September is Newborn Screening Awareness Month
Screening infants for hearing loss is extremely important for future development

RESTON, Va., Sept. 13, 2017—The American Academy of Audiology advocates education of the public regarding the importance of hearing screening for infants. Approximately 97% of hospitals and birthing clinics screen infants. A bipartisan bill (S. 652), Early Hearing Detection and Intervention Act has just passed the Senate. This bill reauthorizes funding for important EHDI programs over the next five years. Since the program was first approved in 2000, there has been a significant increase in the number of newborns screened for hearing loss from just 44 percent to over 97 percent.

Two types of screening tests are used in hospital nurseries: automated Auditory Brainstem Response and otoacoustic emissions. Both ABR and OAE tests are accurate, non-invasive, and automated.

According to the National Institutes of Health, two to three children in every thousand are born deaf or hard of hearing and more will lose their hearing during childhood. Studies have shown that children identified and treated for hearing loss prior to six months of age have a better chance of developing skills equivalent to their peers by the time they enter kindergarten.

Children not identified until later may exhibit impairment in language, speech, and cognitive abilities compared to their normal-hearing peers. NIH estimates that children who receive cochlear implants save from $30,000 to $200,000 in special education costs by the time they graduate high school because they’re more likely to be placed into mainstream classrooms.

The causes of hearing loss vary, and, in half of all cases, the cause is never determined. Common causes include genetics, prematurity, infection or congenital malformation of the ear(s). Ear infections can also cause hearing loss, typically transient. Five out of six children experience ear infections in their first three years of life.

According to the NIH, as much as 20 to 30 percent of childhood hearing loss is caused by congenital cytomegalovirus infection, a common virus that is passed from a mother to unborn child. Ninety percent of CMV-infected children show no symptoms at birth.

The ABR and OAE tests both have a small percentage of false positives (screen fail when hearing is normal) and false negatives (screen pass when hearing is impaired). If the infant fails the first screen, a second screen is performed prior to discharge. If the second screen results in a fail-outcome, the infant is referred to a specialist, an audiologist. Audiologists have training that emphasizes diagnostic hearing testing. The audiologist will implement further tests and then determine the type and degree of hearing loss and create a plan for follow-up and management.

In some cases, babies pass hearing screening, even when hearing is impaired. Screening only identifies moderate to profound hearing loss. Hearing loss can develop after birth, or hearing may worsen after passing the birth screen.

“Hearing screening is an excellent, although not perfect, means to identify significant hearing impairment in newborns. It is critically important that parents and primary-care physicians follow up on a failed or missed hearing screening outcome by seeing an audiologist with
expertise in diagnosis and treatment of hearing loss in infants and young children. Parents are astute observers of their child’s responsiveness to sound at home, and any parental concern regarding hearing (regardless of whether newborn hearing screening was passed), should be responded to promptly with a referral to a pediatric audiologist. The sooner a hearing loss is identified and treated, typically with hearing aids or cochlear implants, and the sooner the child receives early intervention to facilitate language development, the better the long-term psychosocial and educational development,” explains Alison Grimes, AuD, director of audiology and newborn hearing screening at UCLA Health.

Baby’s speech is another indicator of hearing ability. Here are some of the signs parents should look for:

- At six months, babies should recognize familiar voices, play with their voices, engage in vocal play with parents and experiment with multiple speech and non-speech sounds.
- By nine months, babies should demonstrate understanding of simple words—“mommy,” “daddy,” “no,” “bye-bye.”
- By 10 months, babies should be making babbling sounds that begin to sound like speech, phrases such as “da-da-da.”
- By 12 months, babies should be able to say one or more recognizable spoken word.

The American Academy of Audiology provides a list of licensed audiologists on its website: [www.audiology.org](http://www.audiology.org). Click on “Find an Audiologist.”

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The American Academy of Audiology is the world's largest professional organization of, by and for audiologists. The active membership of more than 12,000 is dedicated to providing quality hearing care services through professional development, education, research, and increased public awareness of hearing and balance disorders. For more information or to find an audiologist, go to [www.howsyourhearing.org](http://www.howsyourhearing.org).