School-Based Audiology Advocacy Series
Hearing Screening

(Approved by the Board of Directors of the Educational Audiology Association June 2018)

Hearing Screening

In today's classrooms, typically 60% of instructional activity involves listening (ANSI S12.60-2010). The ability to hear is not only critical for instruction, but it also provides the foundation for the development of spoken language and subsequent literacy, particularly the acquisition of phonemic skills. Consequently, children who have reduced hearing need to be identified as early as possible so that appropriate measures to provide access to communication, language and learning can be implemented.

The Joint Committee on Infant Hearing (2007,2013) recommended that the screening of all infants occur at birth but no later than one month of age, that the diagnosis of reduced hearing be confirmed by three months of age, and that infants are enrolled in appropriate intervention programs by six months of age. Due to late onset, the potential progressive nature of hearing levels, and recreational noise exposure, hearing screening measures must continue routinely throughout toddler, preschool and school age years.

Many factors affect hearing status, whether fluctuating or permanent, during a child's life. In the early years, there is a higher incidence of middle ear problems that often result in fluctuating hearing levels. As children age their exposure to noise increases placing them at risk for late onset hearing problems. Additionally, trauma, disease, genetic late onset or other causes of later onset of reduced hearing can occur at any time.

Most states have guidelines on how, who and when hearing of school age students will be screened (Johnson, 2018). However, procedures, referral criteria, and follow-up processes vary by state. Most often the responsibility for screening falls on the school nursing staff as a health procedure. Frequently, screenings are conducted by volunteers, training is brief, and supervision is limited. Adherence to test protocols can vary significantly.

Classroom teachers rely on the screening information to ensure that students hear adequately to access instruction and progress academically. Thus, when children do not develop age appropriate communication skills, do not acquire the basic phonemic skills to develop literacy, or do not make adequate general academic progress, there may be an assumption that the delays are due to reasons other than hearing ability. Therefore, it is critical that the hearing screening process be performed in an efficacious manner. Instrumentation must be calibrated; training must be thorough; protocols must be developed appropriately and followed consistently for target age groups (e.g., young children to identify middle ear disease, older children to identify noise-induced hearing conditions), and there must be a good understanding of the criteria for a "referral" to effectively provide follow-up.

To increase awareness about hearing and reduced hearing, screening should be accompanied by hearing loss prevention education. Students who fail the screening or could not be screened, should be referred for a complete audiological evaluation. Students who are enrolled in special education or speech language services should have their hearing levels screening annually.

References:

American National Standards Institute (2010). Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools [ANSI s12.60-2010]. New York: Acoustical Society of America.

Johnson, C. D. (2018). Screening, Assessment and Management of Auditory Disorders in School-Aged Children in Madell et al Pediatric Audiology: Diagnosis, Management and Technology, Thieme, NY, 335-346.

Joint Committee on Infant Hearing (JCIH) (2013). Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs. *Pediatrics. 120*, 898-921.

Meinke, D.K. & Dice, N. (2007). Comparison of Audiometric Screening Criteria for the Identification of Noise-Induced Hearing Loss in Adolescents. *The American Journal of Audiology 16*, 190–202.

Supplement to the JCIH 2007 Position Statement: Principles and Guidelines for Early Intervention After Confirmation That a Child Is Deaf or Hard of Hearing, *Pediatrics*. 2013;131;e1324