Newborn Hearing Screening in the NICU
Subcommittee Meeting Minutes
October 1, 2018
3:06 p.m. – 4:06 p.m.
Conference Call

Table 1: Subcommittee member attendance at the Monday, October 1, 2018 meeting.

MEMBER NAME	YES	NO	MEMBER NAME	YES	NO
Tiffany McKee-Garrett, M.D. (Chair of Subcommittee)	P		Joseph Schneider, M.D.	P	
Alice Gong, M.D.	P		Michael Speer, M.D.	P	
Charleta Guillory, M.D.	P				

Yes: Indicates attended the meeting **No:** Indicates did not attend the meeting **P:** Indicates participated by phone

Table 2: Newborn Screening Unit (NBS) and other guest attendance.

NBS STAFF NAME	YES	NO	GUEST NAME	YES	NO
David Martinez	Yes		Benna Timperlake, RN		x
Aimee Millangue	Yes		Barbra Novak, PhD., CCC-A	P	
Patricia Lanfranco	Yes		Terese Finitzo, OZ Systems	P	
Eugenia Dunham	Yes		Christine Evans, OZ Systems	P	
Cheri Grimm	Yes				
Doug Dittfurth	P				
Milan Kimberly, TEHDI Intern	Yes				

SUBCOMMITTEE MEETING NOTES:

The meeting was called to order at 3:06 p.m. by Subcommittee Chair, Dr. Tiffany McKee-Garrett. This meeting was held via conference call and was audio recorded. Dr. McKee-Garrett greeted everyone and requested attendees introduce themselves.

Dr. McKee-Garrett gave the background of the subcommittee and stated its purpose. The subcommittee was formed at the July 16, 2018 Newborn Screening Advisory Committee meeting after a presentation from Dr. Barbra Novak on how hearing screening takes place in the Neonatal Intensive Care Unit (NICU) at Texas Children's Hospital. Dr. Novak also mentioned related issues such as loss to follow up and delay in diagnosis. Due to these issues, Dr. Charleta Guillory, NBSAC Chair, requested a subcommittee to develop best practices for newborn hearing screens in the Texas NICU population.

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To start off the discussion, Dr. McKee-Garrett sent out two references for members to review in preparation for the meeting. One was an online article on a Brazilian study (www.ncbi.nlm.nih.gov/pmc/articles/PMC4066868). The other reference was on the National Early Hearing Detection and Intervention (EHDI) goals for newborns at 1 month, 3 months, and 9 months from the National Center for Hearing Assessment and Management (www.infanthearing.org/infant_screening_course/page580.html). She said while the article had some information on diagnosing hearing loss, she did not get a good idea on how to meet these goals.

Subcommittee Meeting Discussion:

- The commonly accepted knowledge and practice of not screening babies on respiratory support may be wrong/outdated.
- Many doctors are told that babies on respiratory support such as mechanical ventilation and nasal Continuous Positive Airway Pressure (CPAP) machines cannot be screened, possibly due to interference.
- Dr. Alice Gong cited a study on hearing loss risk that found ventilation was not different from not being on ventilation in terms of picking up abnormalities.
- Dr. Novak agreed – respiratory support does not typically affect performance of hearing screening. Many patients receive screening and diagnostic testing and are discharged while on mechanical ventilation.
- Perhaps the goal should be to screen every baby in the NICU regardless of support equipment - to give it a try or document why it isn't done.
- According to data in Dr. Novak's presentation and the Brazil study, gestational age does not seem to be a problem after 34 weeks. At that age, the auditory system has reached a safe level of maturity.
- If all babies are screened, there isn't a missed population that is of concern to committee members. After screening, then those who need additional care can be addressed.
- Every hospital has its own protocol. Sometimes charge nurses determine who is ready to be screened, not screeners.
- It may not be a matter of missed screens in the NICU population, but medical complications leading to screenings being delayed, such as not being "medically stable."
- Definition of "medically stable" is subjective. Doctors have leeway to err on the side of 'a little unstable,' so the expectation may need to be that every baby is screened and leave out "medically stable."
- Delayed diagnosis, not just delayed screening, may be of concern.
- Concern from DSHS Newborn Hearing staff - if you take out "medically stable," you may have babies on continued treatments that are risk

factors to hearing loss, so they may incur hearing loss after they're screened. There is a limit to the number of screens accepted for capturing in the Texas Early Hearing Detection and Intervention (TEHDI) Management Information System for (MIS) tracking hearing screening.
- Risk factor monitoring for hearing loss after first screen may counter concern over removing language on medical stability.
- Risk factor monitoring may not be reliable due to lack of knowledge and experience among many pediatric primary care providers providing follow up care. This may also mean a high chance that the wrong screening technology will be used which results in a missed/incorrect diagnosis.
- According to the 2007 Joint Committee on Infant Hearing (JCIH) position statement, they do specifically outline and clarify the specific risk factors for follow up, which the TEHDI MIS is able to take and document, but very few hospitals complete this documentation. 65% of hospitals have outsourced their newborn hearing program to a private company, who does not have legal access to medical records, which is required to enter the documentation.
- Per 2007 JCIH position statement, a separate care path for NICU babies is needed, but has yet to be written and released.
- Suggestion to screen all babies unless there is an exclusion/medical contraindication may cause confusion – screeners can document why screening was not done instead of defining exclusions.

Subcommittee Recommendations:

- The Subcommittee recommends performing screening on two groups:
    1. Babies who are born at less than 34 weeks gestation should be screened when they reach 34 weeks gestation
    2. Babies born at 34 weeks gestation or greater should be screened as soon as possible and no later than a month of age.

Action Items/Ideas/Next Steps:

- Dr. Gong will share research study articles cited during discussion.
- Recommendation(s) can be disseminated through the DSHS website and through organizations such as the Texas Pediatric Society.
- Per David R. Martinez, NBS Unit Manager, DSHS staff may be able to add the recommendation into the protocol which was removed from hearing screening rules. NBS can add a statement in the protocol referencing JCIH in Part C of certification.

Dr. McKee-Garrett adjourned the meeting at 4:06 p.m.