

**ARTICLE REFERENCE:** McCreery, R. W., Bentler, R. A., & Roush, P. A. (2013). Characteristics of hearing aid fittings in infants and young children. *Ear and Hearing, 34*(6), 701-710.

**KEYWORDS:** Audibility, Hearing Aids, Speech Intelligibility Index

**WHAT WAS STUDIED, HOW WAS IT STUDIED AND RESULTS:**

- **WHAT:** Best practice guidelines recommend that audiologists fit hearing aids using computer-based prescriptive targets. By setting and meeting targets for how much gain to provide at each of the frequencies important for speech, they provide children the best possible auditory access speech signal. The goal in fitting hearing aids is for children to hear as much speech as possible with their HAs (**audibility**). This study examined the degree to which children's hearing aid fittings matched the prescribed targets.
- **HOW:** Research audiologists analyzed the hearing aid fittings of a large group of hard of hearing children. They determined how closely the actual gain from each hearing aid matched the target gain. They measured the children's audibility with the hearing aids using a measure called the Speech Intelligibility Index (SII).
- **RESULTS:** More than half (55%) of the children in the study had at least one ear where the fitting was not a good match to the prescribed target values, and could be improved. Approximately 26% of the children in the study had HAs that were not fit in a way that allowed speech to be heard well.

**HOW THIS INFORMATION MAY BE USEFUL TO YOU AND YOUR CHILD:**

Well fit hearing aids (with good audibility) was found to benefit language development in children with mild to severe hearing loss. Children with better audibility with their hearing aids were more likely to learn quickly and develop age-appropriate spoken language skills. Parents are encouraged to ask the audiologist about their child's aided audibility. The Speech Intelligibility Index that is the measure of audibility ranges from 0 (nothing is audible) to 1.0 (everything is audible). Higher values mean better audibility. Aided **audibility** should be checked regularly (after hearing evaluations and earmold fittings). It is possible to improve inadequate hearing aid fittings by following best practice recommendations.

**WHO WAS STUDIED:**

195 children with mild to severe hearing loss who were enrolled in the Outcomes of Children with Hearing Loss study, a collaboration of University of Iowa, Boys Town National Research Hospital, and University of North Carolina at Chapel Hill.

**WHAT STILL REMAINS TO BE ANSWERED:** It is not yet clear how much aided audibility is optimal for language learning. Stiles, Bentler, & McGregor (2012) found that values below .65 were not optimal, but more research is needed.

**WHERE CAN I FIND MORE INFORMATION:** [www.ochlstudy.org](http://www.ochlstudy.org)