

Spend to Save: Investing in our Hearing Improves Lives and is Cost Effective

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).



HEARING AIDS AND COCHLEAR IMPLANTS ARE EFFECTIVE AND COST EFFECTIVE

- Regular hearing aid use was associated with lower risks of mortality than in non-hearing aid users in US adults with hearing loss. (Choi et al., 2024)
- Hearing aids improve mental health, physical abilities, cognitive abilities, and employability. (Arrieva, et al., 2015; Contrera et al 2015; Kochkin, 2010; Dept of Health/NHS England 2015; Ferguson et al., 2017; Mahmoudi, et al., 2018)
- The use of hearing aids is associated with less cognitive decline. (Deal, 2015; Arrieva, et al., 2015; Mahmoudi, et al, 2018, Bucholz, et al., 2022; Cantuaria, et al., 2024)
- CI in adults reduces depression and improves cognitive functioning. (Arrieva, et al., 2018; Mosnier, et al., 2014; Archbold, 2014)
- CIs ensure better hearing, improved individuals' quality of life, ability to communicate verbally and their ability to function independently. (Cuda 2024; Ng, et al., 2016)
- The latest hearing technologies, including hearing aids and implants, have been shown to improve the lives of those with hearing loss and to be cost effective. (Gatto et al., 2024; Lamb, et al, 2015; Morris, 2012; Bond, 2009; WHO, 2021; Kervassoulé & Hartmann, 2016; Davies, et al. 2024.)



Previous Spend2Save translated into 19 languages- hugely popular and effective

Spend2Save: Investing in hearing technology improves lives and saves society money
Adult Hearing Loss: Europe's growing challenge

Spend2Save: Investire nella tecnologia dell'udito migliora la qualità della vita e fa risparmiare denaro alla società
Perdita dell'udito NEGLI ADULTI: una crescente sfida per l'Europa

Spend2Save: Investering i hörselteknik ger bättre livskvalitet och är en ekonomisk besparing för samhället
HÖRSELNEDSÄTTNING HOS VUXNA - EN VÄXANDE UTMANING I EUROPA

Spend2Save/Gastar para ahorrar: La inversión en tecnología auditiva mejora la vida de las personas y ahorra dinero a la sociedad
La pérdida auditiva en adultos: el creciente reto de Europa

RIASSUNTO

Hearing loss is one of the most challenging issues facing Europe. Globally, the World Health Organisation (2016, May 2017) called for more for hearing care into health care systems, hearing and communication technologies, and underlines our ability to function in the friends and partners, have a job, lead our health and wellbeing through social life. Hearing loss robs us of the ability to communicate on every facet of life. Yet its impact is unaddressed.

- 52 million people across Europe have hearing loss, and this number is growing. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- Hearing loss is the number one cause of isolation in Western Europe. (Jaw 2016)
- Those with severe hearing loss are at risk of developing dementia as those with normal hearing. (Jaw 2016)
- Mid-life hearing loss may account for up to 10% of dementia cases world-wide and is potentially preventable. (Lewington et al 2018)
- In older age people with hearing loss are at risk of isolation and reduced mental well-being. (Pichon-Frute et al 2018)
- Older people with hearing loss are two times more likely to experience depression than those without. (Jaw 2016)
- Social isolation has an effect on health: people with hearing loss are at risk of cognitive decline. (Jaw 2016, mental illness. (Jaw 2011, 2012) and premature death. (Jaw 2016)
- Hearing loss is associated with greater use of social services. (Jaw 2016, O'Hare 2017)
- Those with hearing loss have higher rates of unemployment and underemployment.

La perdita dell'udito è una delle sfide più difficili nell'ambito sociale e sanitario. L'Organizzazione Mondiale della Sanità (2016, maggio 2017) ha chiesto di integrare le strategie di cura della salute e di dare maggior accesso alle tecnologie di comunicazione. La comunicazione è la nostra capacità di interagire con i nostri amici e colleghi, avere un lavoro, avere una buona salute e benessere. La perdita dell'udito ci toglie la capacità di fare così ogni aspetto della nostra vita. Eppure non è mai stato affrontato.

- In Europa 52 milioni di persone hanno perdita dell'udito. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- La perdita dell'udito è la prima causa di isolamento in Europa Occidentale. (Jaw 2016)
- Le persone con una pesante perdita di udito sono a rischio di sviluppare demenza. (Lewington et al 2018)
- La perdita dell'udito a metà della vita può essere evitabile nel mondo ed è un fattore modificabile. (Lewington et al 2018)
- In età avanzata, le persone con una perdita di udito sono a rischio di isolamento sociale e di un maggiore rischio di depressione. (Jaw 2016, Pichon-Frute et al 2018)
- Per le persone anziane con una perdita di udito, l'isolamento sociale è una forte correlazione tra la salute cognitiva, la malattia mentale e la morte prematura. (Jaw 2011, 2012, O'Hare 2017)
- La perdita dell'udito è associata ad una maggiore utilizzazione dei servizi sociali. (Jaw 2016, O'Hare 2017)
- Tra quelli che perdono l'udito c'è una più alta disoccupazione e sottoccupazione. (Jaw 2016)

Hörselnedsättning är ett av Europas mest utmanande problem med långtgående sociala konsekvenser. Världshälsoorganisationens resolution (2016, maj 2017) efterlyser strategier för hörselvård, hälsa- och sjukvårdstjänster till hörsel- och kommunikationsteknik, grundläggande för vår förmåga att fungera, arbeta och kollegor, ha ett jobb, leva ett rik liv som vi genom sociala kontakter och nätverk.

En hörselnedsättning berövar oss möjligheter, planerar därför att göra av värt liv. Trots detta är hörselnedsättning ofta inte och förbises.

- 52 miljoner människor i Europa har hörselnedsättning. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- Hörselnedsättning är den främsta orsaken till isolering hos personer över 70 i Västeuropa. (Jaw 2016)
- Personer med grav hörselnedsättning löper större risk att drabbas av depression än personer med normal hörsel. (Jaw 2016)
- Hörselnedsättning hos medelålders personer ökar risken för kognitiv försämrning, psykisk ohälsa och prematur död. (Lewington et al 2018)
- Äldre personer med hörselnedsättning löper större risk att drabbas av depression än personer med normal hörsel. (Jaw 2016, Pichon-Frute et al 2018)
- Hörselnedsättning kan sättras i samband med sjukvård och socialtjänst. (Jaw 2016, O'Hare 2017)
- Gruppen personer med hörselnedsättning har högre arbetslöshet och underbesättning än personer med normal hörsel. (Jaw 2016)

La pérdida auditiva es una de las cuestiones sociales y sanitarias más desafiantes a las que se enfrenta Europa. A nivel global, la resolución de la Organización Mundial de la Salud (2016, mayo 2017) llama a los países para que integren las tecnologías de audición y comunicación en los sistemas de salud, y subraya nuestra capacidad para relacionarnos con la familia y amigos, tener un trabajo, vivir una vida productiva a través de las relaciones sociales. La pérdida auditiva restringe la capacidad por tanto, en todas las facetas de la vida. Sin embargo, no se aborda.

- 52 millones de personas en toda Europa tienen pérdida auditiva, y esta cantidad sigue aumentando. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- La pérdida auditiva es la principal causa de la discapacidad en los mayores de 70 en Europa Occidental. (Jaw 2016)
- El riesgo de contraer demencia es dos veces mayor en las personas con pérdida auditiva severa que en aquellas con audición normal. (Lewington et al 2018)
- La pérdida de audición en la mediana edad puede ser evitable en el mundo y es un factor modificable. (Lewington et al 2018)
- En la vejez, las personas con pérdida auditiva tienen un mayor riesgo de aislamiento social y de sufrir depresión que las que no. (Jaw 2016, Pichon-Frute et al 2018)
- El aislamiento social afecta la salud cognitiva, la enfermedad mental y la muerte prematura. (Jaw 2011, 2012) y la muerte prematura. (Jaw 2016)
- La pérdida auditiva se asocia con un mayor uso de servicios sociales. (Jaw 2016, O'Hare 2017)
- Las tasas de desempleo e infrabajo son más altas en las personas con pérdida auditiva. (Jaw 2016)

SAMMANFATTNING

Hörselnedsättning är ett av Europas mest utmanande problem med långtgående sociala konsekvenser. Världshälsoorganisationens resolution (2016, maj 2017) efterlyser strategier för hörselvård, hälsa- och sjukvårdstjänster till hörsel- och kommunikationsteknik, grundläggande för vår förmåga att fungera, arbeta och kollegor, ha ett jobb, leva ett rik liv som vi genom sociala kontakter och nätverk.

En hörselnedsättning berövar oss möjligheter, planerar därför att göra av värt liv. Trots detta är hörselnedsättning ofta inte och förbises.

- 52 miljoner människor i Europa har hörselnedsättning. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- Hörselnedsättning är den främsta orsaken till isolering hos personer över 70 i Västeuropa. (Jaw 2016)
- Personer med grav hörselnedsättning löper större risk att drabbas av depression än personer med normal hörsel. (Jaw 2016)
- Hörselnedsättning hos medelålders personer ökar risken för kognitiv försämrning, psykisk ohälsa och prematur död. (Lewington et al 2018)
- Äldre personer med hörselnedsättning löper större risk att drabbas av depression än personer med normal hörsel. (Jaw 2016, Pichon-Frute et al 2018)
- Hörselnedsättning kan sättras i samband med sjukvård och socialtjänst. (Jaw 2016, O'Hare 2017)
- Gruppen personer med hörselnedsättning har högre arbetslöshet och underbesättning än personer med normal hörsel. (Jaw 2016)

La pérdida auditiva es una de las cuestiones sociales y sanitarias más desafiantes a las que se enfrenta Europa. A nivel global, la resolución de la Organización Mundial de la Salud (2016, mayo 2017) llama a los países para que integren las tecnologías de audición y comunicación en los sistemas de salud, y subraya nuestra capacidad para relacionarnos con la familia y amigos, tener un trabajo, vivir una vida productiva a través de las relaciones sociales. La pérdida auditiva restringe la capacidad por tanto, en todas las facetas de la vida. Sin embargo, no se aborda.

- 52 millones de personas en toda Europa tienen pérdida auditiva, y esta cantidad sigue aumentando. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- La pérdida auditiva es la principal causa de la discapacidad en los mayores de 70 en Europa Occidental. (Jaw 2016)
- El riesgo de contraer demencia es dos veces mayor en las personas con pérdida auditiva severa que en aquellas con audición normal. (Lewington et al 2018)
- La pérdida de audición en la mediana edad puede ser evitable en el mundo y es un factor modificable. (Lewington et al 2018)
- En la vejez, las personas con pérdida auditiva tienen un mayor riesgo de aislamiento social y de sufrir depresión que las que no. (Jaw 2016, Pichon-Frute et al 2018)
- El aislamiento social afecta la salud cognitiva, la enfermedad mental y la muerte prematura. (Jaw 2011, 2012) y la muerte prematura. (Jaw 2016)
- La pérdida auditiva se asocia con un mayor uso de servicios sociales. (Jaw 2016, O'Hare 2017)
- Las tasas de desempleo e infrabajo son más altas en las personas con pérdida auditiva. (Jaw 2016)

RESUMEN

La pérdida auditiva es una de las cuestiones sociales y sanitarias más desafiantes a las que se enfrenta Europa. A nivel global, la resolución de la Organización Mundial de la Salud (2016, mayo 2017) llama a los países para que integren las tecnologías de audición y comunicación en los sistemas de salud, y subraya nuestra capacidad para relacionarnos con la familia y amigos, tener un trabajo, vivir una vida productiva a través de las relaciones sociales. La pérdida auditiva restringe la capacidad por tanto, en todas las facetas de la vida. Sin embargo, no se aborda.

- 52 millones de personas en toda Europa tienen pérdida auditiva, y esta cantidad sigue aumentando. (EFHC 2016, 2018, AEA 2017, ENMA 2017)
- La pérdida auditiva es la principal causa de la discapacidad en los mayores de 70 en Europa Occidental. (Jaw 2016)
- El riesgo de contraer demencia es dos veces mayor en las personas con pérdida auditiva severa que en aquellas con audición normal. (Lewington et al 2018)
- La pérdida de audición en la mediana edad puede ser evitable en el mundo y es un factor modificable. (Lewington et al 2018)
- En la vejez, las personas con pérdida auditiva tienen un mayor riesgo de aislamiento social y de sufrir depresión que las que no. (Jaw 2016, Pichon-Frute et al 2018)
- El aislamiento social afecta la salud cognitiva, la enfermedad mental y la muerte prematura. (Jaw 2011, 2012) y la muerte prematura. (Jaw 2016)
- La pérdida auditiva se asocia con un mayor uso de servicios sociales. (Jaw 2016, O'Hare 2017)
- Las tasas de desempleo e infrabajo son más altas en las personas con pérdida auditiva. (Jaw 2016)

Cochlear Implants International
An Interdisciplinary Journal

ISSN: 1467-0100 (Print) 1754-7628 (Online) Journal homepage: <http://www.tandfonline.com/loi/ycii20>

Cost implications for changing candidacy or access to service within a publicly funded healthcare system?

Ciaran O'Neill, Brian Lamb & Sue Archbold

To cite this article: Ciaran O'Neill, Brian Lamb & Sue Archbold (2016) Cost implications for changing candidacy or access to service within a publicly funded healthcare system?, Cochlear Implants International, 17:sup1, 31-35, DOI: [10.1080/14670100.2016.1161123](https://doi.org/10.1080/14670100.2016.1161123)

To link to this article: <http://dx.doi.org/10.1080/14670100.2016.1161123>

Led to Specific country campaigns-Canada Spend to Sav

- Brought together 13 regions across Canada. GOAL: To increase access to CI for adults – and to lifelong services
- Produced and agreed to the Spend to Save agenda
- To be taken by the groups to the Commissioners
- Groups using in their own areas
- High powered national group established to campaign on better access and services

Adult Hearing Health: Canada's growing challenge

Investing in Hearing Health and Cochlear Implantation improves lives and saves Canadian society money

Hearing loss is a growing health and social issue. Hearing loss challenges our capacity to communicate which underlies our ability to function in the world: to relate to family, friends and partners, have a job, lead productive lives and maintain our health and wellbeing through social connections. Today's hearing technologies, including cochlear implants, have the ability to change this.

- Hearing loss is ranked as the fifth-leading cause of Years Lived with Disability (YLD) in Canada (GBD 2019).
- 19% of Canadian adults under the age of 79 experience hearing loss such that it negatively affects their ability to comprehend speech (Feder et al., 2015).
- An estimated 30% of Canadians between 40-79 have audiometrically measured disabling hearing loss (>40 dB) (Ramage-Morin et al., 2019).
- 11% of adults 65 years and older report a significant hearing problem (Crowson, 2017).
- Untreated, disabling hearing loss in Canada costs C\$ 25 billion each year (Business Wire (EHIMA/Shield) 2019).
- Of Canadians living with hearing disabilities in 2017, around a third (32%) were employed compared to 62% of the rest of the population (Gupta et al., 2022).
- 38% of people with a hearing disability in employment said that they were disadvantaged in their employment due to their hearing loss (Gupta et al., 2022; Morris et al., 2018).
- Poor general, and psychosocial health is "significantly associated with negative employment outcomes among working-age adults with hearing disabilities in Canada." (Gupta et al., 2022).
- Only around 1% of the total public funding for health research is spent on hearing loss in Canada (Herbert, 2023).



"So, consistency I think is a huge thing and that's something we really need to look at so we are all asking and pushing for the same thing."

"There's not enough audiologists to handle the number of patients implanted."

"So, the government doesn't seem to see the value in aftercare, you know, replacements, repairs; none of that is covered or no financial assistance is provided. So basically, you're on your own."

CI Users

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).



HEARING AIDS AND COCHLEAR IMPLANTS ARE EFFECTIVE AND COST EFFECTIVE

- Regular hearing aid use was associated with lower risks of mortality than in non-hearing aid users in US adults with hearing loss. (Choi et al., 2024)
- Hearing aids improve mental health, physical abilities, cognitive abilities, and employability. (Arrieva, et al., 2015; Contrera et al 2015; Kochkin, 2010; Dept of Health/NHS England 2015; Ferguson et al., 2017; Mahmoudi, et al., 2018)
- The use of hearing aids is associated with less cognitive decline. (Deal, 2015; Arrieva, et al., 2015; Mahmoudi, et al, 2018; Bucholt, et al., 2022; Cantuaria, et al., 2024)
- CI in adults reduces depression and improves cognitive functioning. (Arrieva, et al., 2018; Mosnier, et al., 2014; Archbold, 2014)
- CIs ensure better hearing, improved individuals' quality of life, ability to communicate verbally and their ability to function independently. (Cuda 2024; Ng, et al., 2016)
- The latest hearing technologies, including hearing aids and implants, have been shown to improve the lives of those with hearing loss and to be cost effective. (Gato et al., 2024; Lamb, et al 2015; Morris, 2012; Bond, 2009; WHO, 2021; Kervassoud & Hartmann, 2016; Dawes, et al. 2024)



But it Needs an Update-Why?

- New research from the WHO in the World Report on Hearing including a comprehensive global model with regional variations providing the evidence that investing in hearing care improves lives and is cost effective
- New research that has strengthened the case for the cost effectiveness of CI
- The performance of CI has become even more effective altering the case for funding further
- Continuing evidence that concerns around the cost of CI hamper investment and funding
- Continuing need for awareness about the benefits of CI

What's New?



WORLD REPORT ON HEARING



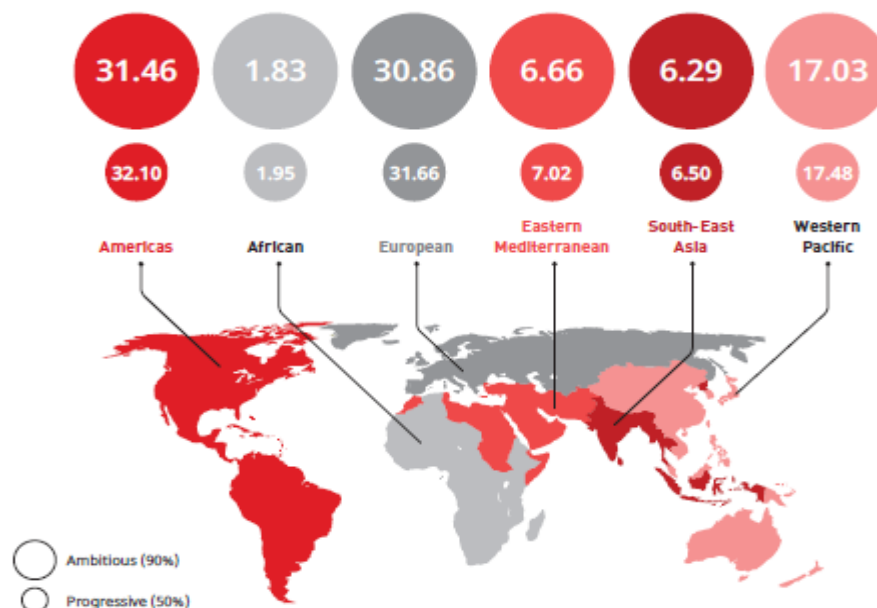
EVERY
1 USD
INVESTED
CREATES
A SOCIAL VALUE OF
16 USD



(WHO, WRH, 2021)

Investment in greater and effective use of hearing aids, implantable hearing devices and hearing care could give a return on investment globally that for every US\$1 invested a return of around US\$16 could be achieved. (WHO, WRH 2021; Tordrup et al., 2022).

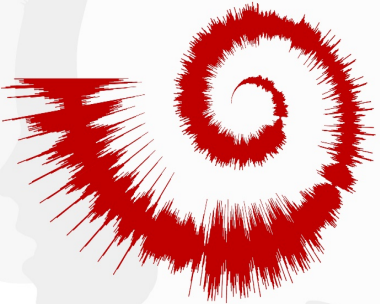
Figure 4.15 The net dollar return for every dollar invested for scale-up scenarios, by WHO region (in US\$)



Note: This illustration represents WHO regions, not country boundaries.



WORLD REPORT ON HEARING



- “Early rehabilitation along with use of hearing devices such as **cochlear implants are also cost-effective, despite large costs associated with initial technology investments.**” (*The Lancet, Global Burden of Disease, March 2021*)
- “With unilateral cochlear implants, estimations based on actual costs in a high-income setting showed **a return of 2.59 International dollars for every 1 dollar invested,** In the example of a **lower-middle-income setting, the return on investment ratio was 1.46 International dollars** For an **upper-middle-income setting, the return on investment ratio was estimated to be 4.09 International dollars.....**”

(*World Report on Hearing, page 104*)

Evidence shows that Cochlear Implantation Saves Money



Neve et al., 2021 Cost-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).
- **Adults and seniors** with progressive profound hearing loss and a unilateral CI had a total net benefit of **€275,000 and €76,000**, respectively.
- Based on the author’s estimates from modelling, “**the increased healthcare costs due to CI were more than compensated by the value of the health benefits and by savings in educational and productivity costs.** In particular, for children and working adults, the societal benefit was positive even without taking health benefits into account. Therefore, **CI generates an advantage for both patients and society.”**



More new evidence in the briefing...

Awareness of CI continues to be low

- 4 in 10 of respondents in the USA, 69% of the population in Germany and 41% of the population of the UK hadn't heard of CI. (EHIMA 2022)

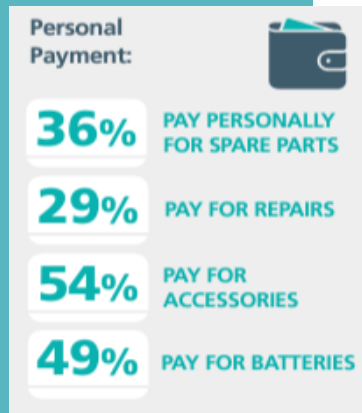
The costs of not addressing hearing continue to rise...

- For individuals with severe late onset of hearing loss (60 years old) lifetime costs in the US were estimated to be \$154,536. The annual societal costs for the US population overall were estimated to be \$37 billion. (Cejas, et al., 2024)

And hearing loss continues to have a massive effect on people's life chances

- Those with hearing loss are more likely to have lower earnings (Jørgensen et al., 2024) and the earnings are, on average, around 85% of those of the hearing population in Europe. (Shield 2019)

Why ongoing funding also matters- CIICAs research



Ongoing support has different levels of funding across different countries.

- 67% of implants in adult provision were publicly funded while 35% of implants were funded from insurance or privately. (CIICA Cochlear Implant Services Matter 2023)
- The proportions are similar to other studies e.g. Vickers et al. 2016.

Audiological criteria and waiting lists also put a limit on the number of implants fitted.

- Funding of the Implant and ongoing support has a significant impact on availability of implants, decision to have an implant and quality of life after implant.

So we need to also argue for more ongoing funding for CI

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

- Promote innovative ways of improving finance for Implants especially in medium and low resource countries.
- Better research on demonstrating overall costs to society e.g. cost of care givers time, additional health impacts, productivity gains, lifetime benefits.
- Insurance schemes improved to ensure better access- e.g. recent changes in the USA to extend insurance cover to low-income groups?
- How can we find better ways of demonstrating the cost benefits especially when savings are not from the same budgets as initial costs for the implant?
- How can we increase value and reduce costs of implants through design and more innovative funding and service arrangements?
- What examples have we got of successful campaigns to extend criteria and funding-see [CIICA Advocacy Guide?](#)

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!
- Need 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.** CIICA and the new **Spend to Save briefing** is there to help support those efforts.
- Find more resources for advocacy at <https://ciicanet.org/>

