Oklahoma Follow-up

Changing 1-3-6 Months to 1-3-6 WEEKS
Presenters

Patricia Burk, M.S., CCC-SLP, LSLs, Cert. AVT
Coordinator, NHSP

Joan Burns, M.S., CCC-A
Audiologist, Rogers and Washington County

Deborah Earley, M.S., CCC-A
Audiologist, Cleveland County

Meredith Gatzemeyer, AuD, CCC-A
Audiologist, Tulsa County Sooner Start
1-3-6 Goals

**National***  Oklahoma

**Initial Hospital Screen**
1 Month 1 Week

**Diagnosis of Hearing Loss**
3 Months 3 Weeks

**Placement in Early Intervention**
6 Months 6 Weeks

*Source: (Center for Disease Control and Prevention)*
History and Laws

• 1982: Law Risk Registry
• 1983: Implementation
• 1997: Funding Physiologic Screening
• 2000: Law Physiologic + Risk Registry
• 2002: Hearing Screening **ALL** * OK hospitals!

*birth census of 15 or more
**Source: OSDH, 2006
State of Oklahoma
Newborn Infant Hearing Screening Act

§ 63-1-543-545

Effective:
November 1, 2000
Responsibility – Initial Screen

• Oklahoma State Department of Health

• Oklahoma Birthing Hospitals
  310: 540-1-3 Guidelines (a) All newborns in Oklahoma will have a Hearing Screening Procedure completed unless the parent of guardian refuses because of religious or personal objections.
Responsibility – Follow-up Screen

• Oklahoma State Department of Health

• Providers completing follow-up screens
  310: 540-1-3 Guidelines (i) “Audiologists or physicians involved in completing follow-up evaluations will forward test results and recommendations to the Oklahoma State Health Department in a manner and time frame deemed appropriate by the Oklahoma State Department of Health”
Physiologic Screening

- 95.7% screened in US*
- 96.8% screened in Oklahoma**

*Source: NCHAM, 2006
**Source: OSDH, 2009
# Newborn Hearing Screening Summary 2005 & 2007

- **Number of infants born in Oklahoma during the calendar year:**
  - **2005**: 51,775
  - **2007**: 54,946

- **Number who received physiologic hearing screening prior to discharge:**
  - **2005**: 49,001 (94.6%)
  - **2007**: 53,241 (96.8%)

- **Number of infants not screened at birth:**
  - **2005**: 2,774
  - **2007**: 1,704

- **Number of infants who referred on screening (one or both ears):**
  - **2005**: 1,398
  - **2007**: 2,637

Source: Oklahoma State Department of Health, June 2007 and February 2009
Summary (continued)

- Number of infants who passed but had hearing risk status*: 2005 2,210 2007 2,906
- Number of infants tracked: 6,382 8,226
- (Refer, not screened, risk status):
- Number of infants with confirmed hearing loss (unilateral & bilateral): 87 108
- Number enrolled in early intervention: 76 89

*Oklahoma hearing risk status: family history of loss; congenital infection; craniofacial anomalies; exchange transfusion; serum bilirubin level ≥ 15 mg/dL; infant placed in Level II or Level III nursery for more than 24 hours
Age of Diagnosis
2007

- Number of infants with a 2007 birth date with confirmed loss - unilateral & bilateral: 108 (Includes possible late onset hearing loss)

- Average age in months at diagnosis:
  - < Below 1 month of age: 28 (26%)
  - 1-3 months of age: 20 (19%)
  - 3-6 months of age: 17 (16%)
  - After 6 months of age: 21 (19%)
  - Diagnosis Age Not Reported: 22 (20%)
Biggest Obstacles

- Minimal parental concern
- Hospital staff indicate follow-up is not important
- Physicians tell parents to wait on follow-up
- Lack of screenings in rural areas
- Limited pediatric audiologists
- Lost to documentation
Collaboration with Birthing Hospitals

• Provide hospitals screening equipment (AABR)
• In-services provided for hospital staff
• State law requiring screening and reporting
• List of babies sent to double check if no results were sent or confusing
• Free brochures in Spanish and English
• Hearing Results linked with Metabolic Bloodspot
Hospital Bloodspot Form

Specimen Information

1. Collection Date
2. Collection Time
3. Collector
4. Collector Initials
5. Collector Phone

Do not write in this box

1. Has previous metabolic blood test been done anywhere?
   - Yes
   - No
2. Previous OSHN
   - Yes
   - No
3. Age of infant at time of specimen collection:
   - Under 24 hours of age
   - Over 24 hours of age
4. Test requested:
   - All Tests
   - PKU, T4, GAL, HGB
   - HGB only
5. Monitor patient for

Hearing Screening Results:

1. Right Ear
   - Pass
   - Refer
2. Left Ear
   - Pass
   - Refer

Screen Method:

- ABR
- OAE
- Other (Specify)

Hearing Risk Status—Check all that apply:

- Blood relatives of the infant have a permanent hearing loss that began at birth or in early childhood.
- Infant is suspected of having a congenital infection (neonatal herpes, cmv, rubella, syphilis, toxoplasmosis).
- Infant has craniofacial anomalies (premature canal abnormality, ear lobe pit, amniocentesis).
- Infant had exchange transfusion.
- Infant has serum bilirubin level > 15 mg/dL.
- Infant was placed in a Level II or III nursery for more than 24 hours.
# Hearing Screening Results Section

Hearing Screening Results Section

Newborn Metabolic Disorder Screening Form (ODH #450 Rev. 1/2005)

<table>
<thead>
<tr>
<th>Hearing Screening Results:</th>
<th>Screen Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right Ear</td>
<td>ABR</td>
</tr>
<tr>
<td>Pass</td>
<td>OAE</td>
</tr>
<tr>
<td>Left Ear</td>
<td>Other (Specify)</td>
</tr>
<tr>
<td>Pass</td>
<td></td>
</tr>
<tr>
<td>Refer</td>
<td></td>
</tr>
<tr>
<td>Refer</td>
<td></td>
</tr>
</tbody>
</table>

3. If not screened, reason:
   - Technical problem
   - No equipment
   - Other
   - Caregiver refused
   - Baby discharged

4. Hearing risk status – Check all that apply:
   - Blood relatives of the infant have a permanent hearing loss that began at birth or in early childhood.
   - Infant is suspected of having a congenital infection (neonatal herpes, cmv, rubella, syphilis, toxoplasmosis).
   - Infant has craniofacial anomalies (pinna/ear canal abnormality, cleft lip/palate, hydrocephalus).
   - Infant had exchange transfusion.
   - Infant has serum bilirubin level ≤ 15 mg/dL.
   - Infant was placed in a Level II or III nursery for more than 24 hours.

5. Hearing risk status – Check all that apply

1. Right Ear Results
2. Left Ear Results
3. Screen Method
4. If not screened, reason
5. Hearing risk status – Check all that apply
NHSP Follow-up

- EDHI Follow-up Coordinator
- Initial follow-up letters to Parents and Physicians within 7 days of birth
- Provide Spanish translation as requested
- Second letter and two phone calls provided to Parents at 45 days
- Help families follow-up with providers
- Reminder letters at 5 months for babies who passed but are at risk
Follow-up Screenings

- Free follow-up screens at local county health departments: Nurses, Speech-Pthologists, Audiologists, etc.
- Follow-up AABR and OAE equipment available throughout state
- 5 Health Department Audiologists
- 5 Contract Audiologist (rural areas)
- Private audiologists
Collaboration with Early Intervention/Part C

• Voice Response System
• PHOCIS – able to see if child has had appointment and if results available
• Contact providers before closing charts
• Help providers when having difficulties getting families to attend appointments
• Seek results for Follow-up Screenings
• Quarterly Tracking forms
Collaboration with Follow-up Providers

• Contact Health Department providers, private audiologist, doctor’s offices, etc.
• Give providers Initial/Follow-up Results
• Statewide Audiology Survey
• In-services through Hearing Aid/FM companies using State Slides
• Hearing Results form – available online
Hearing Results form

Dear Clinician: If the infant's parents/guardian did not bring a form that includes the infant's identifying information, use this form to report hearing screening or audiology diagnostic results to the newborn screening program. Please return the completed form to the address above or Fax it to 405-271-4952.

Infant's last name: [field]
Infant's first name: [field]
DOB: [field]
Mother's last name: [field]
Mother's first name: [field]
Mother's SSN: [field]
Address: [field] City: [field] State: [field] Zip: [field] Birth Facility: [field]

To the clinician evaluating hearing: Complete Box 1 if you are screening hearing; complete Box 2 if you are providing a diagnostic audiology assessment.

Box 1: Hearing Screening Results
Screening Date:
Results:
Right Ear: Pass Refer Left Ear: Pass Refer
Screen Method: ABR OAE other:
Intervention: Referred Already Enrolled ScreenStart other:
Comments:
Purpose screening: [field] Title: [field] Phone: [field]

Box 2: Diagnostic Audiologic Assessment Results
Assessment Date: [field] Seen previously? Yes No If Yes, Date:
Results:
Right Ear: Normal Mild Loss Moderate Loss Severe Loss Profound Loss Inconclusive
Left Ear: Normal Mild Loss Moderate Loss Severe Loss Profound Loss Inconclusive
Type of loss: Sensorineural Conductive Mixed Undetermined
Assessment used: (check all that apply) ABR Bone ABR ASSR TEOAE OTOAE BOA VRA Pure Tone Tympanometry otoAW
Intervention: Referred Already enrolled ScreenStart other:
Comments:
Recommendations:
Audiologist: [field] Phone: [field]

Additional copies available online at http://www.ok.gov/health/documents/Hrfollow-up.pdf
Collaboration with Other Providers

- Grand Rounds
- Women, Infants and Children (WIC)
- Children First Nurses
- Prenatal Parent Education Packets
- Community Initiatives
- Health Educators – Dangerous Decibels
Case Studies

GS
- 1/4/08 - DOB at Rural hospital
- 1/5/08 - Initial Screen: Bilateral Refer
- 1/18/08 - Follow-up Screen: Bilateral Refer
- 2/14/08 - Diagnosis: Severe-Prof. SNHL AU
- 2/22/08 - EI services
- 3/27/08 - Hearing Aids
- 1/14/09 - Bilateral Cochlear Implant Surgery
Case Studies

MM

- 7/7/08 – DOB at Metro hospital
- 7/8/08 - Initial Screen: Bilateral Refer
- 8/4/08 - Follow-up Screen: Bilateral Refer
- 8/25/08 - Diagnosis: Profound SNHL AU
- 8/25/08 - Hearing Aids
- 8/25/08 - EI services
Case Studies

CH

- 5/16/08 - DOB at Rural hospital
- 5/16/08 - Initial Screen: Bilateral Refer
- 5/28/08 - Follow-up Screen: Bilateral Refer
- 6/5/08 - Diagnosis: Severe-Profound SNHL
- 6/12/08 - Hearing Aids
- 6/12/08 - EI services
Case Studies

TW

- 10/31/08 - DOB at Rural hospital
- 11/1/08 - Initial Screen: Bilateral Refer
- 11/12/08 - Diagnosis: Mild High Frequency SNHL
- 11/25/08 - Hearing Aids
- 11/25/08 - EI services
Contact Information

Oklahoma State Dept. of Health
Newborn Hearing Screening Program
1000 NE 10th Street
Oklahoma City, OK 73117
Phone: 405-271-6617
Fax: 405-271-4892
Email: PatriciaAB@health.ok.gov