

Funding Cochlear Implants- Models of Provision

Brian Lamb

SUMMARY

Spend2Save: Investing in hearing technology improves lives and saves society money

Adult Hearing Loss:

Hearing loss is one of the most chronic issues facing Europe. Globally, the WHO (2016, 2018, AEA 2017) called for hearing care into health care systems and underlines our ability to function in friends and partners, have a job, lead our health and wellbeing through social. Hearing loss robs us of the ability to connect on every facet of life. Yet it is unaddressed.

- 52 million people across Europe have hearing loss. Hearing loss is the number one cause of dementia in Western Europe. It is associated with severe hearing loss are a developing dementia as those with hearing loss.
- Mid-life hearing loss may account for dementia cases world-wide and is a risk factor for dementia (Kujawa et al 2016).
- In older age people with hearing loss isolation and reduced mental well-being (Pichora-Fuker et al 2015).
- Older people with hearing loss are twice as likely to experience depression than those who do not. Hearing loss is also an increased risk of major depression (Pichora-Fuker et al 2015).
- Social isolation has an effect on people there is a strong correlation between cognitive decline (Pichora-Fuker et al 2015, 2019) and premature death.
- Hearing loss is associated with greater social and service needs (Pichora-Fuker et al 2015).
- Those with hearing loss have high unemployment and underemployment.

RESUMEN

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

La pérdida auditiva es una de las cuestiones sociales y sanitarias más importantes que se enfrenta Europa. A nivel global, la OMS (2016, 2018, AEA 2017) llama a integrar la atención de la audición dentro de los sistemas nacionales de salud y un modelo de atención que permita a las personas comunicarse y mantener sus relaciones sociales. La pérdida auditiva restringe la capacidad de comunicación por tanto, en todas las facetas de la vida. Sin embargo, esta es una discapacidad que no se aborda.

- 52 millones de personas en toda Europa padecen pérdida auditiva. La pérdida auditiva es la principal problemática de los años P en Occidente (AEA 2017).
- El riesgo de contraer demencia es cinco veces mayor en las personas con pérdida auditiva severa que en aquellas cuyo audición es normal (Kujawa et al 2016).
- La pérdida de audición en la mediana edad puede representar el 9,1% de los casos de demencia prevenibles en todo el mundo (Kujawa et al 2016).
- Las personas de edad avanzada con pérdida auditiva corren un riesgo de aislamiento social y declive del bienestar mental (Pichora-Fuker et al 2015).
- La probabilidad de sufrir depresión es dos veces y media en las personas mayores con pérdida auditiva que en aquellas sin pérdida auditiva (Pichora-Fuker et al 2015, 2019).
- El aislamiento social afecta la salud (Cohen 1998) y tiene una fuerte correlación con la pérdida de bienestar cognitivo (Pichora-Fuker et al 2015, 2019) y la muerte prematura (Fitzburg 2014, Contes 2015).
- La pérdida auditiva se asocia con un mayor uso de los servicios médicos y sociales (Pichora-Fuker et al 2015).
- Las tasas de desempleo e infratemplo son mayores en las personas con pérdida auditiva (Kochkin 2007).

SAMMANFATTNING

Spend2Save: Investering i hörselteknik ger bättre livskvalitet och är en ekonomisk besparing för samhället

HÖRSELNEDSÄTTNING HOS VUXNA - EN VÄXANDE UTMANING I EUROPA

Hörselnedsättning är ett av Europas mest utmanande problem med långtgående sociala konsekvenser. Globala hälsoorganisationens rekommendation (WHO 2016, 2018, AEA 2017) utmanar oss att integrera hörsel- och kommunikationsteknik i vår hälso- och kommunikationssystem. Kommer grundläggande för vår förmåga att fungera i samhället och kollegor, ha ett jobb, leva ett liv som fungerar genom sociala kontakter och nätverk.

- En hörselnedsättning begränsar oss möjligheter att kommunicera och interagera med andra. Hörselnedsättning påverkar därför alla delar av livet. Trots detta uppmärksammas hörselnedsättning ofta inte och förblir obehändert.
- 52 miljoner människor i Europa har hörselnedsättning (WHO 2016, 2018, AEA 2017, EAMA 2017).
- Hörselnedsättning är den främsta orsaken till "M" hos personer över 70 i Västeuropa (Pichora-Fuker et al 2015).
- Personer med grav hörselnedsättning löper fem gånger större risk att utveckla demenssjukdom än personer med normal hörsel (Kujawa et al 2016).
- Äldre personer med hörselnedsättning löper större risk för isolering och ökad psykisk ohälsa (Pichora-Fuker et al 2015).
- Äldre personer med hörselnedsättning löper högre risk att drabbas av depression än personer utan hörselnedsättning (Pichora-Fuker et al 2015, 2019).
- Social isolering påverkar hälsan (Cohen 1998) och finns en stark korrelation mellan hörselnedsättning och kognitivt utfall (Pichora-Fuker et al 2015, 2019) och till och med död (Fitzburg 2014, Contes 2015).
- Hörselnedsättning kan sällan i samband med sjukvård och socialtjänst (Pichora-Fuker et al 2015, 2019).
- I gruppen personer med hörselnedsättning är arbetslöshet och underysselsättning (Kochkin 2007) högre än i gruppen personer med normal hörsel.

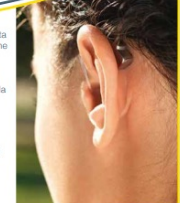
RIASSUNTO

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

La perdita dell'udito è una delle sfide più importanti che l'Europa affronta nell'ambito sociale e sanitario. Traduzione: In tutto il mondo la risoluzione dell'Organizzazione Mondiale della Sanità (2016, 2018, AEA 2017) chiede ai paesi di integrare la strategia di cura della sordità nei piani del sistema sanitario e di dare maggior accesso alle tecnologie che permettono di sentire e comunicare. La comunicazione è condizione ed è la base della nostra capacità di interagire con il mondo: relazionarsi con i parenti, amici e colleghi, avere un lavoro, avere uno stile di vita produttivo e mantenere la nostra salute e benessere tramite legami sociali.

- La perdita dell'udito ci toglie la capacità di comunicare, influenzando così ogni aspetto della nostra vita. Eppure il suo impatto spesso passa inosservato o ignorato.
- In Europa 52 milioni di persone hanno perso l'udito e il numero è in crescita (WHO 2016, 2018, AEA 2017, EAMA 2017).
- La perdita dell'udito è la prima causa degli anni persi per disabilità di ultrasessantenni in Europa Occidentale (Pichora-Fuker et al 2015).
- Le persone con una pesante perdita dell'udito hanno un rischio cinque volte più alto di sviluppare demenza in confronto ai soggetti con udito normale (Kujawa et al 2016).
- La perdita dell'udito a metà della vita provoca fino al 9,1% di casi di demenza evitabili nel mondo ed è un fattore di rischio potenzialmente modificabile (Kujawa et al 2016).
- In età avanzata, le persone con una perdita dell'udito sono più a rischio di isolamento sociale e di un minore benessere mentale (Pichora-Fuker et al 2015, 2019).
- Per le persone anziane con una perdita dell'udito, il rischio di cadere in depressione è due volte e mezzo più alto rispetto a quello delle persone con udito sano (Pichora-Fuker et al 2015, 2019) e come anche il rischio di una forte depressione (Pichora-Fuker et al 2015, 2019).
- L'isolamento sociale influisce sulla salute (Cohen 1998) e negli anziani c'è una forte correlazione tra la perdita dell'udito e il declino cognitivo, (Pichora-Fuker et al 2015, 2019), malattie mentali e demenza (Pichora-Fuker et al 2015, 2019) e morte prematura (Fitzburg 2014, Contes 2015).
- La perdita dell'udito è associata ad una maggiore assistenza medica e servizi sociali (Pichora-Fuker et al 2015, 2019).
- Tra quelli che perdono l'udito c'è una percentuale maggiore di disoccupazione e sottoccupazione (Kochkin 2007).



"... perdi l'autoestima, non hai voglia di stare con le persone - la sordità ti fa questo."
 "Niente vita sociale. Un senso di isolamento. Frustrazione. Non poter neanche rapportarsi con la famiglia."
 "M'ha spaventato parecchio. Rischio di diventare così sordo da non poter lavorare bene."
 Adulto con perdita dell'udito



Why funding matters

- 67% of implants were publicly funded while 35% of implants were funded from insurance or privately.
- It's interesting that 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.
- Ongoing support has different levels of funding across different countries.
- 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.

The long term costs are not thought of but important to users....

- Without thinking about the long-term costs – which are trivial compared with the upfront costs the upfront costs can be wasted

“I need reassurance that my CI will work and be supported right up to the day I die. So, I need batteries, coils, cables, filters, chargers, upgrades etc., and also need to be convinced that my CI will be managed for me if I end up in a home for old people.” (User from CIICA survey)

Different Funding Models

- **Universal government funding directly:** All cochlear implants funded by the government, regardless of the individual's income or insurance status.
- **Insurance based Government funding or state social insurance:** Cochlear implants funded by the government for people covered by the social insurance. Depending on the scheme people with higher incomes can be required to contribute to the cost of their implants or low income groups subsidized.
- **Private health insurance funding:** Cochlear implants funded by private health insurance companies but sometime a level of public subsidy can be involved.
- **Self-funding:** People pay for their own cochlear implants.
- **Mixed funding - and fragmented funding – different parts paid by different funders.**

Impact of different funding models

- “in privately funded systems financial incentives for non-CI providers **“weigh in favor of recommending continued HA use over CIs.”**
- “Despite compelling clinical data, without up-to-date cost-effectiveness evidence, **financial justification is challenging and may be an important barrier to CI utilization.”**

(Economics of Cochlear Implant Utilization. By Mark E. Votruba et al.,. The Hearing Journal October 2019.)

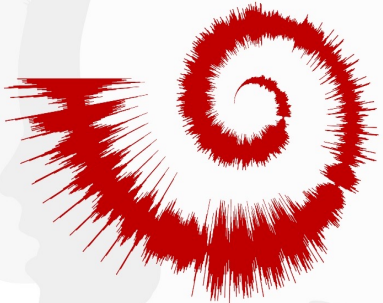
But.....

- **“Innovative life-long CIs could achieve significant savings per case that could finance additional implant cost.”**

(Christin Thum et L., Lifetime Cost of Unilateral Cochlear Implants in Adults: A Monte Carlo Simulation DOI: Eur J Health Econ. 2020 Apr 24. doi: 10.1007/s10198-020-01188-7)

So we need to provide the social and financial justification for CI's!

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*)

Impact of Funding on users of CI

- “I was aware of [CIs] but never considered because of costs and not aware that medical insurance provided. Also thought that children would get priority and at 60 years didn’t even think that I had a chance.”
- “Australian patients and audiologists believed that costs of the CI device and surgery were a concern to many patients. Australian HCPs lacked knowledge about the costs of CIs, which reflected, in part, the complex and variable funding structures between Australian states.”

Bierbaum, Mia; McMahon, Catherine M.; Hughes, Sarah; Boisvert, Isabelle; Lau, Annie Y. S.; Braithwaite, Jeffrey; Rapport, Frances. Barriers and Facilitators to Cochlear Implant Uptake in Australia and the United Kingdom. Ear and Hearing 41(2):p 374-385, March/April 2020.

What is Needed?

- We need to look at innovative ways of improving finance for Implants especially in medium and low resource countries.
- How can insurance schemes be improved to ensure better access-e.g. recent changes to Medicaid in the USA to extend 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?

Elephant in the Room- Money!

- We often talk about CI's as an expensive solution...this leaves everyone thinking it is!
- But it costs more **not to take action** to address hearing loss.
- 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 is there to help support those efforts.
- Find more resources for advocacy at <https://ciicanet.org/>