



Habilitation Outreach for
Professionals in Education

HOPE Note

Performance Outcomes

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Assessing performance outcomes of a child with a cochlear implant is closely linked to candidacy factors such as age at implantation. The following HOPE Note outlines the general performance trends observed in children with cochlear implants over time.

Performance Trends

Just as there is a variety in the general population on measures of performance, so too is there variability in performance of children with cochlear implants. That being said, however, in the almost twenty years of experience with children with cochlear implants, certain trends with regard to implant usage have emerged. First, children who receive cochlear implants at early ages (two years of age or younger) appear to have great potential for maximizing the benefit offered by implant technology. Older children, with short durations of deafness (e.g. those who were hard of hearing and then had a decrease in hearing) also appear to maximize the implant's potential. In contrast, children with long durations of deafness, implanted at later ages receive more limited benefit from the device. Finally, medical, cognitive or environmental issues present at the time of candidacy evaluation will affect performance outcomes after implantation. Regardless, under the right conditions (good maintenance and proper habilitation) benefit from the device can still be anticipated for virtually all children that seek implantation.

Successful Use of the Cochlear Implant

It is commonly accepted in cases of severe and profound deafness that the auditory access provided by a cochlear implant is superior to that of hearing aids. Thus, it is likely that the majority of children that receive cochlear implants will, at minimum, develop auditory skills beyond those that would have been possible with a hearing aid. Any given child's performance with a cochlear implant cannot be predicted. However, systematic development of auditory skills should be expected over time unless there are mitigating circumstances that preclude maximal use of the potential of the device. Examples of these mitigating circumstances include limited cognitive ability or language processing issues. On one end of the performance continuum are children who develop comprehension of spoken language such that they can participate easily and respond appropriately in conversational exchanges. Other children will need contextual support to process spoken language yet they will receive much important information auditorily. Still others will benefit from the implant primarily as an assist to visual communication. Regardless of absolute performance level, children who wear their implants for all waking hours will receive their own benefit from the device and can be considered successful users.





Responsibilities of Educational Professionals

School based professionals with knowledge about anticipated performance outcomes of children with cochlear implants will be positioned to monitor progress to determine if appropriate levels of auditory achievement are being met. Conversely, these same professionals can establish whether or not a given child's level of performance matches appropriate expectations based on the pre-implant profile. When a given child's performance is substandard with regard to expected auditory accomplishments, it is incumbent upon the teacher or speech and language pathologist to initiate additional assessments, revise the intervention plan and/or pursue additional resources as needed.

Related Resources

Brooks, B.M. (2002). *My Baby and Me - A Book About Teaching Your Child to Talk*. St. Louis: Moog Center for Deaf Education.

Chute, P., & Nevins, M.E. (2006). *The Zone of Cochlear Implant Performance in School Professionals Working with Children with Cochlear Implants*. San Diego: Plural Publications.

Cochlear Americas. (2004). *(Re)Habilitation Factors in Cochlear Implant Resource Guide*. Englewood, CO. To order, visit the HOPE Education and Rehab section of the Cochlear Online Store: www.cochlear.com/shop.

McClatchie, A., & Therres, M.K. (2003). Educational Outcomes and Support Services in *AuSpLan: Auditory, Speech and Language. A Manual for Professionals Working with Children Who Have Cochlear Implants or Amplification*. Children's Hospital and Research Center at Oakland. Available at www.agsbell.org.

Nevins, M.E., & Garber, A.S. (2005). *Benchmarks of Performance for Children with Cochlear Implants*. HOPE Online Library. Available at www.cochlear.com/HOPE.

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