Research Briefing

Adults

Speech Comprehension and Quality of Life

Correlations between speech comprehension and quality of life in adults with early childhood cochlea implantation. Kasper, A., Böcker, M., Khouchoua, I. *et al.* . *Eur Arch Otorhinolaryngol* **283**, 2209–2226 (2026). https://doi.org/10.1007/s00405-025-09931-7

This study looks at the long-term outcomes of adults who received cochlear implants (CIs) in early childhood, with a particular focus on how prolonged CI use influences auditory performance, psychological well-being, social functioning, and overall quality of life (QoL). The main goal was to identify which factors predict better QoL in adulthood after many years of CI use.

The study included 31 adults with an mean age of 25 years, all of whom had received either unilateral or bilateral cochlear implants before the age of 10 (with a mean implantation age of around 3.4 years). Participants had used their implants for an average of over 21 years, providing a long-term perspective on outcomes.

Auditory performance was assessed using several standard measures, including pure-tone audiometry, speech recognition in quiet and speech perception in noise. Participants demonstrated good auditory outcomes. The study also included a comprehensive psychological assessment. This covered both hearing-specific and general quality of life, as well as measures of depression, resilience, self-esteem, and personality traits. The results showed meaningful relationships between auditory performance and improved quality of life outcomes. Speech comprehension was associated with higher quality of life scores.

In particular, participants who achieved better speech perception showed better outcomes across several domains, including quality of life, mental health, and resilience. Moderate correlations were found between auditory measures and QoL, indicating that while hearing ability is important, it is one of several contributing factors to overall well-being.

Implications for Advocacy

This study provides valuable long-term evidence that early cochlear implantation, followed by consistent and prolonged device use, supports sustained auditory performance into adulthood. Importantly, it highlights that speech comprehension plays a central role not only in communication but also in psychological well-being and quality of life. These findings reinforce the importance of early intervention and long-term support.

CI use and Dementia

Cochlear Implantation Is Associated With Reduced Incidence of Dementia in Severe Hearing Loss. Seo HW, Ryu S, Han SY, Lee SH, Chung JH. Ear Hear. 2025 Sep-Oct 01;46(5):1189-1196. doi: 10.1097/AUD.0000000000001660. Epub 2025 Apr 9. PMID: 40200399.

Hearing loss is recognized as a potentially modifiable risk factor for dementia in midlife. This study aimed to investigate the association between rehabilitation methods and dementia risk in patients with severe to profound hearing loss.

Using the nationwide population data from South Korea, individuals with severe to profound hearing loss were identified. Individuals aged 40 to 79 were then divided into 3 groups according to the type of auditory rehabilitation they received in the period between 2005 and 2010, either cochlear implant (CI), hearing aid (HA), or no rehabilitation (NR). No hearing loss (NHL) group (with normal hearing) consisted of individuals without hearing loss. Dementia incidence was followed up to 2022.

The study involved 649 individuals in the CI group, 35,076 in the HA, 16,494 in the NR, and 1,280,788 in the NHL group. The groups that received auditory rehabilitation (HA and CI groups) had a significantly reduced risk of dementia compared with the NR group, with the CI group showing the most pronounced reduction. The CI group demonstrated a lower risk of dementia than the HA group and had a similar dementia risk to the NHL group.

In individuals with severe to profound hearing loss, rates of dementia were lower in CI users than in HA users. Moreover, the risk of dementia in those undergoing CI surgery is comparable to that of individuals with normal hearing.

Barriers to CI take up.

Patient barriers to adult cochlear implantation: a systematic review of literature. Le M, Psarros C, Leigh J, Anderson RB, Šarkić B. Cochlear Implants Int. 2026 Mar;27(2):136-148. doi: 10.1080/14670100.2026.2635183. Epub 2026 Mar 1. PMID: 41766054.

This study examines why CI remains underutilised among adults compared to children, focusing specifically on barriers experienced by patients themselves. The authors conducted a comprehensive systematic review of English-language literature published between 1990 and November 2025. A total of 28 studies met the inclusion criteria, and their findings were synthesised descriptively.

The review identified a wide range of patient-related barriers, 95 in total, which were grouped into four main themes.

The first theme, **uncertainties, fears, and beliefs**, includes concerns about surgery, potential complications, and the risk of losing any remaining natural hearing. These fears can significantly deter individuals from pursuing cochlear implantation.

The second theme, **knowledge and professional guidance**, highlights gaps in patient understanding and the role of healthcare providers. Many patients reported insufficient or unclear information about cochlear implants, including candidacy criteria, benefits, and the process involved. Limited or inconsistent guidance from professionals further contributes to uncertainty and delays in decision-making.

The third theme, **system and organisational factors**, includes structural barriers such as complex or fragmented funding systems, perceived or actual financial burdens, and inconsistencies in service provision. These factors can make access to cochlear implantation more difficult, even for eligible candidates.

The fourth theme**, psychosocial and practical support**, reflects the importance of emotional, social, and logistical support. A lack of support from family, peers, or healthcare systems—as well as practical challenges like travel or time commitments—can discourage patients from pursuing or completing the implantation process.

The review demonstrates that barriers to adult cochlear implantation are significant and span psychological, informational, systemic, and social domains.

Implications for Advocacy

The authors recommend a coordinated approach to address the challenges they outline. Including improving CI-specific education for healthcare professionals, providing clearer and more accessible information about funding and treatment pathways, implementing standardised adult hearing screening programs, and expanding the use of telehealth to reduce logistical burdens.

They also argue that patient fears also need to be directly addressed including, misconceptions, and support needs through targeted interventions. Only by tackling these interconnected barriers can healthcare systems improve access to and uptake of cochlear implantation among adults.

Professional barriers to adult cochlear implantation: a systematic review of literature. Le M, Anderson RB, Leigh J, Psarros C, Šarkić B. Cochlear Implants Int. 2026 Jan;27(1):11-21. doi: 10.1080/14670100.2025.2604428. Epub 2025 Dec 17. PMID: 41407529.

Despite well-established benefits, cochlear implant (CI) use among adults with significant hearing loss remains low. This systematic review focuses on professional and organisational barriers that may prevent appropriate referrals for cochlear implantation within audiological rehabilitation services.

The review identifies four major categories of barriers.

The most prominent is a lack of knowledge and training among clinicians. Many healthcare professionals have limited understanding of CI candidacy criteria and referral pathways, which leads to missed opportunities for timely referral. This knowledge gap is the most frequently reported issue across the literature.

Another area relates to clinician attitudes and beliefs. Some professionals hold concerns or misconceptions about cochlear implants, including doubts about patient suitability or outcomes, which can discourage referrals. These perceptions may not always align with current evidence.

Organisational factors also play a significant role. These include financial disincentives—particularly in settings where hearing aid provision is prioritised or financially rewarded—as well as poor coordination and communication between different healthcare providers. Such structural issues can create friction in the referral process.

The review also highlights a broader issue within healthcare systems: hearing loss is often not treated as a high-priority condition, especially by non-audiology specialists. This contributes to

under-referral, even when patients meet established criteria for CIs.The authors conclude that improving access to cochlear implants for adults will require targeted efforts to address these barriers.

Implications for Advocacy

They recommend enhancing clinician education and training, better integrating cochlear implant information into standard hearing care (including hearing aid services), and addressing financial and organisational disincentives for fitting CIs. They also suggest that future research should incorporate patient perspectives to better understand additional barriers and help design more effective interventions. CIICA has routinely stressed the importance of patient's perspectives in improving hearing care.

Comparison of Socioeconomic Factors Influencing Delay and Underuse of Cochlear Implants Zhao M, Huang V, Zhang MH, Ghannam JY, Morcos MM, Shin JJ, Quesnel AM, Corrales CE, Naples JG.. Otolaryngol Head Neck Surg. 2025 Jul;173(1):218-227. doi: 10.1002/ohn.1250. Epub 2025 Apr 10. PMID: 40211680; PMCID: PMC12825393.

This retrospective cohort study investigated how socioeconomic and demographic factors influence both the likelihood of receiving cochlear implant (CI) surgery and the time taken to proceed from candidacy to implantation among adults in the United States. The study included 382 adult patients evaluated as CI candidates between 2018 and 2022 across three tertiary academic centres.

The sample had a median age of 70 years, with an equal gender distribution. Of all eligible candidates, 80% ultimately underwent cochlear implantation. Researchers analysed a range of variables, including age, sex, race, insurance status, preferred language, marital status, income (based on zip code), and clinical measures such as speech recognition ability.

The findings showed that several factors were associated with a lower likelihood of proceeding to surgery. Non-English-speaking patients were significantly less likely to receive a cochlear implant, making language one of the strongest barriers identified. Older individuals and male patients were also less likely to undergo surgery. Additionally, patients with relatively better speech recognition scores were less likely to pursue implantation, possibly because their perceived need for intervention was lower.

Among those who did receive implants, most factors did not significantly affect how long it took to reach surgery, except for language. Non-English-speaking patients experienced significantly longer delays between being identified as candidates and undergoing implantation compared to English, speaking patients.

Other socioeconomic indicators such as income level or geographic distance to the implant centre were not found to significantly influence access or timing in this study. This suggests that communication barriers, rather than purely financial or geographic factors, may play a more critical role in limiting access.

Implications for Advocacy

In the context of the US this study highlights non English-speaking patients as a key barrier affecting both the decision to pursue cochlear implantation and the timeliness of receiving it. The authors recommend developing targeted strategies, such as improved language support and culturally appropriate communication, to reduce disparities and improve equitable access to cochlear implant care.

Access to CIs and Human Rights

Equitable access to cochlear implants: a perspective on social justice and international obligations. Suazo-Díaz P, Aedo-Sanchez C,Cuéllar-Muñoz G and Aguilar-Vidal E (2025) Front. Public Health 13:1672820
https://www.researchgate.net/publication/398078400_Equitable_access_to_cochlear_implants_a_perspective_on_social_justice_and_international_obligations .

This review examines access to Cochlear Implants within the context of a human rights framework and examines how far a number of countries promote access on the basis of such a framework given that access to CI remains very unequal between and even within countries. They argue that because of CIs fundamental role in significantly improving speech comprehension, language development and therefore quality of life and social inclusion its provision should be seen a fundamental right and that International legal standards already obligate states to implement inclusive policies which should include CI and they provide a very helpful review of what these are. It also provides a very helpful analysis of some of the existing barriers to CIs and lack of equitable access for a number of different countries where evidence is available.

They then argue that Governments must translate human rights commitments into tangible actions. They also argue that ethical responsibility exists to ensure affordability, accessibility, and adaptability of CIs. As part of accessibility public policies should address socioeconomic, geographic, and systemic barriers to accessing CI provision and support. They therefore also argue that a rights-based approach is essential for achieving social justice, dignity, and full participation for people with hearing disabilities. They conclude that reducing the barriers to CI is both urgent and possible.

Implications for Advocacy

This review provides a powerful basis for grounding the advocacy for provision of CIs within a human rights framework which already exists in a number of international conventions. This will be of use to all advocates in helping to ground their arguments in jurisdictions that are signatories to those conventions. As they argue "*should be recognized not as a privilege conditioned by resource availability, but as a right that warrants progressive realization and legal protection. The Convention on the Rights of Persons with Disabilities outlines specific obligations for states in this domain, including both immediate duties and long-term commitments*. "

What the article may underestimate is the purchase that such conventions have, especially in health systems, is less than might be implied from the obligations that Governments have signed up to. However, putting arguments on rights bases must be helpful compared to seeing health expenditure as simply benevolent gift of public policy for those systems which can afford it or as an excuse to leave to the private market for those who can afford provision rather than a fundamental part of health provision as a human right.

The Benefits of Bilateral CIs

The benefit of bilateral cochlear implants in adults with bilateral sensorineural hearing loss: a systematic review and meta-analysis Manohar Bance, Maria Costales Marcos, Jérémie Guignard, Wendy Huinck, Matthijs Killian, Vikte Lionikaite, Hafsa Quadri, Kim Rand & Ville Sivonen (25 Jun 2025):, Cochlear Implants International, DOI: 10.1080/14670100.2025.2516932

The authors aimed to evaluate and compare the hearing and quality-of-life (QoL) benefits of bilateral versus unilateral cochlear implantation in adults with sensorineural hearing loss (SNHL). They conducted a systematic literature review covering studies published between 2005 and 2022, and where possible, performed a meta-analysis to quantify the differences in outcomes. 35 studies met the inclusion criteria. These studies assessed various aspects of auditory performance and QoL in adults using either one or two cochlear implants. For outcomes with sufficient comparable data, meta-analyses were conducted using both fixed- and random-effects models.

The findings consistently showed that **bilateral cochlear implants provide measurable auditory advantages over unilateral implantation.** In particular, bilateral users demonstrated significantly better sound localization and benefited from binaural redundancy (the ability to process sound more effectively using both ears). The meta-analysis confirmed statistically significant improvements in speech perception: scores in quite improved by an average of 12.6 percentage points, while performance in noisy environments also improved, reflected by a meaningful reduction in the signal-to-noise ratio required for speech understanding.

Additional benefits of bilateral implantation were observed in areas such as the head-shadow effect (improved ability to hear sounds coming from different directions) and binaural release from masking (better separation of speech from background noise), although these findings were more variable across studies.

Looking at quality of life, **bilateral implants were associated with clear improvements in hearing-specific QoL measures, indicating that patients experienced meaningful gains in hearing-related daily functioning**. However, more general QoL measures showed little or no change. The authors suggest this may be because generic QoL tools are not sensitive enough to capture the specific benefits of improved hearing when moving from one implant to two.

The review concludes that **bilateral cochlear implantation offers significant audiological and hearing-related quality-of-life benefits compared to unilateral implantation**. The use of bilateral implants in appropriate adult candidates is supported by this analysis and provides important evidence to guide clinical decision-making and optimise patient outcomes.

Implications for Advocacy

There is a continuing debate about the criteria and effectiveness of bilateral implants. This review adds a really helpful summary of the growing evidence that bilateral implants should be more broadly offered. It also challenges some of the assumptions and research around the way the economic utility models have been applied to this area to question the cost effectiveness of bilateral CI. Advocates will find this evidence really helpful in challenging the current position of bodies evaluating the cost effectives and utility of bilateral implants and suggests a review of the current guidelines is appropriate in many countries.

Testing for Hearing Loss.

Evolving perspectives on speech perception assessment in adults with cochlear implants: Are we using the right tests? Shafiro V, Moberly AC, Pisoni DB and Tamati TN (2025) *Front. Neurosci.* 19:1667467. doi: 10.3389/fnins.2025.1667467

This article examines the role of speech perception testing in CI candidacy and care, arguing that while such tests are widely used, they do not fully capture the complexity of real-world communication. They argue that **speech test scores cannot be directly equated with an individual patient's everyday listening needs.** Instead, these tests offer a practical and time-efficient way to assess specific components of speech processing.

The review traces the evolution of speech perception testing in the United States since the introduction of cochlear implants. Over time, testing approaches have changed in response to advances in technology, shifts in clinical goals, and a growing understanding of patient outcomes. They note that currently speech perception tests serve three primary clinical purposes: determining candidacy for cochlear implantation, evaluating benefit after implantation, and identifying specific perceptual difficulties that can inform counselling, rehabilitation strategies, or device programming.

The authors highlight several important considerations in how speech perception is assessed and interpreted. These include the factors that have shaped testing practices over time, the selection of appropriate outcome measures, and the limitations of relying on standardised tests to represent broader communication abilities. They emphasise that test conditions, such as listening environment or type of speech material, can significantly influence results and, consequently, clinical decisions.

They argue that **speech perception testing provides only a partial picture of CI outcomes. Real-world communication involves more complex, dynamic listening environments that are not fully replicated in clinical testing**. As a result, relying solely on these measures may overlook important aspects of patient experience and functional hearing.

The authors advocate for **more comprehensive and ecologically valid assessment approaches that better reflect everyday communication demands**. They recommend selecting outcome measures that capture real-life listening challenges and support more individualised, patient-centred care. The authors also call for a move towards more holistic evaluation methods to improve rehabilitation and improve outcomes for adult CI users.

Implications for Advocacy

Patients have long been concerned that hearing tests do not fully capture their own personal experience of hearing loss, the real-world context of hearing loss and the benefit they experience. This review adds powerful evidence for a rethink of the role of current tests and pathway to more patient centred criteria. The authors suggest that; "*Priority should be given to the development and validation of new measures that also satisfy the following characteristics: (1) assess patient-specific communication needs, (2) are quick and easy to administer with no or minimal assistance from a clinician, and (3) provide actionable recommendations for improving patient-specific outcomes*." They also suggest that "*new online technologies enable patient testing in their unique communication environments, potentially providing more accurate and individually-tailored results*."

But also recognise that for this change to be widely adopted, "*new tools must undergo rigorous validation, including demonstration of reliability, sensitivity to change, and clinical utility*."

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23.4.2026