

Pediatric Guidelines for Pennsylvania Audiologists

- I. Intent
 - a. The intent of these guidelines is to assist audiologists in Pennsylvania who are providing services to pediatrics. As a result, improved and standardized care will be provided to children with hearing differences across the state. Improved and standardized care includes appropriate and thorough identification, diagnosis, and treatment of hearing loss. Referrals for appropriate services, including Early Intervention and Guide By Your Side, will improve the long-term prognosis for this group of children. The following guidelines should be available to audiologists in Pennsylvania, related professions, insurance companies, and parents/caregivers of children with hearing differences.
- II. The importance of appropriate evaluation and treatment of pediatric hearing loss has been well documented and supported by state and national guidelines.

- a. PA DOH Position

As stated in the Pennsylvania Department of Health Speech and Hearing Program guidelines, the highest quality audiologic services are imperative, especially in the pediatric population. Providing appropriate services allow for growth and development, leading to capable and productive adult members of society.

“Because human communication is a primary skill, early diagnosis and intervention of hearing and speech disorders is stressed: (1) to provide an optimal opportunity for access to quality health care in the appropriate settings; (2) to reduce the severity of these disorders; (3) to orient, counsel and refer families or patients for support services; (4) to promote healthier attitudes about communication disorders and how they impact on the ability of the individual to perform in a highly verbal society. Awareness and advocacy on behalf of clients with these disorders often involves a multi-disciplinary approach to treatment and case management. Professional services are provided by certified professionals at locations throughout the state. When all requirements are met, the program authorizes prosthetics or hearing aids. The provider/dispenser functions as an advocate for the state program” (Pennsylvania Department of Health).

- b. The need for high quality pediatric services in audiology is well documented. Please review the following excerpts:
 - b.i. “Approximately 12,000 new babies with hearing loss are identified every year, according to the National Institute on Deafness and Other Communication Disorders. In addition, estimates are that another 4,000 to 6,000 infants and young children between birth and 3 years of age who passed the newborn screening test acquire late-onset hearing loss. Therefore, ~ 16,000 to 18,000 new babies and toddlers are identified with hearing loss per year, making hearing loss the most common birth defect. Numerous studies over the decades have demonstrated that when hearing loss of any degree is not adequately diagnosed and treated, it can negatively affect the speech, language, academic, emotional, and psychosocial development of young children. Therefore, the secondary effects of hearing loss, rather than the hearing loss itself, adversely affect a child’s development” (Medell & Flexer, 2014).

b.ii.“The American Academy of Audiology supports early identification, assessment, and intervention for all types of hearing loss in infants and young children to minimize deleterious effects on speech, language, education, and social/psychological development” (American Academy of Audiology, 2012).

b.iii.The American Academy of Pediatrics supports early identification of congenital or acquired hearing loss in children as misdiagnosis is connected to deficits in speech/language acquisition, poor academic performance, personal –social maladjustments, and emotional difficulties.

b.iv.These views are supported by the American Academy of Otolaryngology, the Committee on Practice and Ambulatory Medicine and funded by the Pennsylvania Department of Health

- III. Audiologists within our state are currently not mandated to obtain specific Continuing Education Unit (CEU) hours related to pediatric audiology or continually demonstrate the appropriate skill set and equipment needed to assess this population. However, those providing pediatric audiologic services should demonstrate their abilities to ensure appropriate, quality care.
- a. Evaluating the auditory function in pediatrics requires a variety of testing techniques, using a test-battery approach and cross-checking principles. The audiologist must be skilled in behavioral, physiologic, and electrophysiologic assessments to obtain the necessary information on function and (re)habitation options (Madell and Flexer, 2014).
- IV. The pediatric definition can be variable and debatable, depending on the area of focus. For the purposes of this statement, we define “pediatric” as birth – 18 years of age.
- a. Please review the following excerpts from Madell and Flexer, 2014:
 - a.i.“Studies of brain development show that sensory stimulation of the auditory centers of the brain is critical and, indeed, influences the actual organization of auditory brain pathways...if hearing loss filters some or all speech sounds from reaching auditory centers of the brain, then the brain will be organized differently”.
 - a.ii.“Signal enhancement, such as that provided by amplification technology, is really about brain stimulation, with subsequent development of auditory-neural pathways. Neural imaging has demonstrated that areas in the primary and secondary auditory cortex are most active when a child listens and reads. That is, phonologic or phonemic awareness, which is the explicit awareness of the speech sound structure of language units, forms the basis for the development of literacy skills.”
 - a.iii.“To summarize, neuroplasticity is greatest during the first three and a half years of life. The younger the infant, the greater is the neuroplasticity (Sharma, Dorman, & Spahr, 2002; Sharma et al, 2004, 2009). Rapid infant brain growth requires prompt intervention, typically including

amplification and a program to promote auditory skill development. In the absence of sound, the brain reorganizes itself to receive input from other senses, primarily vision; this process, called cross-modal reorganization, reduces auditory neural capacity.”

a.iv.Neuroplasticity

b.iv.1.With the improvements in diagnostic testing, we can identify hearing loss in the first few months of life. The current national standard is identification by 1 month, diagnosis by 3 months and remediation prior to 6 months of age. It is well documented that neuroplasticity is most active during a young child’s life. Historically we have discussed hearing loss as an ear related problem, however research notes that the true effects of hearing loss relate to brain development and cognition. There is strong evidence that the cornerstone of reading is the development of the neural auditory system.

V. What we are advocating:

- a. To ensure that this population is receiving the care that is necessary to allow for speech, language, education, and social/psychological development, audiologists in Pennsylvania must demonstrate a sufficient level of skill. Audiologists providing pediatric services (ages birth to 18 years of age) must have access to equipment and the knowledge of:
 - a.i.The development of the auditory system
 - a.ii.Behavioral and physiologic testing as it applies to pediatrics
 - a.iii.The fitting of amplification using electroacoustic analysis, or the ability to appropriately refer out for this service.
 - a.iv.To demonstrate the above abilities, audiologists providing pediatric services must have the equipment necessary for the above procedures.
 - a.v.On their honor, it is recommended those treating pediatric patients obtain 6 hours of pediatric continuing education every 2 years as part of their required 20 hours every 2 years required by the Pennsylvania State Board of Examiners.
- b. Medical Assistance and related Managed Care Organizations must adhere to contractual agreements for reimbursement to audiologists in a timely manner. These organizations must provide coverage for interpreter services in order for this population to receive appropriate care without undue financial hardship to the provider.
- c. Upon referral to Early Intervention and/or Guide By Your Side, parents/guardians should be provided with information on appropriate pediatric audiologic care, describing an overview of best practices that their child should receive.

VI. Request for Guidance on how to proceed with the above recommendations

- a. Guidance from the State Board of Examiners in Speech-language and Hearing on how to publish guidelines.

- b. Guidance from the State Board of Examiners in Speech-language and Hearing on how to share guidelines with agencies such as Early Intervention and Guide By Your Side.
 - c. Guidance from the State Board of Examiners in Speech-language and Hearing on how to education insurance companies.
- VII. Twenty-two States have protocol statements, guidelines and recommendations for pediatric audiology for which to model guidelines for Pennsylvania.
<https://www.infanthearing.org/stateguidelines/index.php>
- VIII. Future consideration and discussion
 - a. In the future, an examination evaluating the necessary skills may be considered to ensure that those providing pediatric services are practicing within their knowledge and expertise.

These guidelines are a collaborative effort of Jill McClelland-Knecht, Au.D., Beth Czarnecki, Au.D., and the Pennsylvania Academy of Audiology Board of Directors of 2018/2019.

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