

Hearing Services Program Review Consultation Paper

**Cochlear Submission
December 2020**

Summary

Cochlear supports the principle of universal, publicly funded access to hearing services and technology through the Hearing Services Program (HSP) to promote and support the hearing health of all Australians.

The HSP has played an instrumental role in Australia's position as a world leader in the treatment of children with hearing conditions which require surgical implantation. In particular, Australia leads the way in the treatment of severe to profound sensorineural hearing loss (S-P SNHL) in children, with effective systems for diagnosis, robust and timely referral for treatment, access to world-class clinicians, and early intervention programs.¹ The long-term health, social and economic benefits of this achievement are significant. For a pre-lingual deaf child, the return to the community is more than 13 times for every dollar spent on cochlear implants and related care based on cost savings in education and improved productivity as an adult.²

In contrast, Australian adults with S-P SNHL, and others for whom conventional hearing aids are not effective, are forced to navigate an obstacle course³ - a fragmented, sluggish, inequitable system that is increasingly out of step with contemporary hearing health best practice. The result of this dysfunction is clear: disempowered consumers, under-identification of eligible candidates, delayed treatment, and the risk of inappropriate prescription of ineffective hearing aids.⁴ As a result, it is estimated that less than 10% of adults who would benefit, receive a cochlear implant.⁵ Adults who would benefit from a bone conduction implant are similarly disadvantaged.

The HSP, with its remit of providing access to high quality hearing services and appropriate technology to the Australian community, has a responsibility to prioritise improved outcomes for adults whose treatment requires implantation, particularly those with S-P SNHL, most of whom do not receive treatment consistent with the standard of care, which is cochlear implantation. Cochlear implantation is cost-effective in adults and seniors⁶ with an estimated return on investment of 10:1.⁷ Similarly, the HSP must consider how it can better support adults who require implantation because of mixed and conductive hearing losses.

Towards the best practice: cochlear implantation as the standard of care

A best practice, nationally consistent standard of care for the treatment of S-P SNHL would:

- Reflect evidence including international consensus statements;
- Report on treatment outcomes for consumers across all schemes and jurisdictions. Transparency would allow for continuous improvement and adjustments to the program as needed;
- Empower consumers by providing timely, clear, consistent, information about support pathways, what to expect, where to present for service and what it will cost them, all in a manner that they can comprehend;
- Offer simple effective referral pathways that work seamlessly for the benefit of consumers; and
- Address current inequity in service provision including through:
 - Greater geographic availability for cochlear implant services, particularly in regional and rural settings (thin markets);
 - Greater support for people with S-P SNHL that facilitates informed decision-making and treatment, particularly prior to surgery (counselling) and the first 6 months post- implantation; and
 - Support for maintaining and renewing cochlear implant technology, regardless of a consumer's age at implantation or access to private health insurance.

Recommendations

The HSP is well positioned to facilitate a best practice system for adults as it has done for children. Cochlear makes the following recommendations to deliver improvements:

Reporting and accountability to support continuous improvement:

1. Ensure each component of the Hearing Services Program is funded with outcomes for each cohort specified, made publicly available, and with service providers held to account for delivery.
2. Put in place a simple and robust system to understand and track the treatment of S-P SNHL, including the number of people receiving treatment consistent with the standard of care. (For example, proportion of ears with a hearing loss of 70 dB or greater with a cochlear implant vs a hearing aid; proportion of Community Service Obligation eligible people with a cochlear implant vs a hearing aid; including those served by Hearing Australia or retained by private providers; and number of adults waiting and duration of wait for cochlear implant surgery at public hospitals).
3. Publish data on the referral of HSP clients for specialist hearing services under *Australian Hearing Services (Declared Hearing Services) Determination 2019* to support analysis of the effectiveness and timeliness of S-P SNHL diagnosis.

Equitable funding and access to needs-based services:

4. Implement forward planning mechanisms that ensure funding available under the HSP for children with cochlear implants meets demand and delivers equity in access to technology upgrades between cochlear implant sound processors and hearing aids.
5. Amend the *Australian Hearing Services (Declared Hearing Services) Determination 2019* to ensure the provision of a replacement implant speech processor (cochlear and bone conduction) is a declared hearing service for all people eligible to access the HSP where they are not provided for under the National Disability Insurance Scheme including those over 65.
6. Amend the Schedule of Service Items and Fees (for voucher clients) to provide appropriate reimbursement to reflect the additional needs of those with S-P SNHL (support for counselling around a transition to implant, and referral support)
7. Ensure that the CSO is adequately funded to enable Hearing Australia to meet the specific needs of the over 65s cohort. For example, longer appointments for cochlear implant transition and additional specialist services (e.g., social work, counselling, cochlear implant assessment and ongoing support) are required, particularly for long-term CSO participants for whom barriers to treatment are significant.
8. Implement recommendations made by the Medicare Benefits Scheme Taskforce to expand Medicare funding for remote delivery of hearing implant related services already covered by the MBS.

Fixing the broken treatment pathway for adults with S-P SNHL:

9. Require audiologists working within the HSP to provide greater transparency regarding the limitations of hearing aids for people with S-P SNHL. This could include mandatory sharing of evidence-based information or a requirement for referral for assessment by a cochlear implant specialist audiologist or ENT for all adults whose hearing is reduced below the S-P SNHL range before a hearing aid fitting can proceed. A strong and successful precedent for this approach already exists with asymmetrical hearing loss, where audiologists are required to refer patients for an ENT consult, before a further hearing aid fitting can proceed.
10. The Australian Government/HSP take a leadership role with all relevant stakeholders to map, simplify and resolve the funding and lifetime treatment pathways for equitable provision and ongoing support of consumers who have or are candidates for cochlear implants.
11. The Australian Government/HSP support the delivery of cochlear implant services in thin markets, particularly in regional and rural communities.

Introduction

Over the past forty years, cochlear implants have moved from an unknown, cutting-edge treatment to the standard of care for people with severe to profound sensorineural hearing loss (S-P SNHL) who do not significantly benefit from hearing aids due to the nature of their hearing loss.

Australia sets the standard globally for the treatment of severe to profound hearing loss in children, with effective systems for diagnosis, robust and timely referral for treatment, access to world-class clinicians and early intervention programs. The result is that 90%+ of children who would benefit receive cochlear implantation within the first year of life (bilateral where appropriate) and a large proportion receive access to early intervention services by world-leading providers. With this support, Australian children with hearing loss can enter primary school with speech and listening outcomes comparable to their peers.⁸ Protecting this system, including planning for and removing inequity around the provision of upgrades for children is critical.

We understand that First Voice has made a submission regarding opportunities to strengthen the HSP as it relates to the provision of services for children. Cochlear endorses that submission.

Cochlear's contributions in this paper focus on the needs of adults with S-P SNHL.



About Cochlear Limited

Cochlear is the global leader in implantable hearing solutions including cochlear, bone conduction and acoustic implants. It is estimated around 15,000 Australians have Cochlear Implants (CIs) on either one ear or two ears (bilateral).

Operating out of its global headquarters at Macquarie University, Cochlear is a Top 50 ASX-listed company with annual revenues of \$1.4 billion, 95+ per cent which is earned from exports around the world. Cochlear is supported by a workforce of 4,000 employees.

Cochlear invests AUD\$180 million each year in research and development, mostly in Australia, and participates in over 100 collaborative research programs. Cochlear strives to help people "Hear now. And always" through a lifetime of hearing with the best possible support.

As the leading provider of implantable hearing solutions to Australians, many of whom are supported by the Hearing Services Program (HSP), Cochlear welcomes the opportunity to provide this submission to the Review.

About severe to profound sensorineural hearing loss (S-P SNHL)

Available studies indicate just under 90,000 Australians have severe to profound deafness or hearing loss.⁹

Sensorineural hearing loss is most often a result the of damage to the structures of the cochlea. The normal cochlea is designed to respond to a wide range of sound frequencies and intensities through the function of:

- Outer hair cells which respond mechanically to amplify sound, and
- Inner hair cells which serve as sensory transducers for those amplified signals.

Mild and moderate degrees of hearing loss are often a result of a loss of the amplification function of outer hair cells. When the function of the inner hair cells is preserved, hearing aids are the standard of care for hearing loss. Amplification from the hearing aid helps the surviving hair cells detect the vibrations and convert them into signals that the brain can process.

The greater the damage to a person's hair cells, the more severe the hearing loss and the greater the amplification required from the hearing aid. There are however,

- Practical limits to the amount of amplification that a hearing aid can provide; and
- If the inner ear is too damaged, even large vibrations cannot be converted into neural signals.

Severe to profound hearing loss (70 dB or greater) is characterised by:

- Damaged outer cells, resulting in a loss of amplification; and/or
- Damaged inner hair cells, with a resulting loss of sensory transduction from inner hair cells.

In these cases, hearing aids are ineffective. While they can compensate for the damage to the outer cells (through amplification), hearing aids cannot entirely correct for the distortions in auditory signal from the damaged inner hair cells.

At this level of hearing loss, the continued prescription of a hearing aid can lead to significant frustration for the consumer, as interpreting speech becomes increasingly challenging. A key advantage of a cochlear implant over a hearing aid is that, while a hearing aid simply amplifies sound, a cochlear implant will directly stimulate the auditory nerve, bypassing injured hair cells of the cochlea and provide salient coded information for better speech perception.

In other words, the standard of care for this level of severe to profound sensorineural hearing loss (S-P SNHL) is no longer a hearing aid, but rather a cochlear implant.¹⁰

Standard of care for treatment of severe to profound sensorineural hearing loss

In August 2020, the first ever global consensus paper on the use of cochlear implants as the minimum standard of care for adults with bilateral severe, profound, or moderate sloping to profound hearing loss was published.¹¹

The consensus paper was authored by an independent panel, including 31 hearing experts from surgical and audiology backgrounds representing more than 13 countries. Findings by the panel include:

- Awareness of cochlear implants among primary and hearing healthcare providers is inadequate, leading to under-identification of eligible candidates. Clearer referral and candidacy pathways would help increase access to cochlear implants;
- Adults who are eligible for cochlear implants should receive the implant as soon as possible to maximise post-implantation speech recognition;
- Age alone should not be a limiting factor to cochlear implant candidacy, as positive speech recognition and quality of life outcomes are experienced by older adults as well as younger adults;
- Cochlear implants significantly improve overall and hearing-specific quality of life in adults with bilateral severe, profound, or moderate sloping to profound sensorineural hearing loss; and
- There is an association between age-related hearing loss and cognitive/memory impairment.

Appendix A of this submission contains detailed information about these statements and relevant evidence. More detail on the consensus statements and the process through which they were developed can also be found at <https://adultheating.com/>

About hearing implants

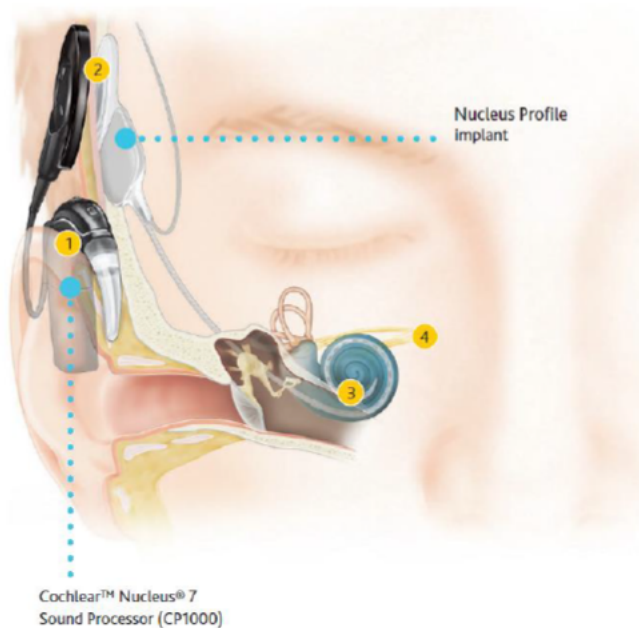
A hearing implant system consists of two parts:

1. The surgically placed component that is designed to last many decades; and
2. The externally worn sound processor, which is fitted by an audiologist, to be worn every waking hour and which needs to be replaced periodically, like a hearing aid.

The implant and sound processor work together to address hearing loss. Each component is integral to the operation of the other. A diagram of a cochlear implant and bone conduction system are included below in Figure 1a and b.

Figure 1a: Cochlear Implant System

How cochlear implants work:

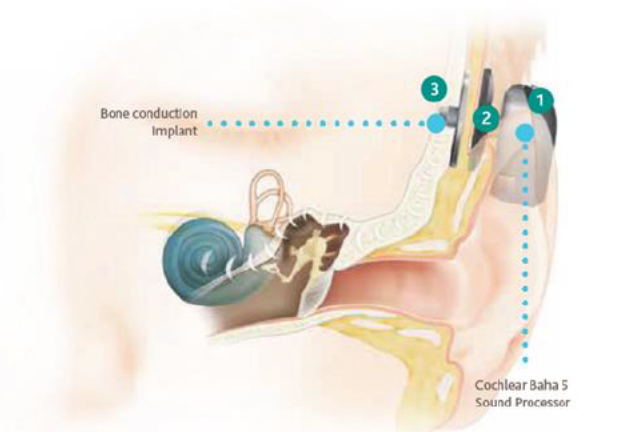


- 1 The sound processor captures sound and converts it into digital code.
- 2 The sound processor transmits the digitally coded sound through the coil to the implant just under the skin.
- 3 The implant converts the digitally coded sound to electrical signals and sends them along the electrode array, which is positioned in the cochlea.
- 4 The implant's electrodes stimulate the cochlea's hearing nerve fibres, which relay the sound signals to the brain to produce hearing sensations.

Figure 1b: Bone Conduction System – Baha

How hearing works with a Baha System:

- 1 The sound processor picks up sound via the microphone.
- 2 Sound is converted into vibrations which are sent to the bone integrated implant.
- 3 Bone naturally conducts the vibrations to the inner ear (cochlea). There, the vibrations are naturally transformed into signals that are sent to the brain where they are perceived as sound.



Responses to Discussion Issues

1) Any changes to HSP objectives & scope?

Cochlear supports the principle of universal, publicly funded access to hearing services and technology through the HSP to promote and support the hearing health of all Australians.

It is critical that the HSP ensures that a national standard of care is adopted by all Contracted Service Providers based on evidence, including international consensus statements on the treatment of S-P SNHL, to confirm that adults with S-P SNHL receive adequate assessment of their eligibility/suitability as cochlear implant candidates, referral, surgery and rehabilitation; and that it enables measurement and reporting of outcomes. The HSP currently falls short of this aim and this needs to be addressed.

Cochlear supports the continuation of the two HSP service delivery programs, i.e. the:

- Voucher Program (VP) which is delivered to eligible clients by contracted private service providers and Hearing Australia whereby clients are issued with a voucher for hearing services and fully or partially subsidised devices that they can use at a service provider of their choice.
 - Many voucher clients have S-P SNHL (greater than 70 db), but only a small proportion currently receive treatment consistent with the standard of care (cochlear implants).
 - Given this, those with S-P SNHL (a minority within the Voucher scheme) need particular focus to ensure that they receive appropriate treatment for their needs (i.e. do not merely receive ineffective treatment with a hearing aid which is the appropriate treatment for the majority of program participants.)
- Community Service Obligation (CSO) program which is currently delivered exclusively by Hearing Australia under a Memorandum of Agreement with the Department of Health to meet the hearing needs of vulnerable groups, including children and young adults (0-26), eligible Indigenous Australians and adults who are eligible for specialist hearing services (otherwise known as 'complex adults'). It is understood that:
 - Most, if not all, cochlear implant candidates and recipients would qualify for specialist hearing services under the CSO given their hearing loss profile or because their "hearing loss and communication difficulty prevents them from communicating effectively in their daily environment".¹² See definition of specialist hearing services under s 5 of *Hearing Services Program (Voucher) Instrument 2019*.
 - While most adults eligible for specialist hearing services experience severe to profound bilateral hearing loss, but only a small proportion currently have received treatment consistent with the standard of care (cochlear implants).

Very little information, however, is available to understand the outcomes delivered for specific sub-groups within the HSP including complex adults and Voucher clients with S-P SNHL, Aboriginal and Torres Strait Islanders, CSO 0-6, and other CSO 7-26. The result is that those with S-P SNHL receive very little focus given their small numbers, and there has been very little consideration to how services could be improved to consider flaws in the current system.

Cochlear would welcome greater specificity, transparency and timely public reporting of performance against the outcomes required of contracting hearing service providers to the HSP including updating *Hearing Rehabilitation Outcomes for Voucher Holders*. In particular, a category for those with disabling S-P SNHL would deliver significant benefit in managing the program and outcomes from investment.

Reporting performance against desired outcomes for each cohort in a nationally consistent manner would also assist delivery of key government priorities (such as Aboriginal and Torres Strait Islander ear health within the

Roadmap for Hearing Health), allocation of required resources, and assist the design of targeted initiatives for each segment, such as contracting providers to address thin markets or targeted support towards new care standards. Tracking consumers with S-P SNHL will ensure they are receiving timely and effective treatment, as they are likely to need additional support particularly in the 12 months prior to and post implantation.

RECOMMENDATIONS 1-3

REPORTING AND ACCOUNTABILITY TO SUPPORT CONTINUOUS IMPROVEMENT

1. Ensure each component of the Hearing Services Program is funded with outcomes for each cohort specified, made publicly available, and with service providers held to account for delivery.
2. Put in place a simple and robust system to understand and track the treatment of S-P SNHL, including the number of people receiving treatment consistent with the standard of care. (For example, proportion of ears with a hearing loss of 70 dB or greater with a cochlear implant vs a hearing aid; proportion of Community Service Obligation eligible people with a cochlear implant vs a hearing aid, including those served by Hearing Australia or retained by private providers, Number of adults waiting and duration of wait for cochlear implant surgery at public hospitals).
3. Publish data on referral of HSP clients for specialist hearing services under *Australian Hearing Services (Declared Hearing Services) Determination 2019* to support analysis of the effectiveness and timeliness of S-P SNHL diagnosis.

2) Any changes to Consumer eligibility (or priority)?

The priority focus for the HSP should continue to be groups most impacted by hearing loss including Aboriginal and Torres Strait Islander peoples, children and those with complex hearing needs. Substantial attention needs to be paid to improving outcomes for those both within the CSO and Voucher scheme who experience S-P SNHL but who are not currently receiving treatment consistent with the standard of care.

Children from birth to 6 years:

The hearing care referral pathway for children 0-6 years of age should remain a high-order priority for the HSP given the critical benefit of timely and effective treatment, and specialist services and expert coordination required.

As previously stated, Cochlear endorses the submission made by the First Voice Group, the coalition for organisations that provide listening and spoken language early intervention services for children who are deaf or hearing impaired.

Cochlear supports the maintenance of a single, independent, national point of referral for children post early-identification of hearing challenges. Australia sets the standard globally for the treatment of severe to profound hearing loss in children, with effective systems for diagnosis, robust and timely referral for treatment, access to world-class clinicians and early intervention programs.

Cochlear implantation has been the accepted global standard of care for children with severe to profound deafness or hearing loss for several decades. The results are clear:

- 90%+ of eligible children receive cochlear implantation (bilateral where appropriate) within the first year of life and a large proportion receive access to early intervention services by world-leading providers.
- With support, Australian children with hearing loss have the potential to enter primary school with speech and listening outcomes like comparable to their peers.

Cochlear supports the HSP delivering against the priority identified in the *Roadmap for Hearing Health (the Roadmap)*, namely, that an integrated national approach to ear health checks of children aged 0-6 is agreed, whereby every child, particularly those in Aboriginal and Torres Strait Islander communities, has regular ear health checks and the results of these checks are recorded in a national database with the objective of no child ‘slipping through the cracks’. Protecting and buttressing this system, is critical.

It is also critical that children who receive cochlear implants have access to technology upgrades which deliver clinical benefit. This includes removing inequity that has developed around the provision of technology upgrades for children. For example:

- A difference in criteria for upgrades has emerged between technologies. Ears with hearing aids, receive more frequent access to upgrades, than those ears with cochlear implants. This difference appears to have no clinical basis, but rather is based on planning and funding constraints. For example, a child eligible for a hearing aid, provided by Hearing Australia, would receive an upgrade within 3 or 5 years; however, a child using a cochlear implant sound processor, funded through Hearing Australia but provided by a cochlear implant specialist, would only be eligible for a replacement every 5.5 or 6 years minimum.
- Applications for funding of cochlear implant technology upgrades which are acknowledged to meet the criteria, are routinely “paused” by Hearing Australia to ensure annual funding will be sufficient, something that does not appear to occur for ears supporting supported by hearing aids.

RECOMMENDATION 4: EQUITABLE FUNDING AND ACCESS TO SERVICES

Implement forward planning mechanisms that ensure funding available under the HSP for children with cochlear implants meets demand and delivers equity in access to technology upgrades between cochlear implant sound processors and hearing aids.

Adults over the age of 26

The HSP should continue to support adults affected by hearing loss, with a focus on improving outcomes for those with S-P SNHL. This means a focus on improving the system that supports the timely diagnosis, referral and treatment of hearing needs and ensuring that the system reflects the realistic needs of a typical consumer.

The HSP CSO program funds sound processor parts and repairs for those eligible who enter into a maintenance agreement with Hearing Australia. The HSP does not however, fund cochlear implant sound processor replacements for anyone over the age of 26. This issue originates with the *Australian Hearing Services (Declared Hearing Services) Determination 2019* which specifically excludes the provision of cochlear implant speech processor units from the definition of declared hearing services delivered through CSO for all classes of people, other than young Australians under 26.

This particularly affects seniors as, unless they became National Disability Insurance Scheme (NDIS) participants before reaching 65, there is no public funding pathway for a sound processor replacement. See also comments later in the paper regarding the HSP interface with other schemes as it affects seniors with S-P SNHL.

RECOMMENDATION 5: EQUITABLE FUNDING AND ACCESS TO SERVICES

Amend the *Australian Hearing Services (Declared Hearing Services) Determination 2019* to ensure the provision of a replacement implant speech processor (cochlear and bone conduction) is a declared hearing service for all people eligible to access the HSP where they are not provided for under the National Disability Insurance Scheme including those over 65.

Low-income earners

Cochlear endorses a priority in the *Hearing Health Roadmap* that additional support for people on low incomes is made available to access hearing health services for those not eligible for the HSP or NDIS.¹³

3) Improvements to HSP interface with other schemes?

In treating consumers with S-P SNHL, there are multiple, complex interfaces between the HSP and other Commonwealth and State programs, including between Hearing Aid and specialist audiologists, Medicare, the NDIS, State public hospitals, compulsory third party motor vehicle accident insurance and workers' compensation schemes as well as private health provision through Private Health Insurance (PHI). Unlike the children's hearing pathway, there is no centralised oversight to ensure an efficient, cost-effective system for treatment.

The result is a system that does not operate seamlessly. There is information asymmetry for consumers, inconsistent or lack of service delivery, cost-shifting, and disenfranchised consumers falling through gaps at the interfaces. There is also no provision in the HSP for supporting cochlear implant recipients in thin markets and it could be argued the delivery of cochlear implants is itself a thin market.

Cochlear is agnostic as to 'who pays' for required implantation surgery, cochlear implant systems and replacement sound processors for eligible consumers. A nationally consistent standard of care, however, should be delivered to Australians with S-P SNHL regardless of the service provider or source of funding for each component of care that:

- Reflects evidence including international consensus statements on the treatment of S-P SNHL;
- Reports on treatment outcomes for consumers across all schemes and jurisdictions. Transparency would allow for continuous improvement and adjustments to the program as needed;
- Empowers consumers by providing timely, clear, consistent, information about support pathways, what to expect, where to present for service and what it will cost them, all in a manner they can comprehend;
- Offers simple referral pathways to work seamlessly for the benefit of consumers; and
- Addresses inequities in service provision including through:
 - Greater geographic availability of cochlear implant services, particularly in regional and rural settings (as an example of a thin market);
 - Greater support for people with S-P SNHL that facilitates informed decision-making and treatment, particularly prior to surgery (counselling) and the first 6 months post implantation; and
 - Support for maintaining and renewing cochlear implant technology, regardless of a consumer's age at implantation or access to private health insurance.

The reality is that adult cochlear implant candidates currently face a treatment pathway akin to an obstacle course. The result is that less than 22% of candidates are aware of cochlear implants as a hearing loss solution¹⁴, with just 9% of people that could benefit from a cochlear implant getting the appropriate referral they need¹⁵.

Adult cochlear implant care involves several phases:

1. **Pre-implant care:** where a candidate is assessed by an audiologist and a surgeon to see whether they would benefit from an implant. This includes counselling on the process and expectations.
2. **Acute phase:** the simple surgical procedure and initial activation of the cochlear implant (approximately 1-3 weeks after surgery) by an audiologist, with up to about 6 visits within the first year which consist of cochlear-implant programming (mapping), tailored to the recipient's needs; and
3. **Long term follow-up:** to check the device is working optimally (usually once and sometimes twice per year).

Below are some examples by way of illustration of complexity in the hearing care system as it relates to service delivery and funding for cochlear implants, sound processors and related services:

- **Service delivery:** adult hearing loss is typically gradual. Audiologists typically support their clients for years, even decades before their loss becomes S-P SNHL. Audiologists at Hearing Australia, and most private voucher providers, are specialists in hearing aids and do not offer cochlear implants services. The implication is that a client is forced to change hearing health care providers just when they are facing deteriorating effectiveness of the solution that was previously functioning. Clients who live in non-urban settings (thin markets) also face travelling for several hours to see a cochlear implant specialist because of the lack of local service delivery.
- **Community/Hearing Aid expertise:** hearing health provision can be delivered by an audiologist or an audiometrist. Education systems train these professionals with an expectation of hearing aid provision, as the dominant activity. Organisational systems also incentive the majority activity of providers – fitting hearing aids. There is very little workforce capability building related to counselling and treatment of S-P SNHL and cochlear implants. The result is a profession geared towards hearing aids, which requires “circuit-breakers” that encourage further referral for or provision of specialist care.
- **Funding for the treatment of S-P SNHL:**
 - **For surgery** - is provided through the state hospital system, including the initial implant and sound processor required to make the implant work or through private health insurance.
 - **For replacement sound processors** - depends on the age of the consumer. Via the NDIS or the HSP for children, and the NDIS for consumers aged 26 to 64. There is no support for those implanted after turning 6. Many private health insurers fund replacement sound processors as an ex gratia payment in relation to a hospital product that covers implantation. This is only available for those consumers who hold the highest levels of PHI.
 - **For ongoing support** - the HSP funds cochlear implant sound processors, batteries, repairs and accessories with the scope of devices/services covered by the funding dependent on the age of the consumer.
 - **Clinical services** - The HSP does not fund cochlear implant related clinical services, creating a major barrier to access, in all, but particularly regional settings (thin markets). Medicare supports cochlear implant programming and some other cochlear implant related clinical services.
 - **Telemedicine:** The HSP currently funds telemedicine for hearing aids, but no such funding exists for cochlear implants through the Medicare Benefits Scheme. Empowering clinicians to deliver telemedicine for cochlear implants would have significant impacts for a small group of patients who are far more likely to have to travel for their hearing care given relatively poor access.

Interface issues for over 65s

Many hearing implant recipients can now participate in National Disability Insurance Scheme (NDIS). In keeping with their NDIS plan objectives, the recipient may receive replacement sound processors. Today however, a systemic inequity exists within the current arrangements that may also expose the Commonwealth to claims of discrimination. If a client with S-P SNHL chooses to persist with a hearing aid, then they may receive funding for a replacement hearing aid. This solution is ineffective however, for the client and should the standard of care of a cochlear implant be adopted, they must forfeit their public funding pathway for a replacement external device. It does not appear defensible to:

- Support one form of technology (hearing aid) but not the other (implant sound processor); or
- Actively create disincentives to cochlear implantation when this is the standard of care for treatment when hearing aids are no longer effective.

Cochlear welcomes the study to *evaluate the clinical and cost-effectiveness of upgrading Cochlear Implants within the HSP* which was commissioned by the Department of Health in 2020. This study will report on the cost-effective benefits of providing cochlear implant technology and support approximately 350 senior Australians without a public funding pathway for replacement of their cochlear implant sound processors with a temporary safety net.

While 66% of current CI users had surgery before they were 65, implantation in over 65s has grown faster than all other age groups, consistent with the prevalence of hearing loss in older age groups. Over the last 3 years, the 65 and over age segment has been the only one that has grown considerably - by 12 per cent (by contrasts, those 0-24 grew 2 per cent and 25-64 grew 3 per cent). In FY18 people over 65 accounted for 43 per cent of all CI surgeries.

Given the small but growing number of people who are being implanted for the first time at 65 or older, and given the intersection of health, disability and ageing policy and funding issues, this is an ongoing funding gap and interface issue that requires resolution.

Recommendation 5 i.e. that the *Declared Hearing Services Determination* be amended to include the provision of a replacement cochlear implant sound processor as a declared hearing service under the CSO would also deliver tangible progress and reflect a key recommendation of the *Hearing Health Roadmap*.¹⁶

RECOMMENDATIONS 6 – 8: EQUITABLE FUNDING AND ACCESS TO SERVICES

6. Amend the Schedule of Service Items and Fees (for voucher clients) to provide appropriate reimbursement to reflect the additional needs of those with S-P SNHL (support for counselling around a transition to implant, and referral support).
7. Ensure that the CSO is adequately funded to enable Hearing Australia to meet the specific needs of the over 65s cohort. For example, longer appointments for cochlear implant transition and additional specialist services (e.g. social work, counselling, cochlear implant assessment and ongoing support) are required, particularly for long-term CSO participants for whom barriers to treatment are significant.
8. Implement recommendations made by the Medicare Benefits Scheme Taskforce to expand Medicare funding for remote delivery of hearing implant related services already covered by the MBS.

RECOMMENDATIONS 8, 9 and 10: FIXING THE BROKEN PATHWAY FOR ADULTS WITH S-P SNHL

9. The Department of Health should work to implement recommendations made by the Medicare Benefits Scheme Taskforce to expand Medicare funding for remote delivery of hearing implant related services already covered by the MBS.
10. Require audiologists working within the HSP to provide greater transparency regarding the limitations of hearing aids for people with S-P SNHL. This could include mandatory sharing of evidence-based information or a requirement for referral for assessment for all adults whose hearing is reduced below the S-P SNHL range before a hearing aid fitting can proceed. A strong and successful precedent for this approach already exists with asymmetrical hearing loss, where audiologists are required to refer patients for an ENT consult, before a further hearing aid fitting can proceed.
11. The Australian Government/HSP take a leadership role with all relevant stakeholders to map, simplify and resolve the funding and lifetime treatment pathways for equitable provision and ongoing support of consumers who have or are candidates for cochlear implants.

4) Sufficient support for hearing loss prevention? (Measures)

It could be argued that Australia is world-leading in its approaches to a range of population health screening checks and preventive health campaigns, such as those for breast, bowel, skin and cervical cancers.

Regular population screening of hearing at life-cycle intervals (i.e. beyond newborn screening), would provide opportunities to educate and inform the public about hearing care, hearing loss prevention and ensure consumers with hearing loss are identified, assessed and placed on an appropriate referral pathway when required. Screening linked to a national database could enable trend analysis that could inform more targeted interventions.

For this reason, Cochlear supports the recommendation of First Voice that the Hearing Services Program be expanded to deliver a national screening program for children 4-7 years of age; and that the HSP consider screening programs at other life-cycle intervals e.g. for those turning 60 years of age.

5) Assessment services and Rehabilitation activities

See Recommendations 6 and 7 on ensuring HSP offers adequate clinical support for consumers with S-P SNHL and cochlear implants.

The current remuneration settings for screening, consultation and assessment are no longer fit-for-purpose for those with S-P SNHL. Originally designed with hearing aid user needs in mind, the settings underestimate the support required to help cochlear implant candidates navigate a complex health system.

Overall, the settings provide disincentives to address the needs of consumers who may be eligible for CIs. The result is that most providers, including Hearing Australia, treat cochlear implant counselling with similar resources to a hearing aid fitting, which results in inconsistent adoption of the standard of care.

Additional remuneration is required for:

- Longer appointments in the CI counselling process
- Health service coordination: including coordinating with cochlear implant specialists, additional counselling support and ENT pathways.
- Other social work support: this may include working with candidates to help problem-solving how they will travel for service provision if local services are not available

6) Consumer choice and control

Consumers need to be informed and understand at an early stage that should their hearing decline to such an extent that that an implantable device could be an option for them.

Information asymmetry results in sub-optimal outcomes for consumers as they age and/or their hearing declines. Lack of awareness of cochlear implants among primary and hearing healthcare providers leads to under-identification of eligible candidates.

It could also be argued that many consumers' hearing 'care' is currently understood to be synonymous with stereotypical hearing 'aids'. There is a need to broaden community awareness of the full spectrum of hearing care preventive actions, implantable and other technologies, and rehabilitation services. This is a shared responsibility of the sector and could be supported by positioning within the government's upcoming public awareness campaign.

Cochlear supports a key action within the *Roadmap for Hearing Health* that (the HSP) develop and publish through a single, trusted access point key information needed to enable consumers to make informed choices about pathways for gaining support for hearing loss.¹⁷

7) Better use of technological developments and services?

The HSP should be technology agnostic but drive the adoption cost-effective solutions

The HSP should drive the adoption and support the provision of cost-effective contemporary technology and services in line with contemporary best practice, and commensurate with the requirements of each client. As such, the HSP should be technology agnostic.

Recipients who elect for cochlear or bone conduction implants do so when hearing aids are ineffective at treating their hearing loss, and with very specific guidance from specialist health care professionals. An implant is their only option for functional hearing.

Hearing implants and hearing aids are not interchangeable for eligible candidates. Implants are the treatment technology option for a candidate when aids are not viable. Hearing aids amplify sounds while cochlear implants convert sounds into electrical impulses.

Health care professionals should recommend cochlear implants only when a client *when wearing hearing aids*, struggles to hear conversations, is forced to ask people to repeat themselves, and/or is unable to speak on the telephone. It is typical that by the time candidates receive an implant, they have become socially isolated and not fully participating in society because of their struggle to hear with hearing aids.

Bone conduction implants are suitable for people with conductive and mixed hearing loss. Unlike hearing aids, bone conduction implants create vibrations that move across the skull to the inner ear. For example, bone conduction implants help people who are physically unable to wear conventional hearing aids for medical (e.g., chronic ear infections) or anatomical reasons.

Implantation is cost-effective when compared with no implant or no intervention at all and is associated with increased employment and income and reduced hospitalisation, falls and other risk factors.

Approximately 8-10 years typically pass between when a person would have been a candidate for an implant to when they eventually choose surgery. This time gap represents a substantial loss of productive capacity for an individual, so the provision of technology must be accompanied by services that provide timely information to consumers so they can make informed choices that maximise their hearing capacity and participation in society. The lack of awareness among healthcare professionals, particularly audiologists, around implants may be due to their expertise and incentives are being based on the provision of hearing aids.

The HSP could play a role in increasing consumer awareness of cost-effective hearing care solutions.

8) Supporting consumers in thin markets?

The CSO and the remit of Hearing Australia in its delivery could be more focussed or dedicated to addressing shortcomings in the delivery of rural and regional areas and for demographic segments not currently well served in the community.

RECOMMENDATION 11: FIXING THE BROKEN PATHWAY FOR ADULTS WITH S-P SNHL

The Australian Government/HSP support the delivery of cochlear implant services in thin markets, particularly in regional and rural communities.

9) and 10) Program administration improvements? Effective use of data and information to inform decision-making?

See our response to Question 1 and recommendations 1-3.

Cochlear contends that the HSP would be more efficient if it ensured that consumers being served through the CSO and eligible for a CI received support at the earliest. A simple and robust system could be enacted to understand and track the treatment of S-P SNHL, including the number of people receiving treatment consistent with the standard of care.

All contracted service providers are under an obligation to notify the Department if they believe a voucher holder client is eligible for specialist hearing services, which includes those with S-P SNHL (*s 50 Hearing Services Program (Voucher) Instrument 2019*). This should provide a starting point for understanding and tracking treatment pathway of consumers with S-P SNHL through the HSP. At a minimum, the Department should be publishing data about the notifications.

References

- ¹ First Voice, Sound Outcomes, 2018. Available at <https://www.firstvoice.org.au/wp-content/uploads/2020/02/FV-Sound-Outcomes-2018-Report-Final.pdf>
- ² Mohr et al, The societal costs of severe to profound hearing loss in the United States, February 2000, International Journal of Technology Assessment in Health Care 16(4):1120-35. Available at www.researchgate.net/publication/12173450_The_societal_costs_of_severe_to_profound_hearing_loss_in_the_United_States
- ³ 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, Available at https://journals.lww.com/earhearing/Fulltext/2020/03000/Barriers_and_Facilitators_to_Cochlear_Implant.16.aspx
- ⁴ Buchman et al. Unilateral Cochlear Implants for Bilateral Severe, Profound, or Moderate Sloping to Profound Sensorineural Hearing Loss: A Systematic Review and Consensus. JAMA Otolaryngology 2020. Available at <https://jamanetwork.com/journals/jamaotolaryngology> More detail on the consensus statements and the process through which they were developed can be found at <https://adultheating.com/> and in Appendix A.
- ⁵ Bierbaum, Barriers (3)
- ⁶ Buchman, Unilateral Cochlear Implants (4)
- ⁷ The Ear Foundation (2018), Spend2Save Report (2nd Edition); Available at <http://eurociu.eu/spend2save--2nd-edition>
- ⁸ Deloitte Access Economics, Cost-Benefit Analysis of First Voice's Early Intervention Program (2017) <https://www2.deloitte.com/au/en/pages/economics/articles/first-voice-early-intervention-program-cost-benefit-analysis.html>
- ⁹ Stevens et al (2011) Access Economics Prevalence Calculator, Global and regional hearing impairment prevalence: an analysis of 42 studies in 29 countries. European Journal of Public Health, 23(1):146-152.
- ¹⁰ Buchman, Unilateral Cochlear Implants (4)
- ¹¹ Buchman, Unilateral Cochlear Implants (4)
- ¹² See definition of specialist hearing services under s 5 of *Hearing Services Program (Voucher) Instrument 2019*.
- ¹³ *Roadmap for Hearing Health* p5 Priority 8. [https://www1.health.gov.au/internet/main/publishing.nsf/Content/CDFD1B86FA5F437CCA2583B7000465DB/\\$File/Roadmap%20for%20Hearing%20Health.pdf](https://www1.health.gov.au/internet/main/publishing.nsf/Content/CDFD1B86FA5F437CCA2583B7000465DB/$File/Roadmap%20for%20Hearing%20Health.pdf)
- ¹⁴ Commercial-in-confidence from internal Cochlear Consumer Brand Tracking – available upon request
- ¹⁵ Commercial-in-confidence from PWC Strategy & Analysis for Cochlear 2016 – available upon request
- ¹⁶ Extend coverage of the HSP to include cochlear implant speech processors, including addressing the gap in support for people over 26 and particularly those over 65", *Roadmap for Hearing Health*, p. 17, Key Actions, point 7.
- ¹⁷ *Roadmap for Hearing Health* p17. Key Action 2.