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Should Deaf Children Get Cochlear Implants?

I recently watched a movie titled *Sweet Nothing in My Ear*, where a deaf mother and a hearing father argued over whether their child should get a cochlear implant (CI). Having taken an ASL (American Sign Language) class, where I was introduced to deaf culture and received instruction from a deaf teacher every day, I have grown to respect the people of the deaf community. Deaf people do not need to hear to live a good life. Knowing this, I was prompted by the movie to question the morality of giving children cochlear implants compared to allowing them to enter the deaf community.

A cochlear implant is a device surgically inserted behind the ear through a small incision. To allow a person to hear, the device transmits electrical signals to the brain by stimulating the auditory nerve. There are alternative devices and tools, like hearing aids and sign language, that can help people with hearing loss, but CIs can work around damaged sensory hair cells and significantly improve a person's hearing range. Sensory hair cells capture sound waves and send the waves to the brain to allow hearing. Hearing aids can amplify sounds transmitted from sensory hair cells, but when the cells are damaged, amplification alone may no longer help with the interpretation of sounds. Instead of hearing aids, CIs may be the next best option. However, when considering cochlear implantation for a child, parents tend to hesitate in the decision-making process.

To help these parents make informed decisions, I want to find out what factors are most important to consider. An analysis of scholarly articles and other sources shows that social interactions of deaf people, the factor of age in cochlear implantation, and the commitment required from implantation are all factors that influence decisions on cochlear implantation involving deaf children.

Focusing on social interaction, clinicians and parents often consider this factor when deciding if a child should be given CIs. People may believe that children should get CIs to avoid communication struggles in the future. This is understandable since people who are deaf or hard of hearing often need to interact with people face-to-face to understand others. Thus, conversations with multiple people, with a person wearing a mask, or from behind a screen can naturally pose communication problems for deaf people. However, there are some additional social barriers that accompany hearing loss.

The presence of such barriers is seen in how deaf and hard-of-hearing people tend to be excluded from the rest of society. People with severe hearing loss have been found to be more at risk of isolation (Bradfield; Crouch). Knowing this risk exists, parents may consider cochlear implantation for their child because of the fear that their child will struggle to make friends or have a sense of belonging. While hearing loss contributes to social struggles in childhood, children who remain deaf may also face a bigger problem in adulthood. For example, deaf or hard-of-hearing adults have a higher rate of unemployment (Bradfield; Sappington; Bustos-Rubilar et al.). The struggles of unemployment can be experienced by deaf children when they reach adulthood, resulting in financial concerns and the inability to live independently.

While these social barriers exist, many of the people in the deaf community do not support cochlear implantation. Some members of the deaf community call CIs a threat to their

culture and see CIs as devices that were created to fix them (Bradfield; Crouch; Sappington; Cooper). According to Robert A. Crouch, "[O]ver ninety percent of deaf children are born to hearing parents" who tend to see deafness as a disability (14). However, many people in the deaf community do not see themselves as people with disabilities. Instead, research indicates that people in the deaf community take pride in being deaf. The deaf community has developed a distinct culture and language despite a history of being silenced by mainstream society, so the notion that deaf people must become hearing people through cochlear implantation rejects the resilience of the community and their culture (Bradfield; Crouch). Crouch states that, contrary to what most people think, deaf people can lead "richly rewarding lives" (20). It may be inferred that since members of the deaf community share similarities that bind them as people of one culture, deaf children can make connections to people who can be their support group outside of their family and who can guide them to a successful life as deaf people. However, in cases where people in the deaf community reject cochlear implant recipients, deaf children may lose access to the community (Cooper; Crouch).

Deafness is not the only attribute of the deaf community; sign language is also intertwined with the community and can help children acquire communication skills. Sign language can be easily learned by deaf children since it is a visual language (Crouch; Krammer). In addition to providing deaf children with a means of communication, learning sign language has also been shown to have a positive correlation to exceptional academic performance in deaf children (Bradfield; Crouch). This supports the claim that people of the deaf community can still succeed in life without CIs. Even with CIs, an implant recipient can still choose to practice sign language (Bradfield). Learning sign language can also help children acquire communication

skills with mainstream society (Krammer; Crouch). Upon gaining the ability to communicate with other people, children can then expand their future opportunities.

Although social benefits were found in children who learned sign language, several authors have found that cochlear implantation may prevent a child from learning sign language. Amelia Cooper points out that parents may think their child does not have to learn sign language since CIs automatically give children normal hearing. Crouch notes that child recipients may be put on strict oral training, delaying their exposure to sign language. As more children are given CIs, the number of people in the deaf community could dwindle since fewer children may be exposed to sign language. This may cause significant concern to the current members of the deaf community.

Looking at the effectiveness of CIs in supporting communication, CIs have had a positive impact overall, helping children understand spoken languages and interact with the hearing community, so their ability to socialize is improved. In the long term, five years or more after implantation, children exhibit hearing levels comparable to those of children who have normal hearing (Bradfield; León Mendez et al.). With the possibility of developing hearing levels comparable to most children, child recipients may be able to fully assimilate into mainstream society. However, when to implant a CI and the road after implantation is another matter that must be discussed.

For prelingually deaf children or children who have yet to develop linguistic skills, the factor of age is often brought up. One of the arguments against early implantation is that parents should wait until their child is old enough to give consent. Owen Bradfield supports this claim when he says that since implantation affects the “future linguistic and cultural identity of a child,” people believe “deaf children should be allowed to grow up” first so they can decide for

themselves. Eunjung Na, Karine Toupin-April, Janet Olds, Dorie Noll, and Elizabeth M. Fitzpatrick also provide insight into this perspective in their coauthored article on the decision-making process involved in the implantation of cochlear devices in children. They have found that adolescents do not feel confident in deciding whether they want CIs (Na et al. 342), so parents would have to make a life-changing decision for their child or wait until their child has developed decision-making skills.

However, research findings say the effectiveness of CIs correlates with the recipient's age at the time of implantation: in younger recipients, the efficiency of CIs will be greater (Hoff et al.; Bradfield; Bustos-Rubilar et al.; Punch and Hyde). Implantation at under twelve months allows children to hear spoken languages early (Hoff et al.), and if deaf children are not given CIs before turning two years old, they may experience more difficulty in developing a sense of belonging among children with normal hearing (Punch and Hyde; Holt and Svirsky).

A reason parents may not want to have their child undergo cochlear implantation at under twelve months of age is that they worry about the procedure's potential risks, but researchers have found the procedure to be safer than people think. Surgical complications in infants have been documented as similar to complications found in adults, so children will not be any more at risk when receiving a CI at only months old than years later. While there can be serious risks, complications are generally minor issues like swelling, fluid in the middle ear, or damage to the facial nerve, which can be easily treated (Deep et al.; Hoff et al.).

Commitment plays a significant part in the outcome of cochlear implantations. For instance, guardians of deaf children will have to commit to paying the cost of CIs. Cochlear implantation surgery can cost from thirty thousand to fifty thousand dollars (Bradfield), while the cost including rehabilitation can range from fifty thousand to one hundred thousand dollars

(Watson). According to Bradfield, if the price of CIs proves to be too much, a child may have to sacrifice a proper diet, livable shelter, and other necessities for the sake of gaining the ability to hear. Under the circumstance where the cost of CIs is "overly demanding," Bradfield concludes that parents should not get CIs for their kids.

Federal systems, such as Medicare or Medicaid, and insurance companies can help people pay for cochlear implantation (Sappington; "Cost"). However, Medicaid does not cover the cost of cochlear implantation in children under twelve months, because implantation in this age group has not been formally approved by the Food and Drug Administration (Holt and Svirsky; Hoff et al.).

CI recipients and their families also need to commit to years of oral training and follow-up appointments, because cochlear implantation needs to be accompanied by extensive training and rehabilitation to work (Bradfield; Cooper; Crouch; Sappington). Extensive training can include psychological therapy, extra language lessons, or support programs (Bradfield). Developing "normal" hearing in children with CIs takes years, especially if the child is prelingually deaf, since the brain will need time to facilitate the comprehension of new sensory input (Cooper). Once sounds can be processed, children will then need to build up the basics of spoken language (Cooper; Crouch). According to Rachel Frush Holt and Mario A. Svirsky, among others, this may not be a problem for children who received CIs under the age of two, but older children are likely to take longer to meet the linguistic level of their peers.

Based on the research, deaf children should be given CIs only if their families can afford the costs and commit to supporting their children on the road to acquiring linguistic skills and optimal hearing. If a child can make decisions for themselves, parents should ask for their child's opinion on cochlear implants since the child's future will be directly impacted. However, if a

child is too young to communicate, then families may want to settle for the earliest date of implantation since the effectiveness of CIs is affected by age. Families of CI recipients should also be open to learning sign language with their children, not only because the spread of sign language can keep the deaf community alive but also because signing has been proven to help deaf children acquire spoken language and communication skills. Finally, if a family cannot obtain CIs, they should know that the deaf community is a strong collective that can provide substantial support to deaf children.

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