

SoundBeginnings

# Newborn Hearing Screening



**Hospital/Birthing Facility Guidelines**

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### **Newborn Hearing Screening Coordinator**

Each hospital should have a designated on-site Coordinator of the Newborn Hearing Screening program. The NBHS Coordinator is to oversee the hospital's newborn hearing screening program and report all results and related data to the SoundBeginnings Newborn Hearing Screening Program.

*NBHS Law, KSA 65-1, 157a requires that every child born in the state of Kansas, within five days of birth, shall be given a hearing screening. The results must be provided to KDHE within seven days. (See page eight for full law.)*

### **Newborn Hearing Screening Coordinator Responsibilities**

1. Coordinate or supervise staff providing screening, including ongoing monitoring and training.
2. Contact SoundBeginnings when screening equipment is down or when a new Hearing Screening Coordinator is appointed.
3. Work collaboratively with Birth Clerks to ensure timely accurate submissions.
4. Assure that initial hearing screening results are reported on the birth certificate.
5. Assure that infants who fail the hearing screen prior to discharge are scheduled for an outpatient rescreen. (\*Note: Scheduling an appointment in advance of discharge increases the likelihood of the family returning. Instructing parent/guardian to schedule at a later date or to return on an unspecified date for a healthy-baby check is less successful.)
6. Assure that infants who are not screened prior to hospital discharge are scheduled with an outpatient appointment and notify SoundBeginnings of scheduled date.
7. Assure that outpatient hearing screen results are submitted to SoundBeginnings within the mandated seven days via fax or directly into the state database.
8. Provide missing hearing screen results as requested from SoundBeginnings as provided through the monthly pending email sent by the program consultant.
9. Fax or enter through the state database all NICU results within seven days of screening, as mandated by state regulation.
10. Oversee data management and transfer of data as required, which includes (but is not limited to) completion of Annual Hospital Report at the request of SoundBeginnings and return within the appropriate requested time frame.
11. Contact SoundBeginnings for resources or educational assistance related to screening or for any problems or concerns.

### **Birth Clerk/Registrar or Medical Records Personnel**

Each hospital should have a designated onsite Birth Clerk/Registrar or Medical Records personnel. Birth Clerks/Registrars are expected to enter complete and accurate hearing screening data with the submission of the birth certificate through the VRV system within the state-mandated seven day time frame.

### **Birth Clerk/Registrar or Medical Records Personnel Responsibilities**

1. All initial hearing screen results must be reported on the birth certificate.
2. Birth Clerk/Registrar has seven (7) days to make changes to the initial hearing screening result through VRV. (\*Note: Outpatient screen results should NOT be entered on the birth certificate/VRV system.) *Birth Clerk/Registrar has 14 days to access the record for lab results.*
3. If infant was not screened, use correct code to report reason not screened. (\*Note: If Reason Not Screened = NICU or Transferred, make sure Nursery Status = NICU.)
4. **REQUIRED information** that is often not reported or incorrectly reported on the birth certificate:
  - a. Mother's telephone number
  - b. PCP they will be following up with after discharge.  
(\*Note: do not list a neonatologist as the PCP.)
  - c. Nursery status (well-baby, NICU)
  - d. Screen date
  - e. Hospital transferred to

***Complete and accurate data submission and reporting eliminates unnecessary follow-up by SoundBeginnings and creates less work for all entities involved (NBHS Coordinators, Birth Clerks/Registrars, parents, PCPs, etc.).***

If the birth certificates are missing the required information, the state hearing screening staff will contact you to obtain the information. Missing data and incorrect data will be included on the hospital report that is sent to the hospital hearing screening coordinator and to the hospital administrative staff. Please do not hesitate to contact us if you are submitting the information on the birth certificate. The hearing screening staff can work with the Office of Vital Statistics to see where the glitch might be in importing the information.

### Babies At-Risk for Hearing Loss

**The incidence of congenital bilateral hearing loss in the in the neonatal intensive care unit population: 5/1000.**

Infants who **pass** the neonatal screening but have a **risk factor** should have at least one diagnostic audiology assessment by one year of age, as recommended by the Joint Committee of Infant Hearing (JCIH) to identify infants at risk for delayed onset or progressive hearing loss.

### Babies at risk for hearing loss due to the following reasons:

- NICU stay of five days or longer
- Family history of permanent childhood hearing loss
- Ventilator use
- High bilirubin level that required exchange transfusion
- Infection while you were pregnant (CMV, herpes, rubella, syphilis, toxoplasmosis)
- Head or neck abnormalities (especially involving the outer ear and/or ear canal)
- Medications that may cause hearing loss (for example, some antibiotics)
- Meningitis
- Syndrome that might involve hearing loss
- Neurodegenerative disorder (Hunter syndrome, Friedreich's ataxia, Charcot-Marie-Tooth syndrome)

### Hospital/Birthing center roles:

- Identify infants who have one or more risk indicators
- Provide the family with information about risk factors
- Provide the family with information regarding the high-risk referral related to delayed onset or progressive hearing loss
- Provide medical home with information regarding the high-risk referral
- Report infants with risk factors to state EHDl program, known as SoundBeginnings

### Hearing Screening Birth Certificate

#### Not Screened REASON CODES

If baby was not screened prior to discharge, enter the appropriate reason.

- **C-COULD NOT TEST** used only when the ear is malformed to the extent that a screening cannot be completed due to atresia ear.
- **S-SCHEDULED** used when the equipment is malfunctioning and an appointment is made to return to rescreen.
- **O-OTHER** used only when equipment is malfunctioning and the infant did not get scheduled.
- **T-TRANSFERRED** used when baby is transferred to another hospital prior to screening.
- **N-TRANSFERRED TO NICU** used when baby is transferred to NICU within your own hospital.
- **D-DECEASED** used when infant dies prior to screening.
- **R-DID NOT CONSENT** used when parent does not give consent.
- **U-SCREENED**, used when baby was screened but no results had been reported at time of birth certificate submission. The Birth Clerk will update electronic birth certificate within seven days of birth.

### OAE Hearing Screening Tips and Tricks

- Wait 18 hours to screen a vaginal birth and at least 24 hours for a C-Section.
- Baby should be fed, dry, calm, asleep if possible. Baby can use a pacifier or nurse if mom feels comfortable doing so, although make sure they do not touch the cord. No bottle feeding while testing. (Use Sweet-Ease, especially for nicotine babies.)
- In a quiet screening environment, swaddle baby snugly with hands down, so they cannot pull the probe out of the ear.
- Lay baby on its side with ear to be screened pointing up.
- Screener should be positioned behind the baby, on the side of the ear to be screened to perform visual inspection, checking for debris and selecting appropriate probe tip (only peachy colored clear preemie tip or clear twisty tree tip probes should be used - make sure you have both).
- Clip cord on blanket to prevent weight from pulling probe out of ear
- Pull back on the ear, place probe tip in the ear, twisting it in towards the nose. The cord should be placed up and around the baby, not touching anything.
- **DO NOT HOLD THE CORD!** This can cause high noise or artifact and slow the test down causing a REFER. Holding the probe can cause you to push the tip up against the canal resulting in an error message “OCCLUDED PROBE”.
- If baby refers, take the probe out of the ear and check for blocked probe or debris in probe. If blocked, clean or change probe tip.
- If baby refers again, lay the baby on its back or with referred ear up to help ears dry out. Wait a few hours and repeat screen up to two more times before discharge. Schedule outpatient screen if needed.

### AABR Hearing Screening Tips and Tricks

- Wait 12 hours to screen a vaginal birth and at least 24 hours for a C-Section.
- Baby should be fed, dry, calm, asleep if possible. Baby can use a pacifier or nurse if mom feels comfortable doing so, although make sure they do not touch the cord. No bottle feeding while testing. (Use Sweet-Ease, especially for nicotine babies.)
- In a quiet screening environment, swaddle baby snugly with hands down.
- Lay baby on its side with ear to be screened pointing up.
- Warm sensors in your hand to increase stickiness.
- Use Nuprep gel to clean skin.
- Clip sensor lead wires to the sensors before applying to baby.
- Place shoulder sensor first, then nape, then high forehead.
- Use firm pressure when placing sensors to make sure they stick.
- Place nape sensor in between the baby's extra neck skin, not on the back.
- Ensure that impedance is  $<8$  kohms at each site and within 3 kohms between sites.
- Use a drop of water or saline if impedance is high.
- Connect cords to muffins, then place over ears last.
- Average screening run time is 4-6 minutes for a PASS; 8-12 minutes for a REFER.
- If these times are exceeded regularly, first look at prep issues and impedance, baby by state, then consider environment or equipment issues.
- If you are experiencing high impedance, check the following:
  - \* Do you need a drop of water onto the sensor?
  - \* Do you need to rescrub the sensor site?
- If you are experiencing high noise/myogenic activity and baby is asleep, check:
  - \* Does the baby need to be repositioned?
  - \* Are you 8-10 feet away from electrical interference?

Be aware of cell phones, pagers, lights on dimmer switch, other computer monitors, bili lights, and warming blankets, as they can cause interference.



### **Communicating a Failed Hearing Screening Result to Parents**

#### **DO say a positive message**

“Your baby didn’t pass the hearing screening which means that more information is needed about your baby’s hearing. The next step is to have a hearing re-screen.” (Indicate results for each ear/s.)

#### **DO give families the “Your Baby Needs Another Hearing Screening” brochure if the infant does not pass**

“Here’s a brochure that explains why your baby needs another hearing screen”. Discuss how the family should follow-up with a rescreen appointment, according to your hospital’s screening procedures. Work with the family to schedule an appointment when the baby will be ideally two weeks old.

#### **DO NOT say misleading messages.**

- The baby has a hearing loss.
- Probably nothing is wrong.
- A lot of babies don’t pass.
- The baby doesn’t need follow-up testing.
- The baby was fussy.
- The equipment isn’t working right
- It’s just fluid or vernix. (We can’t assume this.)

#### **DO NOT perform multiple screens in an attempt to get a pass**

**A baby should not be screened more than three times as an inpatient. (This does not include troubleshooting.)**

KSA 65-1,157a

Chapter 65.--PUBLIC HEALTH

Article 1.--SECRETARY OF HEALTH AND ENVIRONMENT, ACTIVITIES

65-1,157a. Newborn infant hearing screening; informed consent; confidentiality of information; application for and receipt of grants; rules and regulations.

(a) This act shall be known as the newborn infant hearing screening act.

(b) Every child born in the state of Kansas, within five days of birth, unless a different time period is medically indicated, shall be given a screening examination for detection of hearing loss. The screening shall be conducted in accordance with accepted medical practices and in the manner prescribed by the secretary of health and environment.

(c) Informed consent of parents shall be obtained and if any parent or guardian of a child objects to the mandatory examination for detection of hearing loss the child is exempt from subsection (b) of this section.

(d) (1) Any person performing any screening under this act shall provide to the secretary of health and environment within seven days such information regarding the screening examinations conducted under this act as the secretary may require by rule and regulation.

(2) Information obtained by the secretary of health and environment under this section shall be confidential and shall not be disclosed except to notify the primary care physician and the parents or guardian of the child of the screening results.

(e) The secretary of health and environment may make application for and receive grants or other moneys which may be available from the federal government for newborn hearing screening and may enter into cooperative agreements with the federal government relating to newborn hearing screening.

(f) The secretary of health and environment shall adopt such rules and regulations as may be necessary to carry out the provisions of this section and concerning the following matters which include but are not limited to the:

(1) Establishment of standards for the equipment used for any newborn infant hearing screening under this act; (2) establishment of protocols to be followed in performing any newborn infant hearing screening under this act; (3) establishment of standards for the qualifications and training of personnel who perform any newborn infant hearing screening under this act; (4) establishment of responsibilities for any medical care facility's administrator or other personnel necessary to carry out the newborn infant hearing screening under this act; and (5) furnishing of reports and other information necessary for the secretary to carry out the provisions of this act.

History: L. 1999, ch. 92, § 1; July 1; L. 2004, ch. 150, § 1; July 1.

# Newborn Hearing Screening Training Curriculum

[http://www.infanthearing.org/infant\\_screening\\_course/index.html](http://www.infanthearing.org/infant_screening_course/index.html)

This curriculum was developed to standardize the way screeners are trained and to improve the quality of care for newborn hearing screening and follow-up. It will give screeners and stakeholders an understanding of the comprehensive nature of a quality program and provide the necessary foundation and tools to do a thorough job in their role.

With the interactive course, screeners have the ability to easily access the curriculum on the web and to learn at their own pace. It has been updated to provide adult learning activities and to check knowledge gained going through the course. In addition, there are a number of related resources, and supplemental materials and links; for example, screeners who may want to learn more about their specific state EHDI Program can click on a link that will take them directly to their state EHDI profile. There are also updated scripts for screeners to use when communicating with parents in English and Spanish, etc.

Although there are video demonstrations of babies being screened, this course does not endorse any specific type of equipment nor does it include “hands-on” equipment specific training. As it is important to incorporate “hands-on” training and competencies as part of training a screener, a Skills Checklist is included in the Resource Section to provide guidance in facilitating this component.



# SoundBeginnings

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