



## JCIH 2019 Position Statement Frequently Asked Questions

### ◀ Audiology ▶

**Q:** The new risk factor table seems to recommend diagnostic audiology follow-up for all risk factors. If a baby has passed AABR, is re-screening with OAEs for the risk factor follow-up appropriate? Can the committee expand on this topic and the rationale for diagnostic testing?

**A:** For follow up due to risk factors, JCIH is recommending a comprehensive diagnostic audiologic evaluation including, tympanometry, OAE, acoustic reflexes and behavioral testing as the gold standard for hearing assessment when developmentally appropriate. Continued use of OAE alone for monitoring hearing is insufficient for assessing children with mild hearing loss.

**Q:** When should a sedated ABR be done?

**A:** In keeping with the 1-3-6 (or 1-2-3) EHDI goals, audiologic diagnosis should be completed no later than 2–3 months of age. This earlier age facilitates the diagnostic process as infants are more likely to sleep for prolonged periods of time required to complete all measures. In children with special health needs, delay in diagnosis of hearing loss may be unavoidable due to attention paid to other health/ time-urgent diagnostic and treatment procedures; however, every effort should be made to minimize the delays. When possible, audiologists can evaluate infants in the NICU, pediatric intensive care unit, or in conjunction with examinations or procedures conducted with general anesthesia or sedation. (p.11)

Electrophysiological testing (ABR) with sedation or anesthesia, when not medically contraindicated, is indicated if: 1. conventional/behavioral testing does not provide consistent, reliable, and valid information using the cross-check principle and/or results are inconsistent with parent/caregiver observations, and 2. electrophysiologic testing cannot be completed during natural sleep and 3. results of ABR evaluation will influence the treatment or management of the child.

**Q: When middle ear fluid is found during the diagnostic assessment, how soon should an ABR re-assessment be completed?**

**A:** Diagnostic assessment should be completed before 3 months of age. The presence of middle ear fluid should not delay diagnostic assessments. Testing includes bone-conducted stimuli when air-conducted thresholds are elevated to rule out underlying sensory loss and facilitate intervention recommendations. When middle ear fluid is present and bone-conduction testing indicates permanent sensorineural hearing loss, hearing aid fitting, CI candidacy evaluation if indicated, and/or enrollment in early intervention should not be delayed.

As stated on page 15 "management of middle-ear fluid in the infant should be coordinated by the infant's pediatrician/primary-care provider and/or a pediatric otologist, with the audiologist's input, and in conjunction with the family's preferences." Ongoing audiologic monitoring should be completed following resolution of middle ear fluid.

**Q: Why does the position statement recommend that very preterm babies in the NICU for an extended time have a diagnostic evaluation before discharge?**

**A:** For an infant in the NICU whose duration of stay would impact the attainment of the 1-3-6 benchmarks, a diagnostic ABR is recommended to meet the 3-month diagnostic benchmark. This is best practice for babies to meet milestones.

**Q: In the 2007 position statement it recommends at least one ABR be completed as part of the complete diagnostic evaluation for children younger than 3 for confirmation of a permanent hearing loss. But this is not included in the 2019 position statement. Is this no longer recommended? For example, if you have a 2 ½ year old who can complete ear-specific, behavioral testing that is reliable and valid, would you need to recommend an ABR to confirm?**

**A:** If you cannot get ear specific responses at any age, then an ABR is recommended to obtain ear specific thresholds. If you have the ear specific information with a comprehensive test battery approach, you do not need to do the ABR. The rationale for this change involved two considerations:

- The recommendation to do an ABR on every child was primarily based on detecting auditory neuropathy spectrum disorder. Since 2007, there has been an increasing recognition from the literature that ANSD is relatively rare.
- Most children over 6 months of age will require sedation or anesthesia to have an ABR. There has been an increasing recognition since 2007 that anesthesia is expensive and has associated risks.

**Q: What tests need to be included in a diagnostic ABR? If the test is reliable, is a confirmation ABR needed before moving ahead with intervention steps?**

**A:** A complete diagnostic audiology evaluation should include a battery of physiologic tests that define type, degree, and configuration of hearing thresholds for each ear. Key components of a diagnostic audiologic evaluation are noted specifically on page 12. "Auditory brainstem response is the gold standard test for threshold estimation for infants and children who cannot complete behavioral audiologic assessment. ABR provides ear- and frequency-specific threshold estimates that are necessary for the diagnosis of the type, degree, and configuration of hearing loss and provision of amplification."(p.11)

- Frequency-specific (toneburst) stimuli are used to elicit neural responses that enable determination of thresholds and form the foundation for determining hearing aid amplification characteristics. Thresholds for both air-conducted and bone-conducted stimuli are measured to determine type (i.e., conductive, sensorineural, mixed) of hearing loss. Bone conduction thresholds are necessary to estimate additional hearing aid gain and output if there is a conductive component. (p.12) Click stimulus should be included in the ABR to assess for neural (ANS) hearing loss when indicated.
- Confirmatory testing is not indicated to move forward with intervention recommendations if test results are reliable.

**Q: What if my hospital or clinic does not have the equipment to complete a diagnostic ABR, or does not have a pediatric audiologist who can perform diagnostic ABR?**

**A:** If your facility does not have the equipment for a diagnostic ABR, we recommend using this document to advocate for diagnostic equipment and pediatric audiologist in your clinic and/or refer the baby to a facility where the equipment **and** pediatric audiologist are available.