

SAMPLE

Hospital Policy and Procedures for Newborn Hearing Screening

PURPOSE:

Undiagnosed congenital hearing loss has been documented to negatively impact language, academic and social development in children. Newborn hearing screening is the first step to early diagnosis and intervention of hearing loss. This document serves as a guideline for implementation of newborn hearing screening to ensure that all babies born at _____Hospital are screened prior to discharge. All infants who fail their hearing screen prior to discharge will be referred for additional testing.

POLICY:

All medically stable newborns will undergo a hearing screening prior to discharge.

Upon admission to _____Hospital, all families will receive printed information from the State of Michigan related to newborn hearing screening. Whenever possible, this information should be provided in the family's native language. Hospital staff should discuss with parents/caregivers the importance of hearing screening.

The family of any newborn who refers on newborn hearing screening will be given written information on the importance of follow up testing in addition to contact information for a rescreen or diagnostic audiology facility.

All newborns admitted to _____Hospital will be screened for high-risk factors by providers prior to discharge.

Screening Personnel/Scope:

Screening is conducted by personnel who have received training and demonstrated competence in (insert appropriate equipment: OAE/A-ABR) testing. Appropriate personnel may include, but are not limited to Registered Nurses, Nurse Externs, Nurse/Medical Assistants, Licensed Practical Nurses, Volunteers, Patient Care Technicians, Audiologists, and Case Coordinators.

Patient Assessment Criteria:

1. All newborn infants delivered and/or admitted to nursery will have a hearing screen.
2. The following are recommended to ensure optimal test conditions:
 - a) Screening is performed while infant is sleeping or quiet.
 - b) The hearing screen should be performed in the nursery as close to discharge as possible, with consideration given to staffing and infant behavior. Screening should **not** be completed before **six hours of age**. Screening done prior to six hours of age with a "refer" result is invalid. The screening should be repeated once the infant is greater than six hours of age.
 - c) The infant should be greater than 34 weeks, post-conceptional age at the time of the screen. If the infant will be discharged before then, screening should be completed as close to discharge as possible.

- d) Likewise, neonates/infants in the Neonatal Intensive Care Unit (NICU) should be screened as close as possible to discharge and no more than five (5) days before anticipated discharge.
 - e) If outer-ear deformities exist, contact infant's attending pediatrician regarding performance of pre-discharge hearing screening (vs. referral for formal audiology evaluation). If available, patient should receive diagnostic ABR evaluation to include bone conduction testing.
 - f) Special consideration is needed for infants receiving potentially ototoxic medications (e.g. Gentamicin, Vancomycin). The screening should not be completed until final 24 hours of antibiotic course or after completion of antibiotics.
3. The medical history for all infants should be reviewed to identify any risk indicators for late onset hearing loss (LOHL). A recommendation for monitoring should be shared with the family verbally and in writing. The infant's pediatrician should also be informed in writing of the recommendation for monitoring. A list of risk indicators from the current position statement of the Joint Committee on Infant Hearing (2007) follows:
- a) Family history of hereditary childhood sensorineural hearing loss.
 - b) In utero infections, such as CMV, rubella, syphilis, herpes and toxoplasmosis.
 - c) Craniofacial anomalies, including those with abnormalities of the pinna and ear canal, ear tags, ear pits and temporal bone anomalies.
 - d) Culture-positive postnatal infections associated with sensorineural hearing loss including confirmed bacterial and viral (especially herpes viruses and varicella) meningitis.
 - e) Hyperbilirubinemia at a serum level requiring exchange transfusion.
 - f) Ototoxic medications, including but not limited to the aminoglycosides, used in multiple courses or in combination with loop diuretics.
 - g) Birth weight less than 1500 grams or gestational age less than 35 weeks.
 - h) Caregiver concern regarding hearing, speech, language or developmental delay.
 - i) 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.
 - j) 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.
 - k) Neurodegenerative disorders, such as Hunter syndrome; or sensory motor neuropathies, such as Friedreich ataxia and Charcot-Marie-Tooth syndrome.

PROCEDURE:

Prioritize infants to be tested:

1. Begin with babies who may be discharged before being screened. Attempt to test any infants eligible for screening as discharge dates and times can be unpredictable.
2. Test any new babies or babies needing a re-screen following a refer result on the initial screening. No more than two screenings should be done before discharge.
3. If a baby has been readmitted, review the reason for readmission. If a risk indicator is present, the baby must be retested even if he/she passed his/her original newborn

hearing screening.

4. 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.
5. Babies who do not receive testing because of being transferred still need the State form completed. Mark the "transfer" box on the card.

Initiation of testing:

1. Inform family that baby will have a hearing screening. Provide the family with the Michigan EHDI brochure (when possible, in the family's native language). Reassure family that this is an easy test which should take no more than 30 minutes.
2. All screening personnel shall follow hand washing and infection control practices before beginning screening including:
 - 1) Begin by washing hands according to hospital protocol.
 - 2) Remove rings and watch (jewelry is not to be worn when handling babies).
 - 3) Put on clean gloves and gown.

Implementation:

1. Set up the Newborn Hearing Screener (to be done at the bedside if needed).
 - a) Assemble supplies.
 - b) Check electrode cable assembly.
 - c) Check acoustic tubes.
 - d) Open the laptop computer.
 - e) Turn on hearing screen equipment.
 - f) Complete the Patient Information Screen.
 - g) Select screening mode.
2. Enter appropriate patient demographics and screening information.
3. Prepare the infant for screening. If needed, prep the infant's skin and dry thoroughly. Wipe in one direction only. If using the skin prep (Nu Prep), wipe off before applying sensor.

If Otoacoustic Emissions (OAE): Screening personnel shall follow the instructions given in the Newborn Hearing Screener User Manual for screening a baby:

1. Changes ear tip for each patient.
2. Selects proper probe size.
3. Prepares newborn for screening.
4. Places probe in baby's ear properly.
5. Selects correct ear to be screened.
6. Initiates the screening test.
7. Runs test on both ears.
8. Troubleshoots probe fit if needed.
9. Pauses test if/when needed.
10. Demonstrate ability to transition from OAE to ABR if applicable.

If Automated Auditory Brainstem Response (A-ABR): Screening personnel shall follow the instructions given in the Newborn Hearing Screener User Manual for screening a baby.

1. Attach sensor cable to sensors. Squeeze the ends of the clip together so that the clip opens, and place on the colored tab portion of the sensor.
2. Place sensor with attached clip on the baby in the proper locations.
3. Attach electrodes to infant:
 - Black (vertex - forehead)

Green (common - mastoid, high cheek or shoulder)

White (nape of neck)

4. Check impedance and adjust sensor connection if necessary.
5. Attach acoustic tube into earphones.
6. Place earphones on baby.
 - Blue transducer - Left ear
 - Red transducer - Right ear
7. Apply ear couplers over infant's ears.
8. Allow infant to fall asleep before proceeding.
9. Press START to begin test.
10. Monitor occasionally. If the test slows or stops, check for myogenic, ambient or excessive interference. Consult the Help tutorial for information on how to alleviate interference.
11. Wait for electronic result on computer.
12. Remove electrodes and the ear couplers from the infant and record results.
13. When screening is complete, discard all disposable supplies, clean wires and transducers and return newborn to mother using proper identification procedures.
14. If unable to complete test due to excessive myogenic activity (i.e., hunger) leave electrode couplers in place, comfort infant and retest infant. Avoid screening time of greater than 60 minutes per infant.
15. Record and communicate results (see below).

Documentation of screening:

1. Document results in Hospital Electronic Health Record.
2. The hearing screen form located in the state newborn screening card will be completed with all requested information including, test date, results and method (OAE/A-ABR) or document an incomplete reason.

Forms will be mailed to the State of Michigan's Newborn Hearing Screening Program at least weekly.
3. The sticker printed from the screener will be placed in the progress notes of the newborn's record. Include all tests that were completed (should be no more than 2).
4. The infant's name, MRN, test date and results and initials of the screener will be logged into the hearing screen log book. (if applicable)
5. Notation will be made on the staff hand-off communication log when the test has been completed.
6. The pediatric providers will document test completion in the discharge summary.
7. Complete billing sheet.

Communicating results with family:

1. Bilateral Pass
 - a) Provide family verbally and in writing the results of the test.
 - b) Make recommendations for monitoring if infant has risk indicator for LOHL.
When needed provide list of pediatric audiology facilities.
2. Bilateral and Unilateral Refer
 - a) Provide family verbally and in writing the results of the test.
 - b) Discuss need for follow up.
 - c) Set up appointments for rescreen or diagnostic testing prior to discharge when possible.

3. If family declines to have hearing screening completed:
 - a) If parents refuse the screening, a “Waiver of Newborn Hearing Screening” must be completed (Attachment A).
 - b) Parents must sign and date “Waiver” form. This form should be placed in the baby’s chart. Document on the state hearing card by marking the “refused” box.

If an infant is unable to be tested for any reason, the mother will be given a letter with required follow-up instructions. Missed tests will be documented in all of the above locations.

Equipment Issues:

If you have any questions or problems while testing you may refer to the troubleshooting guide for help. The equipment manufacturer is also available at (insert manufacturer contact info). In the event of equipment failure, all attempts will be made to have it repaired immediately. If repair cannot be made the manufacturer sales representative will be called for temporary replacement.

Attachment A

Insert Hospital Logo Here	Insert Hospital Address Here
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Birth Date ____/____/____
Newborn's Name _____, _____ <small>(Last) (First)</small>
Patient ID# _____
Today's Date ____/____/____

HEARING SCREENING REFUSAL

Benefits of Newborn Hearing Screening

In order to identify and treat infants with hearing loss as early as possible, a hearing screening is provided as part of the standard care of infants. The test causes no pain to the infant. Hearing loss is the most common birth condition in infants, occurring in 1-3 babies per 1,000. Early identification of hearing loss may prevent negative effects on speech, language, and social development.

I have read the above information about the benefits of newborn hearing screening. I understand the consequences of refusing to have my baby's hearing screened and release my birth hospital, _____, and all related staff from any liability with such request.

I request that the newborn hearing screening test **NOT** be performed for the infant stated above. I fully accept responsibility for choosing not to have the newborn hearing screening performed on my baby.

Parent/Legal Representative NAME (Print)

Witness NAME (Print)

Parent/Legal Representative SIGNATURE

Witness SIGNATURE

Date and Time _____