

RATIONALE FOR MANDATORY COCHLEAR IMPLANT COVERAGE BY PRIVATE INSURANCE COMPANIES

INTRODUCTION

Approximately 1.7% (17 out of 1000) of children have hearing loss. Left untreated, hearing loss in children delays their speech and language development. In addition to developmental delays, hearing loss in children also presents significant safety concerns and puts them needlessly at heightened risk. Children with hearing loss may not be able to hear approaching cars, police sirens, or other noises which would alert a person without hearing loss to danger. In addition to the concerns about a child’s development and safety, untreated hearing loss also presents substantial costs to society.

Hearing loss can range from mild-to-moderate to severe-to-profound. While hearing aids can be used to ameliorate mild-to-moderate hearing loss, they provide no auditory benefit to children with severe-to-profound sensorineural hearing loss. Only cochlear implants provide access to sound to children with severe-to-profound sensorineural hearing loss. Cochlear implants are the standard of care in the medical community to treat children with bilateral profound sensorineural hearing loss. The Food and Drug Administration approved cochlear implants almost 25 years ago as a safe and effective means of treating bilateral profound sensorineural hearing loss in children who receive no meaningful auditory benefit from hearing aids.

A cochlear implant is an electronic device, surgically implanted in the inner ear that allows a person with bilateral severe to profound sensorineural hearing loss access to sound. The device consists of four basic parts:

- A microphone that picks up sound from the environment
- A speech processor that translates the sounds into signals
- A transmitter that converts the signals into electric impulses
- Electrodes embedded in the cochlea that send the electric impulses to the brain

Cochlear implants are not hearing aids. Hearing aids amplify sound where cochlear implants completely replace the dysfunctional hearing system that would normally allow the brain to hear sound. Cochlear implants are extremely effective for individuals who receive little or no benefit from hearing aids. The federal government categorizes cochlear implants as auditory prosthetic devices because they replace a damaged part of the human body.

LEGISLATIVE HISTORY IN OTHER STATES

Several states mandate coverage for cochlear implants. The federal government mandates coverage for at least one cochlear implant for all Medicaid patients under the age of 21. Medicaid in several states provides coverage for bilateral cochlear implants (i.e. one for each ear). Medicare covers one cochlear implant for the disabled and individuals over age 65. The majority of private insurers now cover bilateral cochlear implantation. In California, any individual on public insurance including Medicaid, CCS, and Healthy Families can receive at least one cochlear implant.

The estimated cost to receive a cochlear implant is \$45,000 to \$80,000.

Although the majority of private insurers cover cochlear implants, there are many private insurers who attempt to exclude or limit coverage for cochlear implants due to the cost of treatment, preferring to increase their own profits by passing the bill for non-treatment onto state taxpayers.

Kentucky

Kentucky Revised Statutes Section 304.17A-131 requires that all health benefit plans provide coverage for cochlear implants to all persons diagnosed with profound hearing loss.i “Health benefit plan”, as defined by this statute, includes hospital or medical expense policies, self-insured plans or plans provided by a multiple employer welfare arrangement, and any health benefit plan that affects the rights of a Kentucky insured and bears a reasonable relation to Kentucky.

Oregon

While a unilateral cochlear implant (single ear) provides significant benefits to patients who are diagnosed with severe-to-profound sensorineural hearing loss, bilateral cochlear implants (both ears) provides even more significant benefits. Bilateral cochlear implant recipients are better able to understand speech in noisy environments and are better able to accurately locate the origin of sounds (sound localization). Additionally, their perception of language is significantly improved. Oregon Revised Statutes Section 743A.140 requires that “whenever any policy of health insurance provides for reimbursement of a cochlear implant, the insured under the policy is entitled to coverage of bilateral cochlear implants.”

South Dakota

Using a telephone can be crucial – dialing 911 in emergencies, children calling their parents if they are lost or injured or a wife calling her husband just as she goes into labor. However, using a telephone presents significant challenges for people with hearing loss. Cochlear implants can enable a person with a hearing loss to use a telephone. SDCL § 49-31-47 requires South Dakota’s Department of Human Services to establish and administer a statewide program to purchase and distribute telecommunication devices, including cochlear implants, to residents who have disabilities that prevent them from using a telephone. The cochlear implants are bought using funds from the “telecommunication funds for persons with hearing and other disabilities,” created under SDCL § 49-31-50. SDCL § 49-31-50 continuously appropriates two hundred thousand dollars (\$200,000), or as much as is necessary, each year to provide unilateral or bilateral cochlear implants to any child who suffers from bilateral severe to profound sensorineural hearing loss. The statute requires that a child be less than five years of age at the time of the first implant. However, if the child has a documented progressive hearing loss that leads to deafness after speech and language are developed; then the statute requires that a child be less than twenty-one years of age at the time of the first implant.

Cochlear Implants: One or Two?

There are Many Substantial Benefits from Cochlear Implantation.

The benefits of cochlear implantation in children are numerous.

Many studies have shown that the first few years of life are the most important for optimal language development.

1. This concept is known as “neural plasticity” and correlates to the explosive growth in language development that takes place between birth and age five.

Sooner is better: Children receive more auditory and speech benefits from cochlear implants when they are implanted earlier.

1. Children who receive cochlear implants prior to their first birthday learn to speak and understand language at rates comparable to their normally hearing peers, and are significantly faster learners than children who undergo implantation between 12 and 24 mo of age.

2. Earlier implantation in children leads to earlier development of language, reading, writing and other educational skills, and correspondingly lower special education costs.

3. The absence of sound in the first few months of life may affect neurobiological development in important ways.

Uncorrected hearing loss can lead to severe delays in a child's development.

1. The 30-year study by the Gallaudet Research Institute found that half of deaf and hard of hearing high school seniors demonstrate a fourth grade reading level; a significant delay in educational progress.

2. Overall intelligence, measured by IQ tests, is demonstrably higher in hearing impaired children who received cochlear implantation.

3. The overall psychological well being of deaf children can be significantly improved after cochlear implantation.

4. The socialization of children born with profound hearing loss is improved with cochlear implantation because they are able to integrate into hearing society faster through increased expressive and receptive language skills. Community involvement has also been shown to be higher among implanted children than children with uncorrected hearing loss.

There are significant benefits of cochlear implantation in adults.

While cochlear implants will not restore perfect hearing, some adults who have the procedure may regain near-normal access to sound. A small percentage of adults who get implants notice minimal benefit. Most can expect to acquire useful hearing ability that falls somewhere between the two extremes.

Post-lingually deafened adults often benefit immediately and continue to dramatically improve for about 6 months after their cochlear implantation activation. Following the first six months of activation, hearing performance continues to improve for several years, albeit at a slower rate.

Many cochlear implant recipients gain the ability to:

1. Distinguish environmental sounds. Cochlear implant recipients report that they can identify many different types of sounds, such as footsteps, doors slamming, engines idling, telephones ringing, dogs barking, leaves rustling, birds chirping, and many other sounds.
2. Understand speech without lip-reading. Even if this level of hearing is not possible, the cochlear implant usually makes lip-reading easier.
3. Enjoy music. Some cochlear implant recipients enjoy the sound of certain instruments (piano or guitar, for example) and certain familiar songs. Other cochlear implant recipients may not be able to enjoy music.

Many individuals who receive cochlear implants as adults are able to use the telephone.

Bilateral Implants Are Even More Beneficial

Hearing with bilateral implants offers even more significant benefits to cochlear implant recipients than hearing with a unilateral implant.

Bilateral cochlear implant recipients are better able to understand speech in noisy environments

Bilateral cochlear implant recipients can more easily and accurately locate the origin of sounds.

Bilateral cochlear implant recipients have significantly improved language perception.

Benefits to Society and Public Welfare

Children with cochlear devices present a lower risk of health problems and accidents because they are better able to avoid danger.

Children with hearing loss are significantly more likely to receive emergency treatment for every injury type.

Education and Healthcare costs to society are reduced with cochlear implants.

The National Institute of Health has determined that cochlear implantation in children is extremely cost-effective for society; the average cost of implantation and associated services is \$60,000 per implant while the services, special education, reliance on social programs, interpreter services and lost tax revenue associated with a child who is prelingually profoundly hearing impaired can exceed \$1 million over the lifetime of that individual.

Recent clinical studies indicate that early detection of hearing loss followed with appropriate intervention minimizes the need for extensive habilitation during the school years and therefore reduces the burden on the IDEA Part B program, which is a federal mandate that is on average 79% funded by the states.

A recent study on cochlear implants demonstrated that special education in elementary school is less necessary when children have had "greater than two years of implant experience" before starting school. Children who are implanted by age three are mainstreamed at twice the rate or more of age-matched children with profound hearing loss who do not have cochlear implants.

Academic and occupational benefits to individual children will result in a more productive population and decrease dependence on public assistance.

Early implantation allows for the child to develop skills which will allow them to function in several areas crucial to academic success and occupational productivity, including;

- 1.Improved communication skills
- 2.Participating in conversations without reading lips
- 3.Using a telephone

Cochlear implantation can result in numerous psychological benefits both for implanted children and their families.

Other Policy Considerations

Low risk of offense to the signing deaf community.

Developing standardized documentation decreases the chance that regional influences within a state will result in biased information being presented to families.