

Louisiana Freestanding Birth Centers

Newborn Hearing Screening Guidelines

Louisiana Early Hearing Detection and Intervention



Louisiana Department of Health | Office of Public Health | Bureau of Family Health



TABLE OF CONTENTS

| | |
|--|----|
| Introduction | 3 |
| Hearing Screening Program Staff Qualifications | 4 |
| Newborn Hearing Screening Protocols and Procedures | 6 |
| Documentation and Reporting Through the Louisiana Electronic Event Registration System | 7 |
| Screening Technology | 8 |
| Outpatient Rescreening for Infants Needing Further Testing | 9 |
| Communication with Families | 10 |

INTRODUCTION

Each year, approximately 6,000 babies are born in the United States with permanent hearing loss. According to the [National Institute on Deafness and Communication Disorders \(NIDCD\)](#)¹, every year in the United States two to three children out of every 1,000 are born with detectable hearing loss in one or both ears. Hearing loss is considered one of the most frequently occurring birth conditions. Additionally, another two to three children per 1,000 will acquire a hearing loss after birth.

This document was designed to assist freestanding birth centers in developing and implementing quality hearing screening programs that are based upon best practice in newborn hearing screening (as established by the [Joint Committee on Infant Hearing](#)², Louisiana law and rules and regulations of the legislation.

The Louisiana Department of Health, Office of Public Health, Bureau of Family Health is responsible for the Louisiana Early Hearing Detection and Intervention program which supports coordinated systems of care that ensure families of babies and children who are deaf or hard-of-hearing (D/HH) receive appropriate and timely services. These services include hearing screening, diagnosis, early intervention and family-to-family support. Please visit the Louisiana Early Hearing Detection and Intervention [website](#) for more information³.

The Louisiana Early Hearing Detection and Intervention program includes:

- Universal newborn hearing screening
- Follow-up screening for infants who do not pass the initial screening
- Diagnostic hearing evaluation
- Enrollment into early intervention services
- Data management/surveillance

Legislation and Rules

In 2002, the Louisiana legislation, [Identification of Hearing Loss in Infants](#)⁴, mandated hearing screening of newborns prior to discharge from birthing facilities and reporting of results to the Office of Public Health. The same legislation also created a fourteen-member advisory council to advise and assist the Office of Public Health. The advisory council consists of representatives from different disciplines of the health and education communities, including a/an:

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| • Otolaryngologist or otologist | • Teacher/administrator certified in education of the deaf |
| • Neonatologist | • Parent of an oral deaf or hard-of-hearing child |
| • Pediatrician | • Parent of a deaf or hard-of-hearing child using total communication |
| • Hospital administrator | • Deaf person |
| • Audiologist | • Representative from Louisiana Commission for the Deaf |
| • Speech/language pathologist | • Representative from Louisiana Association of the Deaf |

¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10278076/>

² <https://www.jcih.org/>

³ <https://ldh.la.gov/page/LouisianaEHD/>

⁴ <https://legis.la.gov/Legis/Law.aspx?p=y&d=100582>

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|---|--|
| <ul style="list-style-type: none"> • Representative of Louisiana Department of Education | <ul style="list-style-type: none"> • Representative of the Office [of Public Health] designated by the Assistant Secretary of the Office [of Public Health] |
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For more information, see [Title 48, Volume 2](#)⁵.

HEARING SCREENING PROGRAM STAFF QUALIFICATIONS

As required by [law](#)⁶, a newborn screening program must have appropriately trained staff to manage the program and a screening program supervisor to lead the team. Appropriate training and supervision of all screening personnel is critical to ensure an efficient and accurate screening program. Screening must be performed by either the program supervisor or screeners trained and supervised by the program supervisor.

Hearing Screening Program Supervisor Qualifications

An individual who is eligible to supervise the newborn hearing screening program will submit evidence of training by fax at (504) 568-5854 or email at laehdi@la.gov to the Bureau of Family Health, Early Hearing Detection and Intervention program, *and* meet one of the following qualifications:

1. Board-eligible or board-certified physicians with special training in auditory brainstem response testing and/or otoacoustic emissions and in infant hearing testing; or
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.

Hearing Screening Program Supervisor Responsibilities

General supervision requirements of trained screeners include:

- Supervisor is accessible to trained screeners by telephone while screenings are being performed.
- Supervisor will review a percentage of screening documentation and copies of the [newborn hearing screening report \(NHSR\)](#).
- Supervisor will perform periodic direct observation* of each screener at least once per month as they perform hearing screenings for one year.
- Supervisor will perform direct observation* of each screener every three months following one year of observation as described above.

*Examples of direct observations that qualify to meet this requirement include review of newborn hearing screening report forms, competency training, screening competency checks, meetings to discuss screening and procedures, etc.

Supervisor Led Education and Training of Screeners:

- Identify screener roles, responsibilities, assigned tasks and scope of practice
- Provide competency-based hands-on training through formal instruction

⁵ <https://www.doa.la.gov/media/52pfpizc/48v2.pdf>

⁶ <https://www.doa.la.gov/media/52pfpizc/48v2.pdf>

- Demonstrate basic screening equipment operation and address all aspects of screening accountabilities, including knowledge of and competence with:
 - Basic anatomy and physiology of the ear and nature of responses being measured
 - Patient and non-patient factors that influence responses
 - Screening procedures, documentation and reporting
 - Proper and effective communication for providing accurate and appropriate information to families to ensure:
 - Understanding of hearing screening results
 - The importance of follow-up testing
 - The receipt of appropriate follow-up and resource information
 - Facility requisites, such as confidentiality requirements, patient bill of rights, safety and infection control procedures, emergency procedures, risk management and incident reporting procedures

Screener Assessment:

- Submit annual documentation of competency assessments for each individual screener by fax at (504) 568-5854 or email at laehdi@la.gov to the Bureau of Family Health, Early Hearing Detection and Intervention program.
- Submit a one-time certificate of completion for each individual screener of the [interactive web-based Newborn Hearing Screening Training Curriculum⁷](#) developed by the National Center for Hearing Assessment and Management (NCHAM). American Academy of Audiology (AAA) CEUs are available for this course, three hours (.3 CEUs).

Data Management:

- Participate in LA EHDI-Information System (LA EHDI-IS) training with Bureau of Family Health, Early Hearing Detection and Intervention staff.
- Ensure complete, accurate, timely reporting of hearing screening results or reason for no screen.
- Utilize LA EHDI-IS to oversee data management.
- Verify accuracy of newborn hearing screening results reported to the Bureau of Family Health, Early Hearing Detection and Intervention program monthly by comparing LA EHDI-IS birth center reports to newborn hearing screening report forms.
- Provide for security and privacy of individual patient data.

⁷ <https://www.infanthearing.org/nhstc/index.html>

NEWBORN HEARING SCREENING PROTOCOLS AND PROCEDURES

Informed Consent

Consent for newborn hearing screening should be obtained at one of the prenatal visits. It is important that parents are given information in advance (e.g., in pre-admission packet, at prenatal classes) about the hearing screening process. Brochures detailing what families need to know are available in [English](#)⁸ and [Spanish](#)⁹ on the Bureau of Family Health website at ldh.la.gov/page/LouisianaEHDl.

Screening Refusal

Parents have the right to refuse a hearing screening. If a parent declines testing, the birth center should document “Reason Not Screened—Parents Declined Testing” on the newborn hearing screening report (NHSR) form. Parent signature is required on the NHSR form and a copy should be retained in the infant’s medical record.

Screening Age

For efficient screening and accurate results, it is recommended that the initial screening take place when the newborn is at least 24 hours old. This time allows for any birthing debris in the ear canal to dry. Birth centers may choose to perform the initial screening at the first follow-up visit.

*If the newborn passes the first hearing screen in both ears, the screening process is complete.

No more than two good screening sessions should be completed. A good screening session is where the baby is quiet, the room is quiet and you have acceptable probe/headphone placement. The screening should include testing on both ears.

Outpatient Repeat Screening for Babies Who Do Not Pass Newborn Hearing Screening

Babies who do not pass the newborn hearing screening should be rescreened as an outpatient before six weeks of age. For additional information about outpatient rescreening, refer to the Outpatient Hearing Screening Guidelines on the Bureau of Family Health website at ldh.la.gov/page/LouisianaEHDl.

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| Pass = Both ears pass during the same screening session |
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⁸ https://ldh.la.gov/assets/oph/Center-PHCH/Center-PH/cshs/EHDI/EHDIHearingScreeningForm_Final_OnePage_June2019.pdf

⁹ https://ldh.la.gov/assets/oph/Center-PHCH/Center-PH/cshs/EHDI/SPANISH_BW_EHDIHearingScreeningFormpg4_8_2020.pdf

DOCUMENTATION AND REPORTING THROUGH THE LOUISIANA ELECTRONIC EVENT REGISTRATION SYSTEM (LEERS)

When screening is completed, the following information must be recorded on the Newborn Hearing Screening Report form:

- Screening results
- Name of the baby's primary care provider
- Family's cell phone number
- Risk factors

If an infant was not screened: **Indicate screening was not completed, and Reason Not Screened.** The Newborn Hearing Screening Report form should be distributed to parents and the primary care provider, and a copy should be retained in the infant's medical record.

All freestanding birth centers must provide a copy of the Newborn Hearing Screening Report form to the parent and the primary care provider, and complete the "Hearing" tab in LEERS for every birth within 14 days, as required by Louisiana legislation.

Infants with Physical Anomalies

If screening is unable to be completed due to physical anomalies such as microtia or atresia, indicate Further Testing Needed for ear(s) unable to be screened. Follow-up testing should be scheduled with a pediatric audiologist.

Further Testing Needed

When results indicate further testing is needed, an outpatient follow-up hearing testing appointment should be scheduled and documented on the Newborn Hearing Screening Report form.

Infants with Risk Factors

Documentation of risk factors for delayed-onset or progressive hearing loss is required on the Newborn Hearing Screening Report form. Infants who pass the initial screening but have a risk factor should be seen by an audiologist to have a follow-up hearing test by nine months of age. Testing sooner is suggested if the infant has a risk factor marked with ** on the Newborn Hearing Screening Report form.

Newborns Transferred to another Facility

If an infant is **transferred out** to another facility after birth, the birth center must complete the Newborn Hearing Screening Report tab in LEERS to indicate that the hearing screening was not completed at the birth center by: **Indicating screening was not completed before discharge - Reason Not Screened—Transferred Out to (transfer hospital name).**

Expired Infants

For infants who expire prior to the initial screening, the birth center must complete the Newborn Hearing Screening Report tab in LEERS: **Indicate screening was not completed before discharge - Reason Not Screened—Expired/Deceased.**

For infants who were not screened, indicate Reason Not Screened: equipment failure, infant missed or birth center does not have hearing screening equipment. The birth center should:

- Schedule an outpatient appointment prior to discharge for the initial screening and document the appointment on the Newborn Hearing Screening Report form.
- Provide the family's contact information to the outpatient facility.

SCREENING TECHNOLOGY

Each birth center is responsible for selecting and securing appropriate hearing screening equipment to conduct screening using Auditory Brainstem Response (ABR), either automated or non-automated, and/or Otoacoustic Emissions (OAE) per Louisiana law. Both Auditory Brainstem Response and Otoacoustic Emissions technologies provide noninvasive screening of physiologic activity underlying normal auditory function, are easily performed on newborns and infants, have been successfully used in universal screening of newborns and do not require interpretation by the screener. Either Otoacoustic Emissions, Auditory Brainstem Response or a combination of both (two-stage) is acceptable to conduct newborn hearing screenings.

Auditory Brainstem Response—Measurements are obtained from surface electrodes placed on the infant that record neural activity in response to acoustic stimuli delivered via an earpiece.

Otoacoustic Emissions—Measurements are obtained via a sound stimulus presented through a small probe placed in the infant's ear canal. There are two types of Otoacoustic Emissions technologies: Transient Evoked Otoacoustic Emissions (TEOAE) and Distortion Product Otoacoustic Emissions (DPOAE).

Two-Stage—Screen first with Otoacoustic Emissions; if the infant does not pass, rescreen using Auditory Brainstem Response. Results of both test types should be recorded on the Newborn Hearing Screening Report, but Auditory Brainstem Response results are considered final test results when Otoacoustic Emissions and Auditory Brainstem Response results are not in agreement.

Equipment Management and Calibration

Each center should establish policies and procedures that include the care, use and maintenance of each piece of equipment.

- Hearing screening equipment must be calibrated annually and documentation should be maintained at the site and submitted annually to the Bureau of Family Health, Early Hearing Detection and Intervention program by fax at (504) 568-5854 or email at LAEHDI@la.gov.
- Maintenance and service records should be documented and maintained as per center policy.
- In the event of equipment malfunction, a backup plan should be in place.

OUTPATIENT RESCREENING FOR INFANTS NEEDING FURTHER TESTING

The birth center is responsible for ensuring that a referral for an outpatient rescreening is made when a baby needs further testing after the newborn hearing screening. The appointment should be scheduled prior to discharge, documented on the Newborn Hearing Screening Report form and provided to the parent.

Options for Outpatient Rescreening

- Audiologist providing infant rescreening
- Physician providing infant rescreening
- Birth center, when outpatient rescreening is available

Procedures for Outpatient Rescreening

1. Test both ears, **even if only one ear failed the initial screening**
2. Report results to the Bureau of Family Health, Early Hearing Detection and Intervention program via a [Follow-up Services Report form](#)¹⁰ by fax at (504) 568-5854 or email at LAEHDI@la.gov.

**Report rescreening results to the Bureau of Family Health, Early Hearing Detection and Intervention program on a Follow-up Services Report (FSR).
Do NOT change initial screening results in LEERS.**

Ensuring Follow-Up for Infants Needing Further Testing

Facilities should implement the following strategies to help ensure that families are not lost to follow-up when further testing is needed:

- Schedule outpatient follow-up appointment and document on the Newborn Hearing Screening Report form.
- Schedule rescreening before six weeks of age.
- Screen for CMV (cytomegalovirus) or immediately refer to child's primary care provider for [CMV screening](#). CMV screening is time-sensitive. For an accurate diagnosis, all CMV testing (screening and confirmatory testing) must be completed by 21 days of age.

Infants Who Need Additional Testing After the Outpatient Rescreen

For infants who need additional testing after their outpatient rescreen (one ear or both ears), an appointment should be scheduled with a pediatric audiologist for **diagnostic testing** as soon as possible, and documented on the Follow-up Services Report form. **Do not schedule another rescreen.**

For assistance locating a pediatric audiologist in your area, visit [EHDI-PALS](#), an online directory to pediatric audiology services.¹¹

¹⁰ https://ldh.la.gov/assets/oph/Center-PHCH/Center-PH/cshs/EHDI/FollowUpServicesReport_2021.pdf

¹¹ <https://www.ehdi-pals.org/default.aspx#gsc.tab=0>

COMMUNICATION WITH FAMILIES

Information at all stages of the newborn hearing screening and follow-up process should be communicated to the parents and guardians in written and verbal form in the primary language of the home and should be presented in a culturally competent manner.

It is the responsibility of each birth center to secure accommodations and offer translation/interpreter services for families whose primary language is not English/spoken English.

Families who are informed of the outcomes and recommended immediate next steps for additional testing are more likely to follow up. 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 families are informed before, during and after the screening, and have opportunity to ask questions and seek clarification.

Before the Screening

Families may have received education prior to their child's screening through information distributed in prenatal birthing classes, brochures in admission packets, through information shared by their primary care provider (obstetrician, doula, midwife, etc.) or a video on the closed-circuit TV. The Bureau of Family Health has brochures available (English, Spanish) at no cost to the public that provide information about the purpose, process and frequently asked questions related to newborn screening. Brochures may be ordered using the [order form](#)¹² available on our website.

During the Screening

During the screening, and immediately after, it is critical that the screeners know exactly what they should and should not say to the family. When reporting that further hearing testing is needed, parents should be strongly encouraged to attend the follow-up appointment.

After the Screening

- To ensure that parents are aware of results and understand any follow-up necessary, birth centers must:
 1. Provide a verbal explanation of the results
 2. Obtain parent's signature on the Newborn Hearing Screening Report form
 3. Provide a copy of the Newborn Hearing Screening Report form to the parent
- It is the responsibility of each birth center to secure accommodations and offer translation or interpreter services for families whose primary language is not English/spoken English.
- Give the parent details of when and where to go for outpatient testing and a contact number should they have any questions (if further testing is needed).
- Give the parent information for [What Families Need to Know](#)¹³ regarding the risk factors associated with delayed-onset or progressive hearing loss and the need for follow-up by nine months of age (if the infant passes newborn hearing screening).

For any questions, please email LAEHDI@la.gov. To find additional resources for providers and families please visit ldh.la.gov/page/LouisianaEHDI.

¹² <https://forms.gle/W4fvx4WnYn3oWFwQA>

¹³ https://ldh.la.gov/assets/oph/Center-PHCH/Center-PH/cshs/EHDI/EHDI_RiskFactors_FINAL.pdf