Pediatric Hearing Aid Use:

Parent Reported Challenges

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Disclosure:

Neither I nor any member of my immediate family has a financial relationship or interest (currently or within the past 12 months) with any entity producing, marketing, re-selling, or distributing health care goods or services consumed by, or used on, patients.

I do not intend to discuss an unapproved/investigative use of a commercial product/device.
Hearing aid fittings are routine in infancy

(Muñoz et al., 2013)
Parents are central in the intervention process

Parents Need

- Information
- Skills
- Support

To be effective day-to-day
Challenges Reported

- Child behavior
- Activities
- Retention
- Child state
- Transition times
- Acceptance
- Troubleshooting problems

(Sjoblad et al., 2001; Moeller et al., 2009; Walker et al., 2013; Muñoz et al., 2013)
**Data logging:** hearing aid use is not consistent

<table>
<thead>
<tr>
<th>Study</th>
<th>N</th>
<th>Ages</th>
<th>Hours of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walker et al., 2013</td>
<td>133</td>
<td>5 mo. – 7 yrs</td>
<td>8 (range 2-10)</td>
</tr>
<tr>
<td>Jones et al., 2010</td>
<td>5000 (total)</td>
<td>0 – 4 yrs (sub-set)</td>
<td>5</td>
</tr>
<tr>
<td>Jones, 2013</td>
<td>2160</td>
<td>0-4 years</td>
<td>4.5</td>
</tr>
<tr>
<td>Muñoz, et al., in press</td>
<td>12</td>
<td>7 – 35 months</td>
<td>4 (range 0-11.5)</td>
</tr>
</tbody>
</table>
If you change the way you look at things, the things you look at change

~ Wayne Dyer
Parent Hearing Aid Management Inventory

Acceptance and Action Questionnaire II

Patient Health Questionnaire (PHQ-9)
Responses

- 37 families (54% return rate)
  - Utah and Indiana
  - 35 mothers, 20 fathers
    - Majority Caucasian, college-educated, two-parent homes, spoken language primary mode of communication
- 37 children (M=22 months; SD=8.07)
- Binaural hearing loss
- Hearing aid experience (M=15 months)
- Degree of HL/multiple disabilities not collected
Information Gaps

Not provided by audiologist:

- 43% - other hearing devices (e.g., FM)
- 30% - hearing aid use
- 30% - referrals (e.g. EI)
Skill Gaps

Not taught by audiologist:

- 59% - how to do a Ling 6 Sound check
- 57% - how to teach others to check hearing aids
- 36% - troubleshooting hearing aids
## Lack of Confidence in Performing Skills

0 = no confidence; 100 = complete confidence

<table>
<thead>
<tr>
<th>Skill</th>
<th>n Mothers</th>
<th>M (SD)</th>
<th>n Fathers</th>
<th>M (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LING sound check</td>
<td>24</td>
<td>47.08 (41.54)</td>
<td>16</td>
<td>48.44 (47.42)</td>
</tr>
<tr>
<td>Troubleshoot function</td>
<td>25</td>
<td>51.52 (33.04)</td>
<td>16</td>
<td>50.00 (38.25)</td>
</tr>
<tr>
<td>Daily listening check</td>
<td>25</td>
<td>70.00 (36.60)</td>
<td>17</td>
<td>53.76 (46.83)</td>
</tr>
<tr>
<td>Teach others listening check</td>
<td>23</td>
<td>61.09 (39.48)</td>
<td>17</td>
<td>63.24 (40.50)</td>
</tr>
<tr>
<td>Keeping hearing aids on child</td>
<td>28</td>
<td>78.39 (29.72)</td>
<td>16</td>
<td>70.31 (36.67)</td>
</tr>
</tbody>
</table>

64% not listening to HA’s daily
Communication Gaps

Aspects of communication not addressed:

- 64% - support for managing emotions
- 49% - help with how to talk to others about HL
- 47% - enough time to talk about emotions
Expectations

Expectations not addressed by audiologist:

- 69% - parent emotions about hearing loss
- 68% - what hearing aids cannot provide
- 41% - how to determine progress
- 39% - demands of daily management
- 24% - frequency of earmold replacement
Parent Concerns

- 73% concerned with how to manage child’s feelings about wearing HA’s
- 60% of mothers (45% fathers) frustrated with daily management
- 57% of mothers (40% fathers) lacked confidence in ability to detect a problem with the HA
- 29% of mothers (10% fathers) felt child was not benefitting
Hearing Aid Use Challenges

- 75% - activities
- 59% - child behavior
- 46% - frustration keeping hearing aids on
- 37% - distractions from other children in home
- 37% - other caregivers’ ability to manage HA’s

37% use hearing aids less than 5 hours per day
Psychosocial Impact

- 96% handling internal experiences in healthy ways (M = 14.5; SD = 6.6)
  - (e.g., recalling unpleasant emotions, worries/emotions controlling life)
- 22% experienced mild to severe symptoms of depression
  - greater for mothers (M=3.7; SD= 3.9; range: 0-15) than fathers (M=1.8; SD=2.9; range: 0-10)
  - 40% of parents indicated that symptoms of depression were interfering with daily life activities
Research Needed

- Types of challenges that influence hearing aid use
- Effective support interventions that can be provided within routine care
- Training needs of providers related to effective communication and support strategies
- How hearing aid use impacts developmental outcomes
Opportunities for improvement

- Provide comprehensive information
- Monitor and support skill acquisition
- Address emotional needs (not just informational)
- Collaborate with other intervention providers and medical home
Questions?