Submission to the Senate Committee on Health 2014

Audiology Australia Ltd
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Introduction

Thank you for inviting Audiology Australia to provide a submission to the Senate Select Committee on Health.

Audiology Australia is the peak body representing audiologists in Australia. Audiology Australia requires members to operate under a Code of Ethics and a Code of Conduct, and supports audiologists to offer the optimum care to their clients by awarding the Certificate of Clinical Practice.

Audiologists are University trained health professionals who specialise in the identification, diagnosis and rehabilitation of hearing loss, tinnitus, balance disorders, auditory processing disorders, hyperacusis and acoustic shock. Audiologists provide services through hospitals, community health clinics, government funded agencies, hearing aid clinics, cochlear implant clinics, private practice, university clinics, medical practices, ear nose and throat (ENT) specialist and otology clinics, occupational hearing conservation programs, programs for compensation of occupational noise injury, community awareness and consumer advocacy. Scientific research and the employment of evidence-based practice are fundamental to high quality and successful outcomes in Australian audiology practices.

In 2006 it was estimated that one in four Australians suffer from hearing loss with this figure expected to rise to one in four Australians by 2050. Amongst elderly Australians the prevalence of hearing loss increases to as much as one in two. (Access Economics, 2006) With an ageing population there will be a continuing and increasing need for the services of audiologists.

As hearing is one of the most common health disorders to affect Australians, Audiology Australia welcomes the opportunity to have input into improvements of the health system, particularly in regard to improvements in the delivery of hearing health care.

Topic A: the impact of reduced Commonwealth funding for hospital and other health services provided by State and Territory governments, in particular, the impact on elective surgery and emergency department waiting times, hospital bed numbers, other hospital related care and cost shifting

Provision of Hearing Services in Australia:

Hearing Services can be separated into primary screening, secondary diagnostic and tertiary rehabilitation services. Funding responsibility for the primary and secondary components of hearing care rest with the State and Territory governments with the Commonwealth Government being the primary funder of tertiary services.

The Commonwealth Government provides tertiary level, hearing rehabilitation services via the Australian Government Hearing Services Program. These services are available to children aged up to 26 years, to holders of certain Department of Veterans Affairs cards and to Australians holding a current Pensioner Health Benefits card. Services to adult Australians are primarily provided through a competitive Voucher scheme where clients are seen by one of approximately 200 providers. Services to children, Indigenous Australians and to eligible adults with complex rehabilitation needs, are provided by Australian Hearing under the Community Service Obligation (CSO) Funding. The CSO funding includes funding for the maintenance, replacement and upgrading of cochlear implants worn by children and for the maintenance of cochlear implants worn by eligible adults.

The State and Territory governments provide newborn hearing screenings throughout their hospital networks. These screenings are undertaken by nursing or other staff who have received training in the specific screening tests. Secondary level diagnostic services are provided by Audiologists. The focus of many of the State funded secondary level hospital services is to provide diagnostic assessments for infants referred from newborn hearing screening programs and/or provide pre- and post-operative assessments for patients undergoing ear surgery. State hospital diagnostic services also provide cochlear implant programs for both adults and/or children.

Approximately two thirds of the services provided under the Voucher section of the Australian Government Hearing Services Program are provided by the private sector. Rehabilitation services to Australian adults who are not eligible for the Voucher program are provided solely through the private sector. The majority of the private sector clinics focus on hearing rehabilitation for adults and do not provide services to young children, particularly to children aged under three years. There are a smaller number of privately operated diagnostic hearing services that offer services to adults and children. These are primarily linked with or owned by specialist medical practitioners.

Availability of State funded services:

The 2010 Australian Government Senate Committee "Hear Us Inquiry into Hearing Health in Australia" (Hear Us report) heard that there was limited provision of State Government funding for hearing services and that in the prior decade, many of these services had been reduced or closed (sections 5.31 and 5.32). In Section 5 of the report, respondents also stated that there was a disparity of access to services across Australia - with the disparity encompassing both diagnostic services and ongoing support services. In late 2014, the situation remains unchanged.

The current situation regarding the provision of diagnostic audiological services by State/Territory is as follows:

NSW: No services are provided by the State in hospitals north of Newcastle.

VIC: State services to regional hospitals have been closed or are now contracted out to private providers. Residents of some regional areas are now travelling for several hours to access services in the Melbourne metropolitan area

SA: There are no public audiology services provided by the State government in hospitals outside of the Adelaide metropolitan area.

QLD: There are no public audiology services provided from hospitals in the Darling Downs, Western or Central QLD areas. There is some contracting of services to Private Providers in Far North QLD. The Healthy Hearing program provides visiting services to a number of communities throughout QLD - this program is primarily focussed on the improvement of ear health in Indigenous Queenslanders.

WA: There are limited State government funded Audiology services in regional areas. These services are contracted to private providers.

TAS: There are no State funded public audiology services outside of Hobart. The service provided at Hobart Hospital is not a full time service.

ACT: There are no public audiology services provided by the ACT government.

NT: The Northern Territory provides a diagnostic services from the Royal Darwin Hospital and Alice Springs Community Health Centre.

Demand for Hospital Services:

The decline in public hospital services has not coincided with a decline in demand for hearing assessments. Otitis media (infection of the middle ear) remains one of the most common childhood illnesses. The hearing loss caused by chronic otitis media can result in speech and language delays, educational delays and possible behavioural problems. Children with chronic otitis media will require multiple hearing assessments including pre- and post-operative assessments. There are instances in Victoria where hospitals have been provided with increased funding for the surgical treatment of otitis media but have not had a concomitant increase in funding for audiological services. Waiting lists for hearing assessments and ENT consultations can be several years. Any further funding cuts will only exacerbate the situation.

Cost Shifting:

Within the limited provision of State-operated diagnostic audiology services there is considerable cost shifting to the Commonwealth. Services in Victoria and some other States regularly bill Medicare for each hearing assessment, and for services relating to the programming of cochlear implants. Where States have contracted private providers to undertake their audiological assessments the work will be routinely billed to Medicare.

The scarcity of State services capable of assessing children aged under three years also results in potential cost shifting to the Commonwealth. Families of children assessed by a private audiologist are unable to claim a Medicare rebate for the service, unless the practice is operated by a medical practitioner. Consequently, few private practice audiologists offer assessment services to children, and particularly to young children who require specialised testing equipment and facilities. This results in families seeking the services of Australian Hearing as there are no alternative options, with the result that the service is funded by the CSO funding.

The lengthy waiting periods for ENT surgery have resulted in a number of children being referred to Australian Hearing for hearing aids to use while they await surgery. This significantly increases the total cost of hearing health care management for these children.

Summary:
The availability of public hearing services has been reduced over time. Any further cuts to

State and Territory hospital funding are likely to result in further reduction of services. There is a risk that children who are unable to access services will have ongoing hearing losses which will impact on their educational outcomes and later employment outcomes.

Reduction in State and Territory services will result in increased demand for services from Australian Hearing.

Topic B: the impact of additional costs on access to affordable healthcare and the sustainability of Medicare;

Impact of Additional Cost on Access to Healthcare

The scarcity of publicly funded hearing services results in families from regional and remote areas of Australia needing to travel long distance to access both diagnostic and rehabilitation services. In 2010, respondents to the "Hear Us" inquiry raised this as a significant issue and potential barrier to service access. The two primary issues identified were that State governments' patient-assisted travel schemes may not always be sufficient to cover all costs incurred in attending appointments and that these schemes cannot be accessed by families travelling to appointments at Australian Hearing.

The lack of a national database for newborn hearing screening prevents the identification of the true numbers of children lost to follow up diagnosis and rehabilitation. Anecdotal evidence suggests that the families most likely to be lost to follow-up are Aboriginal and Torres Strait Islander families from regional and remote locations and migrant families who do not have English as their first language. Any decreases to the level of patient travel subsidy or the imposition of co-payments for travel costs would result in additional children failing to receive appropriate diagnosis and rehabilitation of their hearing loss.

Some Victorian hospitals have already introduced a co-payment for their diagnostic audiology services. Audiologists have the ability to waive the co-payment if they believe it would result in financial hardship. The introduction of the co-payment has not resulted in a significant decrease in demand for services. However there has been no formal research to assess whether any specific sections of the community are no longer attempting to access the service. The widespread introduction of a co-payment to all hospitals, particularly if there is no or only limited ability to waive the co-payment has the potential to prevent some families from accessing services, predominantly if the hearing assessment forms one of several appointments that each incur a fee.

Access to Cochlear Implants

Funding for cochlear implants is provided via a mix of Commonwealth and State Government programs. All State governments allocate some funding towards the funding of initial cochlear implants. The bulk of this funding is directed to infants and children with a small proportion of the allocation provided to adults. Private health insurance and charitable donations assist with the funding of some implants.

Australians who are eligible for the Australian Government Hearing Services Program receive batteries and maintenance services following payment of a small annual fee.

Australians aged up to 26 years also receive replacements and upgrades of the external speech processor under the Hearing Services Program. Replacements and upgrades are not available to Adults. Australians who are not eligible for the Hearing Services Program have traditionally received no Government assistance with ongoing maintenance or upgrades of their speech processors. Adult cochlear implantees are encouraged to maintain private health insurance to cover the cost of replacements and upgrades. The cost of a speech processor is approximately $8000.

The lack of Government funding for adult implantees has been a cause of ongoing concern. A proportion of current CSO clients elect to continue with hearing aid use rather than progressing to cochlear implants as they do not have private health insurance and will be unable to cover the cost of upgrades or replacements when required. These clients have severe communication impairment that affects their ability to interact in society, and that increases their risk of experiencing depression, dementia and other mental health issues.

Adult implantees in the workforce struggle with the costs of maintaining and replacing their devices. Evidence was provided to the "Hear Us" inquiry that these implantees face a cost burden of $60-$80 per week to maintain their devices. For those who are low income employees this is an unacceptable cost. Failure to have a functioning device means that the implantee is unable to hear or communicate, and is totally unable to participate in the workforce.

The potential impacts of changes to health funding on the access to cochlear implants are as follows:

- Reduced funding to State Governments could result in States decreasing the number of implants that they fund annually. This would decrease the already limited ability for adults to access an implant, and may ultimately be insufficient to meet the need for infants to be implanted.
- Increased costs may prevent low-income families from attending specialist appointments required in the initial implantation period, and from accessing ongoing maintenance programming appointments.
- Increased costs will make the ongoing maintenance and replacement costs for working age adults prohibitively expensive.
- Decreased access to cochlear implants will create negative educational outcomes, reduce employment rates and increase societal costs for the support of severely and profoundly hearing impaired Australians.

- Ensuring that the National Disability Insurance scheme has guaranteed funding to support the maintenance, replacement and upgrades of speech processors worn by working age cochlear implantees would allow these Australians to maximise their workforce participation and economic contribution.

Summary:

The "Hear Us" report identified that barriers already exist to the access of hearing health care. Increasing costs will further increase the inequity of access, particularly for families in regional, rural and remote areas.

Adults of working age currently face a high cost burden in maintaining and replacing cochlear implant speech processors - any cost increases would make this cost burden prohibitive. Inability to maintain their cochlear implant would result in these adults having to withdraw from the employment, placing a cost burden on society.

Topic C: the impact of reduced Commonwealth funding for health promotion, prevention and early intervention;

The Department of Health funds research into hearing loss prevention, early intervention and rehabilitation via a direct allocation to the National Acoustic Laboratory (NAL) and via a competitive grant process administered by the National Health and Medical Research Council (NHMRC). Additional funding into hearing loss prevention and education has been provided by the Department of Industry to the Hearing Cooperative Research Centre (CRC).

Ongoing funding of NAL and the Hearing CRC has allowed Australia to be a leader in the field of hearing health. The NAL Longitudinal Outcomes for Children with Hearing Impairment (LOCHI) study is a landmark study that is providing audiologists and educationalists with guidance on best practice rehabilitation and intervention practices for hearing impaired children. Products that have been developed and commercialised through the CRC include HearLab - equipment that allows audiologists to accurately fit hearing aids to infants and babies and a hybrid cochlear implant/hearing aid that will provide improved hearing to people who could not previously benefit from cochlear implants.

The CRC has provided a platform for the parties involved in Australian hearing health care to work together to maximise the efficiency and outcomes of their research efforts. Rather than competing for grants and duplicating projects, the organisations collectively identify how best to utilise funds to generate positive outcomes.

The NAL and CRC developments have allowed Australia to be a world leader in the early intervention and rehabilitation and of hearing impaired children. Following the introduction of newborn hearing screening by State and Territory governments, Australian Hearing has been able to reduce the age of first fitting such that over 90% of children identified as having a moderate or greater hearing loss at birth receive hearing aids before the age of 12 months, with the majority of these having their fitting prior to the age of six months. This has also allowed for early identification and implantation of children who would gain additional benefit by cochlear implantation. The NAL LOCHI study has now demonstrated that there are positive speech, language and developmental benefits for those children who required a cochlear implant and received it within their first year of life. Reduction in funding or changes in funding method would limit the accessibility of service, with direct negative consequences for the education and later work outcomes for hearing impaired children.

NAL has also been active in the area of hearing loss prevention. Research undertaken by NAL has identified and highlighted the risk of leisure noise. This is in addition to the findings that 37% of Australians continue to have hearing losses that are consistent with

exposure to noise in the workplace and newer findings that other workers who have normal hearing thresholds in quiet, have difficulty performing tasks involving the perception of speech in noise.

The Access Economics report of 2006 identified that 50% of the Australians with hearing loss were of working age and that over 150,000 were unemployed due to hearing loss. The estimated cost of hearing loss in 2005 was calculated to be 1.5% of GPD. Funding from the Department of Health has been provided for the development of educational programs for use with school children to raise their awareness of noise risk and to facilitate their adoption of healthy behaviour when exposed to noise.

As discussed in the earlier section, research has demonstrated that the early identification and rehabilitation of hearing loss can reduce the cost of hearing loss by allowing hearing impaired children to develop speech and language skills and to progress in the classroom and ultimately to gain employment on equal terms with their peers. Continued funding of health promotion messages around the dangers of noise exposure can contribute to productivity by reducing the incidence of noise related hearing loss and allowing workers to continue in the workforce. In contrast, reduced funding in these areas will slow improvements in early intervention and in reducing workplace and leisure noise with concomitant decreases in productivity and increased cost burden on society.

Summary:

Australia is currently a world leader in the field of hearing research, early intervention and rehabilitation. This has been achieved by ongoing funding of NAL and via the CRC program. Funding cuts would directly impact on the research programs and on the lives of all hearing impaired Australians.

Topic D: the interaction between elements of the health system, including between aged care and health care;

Audiology Australia believes that one of the primary contributors to lack of integration in the health system is the lack of a consistent and unified electronic health records system. An Audiologist working for Australian Hearing and providing services to remote communities in the Northern Territory will be required to use a minimum of three separate electronic health record systems in order to document the activities taken with each patient. Audiologists providing services under the Voucher scheme are required to record specific items in the health record maintained for each client but are at liberty to design their own system, either paper based or electronic. When clients are seen in the private sector there is no linkage between the audiologists record system and that of the other medical and allied health provider. Although each State and Territory has instigated a program for universal newborn hearing screening, there is no consistency in coordination of service or in recording of data.

This lack of continuity contributes to fragmentation of care and service. It results in the ongoing use of paper records and paper-based communication, in expensive double handling as people input data from paper records, and increases the risk of potential loss of records or data.

Audiology Australia endorses the following actions:

- E-health must receive significant investment for effective ear and hearing health management.
- E-health records and the capacity to read, transmit, receive and process health files and reports must be made available to audiologists as well as all other health professionals. This should include not only primary health providers but also secondary and tertiary health service providers and private practice.
- The utilisation of other electronic media and videoconferencing to facilitate electronic ear and hearing health care and clinical supervision over distance should be invested and supported.
- A single electronic database should exist to co-ordinate, document and manage neonatal hearing screening programs in all States and Territories.

Summary:
Introduction of unified E-Health records for use by all health professionals would reduce much of the current fragmentation and lack of current integration that currently affects the health system.

Topic E: improvements in the provision of health services, including Indigenous health and rural health;

Use of Tele-Health

The majority of health services provided in Australia are delivered as face-to-face services in clinical environments. For Australians living in rural and remote areas, specialist medical practitioners visit infrequently resulting in long waiting times if people are to be seen in their local environment. Alternatively, patients travel long distances to be seen in a large metropolitan centre. Health outcomes of Australians who experience these barriers to accessing health care are reduced relative to their peers in metropolitan Australia.

The expanded use of tele-health services could reduce waiting times, travel costs and health outcomes for residents of rural and remote areas. There are two main impediments to the expanded provision of tele-health services. These are (i) the costs of installing reliable and consistent systems that can be used by multiple health professionals, and (ii) payment incentives that allow health practitioners including allied health professionals to receive reimbursement for services delivered via tele-health.

As discussed in the previous section, the creation of a single health record would improve service delivery to Australians living in rural and remote areas, particularly those where services may be delivered by practitioners based in another State or Territory.

Hearing Loss amongst Aboriginal and Torres Strait Islanders

Aboriginal and Torres Strait Islander children have high rates of chronic middle ear disease with concomitant hearing loss. The " Hear Us" inquiry found that there is no national data base recording the prevalence of this condition. After reviewing presented research and submissions, the committee concluded that prevalence ranged from 10% to 54% with rates in metropolitan areas being lower than in remote areas of Australia. The committee found that the cause of the high rate of middle ear disease was complex and "tied to environmental and social factors that may impact on the lives of Indigenous Australians" (section 8:15).

Ongoing hearing loss caused by middle ear disease, impacts on learning and school attendance. For many Aboriginal and Torres Strait Islander children, English is not their first language - hearing loss adds an additional complication to the already difficult task of learning a new language at school.

The House of Representatives Standing Committee Report "Doing Time - Time for Doing: Indigenous Youth in the Criminal Justice System" recognised the link between conductive

hearing loss caused by middle ear disease, educational failure and the over-representation of young Aboriginal and Torres Strait Islanders in the criminal justice system. Recommendations 11, 12 and 13 of the report specifically focussed on issues related to hearing.

Key issues that remain in the delivery of hearing care for Aboriginal and Torres Strait Islander children include:

- lack of universal screening of all children at school entry
- lack of facilities to assess the hearing of children aged less than 3 years in rural and remote locations
- low rates of identification, treatment and management of hearing loss in early years - Australian Hearing data shows that the rate of fitting hearing aids to school age Aboriginal children is approximately 3 times the rate of fitting hearing aids to non-Aboriginal Australian children but that the fitting rate for Aboriginal children under 4 years is approximately half that of non-Aboriginal children. This is despite the fact that it is clearly known that middle ear disease and concomitant hearing loss commences during the first years of life
- fragmentation of care and long waits for specialist treatment (medical and audiological)- this is discussed further in the following section.

Summary:

Expanded use of tele-health services is crucial to improve services to residents of rural and remote Australia.

Chronic high rates of middle ear disease and hearing loss in the Aboriginal and Torres Strait Islander community require ongoing funding at both State and Commonwealth levels. Initiatives that reduce fragmentation of care and reduce waiting times for treatment would improve management outcomes for Aboriginal and Torres Strait Islander children.

Topic F: the better integration and coordination of Medicare services, including access to general practice, specialist medical practitioners, pharmaceuticals, optometry, diagnostic, dental and allied health services;

The current health system places unnecessary barriers to the smooth transition of patients along their pathways of care. Common examples are:

1. an adult who has their hearing assessed by an audiologist working in a hospital and who is identified as requiring hearing aids will need to obtain a referral from a medical practitioner in order to access the Voucher service and will then require a second hearing assessment prior to being fitted with hearing aids.
2. An infant who is identified as having a sensorineural hearing loss cannot be fitted with hearing aids without clearance from an ENT specialist. Long waiting times for ENT services in public hospitals can delay the hearing aid fitting with potential adverse consequences for the infants speech and language development.
3. A patient identified by an audiologist as having a disorder that is most appropriately treated by surgery must return to their general practitioner just to obtain the required referral to an ENT surgeon.
4. An audiologist visiting a remote community and recognises that a child has otitis media with accompanying hearing loss and would benefit from use of hearing aids. The audiologist must request the local nurse to organise for the child to be seen by the next visiting medical officer so that the medical officer can make a referral to the ENT to obtain clearance to fit the hearing aids. It is not inconceivable that there will be a six to twelve month delay before the hearing aids are actually fitted.

An integrated system would allow patients to seek the services of an audiologist without requirement for a medical referral and would allow audiologists to refer directly to specialists such as Ear Nose and Throat surgeons when necessary. Agreement to an extended scope of care for audiologists who have completed extra training i.e., certificate of Advanced Primary Ear Health care, would allow them to undertake and procedures such as:

- wax removal,
- advanced otoscopy ,
- diagnosis of primary ear health conditions and
- limited prescribing rights to manage conditions such as otitis media, otitis externa, vestibular dysfunction, pressure sores from poorly inserted or poorly fitted hearing aids and any future effective tinnitus medications.

These changes would streamline patient care and reduce the cost and time imposts of unnecessary appointments with other medical practitioners. Audiologists' special knowledge of hearing and ear health, together with the additional skills gained via the advanced care training, would generate higher quality client outcomes than obtained under the current system. These changes would improve access to hearing health care for all Australians with especially positive effect for residents of rural and remote Australia. Trials of advanced care audiology practice are currently being implemented in some hospital outpatients' sections as a means of improving access and decreasing waiting times for ENT appointments.

Summary:

The introduction of a certificate in advanced care would allow Audiologists to undertake some activities that currently are undertaken by ENT Specialists. This would provide better integration and simpler, less expensive clinical pathways for patients.

Topic G: health workforce planning

Supply Demand Relationship

The profession of Audiology is relatively small and highly specialised. The entry-level requirement for the profession is a Master of Clinical Audiology and there are currently 5 accredited university programs in Australia producing a total of 140 graduates each year. As part of their requirements, students complete clinical placements in public, private and not-for-profit audiological settings that total 300-400 hours per graduate. As a result for the need for highly specialised one-on-one clinical training, Australia had seen chronic shortages of Audiologists (particularly in rural and remote areas) for nearly 2 decades. In efforts to overcome this, governments and other employers implemented short-term policies including overseas recruitment and more flexible working arrangements which would encourage audiologists on maternity leave to re-enter the profession. However, the majority of the workforce (over 90%) are Australian graduates, and the chronic shortages subsided over the last couple of years. The supply-demand relationship is finely balanced. Any significant decreases in funding of hearing health care would result in a reduction in workforce number requirements, and the longer term consequence of a reduction in students wishing to complete audiology studies, jeopardising the sustainability of courses, and again leading to a chronic shortage in audiologists.

Issues in Rural and Remote Australia

As with all other health professions, the shortage of audiologists is most acute in regional and remote areas of Australia. Organisations have acted innovatively to overcome these issues. The Northern Territory Hearing Service uses a system of contracting Audiologists from metropolitan areas to provide regular services in remote communities. Australian Hearing uses a similar model to provide services across northern Australia. In Western Australia, private charities have commissioned hearing buses that travel to remote locations to provide hearing assessments and to identify children who require specialist treatment. These initiatives have been successful and have ensured that services are provided on an ongoing basis.

Future health planning initiatives must consider the need of all Australians to access care from a range of health professionals. Initiatives that encourage allied health professionals to work in rural and remote areas would reduce inequities in the level of health care received by residents of rural and remote Australia.

Summary:

The workforce supply demand relationship is finely balanced and any significant decreases in hearing health care funding could jeopardise this relationship and potentially lead to a chronic shortage in audiologists.

Future health workforce planning must consider initiatives that encourage audiologists and other allied health professionals to work in rural and remote areas of Australia.

Topic H: any related matters.

Impact of Sale of Australian Hearing

Australian Hearing is currently the sole supplier of the CSO services. Clients included in this category are recognised as needing high levels of care and of being vulnerable in terms of access to services. This service is provided on a not-for-profit basis. Included in the CSO are all children aged under 26 years, Aboriginal and Torres Strait Islanders aged 50 years and over, adults with complex rehabilitation needs and eligible clients residing in remote localities.

Australian Hearing provides national coverage of services to all of the CSO client groups. It has been able to use its purchasing capacity to ensure that clients have access to high-level technology at prices that are affordable to Government. As a sole supplier, Australian Hearing has been able to deliver a consistent standard of care to all clients.

Provision of services to some of these client groups by Private Sector providers is limited. Audiology Australia is concerned that the sale of Australian Hearing has the potential to decrease accessibility of service to some CSO clients and would welcome the opportunity to be involved in discussions of potential proposals for future CSO service delivery.

References:

Listen Hear! The economic impact and cost of hearing loss in Australia, Access Economics, 2006,
Listen Hear Report

Hear Us: Inquiry into Hearing Health in Australia, Senate Community Affairs References Committee, May 2010,
Hear Us: Inquiry into Hearing Health in Australia

Demographic details of children aged less than 26 years with a hearing impairment, who have been fitted with a hearing aid or cochlear implant at 31 December 2012. Australian Hearing circular, 2013.

Doing Time – Time for Doing: Indigenous Youth in the Criminal Justice System. House of Representatives Standing Committee on Aboriginal and Torres Strait Islander Affairs, June 2011,
http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=atsia/sentencing/report.htm