid selection, verification, and validation procedures.
- B. The audiologist should complete the procedures as described in the Oklahoma Protocol for Infant Audiologic Diagnostic Assessment. For a copy of the protocols, contact the Oklahoma Newborn Hearing Screening Program.
- C. The audiologist should respect individual family choices and provide unbiased information regarding communication options.
- D. The audiologist should provide guidance, education, and training for families to help their child reach their full auditory potential.

II. CRITERIA FOR PERSONAL AMPLIFICATION

A. **Special Note:** The decision for amplification should be based on many factors: the child's audiological data, speech and language development, home-based/center-based/natural environments, family preferences and the existence of other medical conditions or special needs. For families electing amplification, the audiologist should provide infants and children diagnosed with permanent hearing loss with an amplification device **within one month of diagnosis**. Hearing aid features and prescriptive settings can and should be modified as information about the infant's hearing levels or status is regularly updated.

- A. Considerations for Amplification
 - 1. If the child has a permanent, bilateral hearing loss, with thresholds of 20dBHL or greater in any frequency considered critical for speech understanding, amplification should be considered and not be delayed for concurrent medical and/or developmental conditions.
 - 2. All hearing aid fittings for binaural hearing loss should be binaural unless there is evidence, over time, of no benefit in one ear.

3. If the child has a unilateral hearing loss with measurable hearing in the affected ear, amplification in this ear may be beneficial. If further testing indicates that the ear with the loss is unaidable, alternative amplification strategies and hearing assistance technologies such as FM or Bluetooth systems should be considered.
4. If the child has a unilateral "unaidable" hearing loss, a bone anchored hearing aid on a headband may be recommended up to age 5. After age 5, an implantable device can be considered under consultation with a physician who specializes in ear pathologies.
5. If the child has an unusual configuration of loss or unusual type of loss (e.g. cookie-bite configuration, auditory dysynchrony, etc.), the need for amplification should be made on a case-by-case basis.
6. Middle ear status must be considered and periodic immittance testing is recommended using age-appropriate immittance protocols. Infants with chronic middle ear conditions should be referred for medical treatment; however, fitting of amplification and referral for early intervention should not be delayed while waiting for resolution.
7. Infants identified with hearing loss who experience a long hospital stay should be fit with appropriate amplification as soon as medically feasible, after appropriate clearance for amplification use is received from the treating physician.
8. Fitting of amplification should not be delayed for:
 - a. certain medical issues, such as waiting for middle ear fluid to clear in the presence of a sensory loss (pending medical approval).
 - b. financial reasons, as resources are available throughout the state for those families waiting for insurance authorization or those who need assistance to cover the costs of amplification. For a list of resources, contact the Oklahoma Newborn Hearing Screening Program.*

B. National & State Recommendations

1. In accordance with the Food and Drug Administration (FDA) regulations, medical clearance must be obtained within in the last six months prior to fitting hearing aids on children, preferably by a physician who specializes in ear pathologies.
2. In accordance with the Early Hearing Detection and Intervention (EHDI) model of 1-3-6**, an identified child will be amplified before six months of age.
3. In accordance with the Joint Committee of Infant Hearing (JCIH) 2007 Position Statement, the fitting of amplification should take place within one month of diagnosis.
4. In accordance with the Oklahoma Protocol for Infant Audiologic Diagnostic Assessment, steps should be followed in order to appropriately fit amplification.

III. PRE-SELECTION / PHYSICAL CHARACTERISTICS

A. Amplification Options

1. Behind-the-ear (BTE) aids are appropriate for most children. In-the-ear aids are not recommended for use with infants and toddlers due to the rapid growth of the outer ear.
2. Hearing aids with digital signal processing are recommended due to their improved ability to make soft speech audible, their flexible electroacoustic characteristics, and their noise reduction algorithms.

3. Hearing aids with multiple memories and remote controls can be considered for ease of adjustment for the caretaker and for flexibility.
4. Infants need to hear environmental noise and distant speech from all directions to maximize language and speech development and therefore, activated directional microphones are not usually recommended for this population. Directional microphones, or dual microphones, should be considered for toddlers and older children to improve the signal-to-noise ratio when FM technology is not being used.
5. FM systems, coupled with personal hearing aids, are recommended for listening in noise and/or at greater distances. Auditory trainers should be considered in an educational environment when a personal FM system coupled with personal hearing aids is not utilized.
6. A bone conduction aid may be appropriate if the hearing loss is conductive and acoustic aids cannot be used due to medical or physical contraindications.
7. Bone anchored hearing aids may be considered for children with hearing loss that meet audiological and medical requirements. This may include conductive, unilateral, or mixed hearing loss.
8. Cochlear implant(s) may be appropriate if the child meets audiological and medical requirements.

B. Audio Input Features to be considered:

1. Direct audio input (DAI) capabilities
2. Telecoil
3. Microphone-telecoil switching option
4. Bluetooth

C. Safety Features to be considered:

1. Tamper proof battery doors
2. Programmably disabled volume control
3. Volume control covers
4. Water resistant

D. Earmolds should be:

1. Made of a soft material; hypoallergenic when appropriate
2. Replaced whenever feedback is excessive on optimal settings
3. Used with lubricants to help reduce feedback

E. Retention devices for amplification systems can include:

1. Ear retention rings
2. Toupee or wig tape
3. Cords or hearing aid retention clips
4. Headbands

F. Hearing Assistive Technology:

The purpose of devices such as FM systems or/and sound-field systems is to enhance the signal-to-noise ratio by making the auditory signal greater than the background noise to facilitate incidental learning in all environments. FM units are recommended for infants and children with minimal to profound hearing loss (unilateral or bilateral) and children with auditory learning problems.

1. Personal FM units

- a. A personal FM unit is the system of choice for hearing aid and cochlear implant users as it retains the output and frequency response characteristics of the child's device when coupled with: direct auditory input boot, telecoil or loop, silhouette conductor, or ear microphone.
 - b. Auditory trainers are utilitarian FM devices. Schools typically utilize this option when a personal FM system is not available.
2. Sound-field FM Systems
- a. The signal is picked-up by a receiver/amplifier and broadcast through speakers. These speakers can be portable, wall, or ceiling mounted. These systems can be used independently or in conjunction with hearing aids or cochlear implant.

G. Recommended Maintenance Kit items may include:

- 1. Desiccant kit
- 2. Cleaning tools
- 3. Battery tester
- 4. Listening stethoscope

H. Education materials must be given to caregivers including:

- 1. User manuals
- 2. Warranty and insurance information
- 3. Battery toxicity warning
- 4. Explanation of trial period
- 5. Oklahoma Board of Examiners for Speech Pathology & Audiology (OBESPA) contact information

IV. ON-GOING VERIFICATION OF HEARING AIDS

- A. Prior to direct evaluation of the hearing aid on the child, the instrument should be preset in a test box to average age-related real-ear to coupler difference (RECD) values. The Desired Sensation Level (DSL) v5.0 or most current available method calculated either manually or in computer-assisted format is the approach of choice for the RECD procedure.
- B. The preferred verification method for amplification is to use probe microphone measurements and the child's ear, earmold, and personal amplification system. The procedure should be combined with a prescriptive technique that states target responses appropriate for the characteristics of the amplification system (e.g. linear vs. non-linear, analog vs. digital).
- C. Audiological assessment directly measuring the child's performance should be completed including aided soundfield responses to speech and frequency specific stimuli.
- D. Verification reports should include hearing aid characteristics such as make, model, serial number, input and tone settings, compressions or special feature settings, volume setting, earmold style and quality of fit.
- E. Electroacoustic and biologic verification should be performed:
 - 1. On the day of fitting
 - 2. One to three month intervals
 - 3. Following any hearing aid repair
 - 4. When parental listening checks and/or behavioral observations raise concerns
- F. Suggested frequency of on-going verification:
 - 1. Hearing aids should be evaluated every three (3) months until the child and parent are capable of determining and reporting the status of hearing aids.

2. Earmolds should be evaluated monthly as frequent earmold replacement may be necessary during the first year of life. Thereafter earmold fittings should be evaluated at routine audiological appointments or until growth has stabilized.
3. Immediate evaluation should be scheduled if parents or caretakers suspect a change in hearing or hearing aid function.

V. AIDED AUDITORY SKILLS SHOULD BE MONITORED AND SHOULD INCLUDE:

- A. Report and informal assessment by parent or caregiver
- B. Functional auditory skill assessment obtained by the audiologist and early interventionist
- C. Speech, communication and language skill assessment obtained by the early interventionist
- D. Developmental input and recommendations by health care provider

VI. INFORMATIONAL COUNSELING AND FOLLOW-UP

- A. Parents are the child's best advocate and should be guided in the education and training for working with their child with hearing loss to help them reach their full potential.
- B. Information about all amplification options should be provided to parents.
- C. Parents and other family members or all caregivers that assist in caring for the amplification system should receive orientation and ongoing support as needed.
- D. An audiologist should see the child at least every three months until hearing loss stability is known. Thereafter, follow-up is at the discretion of the pediatric audiologist.
- E. Follow-up appointments should include:
 1. Behavioral audiometric evaluations
 2. Adjustment of the amplification system based on updated audiometric information
 3. Periodic electroacoustic evaluations
 4. Listening checks
 5. Check fit of earmolds
 6. Periodic probe microphone measurements
 7. Periodic functional measures to document development of auditory skills
 8. Insurance options following warranty period for repairs and/or loss
- F. An early interventionist should provide ongoing re/habilitation training aligned with the family's desired outcomes.

Footnotes:

* Oklahoma Newborn Hearing Screening Program can be reached at 1-800-766-2223 or NewbornScreen@health.ok.gov

** CDC National EHDI Goals located at <http://www.cdc.gov/ncbddd/ehdi/nationalgoals.htm>

These first three goals are frequently referred to as the 1-3-6 plan.

Goal 1: All newborns will be screened for hearing loss before one month of age, preferably before hospital discharge.

Goal 2: All infants who screen positive will have a diagnostic audiologic evaluation before 3 months of age.

Goal 3: All infants identified with a hearing loss will receive appropriate early intervention services before 6 months of age.

APPENDIX A

From the Joint Committee on Infant Hearing, 2007

1. All infants should have access to hearing screening using a physiologic measure before 1 month of age.
2. All infants who do not pass the initial hearing screen and the subsequent rescreening should have appropriate audiologic and medical evaluations to confirm the presence of hearing loss before 3 months of age.
3. All infants with confirmed permanent hearing loss should receive intervention services before 6 months of age. A simplified, single point of entry into an intervention system appropriate to children with hearing loss is optimal.
4. The EHDI system should be family centered with infant and family rights and privacy guaranteed through informed choice, shared decision making, and parental consent. Families should have access to information about all intervention and treatment options and counseling regarding hearing loss.
5. The child and family should have immediate access to high-quality technology, including hearing aids, cochlear implants, and other assistive devices when appropriate.
6. All infants and children should be monitored for hearing loss in the medical home. Continued assessment of communication development should be provided by appropriate providers to all children with or without risk indicators for hearing loss.
7. Appropriate interdisciplinary intervention programs for deaf and hard-of-hearing infants and their families should be provided by professionals knowledgeable about childhood hearing loss. Intervention programs should recognize and build on strengths, informed choices, traditions, and cultural beliefs of the families.
8. Information systems should be designed to interface with electronic health records and should be used to measure outcomes and report the effectiveness of EHDI services at the community, state, and federal levels.

To view the complete statement, please visit the following:
http://www.cdc.gov/ncbddd/ehdi/documents/JCIH_2007.pdf

APPENDIX B

Oklahoma Law and State Board of Health Rules

Oklahoma legislation originally enacted in 1982 and updated in 2000 requires that every newborn have hearing screened before discharge from the birthing hospital. The legislation also required the State Board of Health to develop rules and guidelines to accomplish the provisions of the act.

State of Oklahoma *Newborn Infant Hearing Screening Act*

§63-1-543. Short title - Screening for detection of congenital or acquired hearing loss.

A. This act shall be known and may be cited as the “Newborn Infant Hearing Screening Act”.

B. Every infant born in this state shall be screened for the detection of congenital or acquired hearing loss prior to discharge from the facility where the infant was born. A physician, audiologist or other qualified person shall administer such screening procedure in accordance with accepted medical practices and in the manner prescribed by the State Board of Health. If an infant requires emergency transfer to another facility for neonatal care, such screening procedure shall be administered by the receiving facility prior to discharge of the infant.

C. The State Board of Health shall promulgate rules necessary to enact the provisions of this act. The State Commissioner of Health shall develop procedures and guidelines for screening for the detection of congenital or acquired hearing loss.

D. Any durable medical equipment purchased or supplied by the State Department of Health for the purpose of being permanently or temporarily fitted for use by a specific child shall not be deemed or considered to be a “tangible asset” as that term is defined in Section 110.1 of Title 74 of the Oklahoma Statutes and, once fitted to a specific child, shall be deemed thereafter to have minimal or no value to the Department for purposes of further disposition pursuant to the Oklahoma Central Purchasing Act.

[1]Added by Laws 1982, c. 141, § 1, emerg. eff. April 9, 1982. Amended by Laws 2000, c. 204, § 1, eff. Nov. 1, 2000; Laws 2006, c.273, § 1, emerg. eff. June 7, 2006.

[2]

§ 63-1-544. Report of results

The results of the screening procedures, conducted pursuant to section 1 of this act, shall be reported to the State Department of Health in accordance with procedures adopted by the State Board of Health.

[1]Added by Laws 1982, c. 141, § 2, emerg. eff. April 9, 1982.

[2]

§ 63-1-545. Publication of results--Release of information

The State Commissioner of Health shall compile and publish annually the results of the infant screening procedures using the information reported to the Department. The Commissioner may authorize the release of information concerning children who are found to have hearing impairments to the appropriate agencies and department so that such children may receive the necessary care and education.

[1]Added by Laws 1982, c. 141, § 3, emerg. eff. April 9, 1982.

[2]

State Board of Health
Newborn Hearing Screening Rules

CHAPTER 540. INFANT HEARING SCREENING

310:540-1-1. Purpose

The rules in this Chapter implement the Infant Hearing Screening Regulations, 63 O.S. 1991, Sections 1-543 through 1-545.

310:540-1-2. Definitions

The following words or terms, when used in this Chapter, shall have the following meaning, unless the context clearly indicates otherwise:

"Audiologist" means an individual holding certification in Audiology by the American Speech-Language-Hearing Association or its equivalent.

"Discharge" means the release of the newborn from care and custody of a perinatal licensed health facility to the parents or into the community.

"Hearing Screening Procedure" means the combination of physiologic hearing screening and risk factor tracking used to determine from the total population of infants born, the infants at risk for hearing loss.

"Other qualified individual" means an individual working under the guidelines developed by the responsible physician or audiologist.

"Parent" means a natural parent, stepparent, adoptive parent, legal guardian, or other legal custodian of a child.

"Physician" means an M.D. or D.O. licensed in the State of Oklahoma to practice medicine.

"Physiologic Screening" means the use of a bilateral physiologic screening technique to determine from the total population of infants born, the infants at risk for hearing loss.

"Risk Factors" mean conditions identified by the Joint Committee on Infant Hearing (JCIH 2000 Position Statement or later) which place a newborn at risk for hearing loss.

"Transfer" means release of the newborn from care and custody of one perinatal licensed health facility to another.

310: 540-1-3. Guidelines

(a) All newborns in Oklahoma will have a Hearing Screening Procedure completed unless the parent or guardian refuses because of religious or personal objections.

(b) Requirements for the Hearing Screening Procedure are as follows:

(1) For facilities with a two-year average annual birth census of 15 or greater:

a) All infants will receive a physiologic and risk factor screening prior to discharge.

b) Infants transferred to another facility will be screened by that institution prior to discharge.

(2) For facilities with a two-year average annual birth census of fewer than 15:

a) All infants will receive a physiologic and risk factor screening prior to discharge if physiologic screening equipment is available.

b) Infants transferred to another facility will be screened by that institution prior to discharge.

c) If physiologic screening equipment is not available, the infant will be screened for risk factors and,

d) the parents will be directed to a regional site providing physiologic screening and encouraged to have the infant screened within the first month of life.

(3) Out-of-Hospital Births:

- a) All infants who are not born in a hospital will have their hearing screened within the first month of life. The infant's physician or licensed or certified birth attendant is responsible for completing the risk factor screening and for referring the infant to a regional hearing screening site for a physiologic screen.
- b) Physicians, other health care providers, or local county health department staff who examine a child within the first three months of life who was not born in a hospital, or who was born out of state, will verify that the infant's hearing has been screened. Infants not screened will be referred to a regional hearing screening site.
- (c) Hospital universal newborn hearing screening programs will be administered by an audiologist and/or physician.
- (d) The physiologic screening will include the use of at least one of the following:
 - (1) Auditory Brainstem Response Testing (ABR);
 - (2) Otoacoustic Emissions Testing (OAE);
 - (3) any new or improved techniques deemed appropriate for use in hearing screening procedures by the Commissioner of Health.
- (e) The Hearing Screening Procedure will be performed by a qualified and properly trained individual, and the results provided to the primary care physician or other health care provider. Notification of the screening results to parents will be given prior to discharge or immediately following the Hearing Screening Procedure if conducted through a regional site.
- (f) Newborns will be referred to an audiologist for a diagnostic hearing evaluation for these reasons:
 - (1) They did not pass the hearing screening prior to discharge;
 - (2) they passed the screening but were at risk for progressive or late onset hearing loss because of a risk factor identified by the Joint Committee on Infant Hearing.
- (g) The hospital personnel, audiologist, or primary care physician involved in the screening of a newborn will provide the parents with appropriate resource information to allow them to receive the medical, audiologic, and other follow-up services as necessary.
- (h) The hospital personnel, audiologist, or primary care physician involved in the initial Hearing Screening Procedure of a newborn will forward results to the Oklahoma State Department of Health in a manner and time frame deemed appropriate by the Oklahoma State Department of Health.
- (i) Audiologists or physicians involved in completing follow-up hearing evaluations will forward test results and recommendations to the Oklahoma State Department of Health in a manner and time frame deemed appropriate by the Oklahoma State Department of Health.
- (j) To facilitate the reporting of newborns and infants who have or are at risk for hearing loss, the reporting requirements will be designed to be as simple as possible and easily completed by nonprofessional and professional individuals involved in the program.
- (k) The Oklahoma State Department of Health will utilize a tracking system to track infants identified at risk for hearing loss for a period up to one year in order to assure appropriate follow-up care.
- (l) The Oklahoma State Department of Health will compile and report data collected from hearing screening procedures at least annually and will share such information as directed by the Commissioner of Health.

NEWBORN HEARING SCREENING REPORTING FORM INSTRUCTIONS FOR USE

Newborn Hearing Follow-up Report submission is mandated by the State of Oklahoma, Newborn Infant Hearing Screening Act§63-1-543.

PURPOSE:

This Reporting Form is to be used to report all visits to your facility by infants and children birth to three years of age. Information from these reports will be used to update the newborn hearing screening results reported at birth by the hospital and monitor that each child is receiving follow-up services as soon as possible. Annual data will be reported to the Center for Disease Control and Prevention (CDC) to determine babies “Loss to Follow-up/Loss to Documentation”.

REPORTING HEARING RESULTS ON ALL INFANTS AND CHILDREN FROM YOUR FACILITY should include:

- Initial infant hearing screenings on “out of hospital births” and missed hospital screenings
- All infants that referred the initial hearing screening
- A child referred to you from other resources (parents, physicians, etc) with suspected or confirmed hearing loss
- A child being evaluated for hearing aids or cochlear implant(s)
- A child being monitored for risk factors for progressive hearing loss
- A child who exhibits any significant change in hearing status
- A child who was scheduled for follow-up from newborn screening or hearing aid fitting but missed multiple scheduled appointments and has now been lost to follow-up
- **Report all results even if auditory responses are within the normal limits or incomplete results**

INSTRUCTIONS FOR USE:

- Enter date of appointment, not the date you are filling out form

IDENTIFYING INFORMATION

- The child’s full name, birth date, and mother’s first and last name
- Mom’s SS# if given
- Current address
- Name of child’s hospital of birth or note if out-of-hospital birth
- Current Primary Care Physician

RESULTS:

- Complete Box 1 for screenings, complete Box 2 for diagnostic audiologic assessments
- Check correct test results for each ear. Ear specific test results are required, even if baby passed one ear on an initial screen. If baby has malformation of ear prohibiting a screening, need to refer for diagnostic ABR.
- Check all tests performed.
- If baby refers screening, make note of recommendations for follow-up in comments section of Box 1.
- If diagnosed hearing loss, check degree and type of loss (refer to updated ASHA guidelines for degree of loss)
- Do not mark two degrees of hearing loss. If the hearing loss crosses two levels, check the degree that encompasses the majority of the frequencies
- Include date of amplification and check type of amplification device
- Check all other referrals made
- If enrolled or referred to early intervention, note location if known
- Note any known risk factors/family history

Please return or fax the **completed form**, or **audiology report** to: Newborn Hearing Screening Program
Oklahoma State Department of Health
1000 N.E. 10th Street
Oklahoma City, OK 73117
Fax (405)271-4892

