# Investing in Hearing Communicating the Benefits of CI


**Brian Lamb**

**CIICA Policy and Strategy Advisor**




Spend to Save

INVESTING IN OUR HEARING IMPROVES LIVES AND IS COST EFFECTIVE

ADULT HEARING LOSS – A GLOBAL CHALLENGE

Addressing hearing loss is one of the most challenging issues faced by health and social care systems globally today. Hearing loss challenges our ability to communicate and relate to family, friends and partners, to lead productive lives with employment which uses our abilities, maintains good health, independence and autonomy as we age.

- Currently 1 in 3 people over 65 and over half of people over 85 will have disabling hearing loss.
- Nearly 30 million people will have profound or complete hearing loss in both ears, World Report on Hearing. *(WHO, WRH 2021)*
- By 2050 over 700 million people globally will have disabling hearing loss. *(WHO, 2024)*

Faced with this massive increase in the number with hearing loss in the coming decades the challenge is so urgent that The World Health Organisation *(WHO)* World Report on Hearing *(2021)* called for countries to integrate strategies for Ear and Hearing care into health care systems.

The positive news is that we have never been more effective in enabling people to continue hearing or restore lost hearing. Hearing Aids are worn more routinely and with greater satisfaction *(EHIMA, 2024)* and as the WHO noted; "Cochlear implant is one of the most successful of all neural prostheses developed to date." *(WRH, WHO 2001).*

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- CI In adults redu functioning. *(An Archbold, 2014)*
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INVESTING IN CHILDREN'S HEARING:

Deaf Children and the Impact of Cochlear Implantation

Hearing is fundamental for children to acquire the spoken language of their home. Spoken language enables children to communicate, interact with their families and carers, acquire literacy skills and achieve their educational potential. As the World Health Organisation (WHO) noted in their World Report on Hearing (WRH 2021).

> *Unless addressed in a timely manner, those with hearing loss have reduced school performance, slower progression through the academic system, a greater risk of dropping out of school, and lower likelihood of applying for higher education, compared with their hearing peers.*
> *(WHO, WRH, pages 45- 46)*

WE KNOW THAT:

- For children with greater degrees of hearing loss, cochlear implants (CI) provide hearing not possible with hearing aids.
- Cochlear implantation in children has been shown to be safe, effective and cost-effective.
- Over 300,000 children globally have received cochlear implants (industry estimate).

> *Cochlear implant is one of the most successful of all neural prostheses developed to date.*
> *(WHO, page 100)*

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RECOMMENDATIONS:

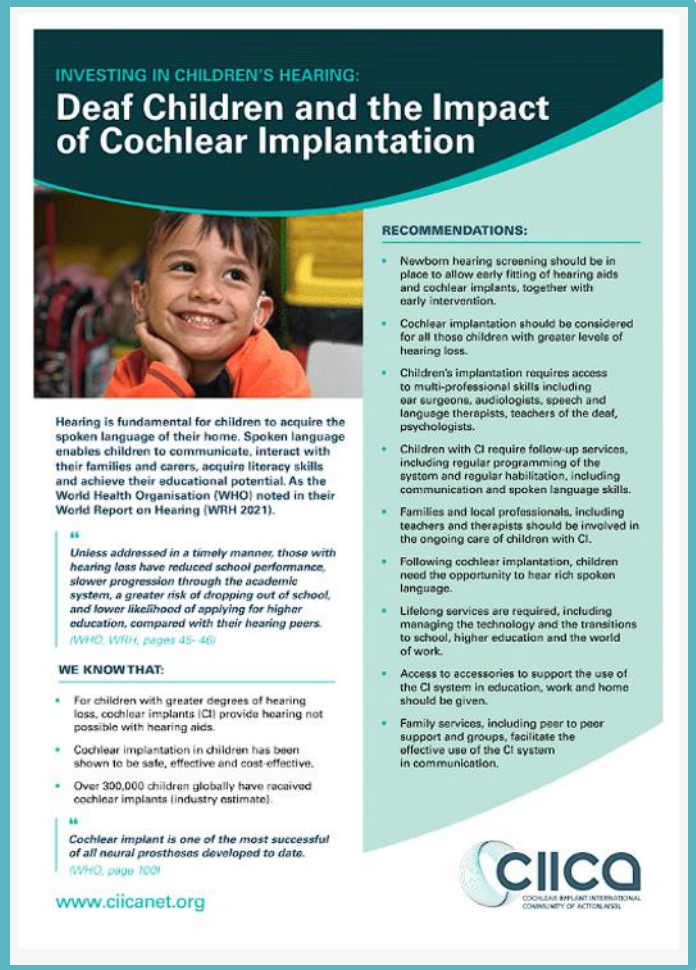
- Newborn hearing screening should be in place to allow early fitting of hearing aids and cochlear implants, together with early intervention.
- Cochlear implantation should be considered for all those children with greater levels of hearing loss.
- Children's implantation requires access to multi-professional skills including ear surgeons, audiologists, speech and language therapists, teachers of the deaf, psychologists.
- Children with CI require follow-up services, including regular programming of the system and regular habilitation, including communication and spoken language skills.
- Families and local professionals, including teachers and therapists should be involved in the ongoing care of children with CI.
- Following cochlear implantation, children need the opportunity to hear rich spoken language.
- Lifelong services are required, including managing the technology and the transitions to school, higher education and the world of work.
- Access to accessories to support the use of the CI system in education, work and home should be given.
- Family services, including peer to peer support and groups, facilitate the effective use of the CI system in communication.

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“Unless addressed in a timely manner, those with hearing loss have reduced school performance, slower progression through the academic system, a greater risk of dropping out of school, and lower likelihood of applying for higher education, compared with their hearing peers.” (WHO, WRH, pages 45- 46)

“Children with cochlear implants have greater likelihood of acquiring oral language, integrating into regular schools and being able to experience sounds along with better speech skills *(199, 200)*. Cochlear implants can also have a beneficial impact on learning and educational outcomes as well as the overall quality of life,” (WHO, WRH page 98).




# New Children's Briefing-Why?

- **New research** that has strengthened the case for the effectiveness of CI for Children
- **Children's language, literacy and quality of life outcomes after implantation has improved** further making the case for more investment in their futures
- Demonstrating the **cost effectiveness of CI**
- Continuing need for **awareness about the benefits of CI** for children across families and professionals
- The **growing evidence** of the importance of implanting children early and providing them with right support post implantation

# Evidence shows that Cochlear Implantation Saves Money over the long-term

*Neve et al., 2021Cost-benefit Analysis of Cochlear Implants: A Societal Perspective. found that:*

- **"the total benefits of CI exceeded the total cost, leading to a net benefit of CI."**
- For prelingually deaf children with a bilateral CI there was a lifetime positive outcome **net benefit of €433,000.**
- and **"was found to lead to a reduction in educational cost of approximately €118,000."** (Neve et al., 2021).
- The total lifetime education cost savings from CI per child in a US study ranged from **USD $167,000 to $191,000 depending on age of implantation.** They estimated **nearly $1.26 billion of societal savings over the lifetime** of the current children eligible (Semenov et al., 2013).
- for every dollar invested in rehabilitation of a child with cochlear implant, there **was a return on investment of US$ 2.07.** (Penaranda et al., 2012)
- in a high-income setting showed a **return of 2.59 International dollars for every 1 dollar invested** and upper-middle-income setting, the **return on investment ratio was estimated to be 4.09 International dollars**
- increased volume of production of CIs should **reduce costs of the CI** as provision increases (Thum et al., 2022; Benifla et al., 2024).

# Improved Educational and Literacy Achievements with CIs

- **Mainstream Success:** CIs drive improved literacy levels, educational attainment, and participation in mainstream education (Ching et al., 2018; Wang et al., 2021).
- **Peer-Level Achievement:** Longitudinal studies demonstrate that children implanted early achieve language, literacy, and educational outcomes comparable to hearing peers (Cejas et al., 2023; Straaten et al., 2021).
- **A Historic Shift:** Literacy research shows that reading and writing improvements among implanted students represent a fundamental and unprecedented shift in the field of literacy for deaf children (Mayer & Trezek, 2018).
- **Advances:** Outcomes will continue to improve due to advancing technology, optimized fitting techniques, enhanced support, and earlier implantation (Gordon et al., 2023).
- Quality of Life: Parents and Children agree that quality of life has improved. (Sahli et al., 2018, Nelson et al., 2016).

# But despite over 300,000 being fitted with CI's worldwide access is still limited

- **Policy Discrepancies:** State-funded programs and third-party insurance payers often enforce overly restrictive candidacy criteria that lag behind modern clinical evidence (Varadarajan et al., 2021).
- **Global Disparities:** Significant global gaps exist in bilateral CI availability due to regional financial restrictions (Vickers et al., 2016).
- **Support Shortages:** Families frequently cite a lack of ongoing educational resources—particularly Teachers of the Deaf and speech therapists—as their primary challenge (Archbold & Mayer, 2012; WHO, 2021).
- **Bi Lateral provision for children is still poor**: A global review of evidence also found that "Despite the importance of bilateral hearing in childhood, there is a great global discrepancy in terms of the availability of bilateral cochlear implants." (Sharma et al., 2020).

## What do we need to do to improve investment in CIs?

- **Raise Awareness:** Increase understanding among general healthcare providers, pediatricians, and educators regarding the benefits of hearing technology.
- **Improve Criteria:** Update medical candidacy policies and funding models to reflect true clinical benefits and remove restrictive barriers.
- **Invest in Infrastructure:** Expand universal newborn and school-age hearing screening programs alongside essential educational support networks (Teachers of the Deaf, speech therapy).
- **Protect Rights:** Strengthen disability rights legislation to ensure inclusive school environments, proper acoustic adjustments, and lifelong device support.

# Elephant in the Room- how we talk about CIs and Funding



- We often **talk about CI's as an expensive** solution…this leaves everyone thinking it is!
- Neet to frame (picture differently) the debate about costs-do not talk about CIs being expensive, costing a lot…..
- The message is that it costs more **not to take action** to address hearing loss.
- Better provision of Ear and Hearing Care and improved take up of CIs is the solution to improve health and save money.
- But we also need to ensure that the support is in place for the lifetime of the user
- Therefore we need to **continue to advocate for the benefits of fully funding access and support for CI.**






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# How does being part of Network help this work?




CIICA has established a global network of advocates to improve access and provision by amplifying the voices of CI users, families and professionals

It is only by working together that we can leverage limited resources and capacity to get our issues onto decision makers agendas

Consistent messages with clear solutions and a unified approach helps to build towards successful outcomes.

The network-working together creates momentum, awareness and understanding of the needs and solutions.

We are now going to hear about some examples that illustrate this from other network members