

## **INPATIENT SCREENING PROTOCOL**

During the maternity stay, a designated hospital staff member will:

- Inform parents of the hospital's universal newborn hearing screening program.
- Obtain informed consent for hearing screening from parents and/or primary caretaker(s) using the **Hospital's general consent**.
- Complete newborn hearing screening waiver if parents or responsible party refuses screening

All newborns will have at least one hearing screening prior to discharge.

The screening should be conducted after stabilization and be performed in as quiet a room as possible. It is recommended that the screening be conducted using one of the following physiologic screening methods: automated auditory brainstem response (AABR) and/or otoacoustic emissions (OAE's), either transient or distortion product.

A two-stage screening method is recommended for all birthing facilities performing newborn hearing screenings. The two-stage method involves the newborn receiving a second (and sometimes multiple) screening(s), in house, prior to discharge and prior to referral.

For those birthing facilities having combination OAE/AABR screening units: the two-stage screening method recommended would involve screening initially with OAE and followed-up with AABR as necessary prior to referral.

Newborns who pass the initial screening do not need to be screened again while in the hospital.

All newborns will be assessed for risk indicators for delayed onset or progressive hearing loss as outlined by the Joint Committee on Infant Hearing Screening in the Position Statement (2000), (see Appendix C, Risk Indicators).

Screening personnel will document screening results on the PKU Filter Paper Form. This form will include information specific to hearing screening including:

- Date of screening
- Time (military)

- Identify risk indicators present
- Method of screening (AABR or OAE)
- Ear specific results (right and left)
- Documentation of a “refused” screen
- Documentation of a screen “not performed”

### **Follow-up Procedures on Newborns who PASS the Inpatient Screening**

1. Newborns who PASS and no risk indicator(s) is identified:  
When any newborn with no risk indicator passes prior to discharge a designated hospital staff member will:
  - A. Provide parents/primary caretaker(s) with documentation that reiterates screening results.
  - B. Provide parents with ***Alabama’s Listening*** hearing development brochure which describes delayed onset and progressive hearing loss and details typical developmental milestones and encourages parents to contact the child’s primary medical care provider, or an audiologist to seek further testing if hearing loss is suspected in the future.
  - C. Notify the Alabama Department of Public Health (ADPH) and the patient’s primary medical care provider of screening results.
  
2. Newborns who PASS and one or more risk indicator(s) are identified:  
When any newborn passes prior to discharge and one or more risk indicator(s) are identified, a designated hospital staff member will:
  - A. Provide parents/primary caretaker(s) with screening results, as well as information regarding the late onset of hearing loss due to risk indicator(s) present. Also provide parents with recommendations for follow-up, along with ***Alabama’s Listening*** hearing development brochure.
  - B. Notify the ADPH Newborn Hearing Screening Coordinator and the patient’s primary medical care provider of screening results and risk indicator(s) present, which warrant follow-up and monitoring.
  - C. Follow-up for this population will include:
    1. A letter sent by the ADPH as confirmation of screening results, risk indicator(s) present and the need to follow-up with continued surveillance at six month intervals until age three and every year

thereafter until age five.

2. Tracking and data management of babies/children identified with risk indicator(s) for hearing loss will be performed by the ADPH.
3. Appropriate diagnostic audiological and medical evaluation should be completed as outlined in the “Outpatient Screening/Diagnostic Protocol and Guidelines” portion of this document should an infant/child fail a hearing screening.

### **Follow-up Procedures on Newborns who FAIL the Inpatient Screening**

In the event that, prior to discharge, the newborn fails the initial and repeated screen(s), a designated hospital staff member will:

- A. Provide parents/primary caretaker(s) with screening results, as well as information regarding the late onset of hearing loss. Also provide a copy of the “**Outpatient Screening and Diagnostic Reporting Form**” (See Appendix F) for follow-up (re-screen within two weeks as an outpatient), along with *Alabama’s Listening* hearing development brochure.
- B. Notify the ADPH Newborn Hearing Screening Coordinator and the patient’s primary medical care provider of screening results and risk indicator(s) present.

Follow-up for this population will include:

1. A letter shall be sent by the ADPH as confirmation of screening results, risk indicator(s) present and the need to follow-up within two weeks for an outpatient re-screen.
2. Tracking and data management of infants who fail the inpatient newborn hearing screen will be performed by the ADPH.

### **Follow-up Procedures on Newborns who are NOT Screened Prior to Discharge (i.e. “not performed” )**

In the event that the newborn is discharged prior to receiving the initial hearing screen, a designated hospital staff member will:

- A. Document a “not performed” screen on the PKU Filter Paper Form (See Appendix E, PKU Filter Paper Form).
- B. Provide parents/primary caretaker(s) with information regarding how to schedule an outpatient screening, provide a copy of the “**Outpatient Screening and Diagnostic Reporting Form**”, as well as providing the

parents/primary caretaker(s) with an **Alabama's Listening** hearing development brochure.

- C. Provide the ADPH Newborn Hearing Screening Coordinator and the patient's primary medical care provider with documentation of a screen "not performed."

Follow-up for this population will include:

1. A hearing screening should be scheduled within two weeks of discharge with data being reported to the ADPH Newborn Hearing Screening Coordinator for tracking and data management.
2. Screening results obtained following discharge will be reviewed and tracked appropriately based on "PASS" or "FAIL" criteria by the ADPH.

**Follow-up Procedures on Newborns who are NOT Screened Due to Refusal by Parents and/or Primary Caretaker(s):**

If any newborn is not screened prior to discharge due to parental and/or primary caretaker refusal, then a designated hospital staff member will:

1. Document a "refused screen" on the PKU Filter Paper Form.
2. Provide parents/primary caretaker(s) with information regarding newborn hearing screening and an **Alabama's Listening** hearing development brochure and a copy of the "**Outpatient Screening and Diagnostic Reporting Form**".
3. Provide the ADPH Newborn Hearing Screening Coordinator and the patient's primary medical care provider with documentation of a "refused screen."

Follow-up for this population will include:

A letter shall be sent by the ADPH with information describing the importance of NHS and recommendations for an outpatient screen within one month of discharge.

## OUTPATIENT SCREENING/RESCREENING AND DIAGNOSTIC

### PROTOCOLS

All infants/children, regardless of newborn hearing screening outcome, should receive ongoing monitoring for development of age-appropriate auditory behaviors and communication skills. Any infant/child who demonstrates delayed auditory and/or communication skills development should receive audiologic and medical evaluation to rule out hearing loss (Joint Committee on Infant Hearing Screening Position Statement, 2000).

Infants/children who meet the defined referral criteria listed below should receive an outpatient hearing screening/rescreening by a certified audiologist:

- Infants who do not “Pass” the initial inpatient newborn hearing screening prior to discharge.
- Infants who were discharged prior to receiving the birth admission newborn hearing screening.
- Infants/children who demonstrate developmental communication delays at any time.

#### Follow-up Procedures on Infants/Children who PASS the Outpatient Screening

1. Infants/children who PASS and no risk indicator(s) is identified, screening personnel will:
  - A. Provide parents/primary caretaker(s) with documentation that reiterates screening results.
  - B. Provide parents/primary caretaker(s) with ***Alabama’s Listening*** hearing development brochure which describes delayed onset and progressive hearing loss and details typical developmental milestones and encourages parents to contact the child’s primary medical care provider or an audiologist to seek further testing if hearing loss is suspected in the future.
  - C. Notify the ADPH and the patient’s primary medical care provider of screening results using the “**Outpatient Screening and Diagnostic Reporting Form,**” (See Appendix E).
2. Infants/children who PASS and one or more risk indicator(s) are identified,

screening personnel will:

- A. Provide parents/primary caretaker(s) with screening results, as well as information regarding the late onset of hearing loss due to risk indicator(s) present. Also, provide parents/primary caretaker(s) with recommendations for follow-up, along with **Alabama's Listening** hearing development brochure.
- B. Notify the ADPH and the patient's primary medical care provider of screening results and any risk indicator(s) associated with hearing loss, which warrant follow-up using the "**Outpatient Screening and Diagnostic Reporting Form,**" (See Appendix F).

Follow-up for this population will include:

1. A letter sent by the ADPH as confirmation of screening results, risk indicator(s) present and the need to follow-up with continued surveillance at six month intervals until age three and every year thereafter until age five.
2. Tracking and data management of babies/children identified with risk indicator(s) for hearing loss will be performed by the ADPH.
3. Rescreening of infants/children, if at any time, the parents/primary caretaker(s) voice concern re: the child's hearing.

### **Follow-up Procedures on Infants/Children who FAIL the Outpatient Screening**

1. In the event that an infant/child fails an outpatient hearing screening, screening personnel will:
  - A. Provide parents/primary caretaker(s) with screening results, as well as information regarding implications of possible hearing loss. Also provide parents/primary caretaker(s) with recommendations for diagnostic Audiology/Medical evaluation:
    - Diagnostic Audiology/Medical evaluation follow-up will be completed according to the following guidelines:
      - ✓ By three months of age for infants.
      - ✓ Within two weeks for infants/children failing an outpatient screening during monitoring and/or continued surveillance.
  - B. Notify the ADPH and the patient's primary medical care provider of screening results using the "**Outpatient Screening and Diagnostic Reporting Form,**" (See Appendix F).

Follow-up for this population will include:

1. A letter shall be sent by the ADPH as confirmation of screening results and the need to follow-up with diagnostic audiological and medical evaluation.
  2. If hearing loss is confirmed, hearing aids shall be fit according to the following guidelines:
    - By six months of age for infants.
    - As soon as possible for all other infants/children with confirmed hearing loss.
    - Based on type, degree and etiology (if known) of hearing loss.
  3. Tracking and data management of infants/children who fail the outpatient hearing screening will be performed by the ADPH.
- C. Refer infant/child to “Child Find” for possible eligibility in Alabama’s Early Intervention System (AEIS) at 1-800-543-3098 due to existing hearing loss.

**RECOMMENDED DIAGNOSTIC AUDIOLOGICAL ASSESSMENT PROTOCOL FOR INFANTS/CHILDREN**

Infants/children who meet the defined referral criteria listed under the previous section will be referred for comprehensive audiologic assessment and specialty medical evaluation to confirm the presence of hearing loss and to determine type, nature, options for treatment, and (whenever possible) etiology of the hearing loss (Joint Committee on Infant Hearing Screening Position Statement, 2000).

The audiological test procedures indicated below are age-specific and are recommended for use with infants/children and are consistent with protocols recommended by the Joint Committee on Infant Hearing. A battery of audiological tests is suggested as no single procedure has sufficient reliability to stand alone. Parents/primary caretaker(s) should be present and participate in the administration of all assessment procedures.

**Age of Child**

0-6 Months

**Audiological Procedures**

\*Child and family case history/Parent observation report.

\*Otoscopic examination.

\*Acoustic immittance: tympanometry, physical volume, and acoustic reflexes (Using a higher probe tone, i.e., 1000Hz).