

GUIDELINES FOR RESCREENING IN THE MEDICAL HOME FOLLOWING A 'DO NOT PASS' NEWBORN HEARING SCREENING

The following guidelines are for infants who do not pass their initial hospital-based screening and for whom rescreening of hearing is being performed in the medical office rather than rescreening by the hospital-based or audiology outpatient programs.

The concept of performing the very first newborn hearing screening test in the medical home rather than at the hospital or birthing center is not optimal. Newborn hearing screening has been successfully implemented over the past 2 decades, primarily because more than 95% of newborns are delivered in a hospital and have immediate access to a hospital-based program to perform a physiologic test to screen for hearing loss. Any erosion of these successful programs results in the loss of this “captive audience” of newborns, even if the intention is good to perform prompt screening in another setting. This results in a real and measureable risk that babies will not obtain the standard of care, will go unscreened, and subsequently will be lost to follow-up. Furthermore, an exit of families from the hospital-based screening programs results in a loss of the sustainability of this important public health initiative. In addition, the hospital-based institutional commitment to equipment calibration and oversight by qualified audiologists in the hospital setting allow for a quality standard that may be difficult to duplicate when screening is performed in the medical office setting.

Although the first newborn hearing screening is always recommended to be performed at the birth hospital, there may be a rare example when this is impossible and when performing the initial screening in the medical office would be a reasonable alternative, even if not the preferred choice. Examples include babies born at

home and not screened by any program (such as may occur with a midwife or birth attendant), babies whose parents refuse hospital-based screening but later realize the merits of screening and consent to office-based screening, and babies who were inadvertently missed at the hospital for a variety of reasons. If, on these rare occasions, the first newborn hearing screening is performed in the medical office, all of the guidelines noted below concerning equipment needs, screening techniques, follow-up, and reporting of results to state entities would apply and are taken on as the responsibility of the care provider.

It is important to recognize that many state Early Hearing Detection and Intervention (EHDI) programs have a system in place in which children missing newborn hearing screening can access this service. Knowledge of these resources can be instrumental in linking families to the existing state infrastructure.



HEARING SCREENING GUIDELINES FOR MEDICAL HOMES

GUIDELINES AT A GLANCE:

- ✓ Except in rare circumstances, medical homes should NOT conduct the initial newborn hearing screening.
- ✓ Proper equipment (eg, automated auditory brainstem response [AABR]) is required for screening in order NOT to miss auditory neuropathy. For this reason, it is very important that the medical home know what screening equipment is used at local birth facilities.
- ✓ If you are conducting a hearing screening, you are obligated to report the results to the state EHDI program.

If the medical home will be performing a hearing rescreening, the following are essential to a successful screening:

REPORTING

- Rescreening in the medical office comes with an important **obligation to report all** normal and abnormal **screening results** to the state EHDI system (and in some states, it is required by law).
- To find your EHDI state coordinator who can provide information about your state reporting requirements, visit <http://www.infanthearing.org/status/cnhs.html>.

EQUIPMENT

- Rescreening of infants must be performed by a **physiologic measurement**, not by assessing behavioral responses to environmental sounds or noises. Currently, the technology that is most commonly available and affordable for such office-based rescreening is otoacoustic emission (OAE) technology.
- The equipment used for rescreening must be **calibrated by the manufacturer**, with a declaration that the device is capable of separating “pass” from “not-pass” at a level that can detect a hearing loss of at least 30 decibels (dB).
- The equipment must be **maintained and recalibrated on a regular basis (at least annually)** or more frequently if recommended by the manufacturer.
- Babies with auditory neuropathy will pass an OAE screening (normal middle and inner ear function) but not pass an AABR (nerve deficits). If an infant does not pass an AABR screening in the hospital and then passes an OAE screening, it DOES NOT ensure normal hearing. This child must be rescreened with an AABR. If, however, the infant does not pass the OAE screening, then a hearing loss is likely and the infant must be referred immediately for further evaluation.
- Infants who were hospitalized in the neonatal intensive care unit (NICU) are at much higher risk of hearing loss, particularly auditory neuropathy, which can only be determined with an AABR or ABR. These infants should only be screened with an AABR, and if they do not pass, they should be referred to an audiologist with experience with infants to perform a rescreening with an AABR.

PROPER SCREENING TECHNIQUE

- It is best to have a **quiet environment** for office-based testing to minimize the risk of ambient noise interfering with the screening results.
- Office personnel who perform the rescreening should be **trained and experienced** in screening infants and children.
- It is important that the infant is only rescreened at a single visit in the office so that there is no delay in identification of infants with hearing loss. If the infant does not pass the office-based rescreening, then the infant should be referred to a qualified audiologist with pediatric expertise.
- During the rescreening visit, there should be no more than 3 tests of each ear with the OAE probe. If, after 3 probe tests, the ear or ears do not pass, the infant should be referred to a qualified infant audiologist.
- At the time of rescreening, **both ears should always be tested**, even if only one ear did not pass the hospital-based hearing screening test.

COMMUNICATION OF RESULTS TO FAMILY

- Screening results should be conveyed to families in a culturally competent, sensitive manner to ensure understanding.
- The results of hearing screening should be explained to families in a way that conveys that the screening is not a definitive diagnosis so as not to cause undue anxiety but **strongly** encourages the family to take the next appropriate step in adhering with a diagnostic testing.

DELAYED-ONSET HEARING LOSS

- A passing screening result at birth does not ensure that delayed-onset hearing loss will not later be diagnosed.
- Referral for pediatric audiology evaluation should be made when there is caregiver concern about hearing or a delay in the child's language development or when there are identified JCIH risk factors for childhood hearing loss.