Increasing Pediatric Hearing Aid Use with Tele-Support

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Why is it important to look at hearing aid use?
Because parents report... 

experiencing challenges

And

problems with use

(Sjoblad et al., 2001; Moeller et al., 2009; Walker et al., 2013; Muñoz et al., 2013)
... data logging shows problems with use, and

auditory experience influences spoken language!

Tomblin et al., 2014)
Pediatric Audiologist Practices: Parent Hearing Aid Education & Support (N = 349)

Hearing aid use practices and experiences

<table>
<thead>
<tr>
<th>Audiologists reported ...</th>
<th></th>
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<tbody>
<tr>
<td>checking data logging</td>
<td>81%</td>
</tr>
<tr>
<td>sharing data logging with parents</td>
<td>91%</td>
</tr>
<tr>
<td>encountering parent defensiveness when discussing use</td>
<td>57%</td>
</tr>
<tr>
<td>addressing how to keep the hearing aids on when the child resists wearing them</td>
<td>81%</td>
</tr>
<tr>
<td>addressing how to teach others to manage the hearing aids</td>
<td>62%</td>
</tr>
<tr>
<td>Wanting training on how to help parents find solutions</td>
<td>70%</td>
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(Meibos et al., in review)
Others have found that health care adherence can be improved by…

Using approaches such as Motivational Interviewing to support behavior change (Rubak et al., 2005)

Using technology such as cell phones to provide more frequent support – diabetes management (Krishna et al., 2008)
Monitoring Data Logging & Supporting Hearing Aid Use via Tele-support

Case Examples
What we did...

Connect remotely with HA

Check Data logging

Offer support over telephone/skype
Monitoring Approach
(Study period 6 months)

Problem-Solving Period
Weekly until use is consistent

Maintenance Period
Every two weeks

Final Monitoring
Once per month
Case #1
Primary challenge: child behavior

- Child Demographics:
  - 2 years
  - Bilateral moderately-severe
  - Diagnosed 1 month
  - Hearing aid fitting 2 months

- Family Demographics:
  - Two-parent home
  - Family members with hearing loss
  - Spoken language communication
  - English-speaking
Case #1

- 10 hours of use on average (2.5 months)
- Addressed behavior management (3 weeks)
- 6.5 hours of use on average (1.5 months)

Hours: Left HA

- Hours: Right HA

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Case #2
Primary challenge: additional disabilities

- **Child Demographics:**
  - 2 months
  - Bilateral mild-moderate
  - Diagnosed 1 month
  - Hearing aid fitting 2 months
  - Additional disabilities

- **Family Demographics:**
  - Two-parent home
  - Spoken language communication
  - English-speaking
Case #2

Hours: Right HA

- Addressing retention (feeds on right side)
- Right aid use remains challenging (7.4 average hours of use (2.5 months))
- New EM
- Intermittent function
- Sent for repair

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Hours: Right HA

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Case #2

Hours: Left HA

- **11.6 average hours of use (3.5 months)**
- **Forgot to turn off a couple of nights**
- **New EM**
- **Intermittent function**

**Hours: Left HA**
Appointment Length (cases 1 & 2)

More targeted support – shorter appointments
Cases #3 and 4: In Progress

<table>
<thead>
<tr>
<th>Case #3</th>
<th>Case #4</th>
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</thead>
<tbody>
<tr>
<td><strong>Child Demographics:</strong></td>
<td><strong>Child Demographics:</strong></td>
</tr>
<tr>
<td>5 years</td>
<td>3 years</td>
</tr>
<tr>
<td>Bilateral mild-moderate</td>
<td>Unilateral mild-moderate</td>
</tr>
<tr>
<td>Diagnosed 12 month</td>
<td>Diagnosed 15 month</td>
</tr>
<tr>
<td>Hearing aid fitting 2 years</td>
<td>Hearing aid fitting 17 months</td>
</tr>
<tr>
<td><strong>Additional disabilities</strong></td>
<td><strong>Additional disabilities</strong></td>
</tr>
<tr>
<td><strong>Family Demographics:</strong></td>
<td><strong>Family Demographics:</strong></td>
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<tr>
<td>Two-parent home</td>
<td>Two-parent home</td>
</tr>
<tr>
<td>Spoken language communication</td>
<td>Spoken language communication</td>
</tr>
<tr>
<td>Spanish-speaking</td>
<td>Spanish-speaking</td>
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Parent Feedback

Struggles

“I struggled with the daily reinforcements of having my third child wear his hearing aids, even for just a few hours a day.”

Closer Look

“During our weekly discussions we were able to analyze more closely and identify times of the day that were most stressful.”

Support

“Communication between the audiologist and myself alleviated a lot of frustrations and ensured my child’s needs were met.”
Audiologist Feedback

Challenges

- Equipment – initial challenges connecting equipment
- Scheduling – getting into a routine was challenging
- Counseling – helping parents find effective solutions

Benefits

- Rewarding to see parents gain confidence
- Seeing targeted solutions resolve problems
Future Directions:
Collaboration with early interventionist
Questions?

Thank You