

Sound Start of Louisiana

Early Hearing Detection & Intervention “EHDI” Program



Universal Newborn Hearing Screening Guidelines for Louisiana Hospitals

**Department of Health and Hospitals
Office of Public Health
Hearing, Speech and Vision Program
Version 3.0**

Louisiana EHDI Program Contacts

Melinda Peat
Hearing, Speech and Vision Program Manager
DHH/OPH
1450 L & A Road
Metairie, LA 70001
985-871-1300
Fax 985-871-1334
melinda.peat@la.gov

Jeanette Webb
EHDI Follow-up Coordinator
2431 Hwy. 118 East
Provençal, LA 71468
318-613-4773
jeanettewebb@hughes.net

M. Christy C. Fontenot
EHDI Program Coordinator
109 Rue Champagne
Broussard, LA 70518
337-277-5481
Fax 337-521-9139
audmcf@aol.com

Dwana J. Green
EHDI Epidemiologist
DHH/OPH
Hearing, Speech and Vision Program
1450 L & A Road
Metairie, LA 70001
504-568-3683
Fax 504-568-5854
dwana.green@la.gov

Terri Mohren
EHDI Systems Development Coordinator
2105 Etienne Drive
Meraux, LA 70075
504-554-5980
Fax 504-271-1251
terrimohren@cox.net

Mariah Ranko
Parent Consultant
DHH/OPH
Hearing, Speech and Vision Program
1450 L & A Road
Metairie, LA 70001
504-568-2340
Fax 504-568-585
mariah.ranko@la.gov

Mary Jo Smith
EHDI Tracking Coordinator
152 Third Street
Colfax, LA 71417
318-627-5714
maryjo.smith@la.gov

Kay Darr
EHDI Outreach Specialist
301 Breeman Circle
Lafayette, LA 70508
337-356-2569
vkdarr@cox.net

Wendy Jumonville
EHDI Outreach Specialist
3640 Marigold
Baton Rouge, LA 70808
225-963-0125
wjumonv@lsu.edu

Dawne Arnold
Statistical Technician
DHH/OPH
Hearing, Speech and Vision Program
1450 L & A Road
Metairie, LA 70001
504-568-5046
Fax 504-568-5854
dawne.arnold@la.gov

Marbely Barahona
Parent Consultant-Bilingual
DHH/OPH
Hearing, Speech and Vision Program
1450 L & A Road
Metairie, LA 70001
504-568-5029
Fax 504-568-5854

Anna Wells
Follow-up Services Data Clerk
DHH/OPH
Hearing, Speech and Vision Program
1450 L & A Road
Metairie, LA 70001
504-568-8352
Fax 504-568-5854

Table of Contents

Program Goals and Requirements	4
Hospital Hearing Screening Requirement Summary	5
Hospital Hearing Screening Supervisor’s Responsibilities	7
Choosing Screening Method and Equipment	8
Management of State Reporting	9
Training and Monitoring Personnel	11
Hospital Policies and Procedures	12
Quality Assurance and Benchmarks	13
Monitoring Infants at Risk for Progressive or Late Onset Hearing Loss	14
Communication with Families	15
Ensuring Follow-up	16
Reporting Results and Tracking	17
Appendix A: Legislation/Rules and Regulations	19
Appendix B: Joint Committee on Infant Hearing	30
Appendix C: Forms Needed for Supervision	34

These guidelines were developed in part by funds from grants from the Maternal and Child Health Bureau / Health Resources and Services Administration, and the National Centers for Disease Control and Prevention in the Department of Health and Human Services.

Program Goals and Requirements

The goal of this Hearing Screening Program is: ***To identify hearing impaired infants at the earliest possible time so that medical treatment, early audiological evaluation, selection of amplification and early educational intervention can be provided.***

Opportunity for Screening

The birth admission represents one of the few times when all but a small number of babies can easily be tested. Louisiana hospitals have recognized this opportunity and the need to identify hearing loss early.

Hospital screening programs form the basis for all statewide early hearing detection efforts and 100% of all birthing hospitals in the state were legislatively mandated to perform universal newborn hearing screening as of April 1, 2002. Refer to Appendix A for information on Legislation, Rules and Regulations.

Hospital Hearing Screening Requirement Summary

1. All infants born in a facility or transferred to a facility must have either an **OAE** or **ABR** hearing screening test performed prior to discharge from the hospital. Either OAE or ABR is acceptable for infants in the well-baby nursery. **ABR is the recommended technology for use with infants with a stay of 5 days or greater in the NICU. These infants are at greater risk for auditory neuropathy which can not be diagnosed with OAE alone.**
 - Only one test on both ears is required to “pass” the screening.
 - Waiting until the infant is at least 24 hours on a vaginal delivery and 48 hours on a C-Section delivery is optimal for a valid screening

The hearing screening must be attempted at least two and NOT MORE THAN FOUR TIMES before a child is considered to fail or “refer” the hearing screening

Repeat screening should not take place back to back but rather with some time interval between repeated testing

2. If a child is transferred to another facility, the accepting facility is responsible for screening prior to discharge home. This facility is also responsible for reporting the results to the DHH Early Hearing Detection and Intervention Program. In addition, children unable to be tested due to death must be reported.
3. **Screening may be performed only by appropriately trained professionals supervised by a licensed audiologist or physician with training in infant hearing screening.**
4. All hospitals are required repeat the hearing screening prior to discharge if an infant is **readmitted to the hospital** within the first month of life when there is a condition associated with potential hearing loss (e.g. hyperbilirubinemia requiring exchange transfusion or culture-positive sepsis).
5. If the child “refers for further testing” in either one or both ears, the discharging hospital should provide the family with a **follow-up rescreening appointment for the infant** and educational information for the family. This appointment can be with an audiologist or the primary care physician if the physician has the capability and proper equipment to perform the screening.
6. The discharging hospital is required to send a copy of the initial newborn hearing screening results to the primary care physician (PCP) if known when the infant leaves the hospital. (Keep in mind this is usually the physician listed on the child’s records in the hospital, and often is not the long-term primary care provider).

SCHEDULING THE FOLLOW-UP OUTPATIENT APPOINTMENT:

1. Standing orders by the infant's hospital attending physician can be used to order the outpatient-rescreening test. These orders are usually kept on file in the nursery for infants returning to the hospital for the follow-up testing. A copy of the order should be sent to the rescreening provider with contact information for the infant.
2. If the child is a Medicaid recipient, standing orders by the hospital attending physician may be used for rescreening **until a PCP is assigned and linkage of the recipient to the provider is established**. This linkage usually doesn't occur until 3-4 weeks after application is made. If the rescreening appointment occurs in as little as 1 or 2 weeks and the PCP/Community Care and recipient linkage has not been established, Medicaid will reimburse for the testing ordered by the original hospital physician.
3. Many NICU infants will already have a Medicaid PCP assigned prior to discharge from the hospital. If this is the case, **Community Care referrals may be obtained prior to hospital discharge** or at the first check-up with the physician. The appointment for rescreening should also be made prior to hospital discharge and a copy of screening results should be forwarded to the PCP.
4. **Hospital personnel should make the appointment for follow-up prior to discharge from the hospital**. It is strongly recommended that all parents leave the hospital **connected to the professional doing the follow-up testing**. Parents should be provided with the name, phone number, directions to the testing site.
5. Parent should receive **educational information** in their native language when possible regarding hearing loss, normal milestones of development, and the importance of keeping the next appointment.

DOCUMENTING THE APPOINTMENT:

The DHH Newborn Hearing Screening Report includes a space at the bottom of the form to document the rescreening appointment place, date, and time.

Louisiana law mandates that the parents and physician each receive a copy of this form and one should be filed in the child's medical record. This is a necessary way to document that the parents were given an appointment.

The scheduling and documentation of a rescreening follow-up appointment assures all parties involved that the parents were aware of the abnormal screening results and were given appropriate follow-up.

Failure to make this appointment is one of the main reasons that many infants do not receive timely diagnostic testing (as recommended by the Joint Committee on Infant Hearing and the American Academy of Pediatrics).

Hospital Hearing Screening Program Supervisor's Responsibilities

Newborn hearing screening programs are complex and involve the management of many different aspects including staffing, policies and procedures, and communications with families, medical providers, and government agencies.

To accomplish the goals of your program, responsibility should be clearly defined and delegated. Assigning a Hospital Hearing Screening Program Supervisor ensures that your program works more efficiently and effectively.

As mandated by the Department of Health and Hospital rules and regulations, this Hospital Hearing Screening Program Supervisor must:

- Be available by telephone while screening is taking place
- Review a percentage of the screening documentation and DHH Newborn Hearing Screening Report (NHSR) to determine if filled out appropriately
- Determine that appropriate testing is being performed in a quiet environment
- Perform direct periodic observation of each individual screener, at least once per month initially, as they perform the hearing screening. After the screener has performed screening for one year, observation is necessary only once every 3 months
- Monitor that hearing-screening equipment is calibrated annually according to manufacturer recommendations
- Monitor that infants failing hearing screening are appropriately referred to an audiologist and PCP for further testing within 7 days
- Work with DHH and hospital staff to assure accuracy of records

Other areas in which the Hospital Program Supervisor will be involved will include:

- Manage state reporting
- Ensure that benchmarks and quality assurance measures are gathered and monitored
- Manage staff including training and monitoring
- Manage equipment including determining type of technology and maintenance
- Determine that proper procedures and protocols are in place
- Create or gather culturally sensitive educational materials
- Communicate program goals and accomplishments with medical providers
- Communicate with families
- Communicate with audiologists, early intervention agencies and other community providers to assure appropriate referrals

Choosing a Screening Method and Managing Equipment

One of the most important decisions in implementing a screening program is the choice of screening method. Any screening method chosen should measure a physiological response (not behavioral).

Currently Transient or Distortion Product **Otoacoustic Emissions (OAE)** or **Auditory Brainstem Evoked Response (ABR)** are the methods of choice for universal newborn hearing screening programs for infants in the **Well-Baby Nursery**.

The Joint Committee on Infant Hearing Position Statement 2007 recommends that infants with **a stay of 5 days or longer in the NICU be tested with ABR** due to a higher risk of auditory neuropathy/dys-synchrony.

Your Hospital Hearing Screening Program Supervisor should research the various equipment options based on the following: Initial cost, anticipated refer rates, on-going costs, ease of use, availability of customer service and support, warranty and service contracts available.

Other considerations for technology choices include the following:

- Use of more than one technology- (OAE then ABR in a two-stage testing system or in different hospital units)
- Average length of stay
- Anticipated staffing patterns and personnel who will be using the equipment
- Birth census
- Demographics of the community
- Screening and rescreening protocols

Several different types of screening equipment are available. Each of them can be part of a successful program although some characteristics may suit one program better than another.

The per patient disposable costs are generally less for OAE's but they often have a higher initial refer rate, especially if the length of stay is less than 24 hours. Hospitals in remote areas where distance and transportation is an issue may need to implement procedures to ensure a very low initial refer rate, such as using ABR as the screening technology.

Some equipment may be easier to learn how to operate. Ease of use can be an important consideration in staffing patterns, especially for hospitals with low birth rates or those who choose to train large numbers of staff as screeners.

Management of State Reporting

Each hospital is required to fill out the form entitled “**Newborn Hearing Screening Report**” (NHSR) on each infant born or transferred into a birthing hospital.

This multiple part NHSR form should be completely filled out with identifying information and hearing screening results. Any risk factors that are present are to be documented as these risk factors are important for long-term follow-up of progressive hearing loss.

One copy is to be kept in the infant’s medical record, and one copy is to be provided to the post discharge PCP. The fourth copy is to be distributed to the parents, and (only if needed) a copy is also available to be mailed to the Louisiana Office of Public Health.

If your hospital uses the **Electronic Birth Certificate**:

The information from the NHSR is sent in electronically with the birth certificate to Louisiana Vital Records Department by your Health Information Management Birth Certificate Clerk.

In most cases, no hard copy needs to be sent to the Office of Public Health. The DHH hard copy of the form however must be mailed in cases of infants that are not screened due to being **transferred to another facility**, due to **death**, or due to **hospital re-admission testing**. This information cannot be transmitted by the current electronic birth certificate. In these cases, the complete name as found on the birth certificate and identifying information must be entered and the form mailed to:

**Office of Public Health
Hearing Speech and Vision Program
1450 L & A Road
Metairie, LA 70001**

The 2007 JCIH Position Statement recommendations indicate that any infant re-admitted in the first month of life for a condition associated with potential hearing loss should receive a repeat hearing screening. These results should be mailed to the OPH on the NHSR. If a child receives a repeat hearing screening, due to re-admission, please indicate that this is a re-admission and send in on a **new** NHSR screening form.

Parents and physicians also need to receive their copies of the NHSR form.

If your hospital **does not** utilize the **Electronic Birth Certificate**:

Your hospital must report the results of the hearing screening by mail using the DHH Sound Start copy of the NHR. Be sure to fill out all portions of the form accurately.

If a child refers for further testing, check the box and fill in where the child will be referred for follow-up.

If a child transfers to another facility, indicate to which hospital the child was transferred. If a child dies after being issued a birth certificate, indicate by checking deceased on the form.

If a child receives a repeat hearing screening due to re-admission within the first month of life, please write on the top of the form that this is a re-admission and send in on a **new** NHR screening form.

Parents and physicians also need to receive their copies of the NHR form.

Training and Monitoring Personnel

Newborn hearing screening can be successfully conducted by anyone who receives appropriate training and meets the competency standards, especially if automated screening equipment is used. Considerations for staffing and training are as follows:

- Staff should be available to test 7 days a week in order to test all infants
- Training should be competency based and involve direct, hands-on components
- Training and supervision must be directed by the Hospital Program Supervisor (see requirements on page 6)
- Monitoring of new screener's skills must occur once a month. For the screener with at least one year experience, monitoring must occur at least once every three months. Monitoring can include review of testing results, accurate completion of NHR forms, proper follow-up appointments being made as well as direct observation of the technician performing testing

Training:

Your Hospital Program Supervisor should:

- **Train and establish screener competency prior to allowing a screener to conduct a hearing screening.** Appropriate training of the screening staff to ensure infants are screened appropriately is vital to the success of the program
- **Validate and document that competency has been met.** A sample competency validation checklist can be found in Appendix C
- **Utilize one-on-one instruction and hands on observation** when training followed by periodic monitoring and observation of the screener and screening outcomes

Monitoring:

Your Hospital Program supervisor should:

- **Monitor the screeners** on a regular basis
- **Monitor new screening personnel** at least once a month
- **Monitor those screeners with at least one-year experience** at least once every three months
- **Conduct annual competency** review for all screening personnel

Hospital Policies and Procedures

Each hospital in Louisiana is unique in the way they serve their community. Written policies and procedures should be developed to reflect the practices of your hospital. The following questions will assist the hospital in developing a written policy. A sample Policy and Procedures can be found in Appendix C.

NICU vs. Well Baby Nursery

- What are the different protocols that are to be developed for each unit?
- OAE or ABR may be utilized in Well Baby Nursery, ABR is recommended for use in the NICU. Which technology will we use?

Screening Protocols

- What type of screening test will be used, who should screen, when, and where?
- How will we prepare babies and parents for the hearing screening procedure?
- If a baby refers from the first test, how long should screeners wait to repeat the screening?
- How many times do we repeat the test? Is ABR used if a baby refers from OAE?
- What is our policy if the parents refuse screening?
- What infection control measures need to be taken?
- What documentation will be made in the medical record?
- If a baby refers for further testing- how do we make follow-up appointments?
- What will your facility do if a child has been re-admitted due to a condition associated with potential hearing loss?

Equipment

- Troubleshooting equipment- what to do if equipment breaks down?
- How do we order supplies?
- Who do we contact for annual calibration and routine maintenance?

Quality Assurance

- What records need to be maintained on all infants?
- What documents and information needs to be collected when infant refers?
- What methods will we use to establish and maintain to track individual screener's performance?
- How will we measure benchmarks as suggested in the JCIH statement?
- How will we measure patient satisfaction?

Follow-up and procedures for infants referred, missed, or at-risk for progressive loss

- Where will follow-up testing be completed?
- Who will make the appointment before the infant is discharged?
- How will the follow-up provider be contacted with contact information?
- Will physician orders be needed for follow-up testing?
- What information should be given to the family?
- Who is responsible if a family doesn't return for follow-up?

Quality Assurance and Benchmarks

To ensure a quality program it is also recommended that the Hospital Program Supervisor establish **benchmarks** and **quality indicators** to ensure program efficacy. These should be evaluated monthly and should be consistent with existing data such as those referenced by the Joint Committee on Infant Hearing 2007 Position Statement. Refer to Appendix B for information on JCIH.

The 2007 JCIH Position Statement recommended benchmarks are:

1. Within 6 months of program initiation, hospitals or birthing centers screen **at least 95%** of infants during their birth **admissions** or **re-admissions**. Some infants are transferred or die before hearing screening can be completed.
2. The referral rate for the screening process **should be less than 4%** within one year of program initiation.
3. If a hospital program offers follow-up testing on outpatients after discharge, the program should **retest at least 70%** of infants who are referred from initial hearing screening.

The 2007 JCIH Position Statement “Quality Indicators” for hearing screening programs are:

1. The percentage of infants screened during birth admission or re-admission within the first month of life. **(Benchmark is 95%)**
2. The percentage of infants that do not pass birth admission or re-admission screening. **(Benchmark is <4%)**
3. The percentage of infants who return for follow-up rescreening if the hospital program performs follow-up testing. **(Benchmark is 70% or >)**
4. The percentage of infants who are referred for further audiologic evaluations after failing rescreening if applicable to hospital program.

The Office of Public Health also recommends that hospitals keep and report the following information at least quarterly to the EHDI Epidemiologist:

1. Number of infants **transferred to another facility** before hearing screening was able to be completed.
2. Number of infants that **expire before hearing screening** was able to be completed who were issued a birth certificate.

Monitoring Infants at Risk for Progressive or Late-Onset Hearing Loss

Considerations for screening and monitoring infants **with risk factors for delayed-onset or progressive hearing loss** should include:

- **Notification of primary care provider and audiologist** regarding infants with known risk factors for delayed-onset or progressive loss by correct identification of risk factors on the Newborn Hearing Screening Report Form and the Electronic Birth Certificate.
- The **timing and number of hearing evaluations** for children with risk factors should be **customized and individualized** depending on the relative likelihood of subsequent delayed-onset hearing loss. Infants who pass newborn screening but have a risk factor at the minimum should have at least **one diagnostic audiology assessment by 24-30 months of age.**
- **Early and more frequent assessment** (every 3-6 months for the first year) **may be indicated for children with:** cytomegalovirus (CMV) infection, syndromes associated with progressive hearing loss including malformations of the pinna, neurodegenerative disorders, trauma, or culture-positive postnatal infections associated with sensorineural hearing loss, children who have received ECMO or chemotherapy, caregiver concern regarding hearing loss, or family history of hearing loss.
- The first appointment may be scheduled prior to discharge from the hospital or it may be left up to the primary care physician to schedule at a later date.
- It is important to **ensure that families receive informational materials** that discuss major milestones in normal speech and language development and risk factors for hearing loss in their native language. DHH brochures are available in both English and Spanish that discuss milestones for speech and language. Milestones are also outlined on the NHSR.
- It is important to ensure **that families of infants “at-risk” receive information on delayed-onset or progressive hearing loss** including local diagnostic resource centers capable of performing appropriate testing.

Information on Risk factors for progressive or late-onset hearing loss can be found in Appendix B.

Communication with Families

Families who are informed of the outcomes and recommended steps are less likely to be overly concerned about the screening results and more likely to follow-up after discharge.

Communications should be in written and verbal form in the primary language of the home as well as be presented in a culturally competent manner.

It is unlikely that the family is knowledgeable about hearing screening procedures or what the test results may mean. There are several opportunities to ensure that the families are informed before, during, and after the screening.

Before Screening

Education prior to screening may take the form of information distributed in the birthing classes, brochures in the admission packets or a video on the closed circuit TV. No matter how it is done, it's a good idea to inform the parents before the screening. The Office of Public Health has a brochures available for use in the hospitals which are available free of charge. Reprints may be ordered using the order forms available from The Office of Public Health/EHDI Program. **Refer to Appendix C for order form.**

During Screening

During the screening, and immediately after, it is critical that the screeners know exactly what they should and should not say. It is important that the screeners know who will tell the parents the results of the hearing screening, when, where, and how. It is not appropriate for the screening technicians to explain the implications of the results.

After screening

By the time of discharge, the parent should know:

- The results of the hearing screening test
- What the results mean
- What happens now:
 - Who will be performing the re-screening?
 - Where will the re-screening/ follow-up take place?
 - When is the appointment scheduled?
 - What do they need to take with them to the appointment?
 - How do they get there?
- Who should get the results – who will be the primary care physician?
- Information they will need about normal speech and language development and risk factors for progressive or late onset hearing loss

Ensuring Follow-up

Strategies to help your program ensure that families are not lost to follow-up may include the following:

- Make the appointment for further testing at the time of discharge
- Schedule the next test within 2-4 weeks
- Gather complete contact information on the infant including at least two contact phone numbers and alternate contact person
- Coordinate appointments with other well-baby visits when possible
- Ensure that the parent understands when and where to go for follow-up
- Ensure that the parent understands who to contact with further questions
- Record the infant's primary care provider if changing after discharge
- Provide the medical home with information on follow-up appointments, especially if parents do not keep the initial appointment

The most critical component of the early hearing detection and intervention program after the screening is completed is ensuring that families are not lost to follow-up. Some of the factors that are believed to influence follow-up rates include:

- **Parent's understanding** of the meaning of the screening outcome and the next steps- the greater the understanding the more compliant the follow-up
- **Length of time** between birth screening and outpatient screening- less than one month is critical, less if possible
- **Accurate results** with lower refer rates are taken more seriously by the primary care providers as a truly serious result
- **Physician support** and understanding of how to assist families in obtaining the outpatient re-screening or audiology assessment- physicians need to know where and how to help parents obtain necessary services
- **Accuracy of contact information** obtained at the time of discharge- multiple phone numbers or contacts is useful in tracking down parents
- **Method of communication**- some parents prefer written reminders, others phone calls
- **Persistence** of the Hospital Screening Program Supervisor in contacting parents that fail to keep appointments- the more attempts the better the chance of follow-up being completed
- **Health plans**- if infant hearing testing is a covered charge, chances are greater that infant will return for further testing
- **Awareness** of early hearing detection and intervention in the community- parents that are familiar with the program and its importance will return
- **Collaboration** with the intervention community- several agencies monitoring follow-up collectively will decrease the incidence of "losing" the infant to follow-up

Reporting Results and Tracking

Ensuring that the baby and family receive the appropriate assessment and early intervention is a necessary part of the screening process. Without this follow-up, the screening will not result in early hearing detection and intervention.

If a baby refers on initial hospital screening, referrals must be made to:

1. **A pediatric audiologist** experienced in infant testing
2. **The medical home**- usually the PCP
3. **The Office of Public Health, The Hearing, Speech and Vision Program** using the Newborn Hearing Screening Report Form or Electronic Birth Certificate

If a diagnosis of hearing loss is made from diagnostic testing by the pediatric audiologist, the following referrals should also be made:

4. **Further medical referrals** including: ENT and Genetics with a report of findings to the PCP.
5. Referral to a pediatric audiologist that is a **hearing aid provider**. This can be within the private sector or, if the child qualifies, through Children's Special Health Services, Office of Public Health. **Hearing aids should be fit as soon as possible.** It is optimal if the child receives amplification within one month of identification.
6. According to Federal Law IDEA, all children diagnosed with a hearing loss **must be referred to Part C (early intervention) within 48 hours.** In 2009, a new single point of entry into the system of early intervention was developed. **The regional LA-Hear Coordinators from PPEP have now been designated as the single point of entry for children identified with any type of hearing loss.** The goal is to begin appropriate early intervention by 6 months of age. PPEP services are statewide, cost-free, home/community-based services provided to families. Services are individualized to meet the needs and priorities of the family.

Referrals to regional LA-Hear Coordinators should be made by an audiologist within 48 hrs. of diagnosis through:

**Phone: 225-757-3331; Fax: 225-757-3332;
TDD: 225-769-8160x331; Email: ppep@lalsd.org**

7. Provide information to parents on **parent-to-parent support agencies**, such as Louisiana Hands and Voices at www.handsandvoices.org or the Louisiana Alexander Bell Association at www.agbell.org/la/, and other references or websites on hearing loss. The Office of Public Health has a parent consultant willing to discuss issues with any family.
8. Notify the **Office of Public Health, Hearing, Speech and Vision Program**. Testing results should be reported on the EHDI **Follow-up Form** which can be obtained by emailing the EHDI Follow-Up Coordinator. This follow-up form should be emailed, faxed, or mailed **within 14 days** to the Department of Health and Hospitals EHDI Program at the address and fax listed on the bottom of the form.

**Email EHDI Follow-Up Coordinator at:
ehdifollowup@hughes.net**

Appendix A Legislation/Rules and Regulations

1. Louisiana Identification of Hearing Impairment in Infants Law (Act 653 amended statutes July 1, 1999 and Act 417 July, 1992 combined)
2. Louisiana DHH Revised Procedures for Identification of Hearing Impairment in Infants law (April, 2002)
3. Louisiana Insurance Coverage for Hearing Aids (ACT 816 – 2003)

Appendix A1:

ACT No. 653

SENATE Bill NO. 436

BY SENATORS LANDRY AND IRONS AND REPRESENTATIVES DURAND, JETSON, TOOMEY, AND WILKERSON

To amend and reenact R.S. 46:2263 (7)(a)(xi) and (b)(ix) and (8), 2264 (A)(4) and 2267 and to enact R.S. 46:2262 (D), relative to the identification of hearing impairment in infants; to revise certain definitions; to require hospitals to provide screening for hearing impairment to all newborn infants prior to discharge; to provide an effective date for adoption of rules and regulations; to provide for related matters. Be it enacted by the Legislature of Louisiana:

Section 1. R.S. 46:2263 (7)(a)(xi) and (b)(xi) and (8), 2264 (A)(4) and 2267 are hereby amended and reenacted and R.S. 46:2262 (D) is hereby enacted to read as follows:

2262. Purpose

A. The purpose of the program for early identification of hearing impairment is to identify hearing impaired infants at the earliest possible time so that medical treatment, early audiological evaluation, selection of amplification, and early educational intervention can be provided.

B. Early educational intervention and early audiological services are required under the Education of the Handicapped Act, Amendments of 1986, Public Law 99457.

C. Early identification and management of the hearing impaired infant is essential if that infant is to acquire the vital language and speech skills needed to achieve maximum potential educationally, emotionally, and socially.

D. Appropriate screening and identification of Newborns and Infants with Hearing Loss will therefore serve the public purpose of promoting the healthy development of children, and reducing public expenditure for health care and special education, and related services.

2263. Definitions

Except where the context clearly indicates otherwise, in this Chapter:

- (1) "Advisory council" means the advisory council created pursuant to R.S. 46:2265.
- (2) "Department" means the Department of Health and Hospitals.
- (3) "Hearing impaired infant" means an infant who has a disorder of the auditory system of any type or degree, causing a hearing impairment sufficient to interfere with the development of language and speech skills. The term "hearing impaired infant" includes both deaf and hard-of-hearing infants.
- (4) "Infants at risk" means those infants who are at risk for hearing impairment because they have one or more risk factors.
 - (5) "Office" means the office of public health within the department.
 - (6) "Program" means the program that the office of public health establishes to provide for the early identification and follow-up of infants at risk, of hearing impaired infants, and of infants who have a risk indicator for developing a progressive hearing impairment.
 - (7) "Risk factors" means those criteria or factors, anyone of which identifies an infant as being at risk for hearing impairment.
 - (a) The risk factors that identify those neonate infants from birth through the first twenty-eight days, who are at risk for sensorineural hearing impairment included the following:
 - (i) Family history of congenital or delayed onset childhood sensory neural impairment.
 - (ii) Congenital infection known or suspected to be associated with sensorineural hearing impairment such as toxoplasmosis, syphilis, rubella, cytomegalovirus, and herpes.
 - (iii) Craniofacial anomalies including morphologic abnormalities of the pinna and ear canal, absent philtrum, low hairline, etc.
 - (iv) Birth weightless that one thousand five hundred grams or less than three and three tenths pounds.
 - (v) Hyperbilirubinemia at a level exceeding indication for exchange transfusion.
 - (vi) Ototoxic medications, including but not limited to the aminoglycosides used for more than five days, such as gentamicin, tobramycin, kanamycin, streptomycin, and loop diuretics used in combination with aminoglycosides.
 - (vii) Bacterial meningitis
 - (viii) Severe depression at birth, which may include infants with Apgar scores of zero to three at five minutes or those who fail to fully initiate spontaneous respiration by ten minutes or those with hypotonia persisting to two hours of age.

- (ix) Prolonged mechanical ventilation for a duration equal to or greater than ten days, such as persistent pulmonary hypertension.
- (x) Stigmata or other findings associated with a syndrome known to include sensorineural hearing loss, such as Waardenburg or Usher's syndrome.
- (xi) Other risk factors added or deleted by the office of public health upon recommendation of the advisory council for early identification of hearing impaired children

(b) The factors that identify those infants aged twenty-nine days to two years who are at-risk for sensorineural hearing impairment include the following:

- (i) Parent or caregiver concerns regarding hearing, speech, language and/or developmental delay,
- (ii) Bacterial meningitis.
- (iii) Neonatal risk factors that may be associated with progressive sensorineural hearing loss, such as cytomegalovirus, prolonged mechanical ventilation, and inherited disorders.
- (iv) Head trauma especially with either longitudinal or transverse fracture of the temporal bone.
- (v) Stigmata or other findings associated with syndromes known to include sensorineural hearing loss, such as Waardenburg or Usher's Syndrome,
- (vi) Ototoxic medications, including but not limited to the aminoglycosides used for more than five days, such as gentamicin, tobramycin, kanamycin, streptomycin, and loop diuretics used in combination with aminoglycosides.
- (vii) Children with neurodegenerative disorders such as neurofibromatosis, myoclonic epilepsy, Werdnig-Hoffman disease, Tay-Sach's disease, infantile Gaucher's disease, Nieman-Pick disease, any metachromatic leukodystrophy, or any infantile demyelinating neuropathy.
- (viii) Childhood infectious diseases known to be associated with sensorineural hearing loss, such as mumps or measles.
- (ix) Other risk factors added or deleted by the office of public health upon recommendation of the advisory council for early identification of hearing impaired children.

(8) "Screening for hearing impairment" means employing a device for identifying whether an infant has a disorder of the auditory system, but may not necessarily provide a comprehensive determination of hearing thresholds in the speech range. Procedures may include auditory brainstem response (ABR) screening or evoked Otoacoustic emission (OAE) or other devices approved by the office upon recommendation of the advisory council.

2264. Identification of hearing impairment in infants.

A. The office of public health in the Department of Health and Hospitals shall establish, in consultation with the advice of the Louisiana Commission for the Deaf and advisory council created in R.S. 46:2265, a program for the early identification and follow-up of infants at risk, hearing impaired infants, and infants at risk of developing a progressive hearing impairment. That program shall, at a minimum:

- (1) Develop criteria or factors to identify those infants at risk for hearing impairment and infants at risk of developing a progressive hearing impairment including the risk factors set forth in this Chapter, and develop an at-risk questionnaire for infant hearing loss.
- (2) Create an at-risk registry to include, but not be limited to, the identification of infants at risk for hearing impairment, hearing impaired infants, and infants at risk of developing a progressive hearing impairment.
- (3) Provide to the hospitals and other birthing sites the at-risk questionnaire for infant hearing loss and require that the form be completed for any newborn prior to discharge from the hospital or other birthing site. As to infants at risk, copies of the completed at-risk questionnaire shall be distributed to the at-risk registry of the office, the parent or guardian, and, if known, the infant's primary care physician and the provider of audiological services.
- (4) Require for all newborn infants that the hospital of birth or that hospital to which the newborn infant may be transferred provides screening for hearing impairment by auditory brainstem response (ABR) screening, or evoked Otoacoustic emission (OAE) or other screening device approved by the office before discharge. The results of that screening for hearing impairment shall be provided to the at risk registry of the office of public health, the parent or guardian, and if known, the primary physician and the provider of audiological services.
- (5) Develop and provide to the hospitals or other birthing sites appropriate written materials regarding hearing impairment, and require that the hospitals or other birthing sites provide this written materials all parents or guardians of newborn infants.

(6) Develop methods to contact parents or guardians of infants at risk, of hearing impaired infants, and of infants at risk of developing a progressive hearing impairment.

(7) Establish a telephone hotline to communicate information about hearing impairment, hearing screening, audiological evaluation, and other services for hearing impaired infants.

(8) Provide that when screening for hearing impairment indicates a hearing loss, audiological evaluation shall be done as soon as practical. The parents or guardians of the infant shall be provided with information on locations at which medical and audiological follow up can be obtained.

B. The office shall consult with the advisory council and implement the program.

C. The office shall develop a system for the collection of data, determine the cost-effectiveness of the program and disseminate statistical reports to the Louisiana Commission for the Deaf,

D. The office, in cooperation with the state Department of Education, shall develop a plan to coordinate early educational and audiological services for infants identified as bearing impaired.

E. The office shall follow current practices and applicable guidelines that are currently utilized in Louisiana and will consider practices and guidelines that may be established by the National Institute of Deafness and other Communication Disorders (NIDCD).

2265. Advisory council creation; membership; terms; quorum; compensation

A. There is hereby created an advisory council for the program of early identification of hearing impaired infants. The council shall consist of fourteen members as follows:

(1) An otolaryngologist or otologist.

(2) An audiologist with extensive experience in evaluating infants.

(3) A neonatologist.

(4) A pediatrician.

(5) A deaf person

(6) A hospital administrator

(7) A speech and language pathologist

(8) A school teacher or administrator certified in education of the deaf.

(9) A parent of an oral hearing impaired child.

(10) A parent of a hearing impaired child utilizing total communication.

(11) A representative of the state Department of Education designated by the superintendent of education.

(12) A representative of the office designated by the assistant secretary of the office.

(13) A representative from the Louisiana Commission for the Deaf.

(14) A representative from the Louisiana Association of the Deaf.

B. Members of the council in accordance with R.S. 46;2265 (A)(1) through (10) and RS. 46;2265 (A)(13) through (14) shall be appointed by the governor, subject to Senate Confirmation, Other members are not subject to senate confirmation.

C. Members of the council representing offices and departments of state government shall serve a four-year term concurrent with that of the governor. Other members shall serve three-year terms, except that in making the initial appointments, four members shall be appointed for a one-year term. Four shall be appointed for two-year terms. and four shall be appointed for three-year terms. No member may serve more than two consecutive terms.

D. Each member shall serve without compensation.

E. A majority of the members of the council shall constitute a quorum for the transaction of all business.

F. The members of the committee shall elect from their membership a chairman and a vice chairman.

2266. Powers. duties, functions of the advisory council

The advisory council shall:

(1) Advise and recommend risk factors or criteria for infants who are at risk of bearing impairments and infants at risk of developing a progressive bearing impairment.

(2) Advise the office as to bearing screening, setting standards for the program, monitoring and reviewing the program, and providing quality assurance for the program.

(3) Advise the office as to integrating the program for early identification of bearing impaired infants with existing medical, audiological, and early infant education programs.

(4) Advise the office as to materials to be distributed to the public concerning hearing.

(5) Advise the office on the implementation of the program for early identification and follow up of infants at risk. hearing impaired infants, and infants who are at risk of developing a progressive hearing impairment.

2267. Effective date; rules and regulations

The office of public health shall, by July 1, 2000 adopt rules and regulations necessary to implement the program in accordance with the Administrative Procedure Act.

Approved by the Governor.

A true copy;

W. Fox McKeithen; Secretary of State

Appendix A2

[DHH/OPH Rules and Regulations relevant to ACT 653 of 1999- approved 2002]

Universal Newborn Hearing Screening

Department of Health and Hospitals
Office of Public Health

Identification of Hearing Impairment in Infants (LAC 48:V.Chapter 22)

In accordance with the applicable provision of the Administrative Procedure Act, R.S. 49:950 et seq. and the Identification of Hearing Impairment in Infants R.S. 46:2261 et seq., notice is hereby given that the Department of Health and Hospitals, Office of Public Health intends to adopt procedures for the screening of infants to identify hearing impairment, testing of all newborns and referral of newborns failing screening for appropriate follow-up services and ensure proper information distribution to parents, primary care physicians and interested groups.

Louisiana's Act 417 of 1992 mandated hearing screening of all HIGH-RISK infants and rules and regulations were adopted to implement the program in accordance with the Administrative Procedure Act. **On July 1, 1999, Act 417 was amended by Act 653 of 1999 to require UNIVERSAL newborn hearing screening or the hearing screening of all newborn infants, rather than only the infants with high-risk factors.**

It is necessary that new rules be adopted to allow for the proper implementation of the amended legislation of Act 653, to allow for implementation of statewide, universal newborn hearing screening.

Title 48

PUBLIC HEALTH-GENERAL

Part V. Preventive Health Services

Subpart 7. Maternal and Child Health Services

Chapter 22. Identification of Hearing Impairment in Infants

2201. Definitions

Advisory Council--the 14 member council created pursuant to R.S. 46:2265.

Audiologist--an individual licensed to practice audiology by the Louisiana Board of Examiners for Speech Pathology and Audiology.

Auditory Brainstem Response (ABR)--the synchronous electrical response elicited from the auditory nervous system within 20 msec after stimulation and its measurement as used for the detection of hearing loss.

Department--the Department of Health and Hospitals.

Discharge--release from the premises of a medical care facility.

Evoked Otoacoustic Emissions (EOAE)--acoustic echoes, evoked in response to acoustic stimuli, produced by the inner ear and measured by a microphone in the ear canal for the detection of hearing loss.

Hearing Screening--using procedures approved by the office to identify infants in need of diagnostic audiological assessment.

Infants at Risk--those infants who are at risk for hearing loss because they have one or more risk factors as indicated in R.S. 46:2263.

Office--the Office of Public Health within the department.

Other Birthing Site--any site of birth other than a hospital.

Other Risk Factors--any other condition(s) in addition to the factors cited in R.S. 46:2263 added by the office upon recommendation of the advisory council.

Other Screening Device--a device pre-approved in writing by the office, comparable to or better than auditory brainstem response testing.

Program--*The Hearing, Speech and Vision Program* within the office.

Risk Registry--will be the data base kept by the office of all infants identified as high risk for hearing loss.

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1430 (November 1993). amended LR 28:0000 (April 2002).

2203. Program for Identification of Hearing Loss in Infants

A. The program will include the following:

1. The office will require a newborn hearing screening report to be used by the hospitals to report hearing screening results and risk status on all newborns to the risk registry. This form will include written material regarding hearing loss and a toll-free hotline phone number (V/TDD).

2. The office will maintain a risk registry to include information reported on the newborn hearing screening report.

3. The office will notify parents of infants at risk of available follow-up services.

4. The risk registry will include periodic notification to parents of recommended procedures for infants and children at risk for progressive hearing loss.

5. The risk registry will include information on infants diagnosed with hearing loss.

6. The office will provide for a toll-free hotline service for parents and professionals to utilize to obtain information about the program and related services. This hotline will be accessible by voice or TDD.

B. Implementation

1. All birthing sites in Louisiana must be in compliance with this act by March 1, 2002

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1431 (November 1993), amended LR 28:0000 (April 2002).

2205. Procedures for Hospitals

A. Hospitals shall complete the newborn screening report, using the at risk criteria provided by the office on all live births.

B. Hospitals shall conduct hearing screening on all newborn before discharge.

C. Hospitals shall record the results of the hearing screening on the newborn hearing screening report.

D. Hospitals shall disseminate copies of the newborn hearing screening report to the parent, the office (within 14 calendar days of discharge), and the infant's primary health care provider.

E. If an infant is born in one hospital and transferred to one or more hospital(s), the last hospital to which the infant is transferred before being discharged into the care of a parent, or guardian for purposes other than transport, must complete the newborn infant hearing report and perform the hearing screening.

F. If an infant is to be placed for adoption and is to be transferred to another hospital for adoption, the hospital at which the infant is born is to complete the newborn hearing

screening report and perform the hearing screening (unless 2205. E above applies). The parent copy of the newborn hearing screening report shall be sent to the guardian.

G. Referrals for infants failing the hospital screening process must be made within seven days of discharge to the infant's primary health care provider and a licensed audiologist.

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1431 (November 1993) amended LR 28:0000 (April 2002).

2207. Procedures for Other (Alternative) Birthing Sites

A. When the infant is born outside the hospital, the person filling out the birth certificate shall complete the newborn hearing screening report.

B. Hearing screening shall be performed at the alternative birthing site before discharge. The results of the screening shall be recorded on the newborn hearing screening report.

C. The person completing the newborn hearing screening report shall disseminate the copies to the parent, primary health care provider, and the office (within 14 calendar days).

D. Referrals for infants who are unable to be tested at the birthing site or who fail the alternative birthing site screening process must be made within seven days of discharge to the infant's primary health care provider and a licensed audiologist.

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1431 (November 1993) amended LR 28:0000 (April 2002).

2209. Hearing Screening Procedures

A. Personnel. Hearing screening will only be performed by:

1. Board eligible or board certified physicians with special training in auditory brainstem response testing and/or otoacoustic emissions and in infant hearing testing. Evidence of training must be submitted to the office.

2. Audiologists licensed by the Louisiana Board of Examiners for Speech Pathology and Audiology with special training in auditory brainstem response testing and/or otoacoustic emissions testing and in infant hearing testing. Evidence of training must be submitted to the office.

3. Persons trained and supervised by personnel meeting requirements for 2209.A.1 or 2 above.

A. A board-certified or board-eligible physician or licensed audiologist who is supervising another individual performing hearing screening must at least be accessible by telephone while the screenings are being performed, review a percentage of the screening documentation and copies of the newborn hearing screening report and perform periodic direct observation of each individual at least once per month as they perform hearing screenings. After an individual supervised by an audiologist or physician has performed hearing screening under the above supervision for one year, direct observation every three months is required.

NOTE: To minimize liability it is recommended that the standard for special training be by an accredited medical or educational institution and include sufficient practicum for proficiency. Any deviation from this recommended standard may increase liability.

B. Test Procedures. The following test procedures are the only acceptable methods for use in infant hearing screening:

1. Auditory Brainstem Response (ABR) either automated or non-automated.
2. Evoked Otoacoustic Emission (EOAE)

3. Test levels, failure criteria and all other test parameters are set by protocols established by the office, upon recommendations of the State Advisory Council.

C. Test Environment. The facility providing the hearing screening tests shall make all efforts possible to insure testing is conducted in a quiet environment.

D. Calibration of Equipment, Hearing screening equipment shall be calibrated annually and documentation maintained at the screening site.

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1431 (November 1993) amended LR 28:0000 (April 2002).

2210. REFERRAL AND FOLLOW-UP

A. Referrals for infants failing screening must be made to the infant's primary care physician and a licensed audiologist within 7 days of discharge by the birthing center.

B. Appropriate protocols and standards for diagnostic evaluations to determine hearing loss shall be established by the office, upon recommendations of the State Advisory Council. AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267. HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1431 (November 1993) amended LR 28:0000 (April 2002).

2211. Confidentiality of Information

All information on the individual newborn hearing screening report is considered confidential and cannot be released by the office, the hospital or the primary health care facility without the parent or guardian's written informed consent.

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19: 1431 (November 1993) amended LR 28:0000 (April 2002).

2213. Risk Registry and Tracking

A. The office will maintain a risk registry to include information on all live births and infants identified as at risk for hearing loss.

B. The office will track at-risk infants who fail or do not receive hearing screening prior to hospital discharge. Assistance will be provided for service referrals when necessary.

C. The office will track and notify parents of infants and children at risk for progressive loss of the appropriate procedures for follow-up testing and monitoring of their child's hearing until age 5.

D. The office will develop a system of reporting diagnosis of hearing loss by primary healthcare providers, audiologists, and parents for children up to age 5.

E. The office will disseminate statistical reports regarding the number of infants tested and the number with diagnosed hearing loss to the Louisiana commission for the Deaf, the Louisiana School for the Deaf, the Department of Education, and other interested parties on an annual basis.

F. Infants and children diagnosed with hearing loss shall be referred to appropriate agencies for rehabilitation and education services parental/caregiver consent. For infants and toddlers, up to age 3 with diagnosed hearing loss, referral to Early Steps shall be made for early intervention services.

G. Non-compliance and penalties:

1. The State Advisory Council shall recommend to the office methods of

monitoring hospitals, physicians and audiologists for compliance with all sections of this statute.

2. The State Advisory Council shall report any hospital, physician or audiologist found to be non-compliant to the appropriate licensing, regulatory or other appropriate agency.

AUTHORITY NOTE: Promulgated in accordance with R.S. 46:2261-2267.

HISTORICAL NOTE: Promulgated by the Department of Health and Hospitals, Office of Public Health, LR 19:1432 (November 1993) amended LR 28:0000 (April 2002).

David W. Hood
Secretary

**Appendix A3:
Hearing Aid Legislation
Enrolled as ACT No. 816
Regular Session, 2003
SENATE BILL NO. 408
BY SENATORS GAUTREAUX AND HINES AND REPRESENTATIVES FAUCHEUX, MURRAY
AND PEYCHAUD
AN ACT**

To enact R.S. 22:215.24, relative to health insurance; to provide hearing aid coverage for minor children; and to provide for related matters.

Be it enacted by the Legislature of Louisiana: Section 1. R.S. 22:215.24 is hereby enacted to read as follows:

§215.24. Hearing aid coverage for minor child

R.S. 22:215.24 is all new law.

A. As used in this Section, "hearing aid" shall mean a non-disposable device that is of a design and circuitry to optimize audibility and listening skills in the environment commonly experienced by children.

B. This Section shall apply to the following entities:

(1) Insurers and nonprofit health service plans, including the office of group benefits, that provide hospital, medical, or surgical benefits to individuals or groups on an expense-incurred basis under health insurance policies or contracts that are issued or delivered in this state.

(2) Health maintenance organizations as defined and licensed pursuant to Part XII of Chapter 2 of this Title that provide hospital, medical, or surgical benefits to individuals or groups under contracts that are issued or delivered in this state.

C.(1) Notwithstanding the provisions of Act No. 1115 which originated as House Bill No. 1606 of the 2003 Regular Session of the Louisiana Legislature to the contrary, an entity subject to this Section shall provide coverage for hearing aids for a child under the age of eighteen who is covered under a policy or contract of insurance if the hearing aids are fitted and dispensed by a licensed audiologist or licensed hearing aid specialist following medical clearance by a physician licensed to practice medicine and an audiological evaluation medically appropriate to the age of the child.

(2)(i) An entity subject to this Section may limit the benefit payable under Paragraph (1) of this Subsection to **one thousand and four hundred dollars per hearing aid for each hearing-impaired ear** every thirty-six months.

(ii) An insured or enrolled individual may choose a hearing aid that is priced higher than the benefit payable under this Subsection and may pay the difference between the price of the hearing aid and the benefit payable under this Subsection without financial or contractual penalty to the provider of the hearing aid.

(iii) In the case of a health insurer or health maintenance organization that administers benefits according to contracts with health care providers, hearing aids covered pursuant to this Section shall be obtained from health care providers contracted with the health insurer or health maintenance organization. Such providers shall be subject to the same contracting and credentialing requirements that apply to other contracted health care providers.

D. This Section does not prohibit an entity subject to the provisions of this Section from providing coverage that is greater or more favorable to an insured or enrolled individual than the coverage required under this Section.

E. The provisions of this Section shall apply to any new policy, contract, program, or plan issued by an entity subject to the provisions of this Section on or after January 1, 2004. Any such policy, contract, program, or plan in effect prior to January 1, 2004 shall convert to the provisions of this Section on or before the renewal date thereof but in no event later than January 1, 2005. Any policy affected by the provisions of this Section shall apply to an insured or participant under such policy, contract, program or plan whether or not the hearing impairment is a pre-existing condition of the insured or participant.

F. The provisions of this Section shall not apply to individually underwritten, guaranteed renewable limited benefit health insurance policies.

Appendix B: Joint Committee on Infant Hearing

1. Joint Committee on Infant Hearing 2007 Position Paper Summary
2. Risk Factors Associated with Permanent Congenital, Delayed-onset or Progressive Hearing loss in Childhood

Appendix B1:

Joint Committee on Infant Hearing 2007 Summary

Following are the principles of the Joint Committee on Infant Hearing (JCIH) 2007 Position Statement:

- *All infants will have access to a newborn hearing screening test using physiologic measures before 1 month of age.*
- *All infants who do not pass the initial hearing screening and the subsequent rescreening should have appropriate diagnostic audiologic evaluation by an audiologist trained in infant testing and a medical evaluation to confirm the presence of hearing loss before 3 months of age.*
- *All infants with confirmed permanent hearing loss should receive intervention service including amplification if warranted before 6 months of age.*
- *A simplified, single point of entry into an intervention system appropriate to children with hearing loss is optimal.*
- *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.*
- *The child and family should have immediate access to high-quality technology, including hearing aids, cochlear implants, and other assistive devices when appropriate.*
- *All infants and children should be monitored for hearing loss in the medical home. Continued assessment of hearing and communication development should be provided by appropriate providers to all children with or without risk indicators for hearing loss at specified intervals.*
- *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.*

Appendix B2:

RISK INDICATORS ASSOCIATED WITH PERMANENT CONGENITAL, DELAYED-ONSET OR PROGRESSIVE HEARING LOSS IN CHILDHOOD

(Joint Committee on Infant Hearing Position Statement, 2007)

The timing and number of hearing reevaluations for children with risk factors should be **customized and individualized** depending on the relative likelihood of a subsequent delayed-onset hearing loss.

Risk indicators that are in bold print are of greater concern for delayed-onset hearing loss and will need close audiologic monitoring. The previous 2000 JCIH position statement **recommended every 6 months for the first three years.**

Infants who pass the neonatal screening but have any of the other risk factor should have **at least 1 diagnostic audiology assessment by 24 to 30 months of age.**

Risk Indicators:

1. **Caregiver concern** regarding hearing, speech, language, or developmental delay.
2. **Family history** of permanent childhood hearing loss. If a blood relative of the infant had a permanent hearing loss from birth or which began in early childhood and needed a hearing aid or special schooling for the hearing-impaired. This DOES NOT include hearing loss due to illness, ear infections, or aging.
3. Neonatal intensive care of more than 5 days or any of the following regardless of length of stay: **ECMO**, assisted ventilation, exposure to ototoxic medications (gentamicin and tobramycin) or loop diuretics (Furosemide/Lasix), and hyperbilirubinemia that requires exchange transfusion.
4. In utero infections, such as **CMV**, herpes, rubella, syphilis, and toxoplasmosis.
5. Craniofacial anomalies, including those that involve the pinna, ear canal, ear tags, ear pits, and temporal bone anomalies.
6. Physical findings, such as white forelock, that are associated with a syndrome known to include a sensorineural or permanent conductive hearing loss.

7. Syndromes associated with hearing loss or progressive or late-onset hearing loss, such as neurofibromatosis, osteopetrosis, and Usher syndrome; other frequently identified syndromes include Waardenburg, Alport, Pendred, and Jervell and Lange-Nielson.

8. Neurodegenerative disorders, such as Hunter syndrome, or sensory motor neuropathies, such as Friedreich ataxia and Charcot-Marie-Tooth syndrome.

9. Culture-positive postnatal infections associated with sensorineural hearing loss, including confirmed bacterial and viral (especially herpes viruses and varicella) meningitis.

10. Head trauma, especially basal skull/temporal bone fracture that requires hospitalization.

11. Chemotherapy.

APPENDIX 1 Algorithm for Hearing Screening. Available at:
<http://www.medicalhomeinfo.org/screening/Screen%20Materials/Algorithm.pdf>

- PEDIATRICS Volume 120, Number 4, October 2007

Appendix C: Forms Needed For Supervision

1. Sample Parent Letter
2. Sample Policy and Procedures
3. Competency Checklists
4. Brochure Request Forms

Appendix C1:

SAMPLE

Information Letter to Parents

Dear Parents,

Your baby's hearing has been screened. The purpose of the hospital hearing screening program is to facilitate early detection of hearing loss that will be detrimental to the development of normal speech and language.

The results of the hearing screening completed on your baby are:

- Your baby passed the screening and no further testing is indicated at this time. This does not mean that your child cannot develop a hearing problem later in life. Some children with recurrent ear infections, serious infections, chronic illness or family history of hearing loss, will need follow-up testing later.

- Your baby did not pass the initial screening; therefore, further testing is needed. Some reasons a baby may require a second screening include fluid behind the eardrum, an ear canal blocked with debris from the delivery, or a possible hearing problem. Upon discharge, you will be given a follow-up appointment for a second hearing test in approximately 2 weeks. This appointment will be very important to rule out hearing loss.

- Your baby has passed the hearing screening; however, there is some birth history that has placed your baby at risk for hearing loss. We are recommending to you and your baby's pediatrician that a hearing re-evaluation be scheduled for 6 months.

If you have any questions please call the Audiology Department.

SAMPLE

Policy and Procedures for Newborn Hearing Screening

Purpose: To Screen all babies born at _____ Hospital prior to discharge from the hospital.

1. Scrub In:

- Begin by washing hands according to hospital protocol
- Remove rings and watch (jewelry is not to be worn when handling babies)
- Put on clean gloves and gown

2. Obtain hearing screening requests:

- Determine via nursery census babies needing screening
- Test any new babies or babies needing re-screening due to refer on screening test number 1
- From baby's chart, retrieve the state pink hearing screening form

3. Prioritize infants to be tested:

- Begin with babies that are in danger of being discharged without testing
- Next, test any babies that did not pass the day before. **We always want to retest a baby if possible (test at least 2 times, but not more than 4 times)**
- Test any baby that can be tested...don't assume they will be there the next day
- If nurses are doing their assessments, ask permission before taking the baby
- If pediatricians are making rounds ALWAYS immediately give the baby to the pediatrician, even if you are in the middle of testing
- If the baby is under a bilirubin light, ask the nurse if it is ok to take the baby out from under the light for testing
- If you have a baby that is in need of testing, but is moving too much: try wrapping tightly, put a blanket over the bassinet to block out some light, give the baby a pacifier if he has one, or put a clean glove on and allow the baby to suck on your pinkie finger
- If a baby has been readmitted, the baby must be retested even if they passed their original newborn hearing screening
- Babies who do not receive testing because of being transferred; still need the pink sheet completed. Mark on the pink sheet the "transferred to" box and please fill out hospital of transfer. **Be sure to indicate where baby is being transferred to.**
- Babies who are transferred into this hospital will be treated as babies born at this hospital in regards to hearing screening

4. Begin testing:

- Pull all paperwork on baby you are testing
- Begin testing (refer to OAE and ABR instructions for detailed information on running test and troubleshooting guide)
- Do not attempt to get a “pass” more than 4 times

5. Retrieving baby from the room:

- There will be times when the baby is not in the nursery and you will need to retrieve baby from the mom. Explain to mom that you are going to take the baby for hearing screening. Reassure her that it is an easy test that takes 15-30 minutes and the baby will probably remain sleeping throughout the entire test

6. Parents who refuse testing:

- Parents must sign and date “refusal to test” form. This form should be photocopied. The original should go in the Audiology folder kept in the nursery, and the copied form should be placed in the baby’s chart

7. Paperwork if baby passes:

- Fill out Audiology log sheet, complete with all identifying information and results
- Fill out pink state hearing screening form and date, check all appropriate information
- Place state hearing screening form in the baby’s chart
- Complete Hearing Screening Progress Note in medical chart
- Log baby’s results in the nursery birthing log
- Complete billing sheet

8. Paperwork if baby refers:

- Fill out Audiology log sheet, complete with all identifying information and results
- DO NOT complete pink state hearing screening form – form will be completed at 2nd screening attempt
- Place state hearing screening form in baby’s chart for the next screener to complete
- Complete Hearing Screening Progress Note in medical chart
- Log baby’s results in the nursery birthing log
- Complete billing sheet
- If baby referred, it is mandated that the baby have a follow-up appointment scheduled upon discharge. Call 222-3333 and schedule the baby for an outpatient appointment for 2-4 weeks after discharge
- Fill out section on pink form with follow-up information
- Give the parents “Your Baby Needs Another Test” brochure with all of our clinic information detailed on it

9. Equipment Issues:

- If you have any questions or problems while testing, I am always available to you by phone at 225-444-5555. You may refer to the troubleshooting guide for help as well. The equipment manufacturer is also available at 800-666-7777

Appendix C3:

SAMPLE

Annual Competency Evaluation for Hearing Screening Technicians

Hospital Name: _____

Screeener's Name: _____

Hospital Supervisor's Name: _____

P = Pass; NR = Needs Remediation; DNO = Did Not Observe

Date of Observation	PERFORMANCE VALIDATION **	Scrub in according to hospital protocol	Obtain hearing screening requests	Select infant appropriate for screening	Prepare Infant	Use of Equipment/run screening procedure	Troubleshoots referrals	Shut down and storage of equipment	Paperwork and reporting of results	SCREENER INITIALS	SUPERVISOR INITIALS

**Performance Validation: DO=Direct Observation; RR=Review of Records; OT=Oral Test

Early Hearing Detection and Intervention (EHDI) Program

Request for Hearing Screening Awareness Brochures (for expectant mothers)
Request for Hearing Screening Refer Brochures (for families of babies who refer from the Hospital Newborn Hearing Screening)

Items Requested:

Number requested

- | | |
|---|------------------------|
| <input type="checkbox"/> Can Your Baby Hear? | English version_____ |
| <input type="checkbox"/> Can Your Baby Hear? | Spanish version_____ |
| <input type="checkbox"/> Your Baby Needs Another Hearing Test | English version _____ |
| <input type="checkbox"/> Your Baby Needs Another Hearing Test | Spanish version_____ |
| <input type="checkbox"/> Roadmap for Families | Eng/Span combined ____ |

Send requested brochures/forms to:

Name: _____ Title: _____

Facility: _____

Address: _____

Phone: _____

E-mail: _____

Date Requested: _____

Mail or Fax requests to:

Dawne Arnold
Statistical Technician
DHH/OPH
Hearing, Speech & Vision Program
1450 L & A Road
Metairie, LA 70001
Fax: 504-568-5854
Phone: 504-568-5028