HEARING SCREENING CONSIDERATIONS FOR CHILDREN WITH SIGNIFICANT DISABILITIES

(Approved by Executive Board of Educational Audiology Association, October 2021)

Background

Hearing screening has been used routinely in school systems across the U.S. to identify children who need further hearing assessment to determine their hearing status. Unfortunately, many states and school districts use technologies and protocols that fail to meet the requirements of the Individuals with Disabilities Education Act (IDEA, 2004) for comprehensive and effective Child Find systems (34 C.F.R. §300.111). Many schools have protocols and technologies that do not align with current audiological and health services recommended practices. Furthermore, the responsibility for screening often falls on the school nursing staff as a health procedure with limited or no audiology involvement. Frequently, screening is conducted by volunteers, training is brief, and supervision is limited. Adherence to screening protocols can vary significantly (Johnson, 2018).

Reduced hearing levels of any degree, even when minimal or mild, can have a detrimental impact on children's access to language, instruction, and the curriculum. Children with significant disabilities are often not screened despite information that over 400 syndromes and illnesses include hearing impairment as a known component (Toriello & Smith, 2013). Not only can developmental and medical disorders mask the presence of hearing problems, but they may also increase the learning difficulties experienced by children. Of additional consideration is the fact that up to 50% of children with reduced hearing have co-occurring disorders (Blackorby & Knokey, 2006). Identifying and managing all children with reduced hearing levels regardless of their ability to participate in routine screening procedures is an educational right under IDEA.

Purpose of Guidance

This document provides guidance to educational audiologists and school health services personnel for designing and implementing effective hearing screening programs for school age children (3-21) with additional disabilities.

Hearing Screening Participation Options for Children with Significant Disabilities

The majority of children with additional disabilities can be screened using routine methods currently employed in many school screening programs. Individuals who administer hearing screenings should be properly trained and supervised by audiologists to ensure effective and valid screening outcomes. Noise levels in the test area need to be documented. If noise levels are above 20 dBA, testing should only be completed with noise cancelling headphones. Equipment must be properly calibrated and maintained on an annual basis. Hearing screening protocols for children published by ASHA (n.d.) and AAA (2011) provide routine screening procedures. Four hearing screening participation outcomes are shown in Figure 1: routine screening, routine screening with special techniques, physiological measures only, and inability to participate requiring referral to an audiologist. Children who are unable to respond reliably using routine screening procedures should not be documented as "could not test" (CNT). This

notation fails to satisfy Child Find directives and can result in failure to provide a free and appropriate public education (FAPE).

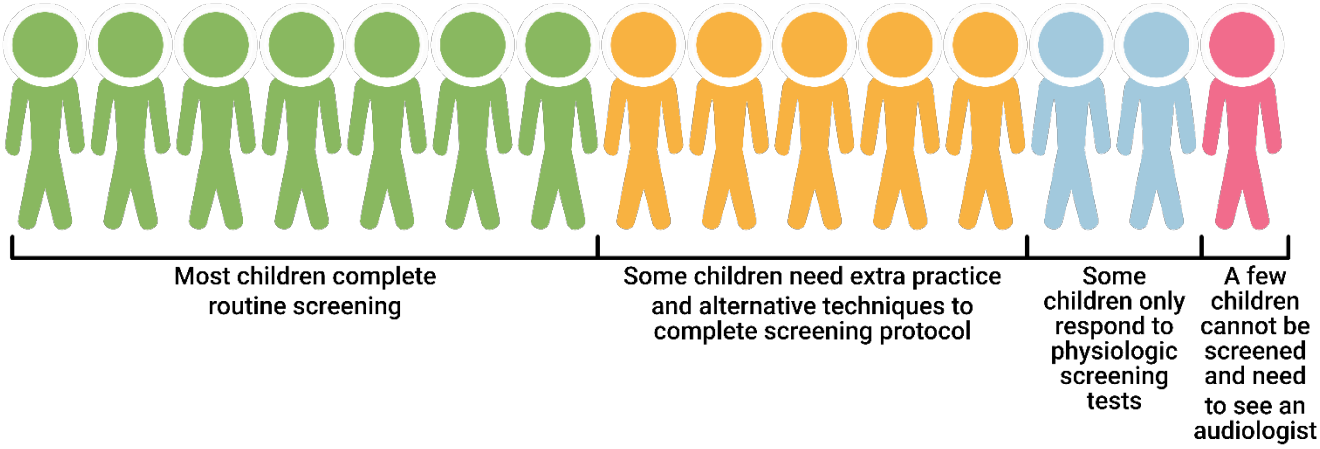

Figure 1 Four hearing screening outcomes for students with special needs representing increasingly specialized protocols.

Behavioral response to pure tones is the preferred method of documenting hearing status and may require additional time and expertise to achieve. In these situations, use of special strategies should be employed (e.g., explicit instructions, conditioning training and stimulus-response practice, alternative response methods, and use of physiologic measures). Educational audiologists possess the clinical knowledge and training to elicit behavioral responses from students who require specialized procedures. The educational audiologist may also use trained audiology assistants or other school personnel to assist in training and screening these children.

Confirmation of elicited behavioral responses for some students with cognitive and/or physical limitations may require additional physiological measures to confirm auditory function [i.e., tympanometry, acoustic reflex and otoacoustic emissions (OAEs)]. For a small subset of these students, physiological measures may be the only procedures that produce reliable results. There may also be a few students for whom no hearing measures can reliably be performed in a typical school screening environment. In these cases, a referral to the educational audiologist is the next step so that testing can be completed with the necessary equipment in a controlled environment such as a sound booth. The flowchart in Figure 2 illustrates the sequence of screening procedures based on the child's ability to participate in the screening.

Physiological measures can identify significant hearing reduction but may miss minimal to mild hearing levels which are educationally compromising especially for students with special needs.

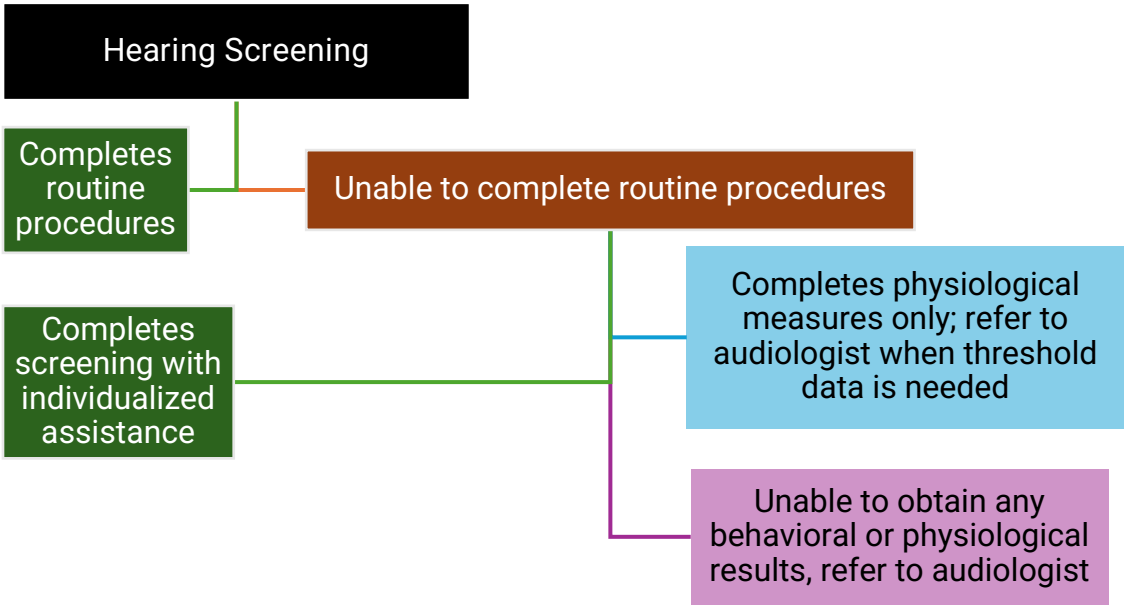

Figure 2 Hearing screening flowchart.

Referral to an Audiologist

Referral to pediatric audiology practices in the community may be necessary if an educational audiologist is not available. On rare occasions, children with special needs/ disabilities will require referral to an audiology practice where testing can be performed under sedation. If sedated procedures are planned for non-auditory reasons, efforts should be made to coordinate with the family and physicians to allow auditory testing to occur at this time. Sometimes parents may not want to pursue hearing screening for their child through sedated measures. Also, the school district may be liable for the cost of these tests. Documentation for children whose parents have opted out of hearing screening procedures, whether standard, adapted or objective; should be maintained in the child's school health record.

Children with Known Hearing Impairments

Children with known hearing impairment who are being managed by an educational or clinical audiologist do not need to be screened since their hearing status has already been determined. The educational audiologist maintains records on each of these children and provides guidance to instructional teams for each child as well as information on signs that might indicate a change in hearing status. If there are no educational audiology services in the district; the school will need to obtain parent permission to request the most recent evaluation results and recommendations. Because hearing levels can change over time, monitoring by an audiologist is essential.

Incidence of Hearing Impairment in Children

Current data indicate the incidence of identifiable hearing loss in newborns is 1.7/1000 (CDC, 2017). Use of objective test measures (OAE and AABR) is currently considered best practice in

Universal Newborn Hearing Screening (UNHS) programs and typically used in the United States. However, a limitation of UNHS is that some infants with minimal and mild hearing levels may not be identified using these procedures. Additionally, due to numerous life events including genetic syndromes, progressive hearing loss, medications, illnesses, and injuries, the incidence of hearing impairment increases as children age. The presence of risk factors also places infants at increased risk of delayed-onset hearing impairment, regardless of the newborn hearing screening results (JCIH 2019). Prevalence rates have been reported to double by school-age and current data on childhood hearing impairment indicate 5/1000 children exhibit a hearing impairment by kindergarten (Boulet, Boyle & Schieve, 2009, NIDCD, 2005). Finally, the incidence of noise-induced hearing loss continues to increase as children enter teen years and experience repeated use of earbuds and headsets to access media (Barrett & White K,2017). In summary, it is imperative that the hearing status of all children is known and that intervention and accommodations are provided for those with compromised hearing to ensure access to communication and learning.

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