Special Olympics Healthy Hearing: Screening Outcomes in Seven Southeastern States
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**Background**

Special Olympics (SO) is a nonprofit organization that brings together individuals with intellectual disabilities (ID) from around the world through organized athletic events. For the past 10 years, Special Olympics has offered free health screenings to athletes through their Healthy Athletes Program. The objectives of the program outlined in 2006 are as follows:

1) Improve access and health care for Special Olympics athletes at event-based health screenings
2) Make referrals to local health practitioners when appropriate
3) Train healthcare professionals and students in the health professions about the needs and care of people with ID
4) Collect, analyze and disseminate data on the health status and needs of people with ID
5) Advocate for improved health policies and programs for people with ID

Seven disciplines are currently offered as part of the Healthy Athletes Program, one of which is Special Olympics Healthy Hearing (SOHH). It is well documented in the literature that hearing loss occurs at a higher rate in people with intellectual disabilities (Beange et al. 1999; VanSchrojenstein Lantman-De Valk et al. 2000; Evenhuis et al. 2001). The hearing loss is often conductive in nature, but it can also be permanent (sensorineural). Moreover, these hearing deficits often go undetected and untreated. Untreated hearing loss has been shown to reduce quality of life and lead to social and psychological deficits. In addition, individuals with ID often experience gaps in medical care. Special Olympics strives to provide medical professionals with information about this special population and it encourages their participation.

**Study Objectives**

1) Determine the prevalence of hearing impairment in SOHH participants with intellectual disabilities
2) Describe the degree and type of hearing loss typically identified through the SOHH program
3) Define barriers to screening and follow-up as identified by Special Olympics athletes and clinical directors
4) Identify potential solutions to barriers and provide recommendations for the SOHH program

**Methods**

Data from seven states (Arkansas, Georgia, Florida, North Carolina, Louisiana, Kentucky, and Virginia) was included in this study from the calendar year 2014. Following established SOHH protocols, initial screening includes otoscopy and otoacoustic emissions screening. If the athlete fails the initial screen they undergo additional measures that include tympanometry and pure tone audiometry. Table 1 provides a summary of SOHH screening and referral outcomes for 7,556 athletes in the seven-state region.

**Participants & Results**

<table>
<thead>
<tr>
<th>Degree of Hearing Loss*</th>
<th>Total Participants (2014)</th>
<th>Average Age</th>
<th>Pass</th>
<th>Fail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>19</td>
<td>32 Years</td>
<td>6133</td>
<td>1,423 (23%)</td>
</tr>
<tr>
<td>Moderate</td>
<td>31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderately Severe</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Severe-to-Profound</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Recommendations for Follow-Up**

- Cerumen Management: 28
- Middle Ear Disorder/Medical Referral: 115
- Suspected Sensorineural Hearing Loss: 135
-Incomplete Test**: 3
- Hearing Aid Voucher Given: 21

*Information not available for all states
**Due to athlete refusal to perform task

**2014 Population Distribution**

States: Arkansas, Georgia, Florida, North Carolina, Kentucky, Louisiana, Virginia

**2014 Athletes Screened by State**

States: Arkansas, Georgia, Florida, North Carolina, Kentucky, Louisiana, Virginia

**Strengths & Challenges**

**Strengths:**
- Total number of athletes screened
- Greater awareness of the need for hearing healthcare services for this population
- Ability to provide hearing aid vouchers

**Challenges:**
- Variability among states in number of athletes screened
- Access to care – insurance, transportation issues
- Lack of uniformity among states in screening and referral criteria
- Need for more volunteers to provide screening and supervision
- Need for greater efficiency in follow-up care

**Future Directions**

1. Establish a timeline for medical/audiological follow-up similar to the 1-3-6 EHDH goals e.g. completion of assessments within three months and hearing aid fitting by six months of referral
2. Collaborate with universities and Student Academy of Audiology chapters to recruit additional screening personnel and clinical directors
3. Seek funding to ensure provision of follow-up services
4. Develop a searchable online database of audiology and medical providers by geographic region with information about services provided and policies regarding private insurance and Medicaid

**References**


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