



STATE REPORT FOR EHDI MINNESOTA



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Parent Hearing Aid Management Survey Results

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For children fitted with hearing aids, a foundational aspect of their auditory experience is dependent on the ongoing management of their amplification, including consistent use of well functioning hearing aids. This study collected information about parent desires for assistance with information and skills, current hearing aid use challenges, and desired communication with their audiologist related to supporting hearing aid management.

Background

Recent research has shown that hearing aid use is highly variable for young children, based on hearing aid data logging, and parents have reported challenges with hearing aid use (Walker et al., 2013; Muñoz et al., 2014). Parents have a steep learning curve related to hearing loss and amplification and rely on their audiologist to provide them with comprehensive information, support for skill acquisition, and help in resolving barriers to effective daily management. Effective daily management of children's hearing aids can also be influenced by emotional factors.

What is included in this report?

- Results for all respondents
- Results from parents in **Minnesota**

Participants

Families were recruited from seven states through the Part C Early Intervention (EI) programs. In 2014, State EI coordinators mailed packets to parents of children enrolled in their program that (1) had bilateral hearing loss, (2) used hearing aids, and (3) parents were proficient in English. Primary caregivers completed a demographic form, the Parent Hearing Aid Management Inventory, and a depression screening (PHQ-9).

Of the 1,104 packets mailed, completed surveys were received from 344 families for a response rate of 31%. Some responses could not be included because the child did not have hearing aids (n=6), the child received a cochlear implant (n=9), the child was using a bone-anchored hearing aid (n=7), and the forms were not completed (n=4). The analysis included responses from 318 parents. Thirty-three of the responses were for children over 36 months (37-51) and were included in the analysis. **In Minnesota, 292 surveys were sent, 78 were mailed back (27% response rate). State-specific demographics are not included.**

The Results

Demographic Data: (State-specific demographic data is not provided)

Responses for this study were primarily from parents of toddlers (M= 23.15; SD= 10.43; range: 3-51 months) who had experience with hearing aids (M= 15.52; SD=10.11; range: 0-50 months). Degree of hearing loss was reported as mild bilateral for 26% (n=74), as ranging from mild to moderately-severe for 55% (n=156), and as ranging from severe to profound for 19% (n=54). Additional disabilities were reported by 30% (n=93) of the parents, spoken language was the primary mode of communication (n=243; 81%), and 20% (n=62) had another family member with hearing loss (sibling or parent of the child). Most children were White (n=251; 80%), non-Hispanic (n=280; 93%) and living with both parents (n=267; 85%). The mother was most frequently reported as the primary caregiver (n=232; 73%). The primary caregivers were predominately White (n=266; 85%) and non-Hispanic (n=284; 95%). For

33% (n=99) of families this was their only child living in the home, 37% (n=114) had two children in the home, and 30% (n=92) reported three or more children in the home. Table 1 summarizes demographic information collected for primary caregiver educational level and family income.

Table 1. Education Level and Family Income

Education and Income	% (n)
Primary Caregiver’s Education Level	
High School/GED or less	17 (52)
Some College / Associate’s degree	30 (91)
Bachelor’s Degree	30 (92)
Graduate Degree/PhD	23 (69)
Family Income	
Less than \$20,000	18 (56)
\$21,000 - \$40,000	17 (53)
\$41,000 - \$80,000	29 (89)
More than \$81,000	37 (114)

Information

For each of the 10 items that addressed information, parents were asked to report if they had received the information and if they had a desire for more information related to that item. The majority of the parents (83-95%) reported receiving information for seven of the items (see Table 2). **In your state the majority of the parents (81-96%) also reported receiving information for seven of the items (see Table 2).**

Table 2. Information received and desired

Information	All Participants		Your State	
	Received % (n)	Desired % (n)	Received % (n)	Desired % (n)
1. Ways I can prevent losing the hearing aids (e.g., clips to secure aids)	95 (295)	22 (66)	96 (73)	17 (13)
2. How to determine if the hearing aids are benefiting my child	94 (293)	23 (72)	87 (67)	22 (17)
3. What my child can and cannot hear <u>without</u> the hearing aids	94 (294)	36 (114)	90 (70)	36 (28)
4. Hearing aid options (e.g., colors, assistive devices, tamper proof battery door)	90 (284)	21 (65)	91 (70)	17 (13)
5. What my child can and cannot hear while wearing hearing aids	88 (274)	35 (109)	86 (66)	42 (32)
6. When the audiologist needs to check the hearing aid settings	87 (273)	29 (91)	81 (62)	39 (30)
7. Financial assistance options	83 (260)	37 (116)	82(62)	29 (22)
8. How to meet other parents / find parent support organizations	78 (247)	31 (100)	83 (63)	28 (21)
9. How to get loaner hearing aids	67 (209)	32 (101)	62 (48)	32 (25)
10. How to help my child hear better in noisy places	65 (205)	31 (100)	64 (49)	42 (32)

Skills

For each of the eight items that addressed skills, parents were asked to report if they had received training for the skill and if they desired more training. For seven of the items most parents (81-99%) reported receiving training (see Table 3). **In your state a majority of parents (82-97%) reported receiving training for six of the items listed (see Table 3).**

Table 3. Skills trained and training desired

Training	All Participants		Your State	
	Received % (n)	Desired % (n)	Received % (n)	Desired % (n)
1. Tell when to change the hearing aid batteries	99 (310)	9 (26)	97 (75)	7 (5)
2. Clean the earmolds and re-attach the tubing	96 (297)	11 (34)	96 (73)	8 (6)
3. Tell when my child needs new earmolds	94 (293)	17 (50)	91 (69)	21 (16)
4. Keep the hearing aids on when my child resists wearing them	91 (286)	35 (110)	86 (65)	40 (30)
5. Teach others to help manage the hearing aids (e.g., check function)	88 (277)	25 (79)	87 (67)	23 (18)
6. Use a listening stethoscope	86 (270)	18 (56)	82 (63)	18 (14)
7. Do a Ling 6 Sound Check (ah, ee, oo, mm, sh, s)	81 (256)	26 (82)	66 (51)	38 (29)
8. Do hearing aid maintenance (e.g., change tone/ear hook)	67 (209)	40 (123)	56 (43)	40 (31)

Hearing Aid Use Challenges

For each of the 14 items related to hearing aid use challenges, parents were asked to report how frequently the item was a challenge. Responses for frequent or always were combined. For approximately one-quarter of the parents, child activities (28%), child not wanting to wear the hearing aids (27%), and fear of losing or damaging the hearing aids (20%) were frequently or always a challenge (see Table 4). **In your state about one-quarter of the parents reported their child not wanting to wear the hearing aids (35%), child activities (29%), and fear of losing or damaging the hearing aids (23%) as frequently or always a challenge (see Table 4).**

Parents were asked to estimate how much their child typically uses their hearing aid on good days and on bad days. Responses indicated all waking hours (good days [42%; n=132], bad days [18%; n=56]), 8 to 9 hours (good days [23%; n=72], bad days [20%; n=64]), 5 to 7 hours (good days [16%; n=51], bad days [18%; n=56]), and less than 5 hours (good days [19%; n=60], bad days [44%; n=137]). Parents

generally reported more good days (M=73%; SD=29.71; range 0-100%) than bad days (M=26%; SD=29.46; range 0-100%). The amount of time other caregivers provided care on a routine basis for the children varied (M=4 hours; SD=3.85; range 0-12 hours).

Table 4. Hearing aid use challenges

Hearing aid use challenge	Your State	All Participants		
	Frequent or Always % (n)	Frequent or Always % (n)	Sometimes % (n)	Never % (n)
1. Activities (e.g., playing outside, riding in car)	29 (22)	28 (89)	42 (131)	30 (95)
2. My child not wanting to wear the hearing aids	35 (27)	27 (84)	43 (135)	31 (98)
3. Fear of losing or damaging the hearing aids	23 (18)	20 (63)	37 (117)	43 (135)
4. Difficulty getting a set routine	16 (12)	16 (50)	24 (74)	61 (191)
5. Other caregivers' ability to manage the hearing aids	15 (11)	14 (42)	35 (109)	52 (164)
6. Frequent feedback	17 (13)	13 (41)	42 (132)	45 (142)
7. Costs (e.g. batteries, earmolds, repairs)	9 (7)	11 (33)	25 (78)	65 (204)
8. Distractions and needs of other children in the home	5 (4)	8 (23)	36 (114)	56 (177)
9. Not seeing the benefit	9 (7)	8 (24)	22 (70)	70 (221)
10. Frequent ear infections	6 (5)	6 (20)	23 (73)	71 (223)
11. Not being convinced that my child needs hearing aids	5 (4)	6 (18)	13 (42)	81 (256)
12. The hearing aids not working	8 (6)	4 (13)	24 (75)	72 (227)
13. Pressure from others not to use the hearing aids	5 (4)	3 (11)	11 (35)	86 (271)
14. Concerns about how the hearing aids look	3 (2)	3 (10)	10 (31)	87 (275)

Audiologist Communication and Support

For each of the 13 items related to communication and support from their audiologist, parents were asked to report if the type of communication or support described is meeting their needs or if they desired that type of communication more often. The majority of parents reported that their needs related to communication with the audiologist were being met; however 27% reported they would like the audiologist to check in with them more frequently to see if support or help is needed (see Table 5). **In your state 25% of parents reported they would like the audiologist to check in with them more frequently to see if support or help is needed (see Table 5).**

Table 5. Communication with the audiologist

Communication Needs	All Participants	Your State
	Desired More Often % (n)	Desired More Often % (n)
1. Checks in with me to see if I need help or support	27 (86)	25 (19)
2. Helps me explore solutions to problems with hearing aid use	18 (55)	16 (12)
3. Helps me monitor problems until the concern is resolved (e.g., contact is frequent enough to help me tell if I am making progress)	18 (57)	17 (13)
4. Provides me with concrete resources	16 (49)	9 (7)
5. Helps me gain confidence in managing my child's hearing aids	14 (43)	14 (11)
6. Asks for my thoughts and opinions, and listens to what I have to say	13 (42)	13 (10)
7. Gives me an opportunity to talk about how I am feeling	12 (39)	8 (6)
8. Helps me recognize what I am doing right	12 (37)	11 (8)
9. Responds to my input in a way that I feel understood (e.g., includes what I have brought up in the discussion/planning)	11 (36)	9 (7)
10. Is accepting of my challenges (e.g., does not judge me)	11 (32)	9 (7)
11. Teaches me in the ways I learn best (e.g., visual, auditory, written, hands-on)	10 (30)	12 (9)
12. Talks in a way I can understand	6 (18)	5 (4)
13. Respects my culture and beliefs by taking into account my views	2 (7)	3 (2)

Psychosocial Impact (State-specific data is not provided)

Parents completed a screening questionnaire for depression and the PHQ-9 primarily revealed minimal symptoms of depression (M=2.27; SD=3.59; range 0-19). Scores of 1-4 indicate minimal, 5-9 mild, 10-14 moderate, 15-19 moderately-severe and 20-27 indicate severe symptoms of depression. Of the responses, 47% (n=132) reported no symptoms of depression, 38% (n=109) reported minimal depression, and 15% (n=43) reported mild to severe symptoms of depression. Some parents reported that their symptoms of depression were causing their ability to manage to be somewhat difficult (20%; n=54), or very/extremely difficult (1%, n=3).