

Newborn Hearing Screening in the Neonatal Intensive Care Unit

Newborn Screening Advisory Committee
Texas Early Hearing Detection and Intervention (TEHDI)

July 16, 2018

Newborn Hearing Screening

Health and Safety Code, Chapter 47

- Statute which mandates newborn hearing screening, tracking, and intervention in Texas
- No mention of screening for the neonatal intensive care unit (NICU) population
- Recommends that current guidelines in the Joint Committee on Infant Hearing Position statement be followed

2

Newborn Hearing Screening

Joint Committee on Infant Hearing (JCIH)
– 2007

- Separate protocols are recommended for NICU and well-baby nurseries
- Infants with > 5 days in the NICU are to have an auditory brainstem response (ABR) as part of the screen to ensure neural issues are not missed
- Infants that do not pass the ABR in the NICU should be referred directly to an audiologist
- Infants who are readmitted to the hospital in the first month of life are recommended to have a repeat hearing screen prior to discharge

3

Births in 2016

- Total occurrent births according to Vital Records* – 407,367
 - 34,634 (8.5%) infants were transferred to NICU within the first 24 hours of life
- Total occurrent births reported to TEHDI** - 396,352
 - 21,048 (5.3%) infants in the NICU nursery

**Source of all data is the Texas Early Hearing Detection and Intervention Management Information System unless otherwise specified

4

NICU Screening Results

Of the 21,048 NICU infants, 20,494 (97.4%) were in need of a hearing screen. This excludes deceased babies and those never medically cleared.

5

Screening Results

Total Needed Screening	20,494
Received Screening	20,154 (98.3%)
Missed	98 (0.5%)

Received Screening	20,154
Passed	18,956 (94%)
Referred	1,168 (6%)

Infants Needing Follow-up Care	
Missed + Referred	1,296 (6.3%)

6

Age at Screen

83.9% of the NICU babies received the birth screen before day 30 of life.

- Average age at first screen - 14.97 days
- Average age at last screen – 17.14 days

The national guidelines for a well baby is to be screened by one month of age (30 days).

7

Screening Results

Infants Needing Follow-up Care	
Missed + Referred	1,296 (6.3%)

Of these 1,296 babies, 204 were referred for an outpatient screen despite best practice guidelines to go directly for a diagnostic evaluation with a pediatric audiologist. 141 (69%) passed the outpatient screen.

8

Screening Results

Infants Needing Follow-up Care

Missed + Referred 1,296 (6.3%)

554 (42.7%) of the babies needing follow-up care were seen by a pediatric audiologist for a diagnostic evaluation. 143 were confirmed deaf or hard of hearing.

9

Age at Diagnosis

Of those NICU infants needing a diagnostic evaluation, 61.2% had the assessment before day 90 of life.

Average age at diagnosis- 101.08 days

The national guidelines for a well baby is to be diagnosed by three months of age (90 days).

10

Lost to follow-up/Lost to Documentation

Nationally 25.4%

Texas - all babies 52.3%

Texas - NICU 28%

11

Questions?

12