



October 18, 2023

Representative Brenda Carter, Chair - House Insurance Committee

Dear Representative Carter:

I am the chair of the advocacy committee and the summer camp program of the Michigan Alexander Graham Bell Association for the Deaf and Hard of Hearing (MI AGBell). I am also the parent of a daughter Lisa who was born in the 1970s with a severe hearing loss in her left ear and a profound hearing loss in her right ear. Lisa wears a hearing aid in her left ear, the hearing loss in the right ear is too severe for her to benefit from a hearing aid. Without her hearing aid, Lisa cannot hear spoken language. Hearing aids now cost \$3000 each and many parents do not have the money to buy hearing aids for their child.

I am writing you to request that you vote "yes" for two bills: 1) Michigan House Bill 4944 that would require that health insurance policies cover hearing aids for children through age eighteen; and 2) House Bill 4963 that would require hearing related services and devices for children (audiology, speech and language pathology, remote microphone, and earmolds). Both bills are bipartisan.

Approximately 400 children are born in Michigan every year who either have hearing impairments or will acquire one by school age. With hearing aids and early intervention services the large majority of these Deaf and Hard of Hearing children can reach the same speech and language milestones as typically hearing children by age five.

These bills are cost effective. If just 100 Deaf and Hard of Hearing children start kindergarten in general education and do not need special education because of being early provided hearing aids and hearing related services, that will save the public schools \$16,123 (per child) x 100 children = \$1,612,300 per year for this cohort.

Lifetime savings (including lost earnings), total \$639,610 per child x 100 children = \$63,961,000. With early provision of hearing aids and audiology and speech-language therapy services, the vast majority of Deaf and Hard of Hearing children can hear and develop good speech and language.

Michigan Chapter

Alexander Graham Bell Association for
the Deaf and Hard of Hearing
P.O. Box 250137
Franklin, MI 48025
themichiganagb@miagbell.org

Board of Directors

Dan Seraphinoff
President

Diane Hodgins, R.N., B.S.N.
Treasurer

Amanda Hopkins M.S.
CCC-SLP, LSLS Certified AVT
Secretary

Melissa Behnan, LSLS Cert AVEEd

Teresa Sundberg, M.A.Ed.

Summer Camp Program Co-Chairs:

Andrea Burns, B.S.,H.I., M.A. ECEd
Sidney Kraizman, Esq.

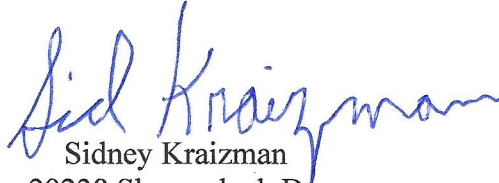
National Office

Alexander Graham Bell Association for
the Deaf and Hard of Hearing
3417 Volta Place, NW
Washington DC, 20007
www.agbell.org

Twenty-eight states have statutes that require insurance coverage of hearing aids for children. Michigan should join the majority of states.

In the event that committee members want to look more closely at cost effectiveness, on the next page there follows my memo entitled "Costs When Hearing Loss is Not Treated Effectively & Cost Effectiveness of Hearing Aids for Deaf and Hard of Hearing Children.

Sincerely yours,



Sidney Kraizman
29238 Shenandoah Dr.
Farmington Hills, MI 48331
C 248) 921-0687

Memo from Sid Kraizman

To Representatives on the House Insurance Committee

Costs When Hearing Loss is Not Treated Effectively & Cost Effectiveness of Hearing Aids for Deaf and Hard of Hearing Children

Costs When Hearing Loss is Not Treated Effectively. “If permanent hearing loss of any severity is not identified early and treated correctly, there are serious consequences for children, their families, and society. Without appropriate access to language, hearing technology, and early intervention, children with hearing loss almost always fall behind their peers in language, cognition, and social-emotional development. Even unilateral loss has substantial negative consequences for academic achievement. *The costs to society are also significant in terms of direct medical costs, special education expenditures, and lost productivity* [emphasis added] ... For most children with permanent hearing loss, many of the negative outcomes can be minimized or avoided completely with early identification and intervention, including the use of appropriate hearing technology.”¹

Special Education Costs. The Centers for Disease Control and Prevention (CDC) stated that: “During the 1999 – 2000 school year, the total cost in the United States for *special education* programs for children who were deaf or hard of hearing was \$652 million, or *\$11,006 per child*...The *lifetime educational cost* (year 2007 value) of hearing loss (more than 40 dB permanent loss without other disabilities) has been *estimated at \$115,600 per child* [emphasis added].”² By applying the Bureau of Labor Statistics Consumer Price Index Inflation Calculator from 12/2007 to 9/2023 of 46.5% the yearly special education cost is an estimated \$16,123 per child. Lifetime education cost is an estimated \$168,475 per child. https://www.bls.gov/data/inflation_calculator.htm

Lifetime Costs & Cost Effectiveness. The CDC stated in 2003: “...lifetime costs (including lost earnings) per person were estimated at ... *\$383,000* for persons with hearing loss.... By applying the Bureau of Labor Statistics Consumer Price Index Inflation Calculator from 12/2003 to 9/2023 of 67% the lifetime cost \$639,610 per child. Id.

Early intervention for children with hearing loss has been associated with higher language development scores, and newborn hearing screening is projected to be cost-effective because of anticipated gains in lifetime earnings.”³

¹ S. Limb, McManus, M., et al. (2010). “Ensuring financial access to hearing aids for infants and young children” *Pediatrics*. 126 Supply 1. S43-51. 10.1542/peds.2010-0354I.

² Centers of Disease Control and Prevention. (n.d.). “CDC - Data and Statistics About Hearing Loss in the United States” <https://www.cdc.gov/ncbddd/hearingloss/data.html>

³ Centers for Disease Control and Prevention (2004). *Economic Costs Associated with Mental Retardation, Cerebral Palsy, Hearing Loss, and Vision Impairment --- United States, 2003*. RTI International, National Center on Birth Defects and Developmental Disabilities.

<https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5303a4.htm> (original); Errata (\$417,000 corrected to \$383,000) found at <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5532a5.htm>

Hearing Aids Are Cost-Effective. The World Health Organization (WHO) stated that: “Use of hearing aids is shown to be cost-effective, especially when use is continuous and accompanied by audiological rehabilitation.”⁴

Cost Effectiveness – Specific Study Outcomes. In a study of 49 Deaf and Hard of Hearing children receiving early intervention at the Shepherd Center in Sydney, Australia, researchers “... found that most children with all severities of hearing loss and no other concomitant diagnosed condition, who were early diagnosed, received amplification by 3 months, enrolled into Auditory Verbal (AV) intervention by 6 months and received a cochlear implant by 18 months if required, were able to ‘keep up with’ rather than ‘catch up to’ their typically hearing peers by 3 years of age on measures of speech and language, including children

with profound hearing loss. *By 5 years, all children achieved typical language development and 96% typical speech [emphasis added].*”⁵

There was a similar result in a large-scale study of 470 Deaf and Hard of Hearing children in Australia (the LOCHI Study).⁶ The summary of findings from the LOCHI study states in part:

“2. Children with moderate hearing loss who received hearing aids before 6 months...On average...achieved language within the range of their typically developing peers.

3. Children with severe hearing loss who received hearing aids before age 3 months ...On average...achieved language at the lower edge of the range of their typically developing peers.”⁷

The researchers also noted that: “The use of spoken language as the primary mode of communication in early education was also associated with better language outcomes.”⁸

A 2019 study done by the University of Michigan shows that young cochlear implant (CI) recipients who received Listening and Spoken Language (LSL) services by a speech and language pathologist had receptive and expressive language in the average to high average range compared to typically hearing children.

⁴ World Health Organization. (2017). *Global costs of unaddressed hearing loss and cost-effectiveness of interventions: a WHO report, 2017*. (Executive Summary, p. vii)
<https://iris.who.int/bitstream/handle/10665/254659/9789241512046-eng.pdf?sequence=1&isAllowed=y>

⁵ Anne Fulcher, et al. (2012). Listen up: Children with early identified hearing loss achieve age-appropriate speech/language outcomes by 3 years-of-age. *International Journal of Pediatric Otorhinolaryngology*, 76(12), 1785-1794.
<https://doi.org/10.1016/j.ijporl.2012.09.001>

⁶ T. Ching, & Leigh, G. (2020). Considering the impact of universal newborn hearing screening and early intervention on language outcomes for children with congenital hearing loss. *Hearing Balance and Communication*, 18(4), 215-224.
<https://doi.org/10.1080/21695717.2020.1846923>

⁷ Ibid., 222.

⁸ Ibid., 221.

Articulation was above the level of a typically developing child; high average reading comprehension skills were obtained by 3 years post CI and remained in that range 7 years after activation.⁹

Listening and Spoken Language (LSL) is a methodology to develop the spoken language of Deaf and Hard of Hearing children and is the same methodology as Auditory Verbal (AV) that were used in the first two cited studies.

Implantation at an early age, when it is required, is a key factor for success. In 2020, the Food and Drug Administration (FDA) approved age of cochlear implantation was lowered from 1 year to 9 months of age. The services of an appropriately trained audiologist and speech and language pathologist and/or teacher of the Deaf and Hard of Hearing are also crucial factors for success. Cochlear implants are not hearing aids, but children that have cochlear implants have the most severe and profound hearing losses. Cochlear implants provide amplification just as hearing aids do for children with less severe hearing loss. With amplification and appropriate audiological and speech language pathology services, kids with hearing aids and cochlear implants can achieve an extraordinary result in spoken language that matches - or exceeds--their typically hearing peers.

Michigan Follows the Early Hearing Detection and Intervention (EHDI) 1-3-6 Goals Recommended by the CDC and the Joint Commission on Infant Hearing. The 1-3-6 goals are defined as:

"1" - All infants are screened for hearing loss no later than **1 month** of age, preferably before hospital discharge.

"3" - All infants who do not pass the screening will have a diagnostic hearing evaluation no later than **3 months** of age.

"6" - All infants with a hearing loss are enrolled in early intervention services no later than **6 months** of age."¹⁰

Principles and Guidelines - Immediate Access to High Quality Hearing Aids. In its 2007 "Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs," the Joint Commission on Infant Hearing states: "5. The child and family should have immediate access to high-quality technology, including hearing aids, cochlear implants, and other assistive devices when appropriate."¹¹

Conclusion. A large majority of Deaf and Hard of Hearing children that are diagnosed early and receive hearing aids by three months of age, listening and spoken language services by six months of age, and a cochlear implant by eighteen months of age, if required, will achieve typical speech and language development by five years of age. They will start kindergarten on par with their typically hearing peers. If just 100 Deaf and Hard of Hearing children start kindergarten in general education and do not need special education because of being early provided hearing aids and hearing related services, that will save the public schools

⁹ Thomas, E. & Zwolan, T. (2019). Communication Mode and Speech and Language Outcomes of Young Cochlear Implant Recipients: A comparison of auditory-verbal, oral communication, and total communication. *Otology & Neurotology*, (2019) 40(10), e975-e983. <https://doi.org/10.1097/MAO.0000000000002405>

¹⁰ Michigan Department of Health and Human Services. (n.d.). Retrieved from <https://www.michigan.gov/mdhhs/adult-child-serv/childrenfamilies/ehdi/early-hearing-detection-and-intervention-ehdi-program> on September 26, 2023.

¹¹ Joint Commission on Infant Hearing. (2007). *Position Statement: Principles and Guidelines of Early Hearing Detection and Intervention programs*. https://www.cdc.gov/ncbddd/hearingloss/documents/jcih_2007.pdf

$\$16,123$ (per child) \times 100 children = $\$1,612,300$. per year for this cohort. Lifetime savings (including lost earnings), total $\$639,610$ /child \times 100 children = $\$63,961,000.00$.

Many other Deaf and Hard of Hearing children who have additional disabilities such as Cognitive Impairment, Cerebral Palsy, and Autism Spectrum Disorder will also substantially benefit from early intervention and hearing aids although their speech and language and academic development may be slower than typically developing children. It is probable that there will also be cost savings for these children with additional disabilities.

It is the opinion of the CDC and WHO that early intervention and hearing aids are cost effective. That is also what these three cited studies show.

Michigan House Bills # 4944 and 4963 mandating that health insurance policies cover hearing aids for Deaf and Hard of Hearing children, and early audiological and speech and language pathology services is not only the right thing to do, but the State will also save millions of dollars in special education and remedial education services throughout the children's academic career.