CMS
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AUDIOLOGY UPDATE

California Newborn Hearing Screening Program

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NHSP STATS IN BRIEF:
Through the dedication and hard work of our NHSP and audiology providers, here is what we have been able to accomplish in California:

Preliminary data for 2006:

- 422,370 babies screened as inpatients with a 98% screening rate. (Follow up data for these babies are not yet available.)

Data for 2005:

- 713 babies were identified with hearing loss which yielded an incidence rate of 1.7/1000. (1.2/1000 in the well baby nursery and 5.7/1000 in the NICU)
- Of the 713 babies identified in 2005, 63% were identified by three months of age.
- 598 babies (84%) were enrolled in the Early Start Program and 67% of those were enrolled by six months of age.
- We had a less than 10% lost to follow up rate - one of the lowest rates in the country!

The NHSP would like to thank all of our providers for helping us get closer to obtaining the 1-3-6 goal every year!

The California Newborn Hearing Screening Program Expands to Universal.

Governor Arnold Schwarzenegger signed into law Assembly Bill 2651, expanding the California Newborn Hearing Screening Program (NHSP), which is currently mandated in California Children's Services (CCS) approved hospitals and neonatal intensive care units, to all hospitals in California with licensed perinatal services effective January 2008. The new law will increase the number of hospitals participating from 180 to 276. An estimated 550,000 babies will be screened every year under the expanded program; approximately 5,500 of those infants will require a diagnostic evaluation with 1,100 babies having hearing loss.

Infant Audiologic Assessment - Are You Ready???

Is your practice ready for the increased numbers of infants expected with the expanded NHSP?

The National Early Hearing Detection and Intervention goals for newborn hearing screening and practice patterns for infant audiologic assessment emphasize the "1-3-6" goals for screening and follow up. These are defined d as follows:

- All newborns will be screened for hearing loss by 1 month of age;
- A diagnostic audiologic evaluation will be completed on all newborns who do not pass the initial screening by 3 months of age; and
- Early intervention services will be provided for newborns with hearing loss by 6 months of age.

The 2006 data attest to how well our state complies with the first goal of screening by one month of age. As a program, the 2005 data suggest we are doing a fair job of identifying children by three months of age, but

Test your Pediatric Diagnostic Knowledge:

1. Air conduction ABR results indicating a moderate-severe loss, along with absent OAEs and Type A tympanograms measured with a 220 Hz or 226 Hz probe tone is indicative of a sensorineural hearing loss:

- True
- False

2. An ABR can be performed on an infant with fluid in their ears.

- True
- False

3. Absent waveforms with ABR and present responses in the severe range with an ASSR may be indicative of auditory neuropathy.

- True
- False

4. It is not necessary to wait for the required 3 month hearing aid trial or age of 12 months to refer for a cochlear implant evaluation.

- True
- False

Answers:
1. False. The absence of bone conduction testing and high-frequency probe-tone use for impedance measurements could result in a misdiagnosis of sensorineural hearing loss when a conductive component is present.
2. True. An ABR can be performed when there is fluid in the middle ears. Fluid can be ruled out by the increased latency of the waveforms, bone conduction ABR, and a high-frequency probe-tone tympanogram. It is important to continue with testing so that early identification and referral to Early Start can be made.
3. False. ASSR is not considered a diagnostic tool for auditory neuropathy/auditory dys-synchrony.
4. True! As soon as a diagnosis of a severe-profound sensorineural hearing loss can be determined, referral for the cochlear implant evaluation can be initiated!

there is room for improvement Limited access to appointments with pediatric audiologists has impacted the ability to achieve the second goal of identification by three months of age. Another barrier that has been identified is a reluctance by audiologists to identify the type of hearing loss based on initial diagnostic information without the input of an otolaryngologist.

It is a common scenario for an audiologist, who has performed an initial evaluation on infant who did not pass outpatient rescreening, to refer to the Otolaryngologist (ENT) before indicating a type and degree of hearing loss, with the recommendation for audiologic assessment after medical intervention. This is reported to the NHSP as a baby with some degree of hearing loss, type undetermined. Often the baby cannot get in to see the ENT in a timely manner, thereby delaying the follow up audiology evaluation and the confirmation of the type of hearing loss even further. In turn, early intervention services can be delayed as many children are not eligible for California's Early Start program without confirmation of a sensorineural component.

If a child has late identified hearing loss because he or she was lost between ENT and audiology or there was an excessive amount of time between audiology evaluations, there is a plausible risk of liability to the audiologist for not initially identifying an underlying sensorineural hearing loss.

The 2007 Position Statement from the Joint Committee on Infant Hearing (JCIH) clearly states that regardless of the infant's age, ear-specific estimates of type, degree, and configuration of hearing loss should be obtained. Under the California NHSP for an infant to have confirmed hearing loss, at a minimum, the type and degree must be identified. The JCIH defines appropriate measures of middle ear function for birth to 6 months of age as, "Tympanometry using a 1000-Hz probe tone" and "bone-conducted tone bursts when indicated."

The click ABR alone is not enough.

Current standard of practice statements such as the JCIH, the California Infant Assessment Guidelines and the American Speech-Language-Hearing Association Guidelines for the Audiologic Assessment of Children From Birth to 5 Years of Age agree that the evaluation of an infant cannot rely on a single test. At a minimum the battery must contain:

- Frequency-specific electrophysiologic testing
- Otoacoustic emission testing
- A measure of middle ear function
- When appropriate, an auditory neuropathy/dys-synchrony evaluation.

For your own protection and the well-being of infants who refer on hearing screenings, please ensure that your infant diagnostic protocol is comprehensive, inclusive, and makes use of a crosscheck system of evaluation.