School-Based Audiology Advocacy Series

**Minimal, Mild and Unilateral Hearing Loss/Single-Sided Deafness**

(Approved by the Board of Directors of the Educational Audiology Association XXX)

Children with minimal/mild hearing loss unilateral hearing loss or single sided deafness often experience educational difficulties. Unilateral hearing loss (UHL) refers to any level of hearing loss in one ear and normal hearing in the other ear while single-sided deafness (SSD) refers to a profound hearing loss in one ear and normal hearing levels in the other. The definition of minimal/mild hearing loss (MMHL) has varied across studies but includes bilateral three-frequency pure tone averages between 20-45 dB HL or thresholds greater than 25 dB HL at one or more frequencies above 2000 Hz in both ears (Lewis, Valente, & Spalding 2014). According to Bess, Dodd-Murphy, and Parker (1998), children with MMHL and UHL make up more than 5% of the school age population. Thirty-seven percent of children with UHL and MMHL will fail at least one grade compared to only three percent of their normal hearing peers (Tharpe, 2008). These children typically hear quite well when they are in an ideal acoustic listening environment. However, when they are at a distance from the teacher, when there is background noise or excessive reverberation, and/or when the teacher speaks softly, they often experience difficulties understanding speech in a classroom.

The following problems have been associated with UHL and MMHL that may lead to educational problems:

1. Difficulties understanding speech in the classroom setting or other challenging listening environments (Crandell, 1993) and poorer performance on complex listening tasks (Lewis et. al. 2014).
2. Increased errors in structural language (grammar) (Walker et. al., 2015).
4. Phonological delays and difficulties with reading comprehension (Ross et al., 2008).
5. Difficulties locating the direction of sounds in those with unilateral hearing loss (Bess 1986).
7. Strained communication with peers/peer relations (Tharpe, 2008).
8. Low self-esteem (Bess, Dodd-Murphy, & Parker 1998).
9. Fatigue and higher stress levels as compared to peers (Tharpe, 2008).

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Because children with UHL and MMHL are at high risk for academic difficulties, an educational audiologist should evaluate these students to verify that they have access to education in their school environments. Testing should include assessing speech perception at normal and soft conversational levels in quiet and in competing noise.

**Educational Audiology Evaluation:**

1. The child’s perception of the impact of MMHL should be evaluated as well as the teacher’s and caregivers’ (Lewis et al, 2014). Examples of questionnaires that would assess self-perception of impact include:
   a. Listening Inventory for Education - Revised (LIFE-R) (Andersen, Smaldino and Spangler, 2011)
   b. Success for Kids with Hearing Loss (SIFTER) (Andersen, 1989)
   c. Classroom Participation Questionnaire (CPQ) (Antia et al, 2007)
      [www.adevantage.com/Resources.html](http://www.adevantage.com/Resources.html)

2. The child’s performance in one’s daily listening environment should be evaluated. A guide to conducting this evaluation using varying distances, background noise and access to visual cues is the Functional Listening Evaluation (Johnson, 2004, [www.adevantage.com/Resources.html](http://www.adevantage.com/Resources.html)).

3. A classroom observation should be conducted to determine how the child uses hearing to gain information and to examine the physical environment regarding classroom acoustics.

**Technology:**

1. Research strongly supports that children with MMHL should be considered for amplification and/or remote-microphone hearing assistive technologies (RMHAT) (AAA, 2013; Bagatto, 2016; Walker et al, 2015).

2. Research strongly supports that children with UHL should be considered for amplification and/or Remote Microphone Hearing Assistance Technology (RMHAT) in the impaired ear if the ear is aidable. If the child has severe to profound UHL and normal hearing in the other ear, other options may be considered such as bone conduction aids/implants, contralateral routing of signals (CROS), cochlear implants and/or RMHAT (AAA, 2013).

**Accommodations:**

1. Students with UHL and MMHL may require additional accommodations to ensure auditory access to instruction such as alterations to the classroom to improve the listening environment, strategic seating close to the instructor, pre and post teaching, and visual aids.
References


