Australian Government
Australian Institute of Health and Welfare

Ear and hearing health of Aboriginal and Torres Strait Islander people 2025

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About

Aboriginal and Torres Strait Islander culture has been passed down the generations for tens of thousands of years using language and storytelling. Having healthy ears and being able to hear well supports language development and transmission of culture through speech, as well as learning, employment and social and community connections. First Nations people have high rates of ear disease and hearing loss. Much of the ear disease and hearing loss affecting First Nations people, particularly children and young adults, is preventable.

Information about ear and hearing health among First Nations people and their access to ear and hearing health services helps develop health policy and plan health services.

This report is prepared with expert guidance from the Aboriginal and Torres Strait Islander Ear and Hearing Health Data and Reporting Advisory Group, chaired by Professor Kelvin Kong.

Data presented in the report are available in more detail in the data tables.

Cat. no: IHW 301

Key findings

- Around 13% (131,300) of First Nations people reported a long-term ear or hearing problem in 2022–23
- 97% (18,600) of First Nations babies had a newborn hearing screening test in 2023–24
- Since 2016–17, the ear/hearing hospital procedure gap for First Nations and non-Indigenous aged 0–2 narrowed
- In 2024, for First Nations people aged 0–25 fitted with a hearing device, the most common age group fitted was 0–4 (41%)

Summary

First Nations children have some of the highest rates of ear disease and related hearing loss in the world (WHO 2004). Middle ear infection, or otitis media, is a major cause of ear and hearing problems in First Nations children (Burns and Thomson 2013, Coates et al. 2002).

In young children, ear and hearing problems can lead to delays in speech and language development and hamper cognitive, behavioural and social development, which in turn can affect schooling and educational achievement (Menzies School of Health Research 2023, Su et al. 2020, Wong et al. 2018). Later in life, ear and hearing problems can be a barrier to employment opportunities and can lead to strained relationships and isolation from community and culture.

This report presents data for both First Nations and non-Indigenous Australians for a range of ear and hearing health measures across prevalence, screening and diagnosis, intervention and treatment, rehabilitation and workforce and outreach.

Prevalence

- An estimated 13% (131,300) of First Nations people reported a long-term ear or hearing problem in 2022–23. The proportion has remained similar over time, ranging from around 12% (in 2004–05 and 2011–13) to 15% (in 2001).
- Among First Nations children aged 0–14, the estimated proportion reporting an ear or hearing problem decreased from 11.2% in 2001 to 4.9% in 2022–23.
- Middle ear infection was reported as a long-term ear or hearing problem affecting 2.7% of First Nations children aged 0–14 (8,800 children) in 2022–23.
- From 2022 to 2024, 12.8% (1,066) of First Nations children 0-14 years eligible for the Queensland Government Deadly Ears Program attending an ENT clinic had an ear condition, whilst 16.3% (1,360) attending an audiology service had hearing loss.

Screening and diagnosis

- Newborn hearing screening coverage of First Nations babies, using combined data for six jurisdictions (New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory), was 96.9% (18,591) in 2023–24.
- One-quarter (259,941) of the First Nations people completed a health check which involves a hearing component in 2023–24.
- 8,306 First Nations people (8.1 per 1,000 population) received Medicare-subsidised audiology services in 2023–24. The rate was highest for children aged 0–14 (16.2 per 1,000 population) and lowest for those aged 15–49 (3.7 per 1,000 population).
- In 2023–24, among First Nations children under 6 who had a hearing test through the Hearing Assessment Program – Early Ears (HAPEE), 21.9% (996) had hearing loss. Of these, 19.3% (877) had mild loss, and 2.6% (119) had moderate, severe or profound hearing loss.

Intervention and treatment

- There were 23,812 emergency department visits (11.7 per 1,000 population) by First Nations people where the main diagnosis was a disease of the ear or mastoid process in 2022–24. Over half (12,251) of these were for children aged 0–14.
- In 2022–24, there were 8,424 hospitalisations (4.1 per 1,000 population) for First Nations people where the main diagnosis was a disease of the ear and mastoid process-67.1% (5,651) of these were for children aged 0–14.
- Ear or hearing related procedures were performed in-hospital for 10,609 First Nations patients (5.2 per 1,000 population) in 2022–24. The most common procedure was myringotomy (61.4% of the procedures).
- Over 2012–13 to 2023–24 median waiting times increased for Indigenous people across myringotomy surgery (54 to 84 days) and myringoplasty surgery (121 to 234 days).

Rehabilitation

- Among Hearing Australia clients with hearing devices, 7,947 were First Nations people (7.6 per 1,000 population) on 31 December 2024. Of these 73% (5,803) were aged 50 and over.
- First Nations Hearing Australia clients increased with remoteness, from 5.5 per 1,000 population in *Major cities*, to 8.7 per 1,000 in *Remote* and V*ery remote* areas.
- The peak ages of first hearing device fitting for First Nations Hearing Australia clients aged 0–25 in 2024 were from 2–6 years, with the proportion fitted at each of these ages ranging from 8% to 11%.
- In 2025 there were 2,239 First Nations NDIS participants with hearing impairment as a disability with 60.8% of these reporting a hearing impairment as their primary disability.

Workforce

- In 2023–24, 52.2% of First Nations-specific primary health-care organisations (120 organisations) employed or had a visiting audiologist or audiometrist. This was almost double the proportion in 2013–14 (27.6% or 56 organisations).
- The principal place of practice among ENTs in 2024 was *Major cities* 87% (500 FTE) and 79% (450 FTE) reported mainly working in a private practice.
- The Healthy Ears-Better Hearing, Better Listening program funded by the Australian Government to support professionals provide outreach services delivered 47,286 services from July 2023 to June 2024. Most of these (41,891 or 88.5%) were delivered to First Nations people.

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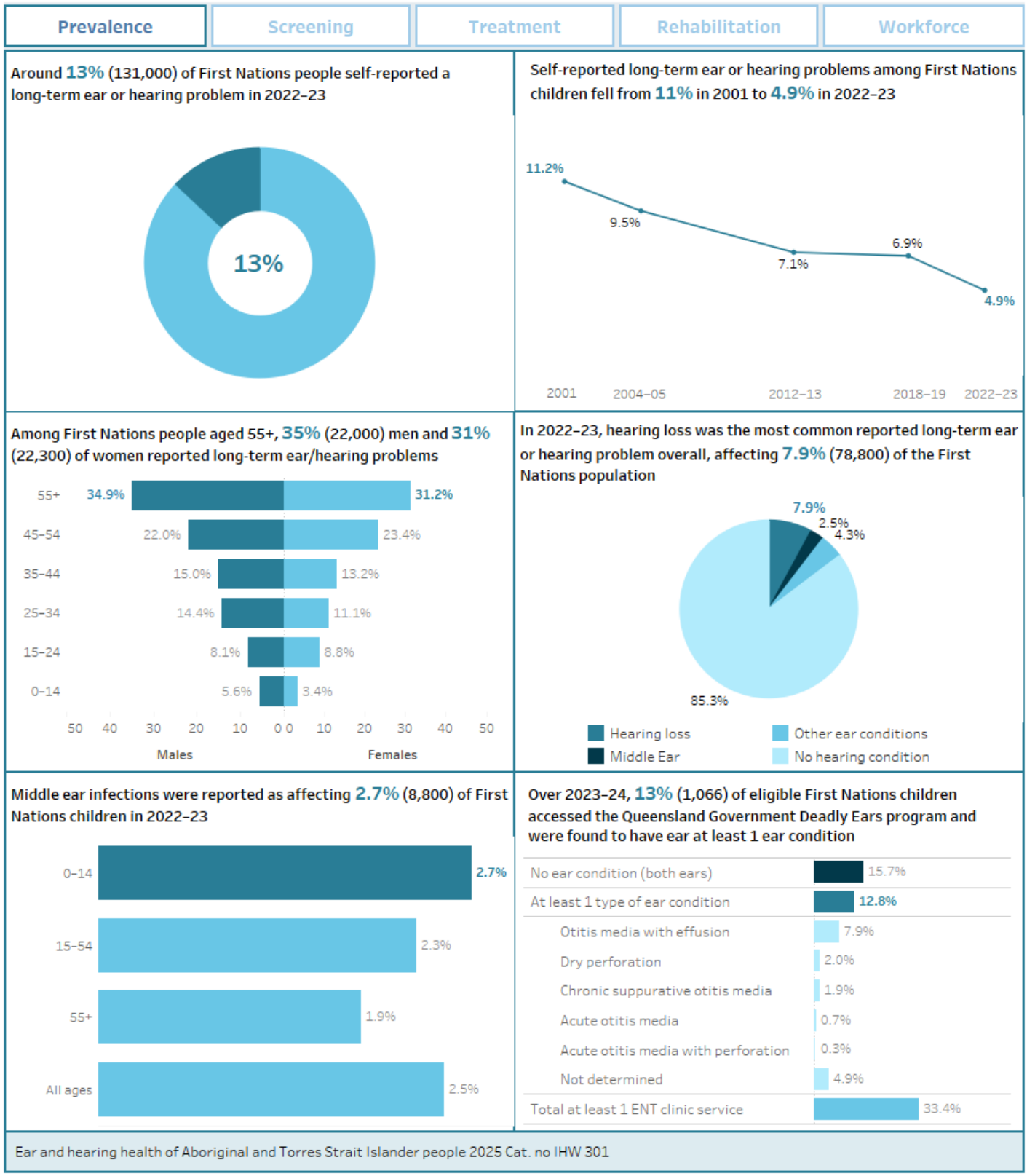
Key statistics

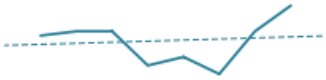
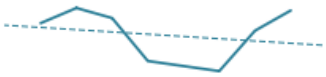
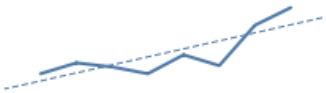
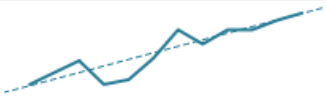
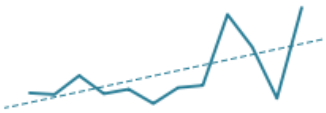
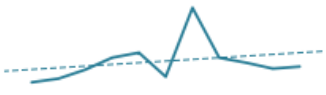
This data dashboard (Figure KEY STATISTICS) shows key statistics for each of the data chapters in this report (Prevalence, Screening and diagnosis, Intervention and treatment, Rehabilitation and Workforce).

Figure KEY STATISTICS: Key measures of ear and hearing health for First Nations people



Key trends

Figure KEY TRENDS: Changes in key measures of ear and hearing health for First Nations people

Measure	Baseline value	Latest value	Change over time	Progress
Reported long-term ear or hearing conditions among First Nations children aged 0–14, 2001 to 2022–23 (per cent)	**11.2%** in 2001	**4.9%** in 2022–23		
Audiology services received by First Nations children aged 0–14, 2014–15 to 2023–24 (per 1,000 population)	**18.6** in 2014–15	**16.2** in 2023–24		
Indigenous-specific health checks among First Nations people, 2016–17 to 2023–24 (per cent of population)	**23.1%** in 2016–17	**25.0%** in 2023–24		
Emergency department visits by First Nations people for ear or hearing related conditions, 2016–17 to 2023–24 (per 1,000 population)	**8.6** in 2016–17	**12.0** in 2023–24		--
Hospital admissions of First Nations people for ear or hearing related conditions, 2016–17 to 2023–24 (per 1,000 population)	**3.8** in 2016–17	**4.3** in 2023–24		--
Hospital procedures for ear or hearing related conditions among First Nations people, 2016–17 to 2023–24 (per 1,000 population)	**4.8** in 2016–17	**5.5** in 2023–24		--
Middle ear related hospital procedures among First Nations children aged 0–14, 2016–17 to 2023–24 (per 1,000 population)	**6.8** in 2016–17	**7.3** in 2023–24		--
Hospital–based adenoidectomies among First Nations children aged 0–14, 2016–17 to 2023–24 (per 1,000 population)	**8.9** in 2016–17	**13.8** in 2023–24		
Elective myringotomy surgery waiting time, First Nations people, 2012–13 to 2023–24 (median number of days)	**54 days** in 2012–13	**84 days** in 2023–24		
Elective myringoplasty surgery waiting time, First Nations people, 2012–13 to 2023–24 (median number of days)	**121 days** in 2012–13	**234 days** in 2023–24		
Audiology and audiometry services in Indigenous-specific health care organisations, 2013–14 to 2023–24 (per cent of organisations)	**27.6%** of organisations in 2013–14	**52.2%** of organisations in 2023–24		
Ear, nose and throat specialist services in Indigenous-specific health care organisations, 2013–14 to 2023–24 (per cent of organisations)	**12.3%** of organisations in 2013–14	**16.5%** of organisations in 2023–24		
Audiologists per 100,000, **general population**, 2016 and 2021 census results	**7.8** in 2016 census	**10.3** in 2021 census		

-- Measure/sub-measure progress cannot be determined. ·· No change

Introduction

This chapter provides context around ear and hearing health among First Nations people:

- Ear and hearing conditions: This section looks at the prevalence and impacts of ear and hearing conditions among First Nations people and some challenges identifying, and measuring, these conditions
- Protective and risk factors for ear disease and hearing loss: This section then identifies some protective and risk factors for ear disease and hearing loss
- Ear and hearing health system: This section describes the complex ear and hearing health system. It describes the broader policy context and broader policy initiatives and then maps out the complex ear health system in Australia made up of a range of policies, programs, service providers, services and settings
- Data gaps and data development: This section describes where there is a need for more data or information, as well as ongoing data developments

Ear and hearing conditions

In this section

Middle ear infection is a common and preventable childhood disease and is the main cause of ear and hearing problems in First Nations children. Middle ear infection tends to occur at a younger age and to be more severe and persistent among First Nations children than among non-Indigenous children. Chronic middle ear infections can lead to long-term hearing loss. Yet middle ear infections can be difficult for parents and carers to recognise and difficult for health professionals to diagnose, especially in very young children (Blomgren and Pitkäranta 2005, Mount Sinai 2024).

Among First Nations adults, hearing loss is the main ear and hearing related condition. Hearing loss can also be difficult to recognise, especially when it is mild. People may be reluctant to acknowledge that they have hearing loss.

National health surveys of the First Nations population have largely relied on survey participants reporting these conditions or reporting them on behalf of young children. Reported measures like these are limited due to the nature of the hearing conditions. Comparison of reported hearing loss and measured hearing loss (based on a voluntary hearing test) has shown that hearing loss is substantially under-reported. These national surveys are conducted at long intervals (about 4 to 6-yearly). A hearing test included for the first time in the 2018–19 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) was not repeated in the 2022–23 survey.

It can be difficult to determine whether changes in rates of emergency department visits and hospital admissions represent a situation that is improving or getting worse. Increasing rates of hospitalisations may indicate either an increasing need for hospital services, or greater access to hospital services, or a combination of both. For this reason, in Figure 1, progress for these measures is shown as ‘not assessed’. Within the context of the COVID-19 pandemic, it is even more difficult to assess trends. During the COVID-19 pandemic, Australian governments placed restrictions on people’s movements and activities to prevent the disease from spreading. The impact of these restrictions – which also reduced rates of other diseases due to social isolation – shows up in various measures over time, such as the uptake of health checks, hospitalisation rates (although emergency department visits were less affected), use of audiology services, rates of elective hospital procedures and waiting times.

Prevalence and impacts

The Aboriginal and Torres Strait Islander (First Nations) population has elevated rates of ear and hearing problems. In 2018–19, more than 2 in 5 First Nations people aged 7 and over were assessed as having some degree of hearing loss.

Many people spend years living with hearing loss and other ear or hearing related conditions. In 2018, the burden of living with ear or hearing related conditions for First Nations people was 3.6 times that of non-Indigenous Australians. This is based on a measure of years lived with disability per 1,000 population, adjusted to account for differences in the age profile of the two populations (AIHW 2022).

First Nations children have some of the highest rates of ear disease and related hearing loss in the world (WHO 2004). Middle ear infection, or otitis media, is a major cause of ear and hearing problems in First Nations children (Burns and Thomson 2013, Coates et al. 2002). Apart from hearing loss caused by genetic conditions and ageing, much of the hearing loss experienced by First Nations people is preventable or amenable to treatment. Worldwide, an estimated 60% of childhood hearing loss is due to preventable causes (WHO 2024).

In young children, ear and hearing problems can lead to delays in speech and language development and hamper cognitive, behavioural and social development, which in turn can affect schooling and educational achievement (Menzies School of Health Research 2023, Su et al. 2020, Wong et al. 2018).

Later in life, ear and hearing problems can be a barrier to employment opportunities and can lead to strained relationships and isolation from community and culture. Ear and hearing problems have also been associated with increased contact with the justice system and have been associated with cognitive decline in older adults (He et al. 2019).

The ear and hearing health of First Nations people has steadily improved over the last 10 years due to new initiatives by government, Aboriginal Medical Services, non-government organisations, and specialist medical and paramedical groups, and researchers (Coates and Kong 2020).

Middle ear infection (otitis media)

Middle ear infection (otitis media) is a common disease in young children. Middle ear infections are preventable and treatable, but persistent middle ear infections that are not treated can cause lifelong hearing loss.

First Nations children, especially those living in remote areas, have high rates of severe, recurring and persistent middle ear infections and related hearing loss. Middle ear infections occur more often and start at a younger age in First Nations people compared to other Australians (Edwards & Moffat 2014; Gunasekera H. et al. 2009; Jervis-Bardy, Sanchez and Carney 2014; Kong & Coates 2009; Morris et al. 2005).

Different forms of otitis media

Otitis media refers to the inflammation and infection of the middle ear. The main forms of this disease are:

- acute otitis media or 'bulging eardrum' – fluid behind the eardrum plus at least one of:
  - bulging or red eardrum
  - recent discharge of pus
  - fever
  - ear pain or irritability
- otitis media with effusion or 'glue ear' – fluid behind the eardrum without acute symptoms other than *conductive hearing loss*
- chronic suppurative otitis media with discharge (CSOM) or 'runny ears' – persistent ear discharge through a hole in the eardrum lasting for more than 2 weeks
- dry perforation or inactive CSOM – a hole in the eardrum without evidence of discharge or fluid behind the ear (Leach et al. 2021).

Hearing loss

The ear condition that most commonly affects First Nations adults is hearing loss.

There are three types of hearing loss. The impact of hearing loss varies, depending on how severe the hearing loss is, whether it affects one or both ears, the type of hearing loss, whether the hearing loss is temporary or permanent, the person's age when they first experienced hearing loss, and their access to services.

Conductive hearing loss is hearing loss that occurs when sounds cannot get through the outer and middle ear. Causes can include middle ear infection (otitis media), fluid in the middle ear, a build-up of wax in the outer ear or a hole in the eardrum. Conductive hearing loss may be temporary or permanent and often gets better without treatment but can usually be treated using medications, non-surgical procedures like ear cleaning, or surgical procedures such as an incision in the eardrum to drain fluid (myringotomy). Hearing aids can help those with conductive hearing loss.

Sensorineural hearing loss is permanent hearing loss that occurs due to damage to the inner ear, or when the hearing pathways to the brain do not function properly. In children, causes of sensorineural hearing loss include genetic factors, structural changes of the inner ear or nerves and infections during pregnancy. In older people, causes include ageing, exposure to loud noise, certain medicines, and exposure to certain chemicals.

Older adults are more likely to have sensorineural hearing loss. While it cannot be treated medically or surgically, hearing aids and cochlear implants can help those with sensorineural hearing loss.

Mixed hearing loss has elements of both conductive and sensorineural hearing loss.

Challenges with identifying ear and hearing conditions

Identifying and managing middle ear infection (otitis media) depends on children being referred to the services they need, at the right time and in the right place.

In young children, signs of otitis media may include the child pulling at their ears, fever, a complaint of ear pain, fluid draining from the ear or ears, dizziness or clumsiness, congestion related to a cold or a child being unusually grizzly and grumpy. In older children, signs of otitis media may include decreased alertness, asking people to repeat things, asking to turn sounds up, boredom, watching others for cues, poor concentration and behavioural problems (Schilder, Chonmaitree et al. 2016).

Middle ear infection can be difficult for parents and carers to recognise and for health professionals to diagnose. Children – especially very young children – can have otitis media with no symptoms or obvious signs. If there are symptoms, they are often similar to those of the common cold. Children may be uncooperative when having an ear examination, making diagnosis more difficult (Blomgren and Pitkäranta 2005; NACCHO and RACGP 2018).

This is why regular hearing checks starting at a young age, along with 'opportunistic' hearing checks – conducted when children visit a health service for any reason – are considered crucial to detecting and treating middle ear infection and preventing long-term hearing loss (Abbott, Frede et al. 2023, AIHW 2021). Effective health promotion and communication between carers and clinics have been identified as important for the timely detection of *otitis media* (Lau, Walker et al. 2024).

Among adults, hearing loss is often under-reported, especially when it is less severe. Under-reporting may be due to people not being aware that they have hearing loss or choosing not to report it (ABS 2020).

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Protective and risk factors for ear disease and hearing loss

In this section

The factors contributing to ear disease and hearing loss among First Nations people are broad and complex and reflect a combination of historical, social, cultural and economic factors, including interpersonal and institutional racism (Burns and Thomson 2013; DeLacy et al. 2020; Jervis-Bardy et al. 2014; Leach et al. 2020; Leach et al. 2021; NACCHO and RACGP 2018).

Enhanced health services, and continued improvement in, and access to, comprehensive, culturally appropriate and safe health services are needed to support improvements in health outcomes among First Nations people (AIHW & NIAA 2024).

Cultural and social determinants of health

Health is influenced by cultural determinants and social determinants – the circumstances in which people grow, live, work and age (WHO 2008). A range of information about cultural and social determinants and First Nations people's health is available from the Aboriginal and Torres Strait Islander Health Performance Framework.

For First Nations people, self-determination and empowerment, cultural identity, family and kinship, Country and caring for Country, knowledge and beliefs, language and participation in cultural activities and access to traditional lands are key determinants of health and wellbeing.

The higher prevalence of otitis media among First Nations children compared with non-Indigenous children has been associated with social determinants, in particular overcrowded housing, as well as low socioeconomic status, low income and poverty, access to services, hygiene and levels of education. That review argued that interventions need to shift from biomedical treatment-focused options to a more preventative model (DeLacy et al. 2020).

Public awareness

Raising awareness about ear and hearing health and associated risk factors helps to prevent ear disease and hearing loss and improve access to treatment.

Public awareness campaigns can help people recognise early signs and symptoms, modify risks, access health care and services, and understand the importance of following treatment procedures. Such campaigns can also support the inclusion of people with hearing loss in the community and reduce the stigma of hearing aids and other hearing devices. They can also support health care providers, teachers and other professionals to build skills to identify ear and hearing problems, navigate complex referral pathways to specialist services, and provide support to families (Box INTRODUCTION 1).

Box INTRODUCTION 1: Raising awareness among new parents

Apunipima Cape York Health Council (Apunipima) is an Aboriginal Community Controlled Health Organisation, providing primary health care to 11 Cape York Communities. Apunipima developed the Baby One Program to support families, women and their children during and after pregnancy up to 1,000 days of life. The program:

'provides health education to pregnant women and young families, including the signs and symptoms of otitis media and hearing loss, and the importance of speech and language development for young children. Some of Apunipima's communities have had access to self-developed health education programs for young school aged children, including the importance of good hearing, good hygiene, how to care for ears, and how to seek help when ears are painful or blocked'.

(AIHW 2022)

Causes of ear and hearing health problems over the life span

There are many different causes of ear and hearing problems. Some of these causes occur more often at certain stages of life, while others can occur at any age.

Hearing loss may result from ageing and genetic causes, complications at birth, low birthweight, certain infectious diseases, chronic ear infections, use of certain medicines, injuries and accidents, smoke exposure and noise.

Causes of hearing loss over the life span

Prenatal

- Genetic factors*
- Intrauterine infections (for example, rubella and cytomegalovirus)

Perinatal

- Early onset otitis media
- Birth complications

- Birth asphyxia
- Neonatal jaundice
- Low-birth weight

Childhood and adolescence

- Chronic otitis media
- Meningitis and other
- Infections

Adulthood and older age

- Chronic diseases
- Smoking
- Otosclerosis*
- Age-related*
- Sudden hearing loss*

Any age

- Trauma to the ear or head
- Loud noise
- Ototoxic medicines
- Ototoxic chemicals
- Nutritional deficiencies
- Viral infections and other ear conditions
- Recurrent ear disease
- Impacted ear wax
- Delayed onset
- Progressive genetic hearing loss*

* These are causes that are not considered preventable.

Sources: Smith 2019; WHO 2016, 2021

Pregnancy, birth and childhood

Genetic factors are the main cause of hearing loss that is present at birth. A family history of hearing loss, particular genes and some syndromes can also increase the risk of progressive genetic hearing loss at any age. These are not preventable (Shearer 2017, Smith 2019, WHO 2016, WHO 2021). However, regular and timely screening of those at-risk can help improve outcomes if hearing loss occurs.

High-quality care during pregnancy decreases the risk of birth complications, low birthweight, premature birth and infections during pregnancy that can cause hearing loss that is present from birth.

Vaccination during pregnancy and childhood protects against conditions including rubella, measles, *Haemophilus influenzae* type b (Hib), pneumococcus, meningococcus and influenza that can cause hearing loss.

Middle ear infection (otitis media) is a common childhood disease and is the main cause of ear and hearing problems in First Nations children.

Evidence based preventive strategies for *otitis media* include:

- breastfeeding babies for at least the first 6 months
- avoiding smoke exposure
- frequent handwashing for children attending day care centres
- keeping children away from sick children and those with a runny nose, especially at day care centres.
- Following childbirth, breastfeeding, a smoke-free environment, good hygiene and adequate housing are protective factors for ear and hearing health (Leach et.al. 2020).

Overcrowded or inadequate housing increases the risk of the spread of otitis media and respiratory infections such as pneumococcal disease that can lead to hearing loss (Jacoby et al. 2011). A study conducted in Northern Territory remote communities found that having a greater number of children aged under 5 in a household increased the risk of the youngest child contracting otitis media (Leach et al. 2014).

Adults and all ages

Hearing loss is the most common ear and hearing problem among First Nations adults. As well as experiencing the ongoing effects of any ear or hearing problems from childhood, adults may be exposed to other risk factors during their lives.

The ageing process itself is a common cause of hearing loss that emerges later in life. Age-related sensorineural hearing loss is one of the main causes of hearing loss and is not preventable (Senate Community Affairs References Committee Hear Us report 2010). Timely diagnosis can help reduce the impact of age-related hearing loss.

Other common causes of hearing loss that emerges later in life include noise exposure, infectious and chronic diseases, use of certain medicines, and injuries and accidents.

Repeated exposure to loud noise is one of the most common preventable causes of hearing loss. Workplace noise and recreational noise are the most common sources of damaging noise exposure.

Early identification and management of malnutrition and chronic health conditions such as heart disease and diabetes can reduce the risk of developing ear and hearing problems (Bainbridge et al. 2008; Helzner & Contrera 2015; Lin et al. 2012).

Reducing smoking rates and exposure to tobacco smoke can reduce the risk of adults developing sensorineural hearing loss (Leach et al. 2021; NACCHO & RACGP 2018; Jones et al. 2012; Dawes et al. 2014; Lalwani et al. 2011).

Certain medications and chemicals, called ototoxic, can cause damage to the inner ear, which can lead to temporary or permanent hearing loss. The use of ototoxic medications in pregnant women can affect their hearing health and that of their newborns (Duthey 2013).

Traumas and injuries to the ear or head may result in temporary or permanent hearing loss.

Access to health care services

Access to culturally safe ear and hearing health services is crucial for achieving better ear and hearing health outcomes for First Nations people.

Systemic barriers to First Nations people accessing ear and hearing health services can add to the difficulty of navigating a pathway through an already complex health system. An indirect measure of the responsiveness of health services to patients needs is the rate of self- discharge from hospitals (Box INTRODUCTION 2).

Box INTRODUCTION 2: Self-discharge from hospital

An indirect measure of the responsiveness of health services to patient needs is the rates of self-discharge from hospitals.

The reasons that patients self-discharge may include dissatisfaction with care, poor communication, long waiting times, and feeling better, as well as family and employment responsibilities.

These factors, together with a lack of cultural safety, and interpersonal and institutional racism, contribute to the disproportionately higher (around five times higher) rates of First Nations people self-discharging from hospital.

Access may be affected by the availability and accessibility of culturally safe health care services (Box INTRODUCTION 3), a lack of continuity of care, or racism and unconscious bias from health-care providers (AIHW 2021a; Burns and Thomson 2013; Gotis-Graham et al. 2020, Lau et al 2024).

A study that explored the impacts of implicit bias on the experience and care provided to First Nations patients within emergency departments found that:

> … implicit racial bias which can result in stereotyping of racial minorities and premature diagnostic closure. Furthermore, it may contribute to distrust of medical professionals resulting in higher rates of leave events and hinder [First Nations people] from seeking care or following treatment recommendations. (Quigley et al. 2021).

Other barriers include:

- a complex referral pathway for specialist services and long waiting times for specialist consults, relevant procedures, follow-up and rehabilitation services
- availability of health professionals with the training and equipment required to conduct tests for hearing and eardrum mobility
- considerable variability in access to services across Australia, given the wide geographic spread and isolation of some First Nations communities, while audiologists and ENT specialists are mostly located in metropolitan areas
- some remote areas having strong outreach programs providing communities with timely access to services, with other areas having very limited and infrequent access to services
- high mobility of First Nations families living in rural and remote areas, which may mean they are not present during outreach service visits
- access to transport services
- affordability of health-care services plus the indirect costs of transportation, time taken for travel and having to take time off work.

Box INTRODUCTION 3: Cultural safety

Improving cultural safety for Indigenous Australians can improve access to, and the quality of health care. Cultural safety is an essential component of access to and the quality of health care. This means a health system that respects Indigenous cultural values, strengths and differences, and also addresses racism and inequity (AIHW 2021a).

The Aboriginal Community Controlled Health Organisations (ACCHO) sector noted the importance of culturally respectful and safe health-care services.

- 'Having a trained Aboriginal or Torres Strait Islander Ear Health worker is absolutely essential for a successful program. The young kids we visit at school (or those that attend the clinic) feel culturally safe and related and we become a familiar face as we see them throughout their starting years at school.'
- 'Visits are significantly more successful when community can assist with a nurse or driver to help locate community members and help with language barriers and clients feel more culturally safe if a community member can attend with them.'
- 'Referring clients to another service is not always an appropriate method of service delivery with reports of clients not showing up to the appointment due to feeling culturally unsafe.' (see Appendix B, AIHW 2022)

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Ear and hearing health system

On this page:

A broad range of policies and programs provides ear and hearing services for First Nations people, with the provision of these services being complex and fragmented. This section describes the broad policy context. It also provides an overview of ear and hearing health services across the continuum of care from awareness, prevention, screening, diagnosis, treatment and rehabilitation.

Broad policy context

The following initiatives form part of the broader policy context for ear and hearing health among First Nations people:

- the National Agreement on Closing the Gap was developed in partnership between Australian governments and the Coalition of Aboriginal and Torres Strait Islander Peak Organisations. It has been built around four Priority Reforms which will change the way governments work with First Nations people and communities and includes 17 outcome areas over the life course. One outcome area, closely related to ear and hearing health, is to ensure that 'Children thrive in their early years'
- the Roadmap for Hearing Health – which identifies priority areas and actions to improve hearing health and its impacts for First Nations people
- the Aboriginal and Torres Strait Islander Ear and Hearing Health Partnership Committee (a partnership between the Australian Government, states and territories and First Nations representatives in the hearing health sector) – which aims to transition ear health promotion, community engagement functions and training and workforce development coordination to community-controlled organisations. The committee has provided input to the Aboriginal and Torres Strait Islander Ear and Hearing Health National Strategy, led by the National Aboriginal Community Controlled Health Organisation (NACCHO).

Policies and programs

A broad range of policies and programs provides ear and hearing services for First Nations people, with the provision of these services being complex and fragmented. A preliminary mapping of the policy and program landscape is provided below and in Table 3. This policy and program landscape includes programs and services for all Australians, not just those specifically for First Nations people. The Australian Institute of Health and Welfare (AIHW) will continue to work with the Ear and Hearing Advisory Group to develop a more comprehensive mapping of ear and hearing health policies and programs for First Nations people in Australia.

First Nations ear or hearing related services, policies and programs in Australia

Policies and guidance

- Health Ministers Form
- National Cabinet
- Roadmap for Hearing Health
- Department of Health Disability and Ageing
- House of Representatives Inquiry
- Aboriginal and Torres Strait Islander Ear and Hearing Health Partnership Committee

Interagency approaches

Department of Education

- Connected Beginnings Program
- Classroom sound amplification

National Indigenous Australians Agency

- Indigenous advancement strategy

Other Australian government initiatives

- Pharmaceutical Benefits Scheme (PBS)
- Medicare
- Hearing Services Program
- National Disability Insurance Scheme (NDIS)

Indigenous Australian health program funded activities

- Tackling Indigenous Smoking
- Connected Beginnings (joint with the Department of Education)
- Reported on Australian Government funded ear health programs (Siggins Miller 2018)
- Otitis Media guidelines

- Care for Kid's Ears
- Ear health coordinators
- Parents Evaluated Listening and Understand Measure, and Hear and Talk Scale (PLUM and HATS)
- Workforce training (EarTrain)
- Hearing Assessment Program – Early Ears (HAPEE)
- Healthy Ears, Better Listening
- Surgical Support
- Aboriginal Community Controlled Health Organisation (ACCHO) sector primary health care*
- Northern Territory Remote Aboriginal Investment
- New Directions Mothers and Babies Services
- Australian Nurse and Family Partnership Program

*As well as the Indigenous Australian Health Program, ACCHOs may access other funding sources to support service delivery.

Hospital sector

- Surgeries
- Newborn Hearing Screening Program
- Emergency department and hospital care
- Specialist outpatients

State/territory funded activities

Travel Subsidy Scheme

New South Wales

- Aboriginal Maternal and Infant Health Strategy
- Hearing and ear health language and speech services

Queensland

- Deadly Ears
- Deadly Kindies

South Australia

- Free hearing assessments through the Women and Children's Health Network

Northern Territory

- Hearing Health Program
- Healthy Under 5 Kids program
- Hearing for Learning

Western Australia

- Child and Adolescent Community Health – Aboriginal Health Team
- Earbus foundation*

Tasmania

- Healthy kids check

* The Earbus Foundation is a non-profit sector organisation which accesses government and other funding sources to support service delivery.

Research projects

- The Hearing Ear Health Language and Speech services initiative (HEALS) (NSW)
- Pathways For Aboriginal and Torres Strait Islander Hearing Health: The PATHWAY Project (SA)
- HearOut: Hearing health Outcomes for First Nations Children

Non-profit sector

- Earbus Foundation* (Western Australia)
- First Voice
- NextSense Institute
- Hear and Say (Queensland)
- Can:Do 4 Kids (South Australia)
- Hear Our Hearts Ear Bus Project (Dubbo, New South Wales)
- The Shepherd Centre (New South Wales & Australian Capital Territory)
- Telethon Speech & Hearing (Western Australia)
- Broad NDIS disability support service providers

* The Earbus Foundation is a non-profit sector organisation which accesses government and other funding sources to support service delivery.

Note: These are a selection of current First Nations ear or hearing related services, policies and programs in Australia; it is not a comprehensive overview of all services, policies, programs and organisations providing services.

National, state and territory governments share funding, operational and management responsibilities. Service provision – through private hospitals, medical practices, audiology services and rehabilitation services – is also spread across the private, for profit, and non-profit sectors. As a result:

- the system (like the whole health system) is complex for consumers to access and navigate
- providers face challenges in resourcing, delivering and reporting on services
- it is difficult to maintain ongoing data collections and monitor change over time
- better data are needed to evaluate programs and inform decisions.

The Universal Neonatal Hearing Screening Program provides a model for integrated ear and hearing services as different service components are interconnected from the outset.

While not comprehensive, Table INTRODUCTION 2 highlights some of the ear and hearing health programs that exist around the country as well as their key sources of funding. This table does not include the many unnamed programs that provide important services to communities.

Table INTRODUCTION 2: First Nations ear or hearing related services, policies and programs in Australia

Location: All | Funding: All

	Eligibility			Program activities						
Program	Funding	Location	Target population	Awareness	Screening	Primary care	Audiology/ENT	Surgical	Rehabilitation	Workforve dev.
Care for Kids' Ears	AG	Australia	Carers/ teachers	✓						
Clinical Care of Otitis Media Guid..	AG	Australia	..							✓
Deadly Ears Program	Mixed	Qld	<18 yrs	✓	✓		✓	✓	✓	✓
Djaalinj Waakinj Centre for Ear a..	Mixed	WA metro	<18	✓	✓	✓	✓			✓
Ear and hearing assessment equi..	AG	Australia	n.a.		✓	✓				✓
Ear Health Coordinators Program	AG	Australia	n.a.							✓
Ear surgical support	AG	Australia	All					✓	✓	
EarBus	Mixed	WA	0–21 yrs		✓	✓	✓			
EarTrain	AG	Australia	PHC							✓
Healthy Ears, Better Hearing, Be..	AG	Australia	<21 yrs			✓	✓			
Healthy Kids Check	Tas	Tas	4 yrs		✓					
Hear to Learn – School Hearing Pr..	Private	Qld	..		✓					
Hearing Assessment Program – E..	AG	Australia	<6yrs	✓			✓			✓
Hearing for Learning (Menzies)	Mixed	Remote NT	<16 yrs		✓					✓
Hearing health outreach services..	AG and NT gov	NT	<21 yrs	✓		✓	✓			✓
Hearing Services Program (HSP)	AG	Australia	<26; 26–49*; 50+ yrs				✓		✓	✓
Improving Access and Pathways ..	AG	Australia	<14							✓
Kindergarten Hearing Screening ..	SA	SA	3–4 yrs		✓					
Listen and Learning in Aboriginal ..	AG	Developed in ..	<10 yrs						✓	
Listen to Learn	AG	National	PHC/ECE/ school staff		✓					✓
Maternal and Child Health Servic..	S/T	Australia	..	✓						
National Disability Insurance Sch..	AG	Australia	<65 yrs						✓	
National guide to a preventive he..	..	..	..							✓
NDIS service providers	Various	Various	All						✓	
New Directions Mothers and Bab..	AG	Australia	..	✓						
Newborn Hearing Screening	S/T	Australia	Newborns		✓					
NSW Aboriginal Ear Health Progr..	NSW	NSW	<6 yrs	✓						
PLUM and HATS (Parents Evaluat..	AG	Australia	PHC/ECE/ parents of ch..	✓	✓					
Sound Scouts	AG	Australia	4+ yrs		✓					
WA Country Health Service (WAC..	Mixed	Kimberley reg..	All	✓	✓		✓	✓	✓	✓
Winnunga Nimmityjah Aborigina..	..	ACT	..		✓					

*If met additional eligibility criteria.

Notes:

1. AG = Australian Government; ECE = early childhood educators; S/T = state/territory; PHC=Primary health care nurse.
2. PLUM and HATS are not programs but tools that workers can use.
3. ASOHNS = Australian Society of Otolaryngology Head and Neck Surgery

Service providers, services and settings

The diversity of ear and hearing health services, providers and settings and the connections between them illustrate the complexity of the ear and hearing health system. These are summarised in Table INTRODUCTION 3.

Providers

Ear and hearing health-care services are provided by various health-care professionals. These include Aboriginal Health Workers, general practitioners (GPs) and nurses (including audiometry nurses and maternal and child health nurses). Health services are also provided by First Nations health practitioners, community hearing health workers, ear health workers and coordinators, audiologists, audiometrists, clinical nurse specialists, ENT

specialists, child ear and hearing health coordinators, occupational therapists, speech pathologists, paediatricians, other health practitioners, allied health workers and nurses. At any point along the continuum of care, a number of providers may need to work together as a team to support ear and hearing health outcomes. More complex health issues and related impacts – such as speech, language and behavioural development – are likely to require a larger and more diverse team of health professionals.

Ear health workers and coordinators work with communities and health-care providers to build skills and knowledge that help prevent and treat ear disease and hearing loss and identify pathways to ear and hearing health services. Other professionals, including support workers, interpreters and teachers, provide vital diagnosis, treatment and rehabilitation support for people with an ear disease or hearing loss.

Families, workplaces, and professionals not traditionally considered part of the health-care system – such as teachers, early childhood education and care professionals, teachers of the deaf, and support workers – also help to prevent, identify and manage ear and hearing problems, and to provide support and rehabilitation services.

Services

There are many challenges in identifying ear and hearing problems using screening and diagnostic tests, and a number of services may be involved in this process. Continuity of care is a particular challenge in identifying and managing ear and hearing health problems as conditions such as chronic and recurring middle ear infections require multiple screenings at the right times by the same provider or by a team of providers.

Once diagnosed, ear disease and conductive hearing loss can be managed or treated in various ways. 'Watchful waiting', which means monitoring a child's hearing and ear examinations over time, is often used in preference to medical or surgical interventions when the hearing loss is minimal and there is access to a clinic to enable regular reviews. This model works well in the team environment where the behavioural, speech and language implications of hearing loss can be monitored in addition to the condition of the ear. Ear disease and conductive hearing loss can also be treated with medical and surgical interventions. Chronic or recurrent ear infections can be treated with antibiotics. Other procedures include cleaning ears and removing wax, incising the eardrum to remove fluid, inserting grommets (drainage tubes), and repairing perforations to the eardrum. Sensorineural hearing loss and other hearing problems such as tinnitus cannot usually be treated or reversed.

The impact of both temporary and permanent ear and hearing problems can be mitigated through rehabilitation. Rehabilitation reduces the impact of ear disease and hearing loss and helps to ensure ongoing access to communication through interventions such as:

- hearing aids or cochlear implants
- speech and/or occupational therapy
- counselling
- teaching and/or school assistance.

For example, the impacts of conductive or temporary hearing loss on speech and language development can be mitigated with the use of hearing aids and other rehabilitation services.

Settings

Most people enter the ear and hearing health system through primary health-care services delivered in settings such as Aboriginal Community Controlled Health Services, general practices, community health centres and allied health practices. Alternatively, people may attend screening programs, visit hospital emergency departments or present at an audiology clinic or hearing aid provider.

Accessibility and availability of culturally safe ear and hearing health specialist services are key to First Nations people receiving timely diagnosis and treatment.

Table INTRODUCTION 3: Overview of ear and hearing health services

	Services	Providers	Settings	Access
Prevention	• Education • Awareness raising	• Families and carers • First Nations Health Workers • Early childhood educators • Employers	• Households • Communities and community events • Aboriginal Community Controlled Health Services • Other Indigenous-specific primary health-care services • Community clinics and health centres • Schools and early childhood education and care services • Workplaces	No referral required

Screening	Ear examinations Audiometric assessments (which may require complementary assessments, including hearing, tympanometry and/or pneumatic otoscopy)	• First Nations Health Workers • General Practitioners (GP) • Nurses • Audiologists • Audiometrists • Audiometry Nurses • Ear Health Coordinators • Paediatricians	• Aboriginal Community Controlled Health Services • Other Indigenous-specific primary health-care services • Community clinics and health centres • Private practices and clinics • Hospitals • Schools and early childhood education and care services	No referral required
Diagnosis	• History taking • Ear examinations • Audiometric assessments (which may require complementary assessments, including hearing, tympanometry and/or pneumatic otoscopy) • Balance assessments • Other scans, biopsies, cultures or tests	• First Nations Health Workers • GPs • Nurses • Audiologists • Audiometrists • Audiometry Nurses • Ear Health Coordinators • Paediatricians	• Aboriginal Community Controlled Health Services • Other Indigenous-specific primary health-care services • Community clinics and health centres • Private practices and clinics • Hospitals • Outreach services	Referral required for some subsidised audiology and ENT services
	• 'Watchful waiting' – timely monitoring and review • Antibiotics and other medical treatments • Ear surgery (for example, myringotomy and myringoplasty) • Wax removal and ear cleaning	• GPs • Nurses • Audiologists • ENT specialists • Paediatricians	• Aboriginal Community Controlled Health Services • Other Indigenous-specific primary health-care services • Community clinics and health centres • Private practices and clinics • Hospitals • Outreach services	• Antibiotics can be provided by any medical practitioner • Surgery requires referral to ENT specialists and access to a hospital with trained surgical staff
Rehabilitation	• Hearing aids, cochlear implants • Assistive listening devices • Communication training • Vestibular (balance) rehabilitation • Counselling • Education and support services • Early childhood development/ intervention services • Speech therapy • Occupational therapy	• Audiologists • Audiometrists • ENT specialists • GPs • Teachers of the deaf • Teachers and other educators • Support workers • Speech pathologists • Occupational therapists • Paediatricians	• Aboriginal Community Controlled Health Services • Other Indigenous-specific primary health-care services • Community clinics and health centres • Private practices and clinics • Hospital outpatient clinics • Outreach services in various settings	Referral required to access subsidised supports

Navigating ear and hearing health services

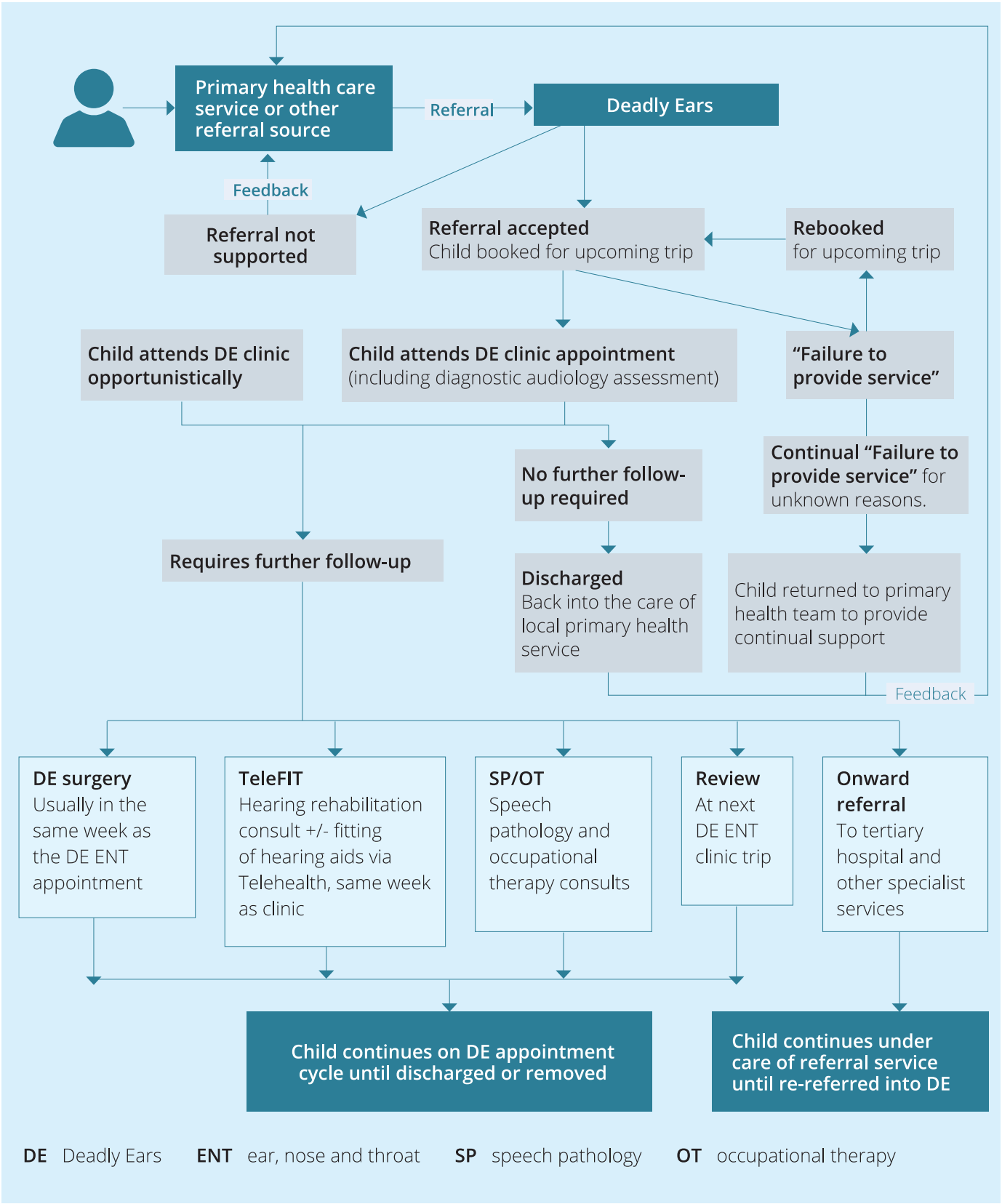
The ear and hearing health service system is extremely complex and navigating it can be challenging for patients and their families. The patient journey through the health system may require accessing numerous services from initial and follow-up screenings, diagnosis, medical interventions, through to rehabilitation services. Rehabilitation services include fitting of hearing aids or other hearing devices, early intervention services for children, speech pathology and occupational therapy. Educational, workplace and community supports may also be needed for patients to better communicate and to participate effectively at school, at work and in their community.

Multiple services and sectors are not typically joined up, and there are different challenges involved in accessing each of these services. This means it is difficult to navigate pathways through these services. This imposes a substantial burden on patients and their families, who need to advocate strongly to ensure the patient gets access to the right services at the right time.

There are critical points in the patient journey where delays in receiving care, and barriers to accessing care, may result in patients 'falling out' along the care pathway. As a result it can take substantial time to receive screening, diagnosis, treatment and rehabilitation services such as referrals, ear nose and throat specialist consultations and surgery (Hearing Australia 2021).

An example of the complexity of the patient journey for children and young people as they move through the Queensland Government's Deadly Ears Program is presented below (Figure INTRODUCTION 1). The program aims to enhance coordination across health, early childhood development and education sectors.

Figure INTRODUCTION 1: Patient journey through the Deadly Ears Program



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Data gaps and development opportunities

In this section

As part of the development of the foundational *Ear and hearing health of Aboriginal and Torres Strait Islander people* report, a range of data sources were reviewed and assessed for reporting. Data gaps and data development opportunities were also identified (AIHW 2022). The foundational report provided an overview of some key data gaps and development opportunities relating to prevalence, primary health-care data, nationally consistent newborn hearing screening, the ear and hearing health workforce, and outcomes.

Opportunities for data development include:

- Repeated measurement of ear and hearing health in national health surveys to increase the currently limited prevalence data
- regular reporting on key primary health-care indicators, including presentations and treatments for ear and hearing health
- a comprehensive standardised national neonatal hearing screening data collection, including pathways from screening, to diagnosis, to treatment
- drawing together information from existing school hearing screening programs and pathways from screening, to diagnosis, to treatment and outcomes
- expanded workforce data sources, with more detailed information on the ear and hearing health workforce, particularly on audiologists
- greater capacity to link administrative and other data sets to understand pathways and outcomes
- improved identification of Indigenous status in administrative data sets
- improved identification of people with ear disease and hearing loss in administrative data sets, particularly:
  - education and health data sets
  - data sets relating to incarcerated populations.

Some of the challenges that need to be overcome for improved data collection include:

- the fact that services involve many different health-care professionals, service providers and government programs. This creates complexity for:
  - extracting, collating and standardising data because services have differences in governance, funding, regulations, reporting requirements and information systems
  - creating data sharing arrangements, which may include a vast number of entities
- no consistent national classification system is used to code conditions and services
- key information, such as diagnosis, may be recorded in free-text fields, which makes data extraction and reporting difficult
- the lack of culturally appropriate, validated assessment tools to provide information on outcomes for developmental milestones, including language and speech.

This section provides an overview of important updates since the last publication. The data gaps and development opportunities discussed align with issues and priorities raised in:

- the Roadmap for Hearing Health
- national inquiries into the hearing health of Australians (House of Representatives Standing Committee on Health Aged Care and Sport 2017 and Senate Community Affairs References Committee 2010).

Prevalence of ear disease and hearing loss

The ABS **National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)** is the main source of data on the prevalence of ear disease and hearing loss among First Nations people. The large NATSIHS sample size, First Nations-specific survey design and repeated measurements over time allow for detailed examination of reported long-term ear and hearing problems. Reported long-term ear or hearing problems were included across the 2001, 2004–05, 2012–13, 2018–19 and 2022–23 surveys.

The continued inclusion of a hearing test in the NATSIHS and a focus on how to better capture information on children aged under 7 is important for examining changes in hearing loss among First Nations people over time. Capturing this information for young children is critical as the key developmental period for language, vision, hearing and higher cognitive functioning occurs at this age. However, a hearing test was not included in the 2022–23 NATSIHS.

One main data gap relating to prevalence is the need for national information on how many people have ear and hearing conditions, such as otitis media. Research coming out of the Telethon Kids Institute will examine the feasibility and effectiveness of ear health screening from 6 to 8 weeks of age. The project will follow a cohort of over 600 children and provide prevalence estimates for otitis media and hearing loss in First Nations children aged 0 to 5. Collecting information on recent experiences of ear disease and hearing loss, particularly for young children, would greatly improve data on prevalence.

As well as NATSIHS, including ear and hearing health related questions in other national surveys would increase available information on the prevalence of ear and hearing problems. Results from the **Australian Eye and Ear Health Survey** conducted over 2022-2025 are presented in this report for the first time.

Primary care

High quality information on primary health care is essential for understanding the role and use of primary care in the diagnosis, treatment and management of ear disease and hearing loss among First Nations people.

Information about how people use primary health care is limited. The Australian Institute of Health and Welfare (AIHW) is involved in the following activities to improve the quality of information on primary health care.

The AIHW is leading work to develop nationally consistent primary health care data.

The AIHW is working in partnership with the Department of Health and Ageing, and the Australian Digital Health Agency to develop and implement a framework to guide the use of My Health Record system data for research and public health purposes.

The AIHW is developing a new indicator on annual ear health checks in primary care settings:

> Proportion of First Nations regular clients aged 0–14 who received an ear health check in the previous 12 months, including whether a visual check, tympanic movement check, or both, were performed.

This indicator is important because frequent assessment of ear and hearing health ensures early identification, management and treatment of ear disease and hearing loss. Reporting this information will improve understanding of service coverage and service access, and will inform decisions about providing services to areas most in need.

The new indicator would be collected as part of the national Key Performance Indicators (nKPI) collection, which is a set of primary health care indicators for First Nations people focusing on maternal and child health, preventative health, and chronic disease management. The collection contains data on First Nations regular clients of organisations receiving funding under the Indigenous Australians' Health Programme.

The indicator is being pilot-tested for a few collection periods starting from June 2024 to assess data quality. The indicator will be considered for inclusion in the data collection depending on the results of the pilot testing.

Newborn hearing screening

States and territories collect data on their respective newborn hearing screening programs. However, the content and scope of data collected varies. Substantial efforts have been made to adopt more consistent and comparable indicators across neonatal hearing screening programs nationally.

An Australian national data collection for newborn hearing screening would improve the availability and quality of data. Such data would support nationally and internationally consistent measurement, reporting, and standards for evaluating programs and outcomes.

The AIHW has been working collaboratively with Commonwealth and state and territory governments on newborn hearing screening data development since 2013. In 2023–24 the Department of Health, Disability and Ageing engaged the AIHW to work with jurisdictions to develop a set of standardised data items that could be collected to support national reporting. A report summarising the next steps in developing a national newborn hearing screening data set was released in July 2025. An updated National Framework for Newborn hearing Screening was also published by Health in July 2025.

The AIHW has been engaged by the Department of Health, Disability and Ageing until 30 September 2027 to work with jurisdictions to further progress national data development for newborn hearing screening.

The AIHW recommenced work in September 2025 and will continue to progress the workplan over the next 2 years. The current workplan includes the development of nationally agreed data items, definitions and specifications to support reporting on audiological assessment, diagnosis and intervention.

Ear and hearing health workforce

The workforce delivering ear and hearing health services is dynamic (high turnover) and diverse. It includes both specialists and generalists with ear and hearing health capability, and models of care can vary between services and regions. Available ear and hearing health workforce data give a broad indication of access to specialists and ear and hearing health services. However, current data provide an incomplete picture. The extent to which First Nations patients are serviced by ear and hearing health professionals is not clear from audiology, ENT or allied health personnel data.

Possible data developments that would increase understanding of the ear and hearing health workforce include:

- adding audiologists to the National Registration and Accreditation Scheme
- developing a national register and nationally consistent workforce survey for all allied health disciplines. For more information, see Allied health workforce data gap analysis – issues paper | Department of Health, Disability and Ageing.

Outcome measures

No national data sources provide insights into health or social outcomes among First Nations people with ear disease and hearing loss. Two main approaches could be used to examine outcomes of First Nations people who have experienced ear or hearing problems:

- targeted longitudinal studies
- data linkage of health and outcome-related data sets.

Targeted longitudinal studies

National Acoustics Laboratories is developing a longitudinal study called HearOut, focusing on hearing health outcomes for First Nations children. A First Nations leadership group has been established to provide cultural guidance and advice around culturally safe research practices. The project seeks to define and understand relevant developmental and wellbeing outcomes, and what tools/ resources are available to inform a longitudinal study design.

The project conducted a literature review which revealed a substantial knowledge gap on the negative impacts of persistent otitis media in early childhood on speech and language for First Nations children. The National Acoustics Laboratories report that many of the studies reviewed assume that developmental milestones for First Nations children are the same as they are for non-Indigenous children, and use standardised assessments with little

to no adaptation. In the published literature, only 4 development-related checklists were found that have been adapted specifically for First Nations children. As well, very few Health-Related Quality of Life tools have been developed or adapted for First Nations populations. Ethics applications are underway, and they are in the early stage of establishing research agreements with participating communities.

The Study of Environment on Aboriginal Resilience and Child Health (SEARCH) has followed over 1,600 First Nations children in urban and regional New South Wales since 2008 to provide longitudinal information about their health, including hearing and speech development. The SEARCH is owned and led by First Nations people. It functions as a long-term partnership between the Aboriginal Health & Medical Research Council, Aboriginal Community Controlled Health Services in New South Wales, the Sax Institute, and researchers from across Australia (Sax Institute 2023). Longitudinal analysis of this data source has the potential to provide new insights in antecedents of ear and hearing related outcomes.

The Djaalinj Waakinj cohort study (Swift et al. 2020) investigated the early onset of middle ear infection (otitis media) among Aboriginal infants in an urban West Australia setting, finding that the condition begins early in life and persists throughout infancy for many children. Among 125 infants enrolled:

- one-third had middle ear infection at 2-months, rising to nearly half by 6 and 12-months (Richmond et al., 2023)
- 45% of infants had hearing loss (≥ 25 dB HL) at around 12-months (Veselinović et al. 2023).
- Infants with middle ear infection detected before six months were over three times more likely to continue to have disease at 12-months than those without early onset.

These findings highlighted that middle ear infection is not confined to remote communities but also in urban areas. Subsequently, routine ear-health screening with otoscopy and tympanometry for First Nations children is being implemented across WA (at ages 2, 4, 12 and 24 months, plus school entry hearing screening), administered through the Child and Adolescent Health Service (CAHS) in metropolitan areas and the Western Australian Country Health Service (WACHS) in regional and remote communities (CAHS, 2024).

Data linkage of health and outcome-related data sets

Data linkage (also called data matching, data integration or record matching) combines information from multiple data sources while preserving privacy. This tells a much more powerful story than is possible from individual data sources in isolation. It can also improve understanding of a range of issues. However, capacity to examine outcomes using data linkage is limited by data gaps in information on First Nations people with ear disease or hearing loss in administrative data sets.

The Murdoch Children's Research Institute has been funded to develop the Australian National Child Hearing Health Outcomes Registry (ANCHOR), which seeks to compile a national research database to collate and track ear and hearing outcome measures. The program will pilot hearing-specific service data collections from Victoria and Queensland with an access and equity lens 'to ensure no deaf or hard of hearing (DHH) child "slips through the cracks"' (MCRI 2023).

ANCHOR also aims to develop a national Core Outcome Set to enable services and researchers to measure outcomes that are important to deaf and hard of hearing children, families, and services. The National Acoustic Laboratories HearOut study has been exploring what outcomes matter to Aboriginal and/or Torres Strait Islander communities who experience recurrent and persistent otitis media. ANCHOR is exploring what outcomes matter to Aboriginal and/or Torres Strait Islander children who are born with permanent sensorineural hearing loss. Together, this information will facilitate streamlined data collection that can be used to identify service gaps and areas of need.

Data linkage would allow research on the relationship between ear and hearing health problems in childhood and outcomes such as contact with the criminal justice system

The patient journey

The ear and hearing health service system is complex, and navigating it is challenging for patients and their families (the patient journey). There are critical points in this patient journey where delays to receiving care, and burden in accessing care, may result in patients 'falling out' along the care pathway.

There are no national sources of data on how many patients are lost along this patient journey, at what stages, or for what reasons.

Access and experience

Researchers from Flinders University are undertaking the Pathways For Aboriginal and Torres Strait Islander Hearing Health: The PATHWAY Project (Flinders University 2022). The aim of this project is to identify the current hearing health-care pathway patterns for First Nations children, from surveillance, through management and follow-up. Located in South Australia, the project is co-designed in partnership with Aboriginal communities, to help overcome difficulties experienced by First Nations children in accessing hearing health care.

Early consultation shows that there are a number of points along the pathway where children are 'falling out' of the system and not getting the help they need. The study will take place over 18 months and will be conducted through a yarning based intervention to further understand lived experience. The project will focus on building local capacity, to train Aboriginal health workers and support them to continue ear health work in between fly-in-fly-out visits from other professionals.

The PATHWAY Project also involves a local 'Patient Navigator' role to help families identify and access the relevant support services for their child's ear health.

The hidden wait list

The waiting time for elective surgery is an indication of how easy the service is to access. Information about waiting times for elective surgery presented in this report refers to the time a patient waits for elective surgery, calculated from the date a patient is placed on the hospital's waiting list to the date of admission for the surgery. However, this does not include the time taken at other steps in the clinical pathway. These steps include accessing primary health care, the process of health professionals diagnosing the underlying condition and referring the patient to an ENT specialist, obtaining appointments with an ENT, and being placed on the surgical waiting list.

The additional time between referral from primary health care to initial consultation with a medical specialist such as an ENT, sometimes referred to as the hidden wait list, is an important step in the patient journey but is not well understood at the national level. National data are available in the National Non Admitted Patient Data Collection. However, further investigation is required in collaboration with states and territories to determine whether data quality and reliability are suitable to meaningfully report on outpatient waiting times.

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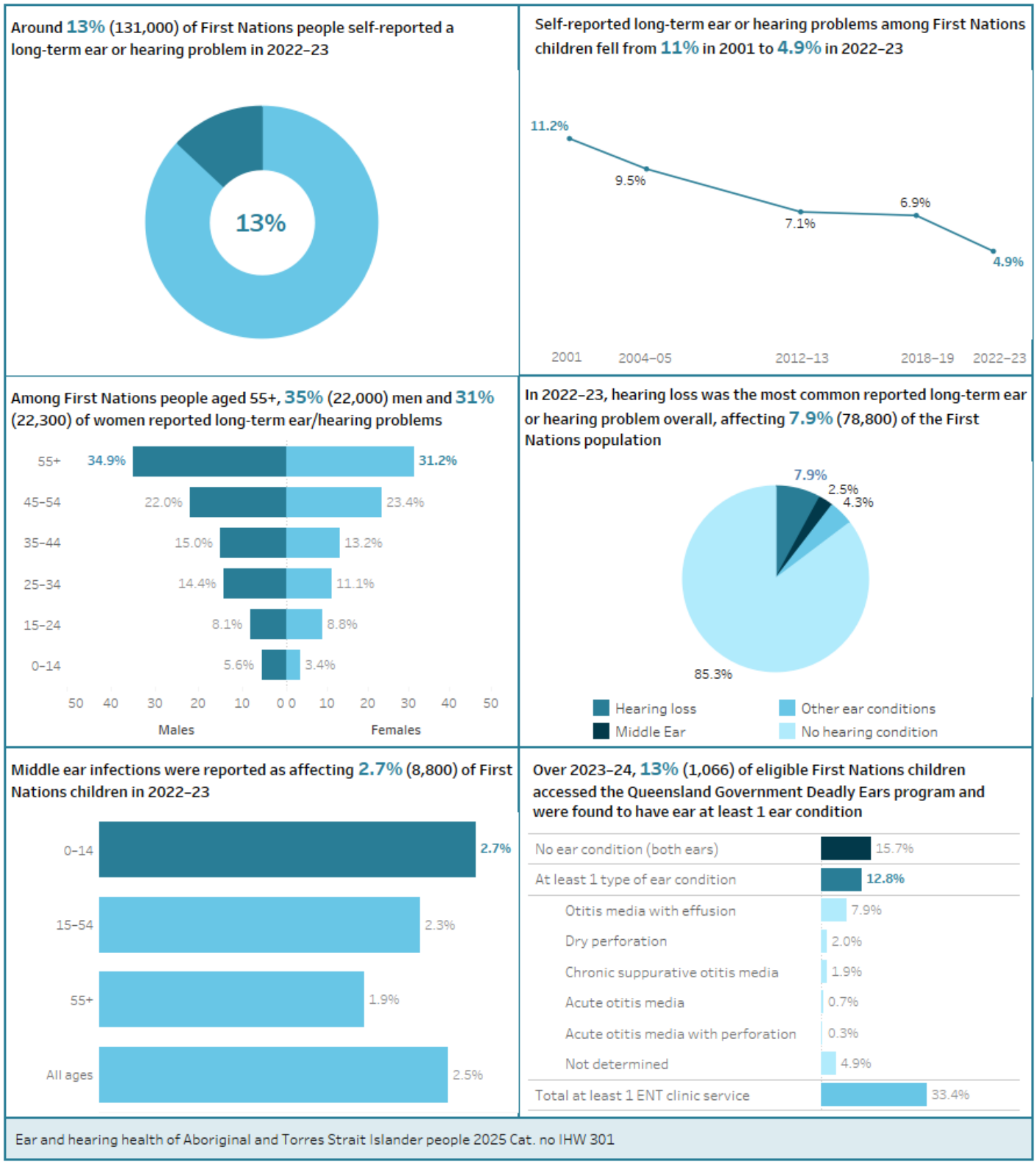
Prevalence

Figure PREVALENCE: Key statistics



Prevalence refers to the proportion of people in a population who have a health condition at a point in time. Measures of prevalence can be used to identify population groups or regions where a health condition occurs more commonly. Information about prevalence can provide insights into population groups or areas with a greater need for preventive health measures or health services.

This chapter contains the following information about the prevalence of ear or hearing conditions among the First Nations population:

- reported long-term ear disease or hearing problems from ABS survey data (data tables 1.1a–1.1f)
- measured hearing loss from the Australian Eye and Ear Health Survey (AEEHS)
- ear conditions or hearing loss among Deadly Ears program participants (data tables 1.2a–1.2b)

Data tables in Excel spreadsheet format can be accessed at the Data tab.

About the data

Information in this section comes from the national Aboriginal and Torres Strait Islander health surveys conducted by the Australian Bureau of Statistics (ABS) and the newly released results from the Australian Eye and Ear Health Survey (AEEHS) a joint project led by the Westmead Institute for Medical Research, University of Sydney. Data are not comparable across two sources due to differences in sampling and estimation methodology, population age cohorts and the ear and hearing health examination protocols and categorisations of hearing impairment.

National Aboriginal and Torres Strait Islander health surveys (ABS)

These surveys cover First Nations people of all ages in remote and non-remote areas of Australia. Parents or guardians are asked to answer for children aged 0–14 and may answer for children aged 15–17. Results are reported as estimates weighted to the Australian standard population.

Reported long-term ear or hearing problem information has been collected since 2001. Respondents are asked if they have a hearing problem or problem with their ears that has lasted, or is expected to last, for 6 months or more. Reported hearing loss includes total deafness, being deaf in one ear, or having hearing loss or partial deafness.

Measured hearing loss information through a hearing test was collected in the 2018–19 National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) and are reported in the previous 2024 report. The 2022–23 NATSIHS did not include a hearing test.

A comparison of measured and reported hearing loss in the NATSIHS has shown that under-reporting of hearing loss by individuals is likely to be substantial. People may not be aware that they have hearing loss or may choose not to report it (ABS 2020). Additionally, for the AEEHS results suggests that reported may not be a reliable indicator, and that screening with objective hearing testing is needed to identify hearing impairment.

Australian Eye and Ear Health Survey (AEEHS) results

The AEEHS was conducted between August 2022 and March 2025 with results published on 9 October 2025 (Kah et.al 2025). A selection of newly available results are presented in this 2025 report. Population estimates have not been calculated so AEEHS results are only representative of the sample selected. Data adjusted for age are available for comparisons between Indigenous and non-Indigenous participant responses.

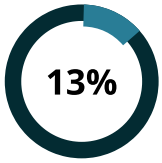
The AEEHS was limited to those aged 50 and over, with a hearing component sample of 461 (12.9%) Indigenous participants and 3,112 (87.1%) non-Indigenous participants.

Hearing examinations and interviews included questions around hearing, including both *reported* or *measured hearing loss* laterally and duration, the frequency of past hearing examinations, ever use of hearing aids, and other questions on impacts from hearing impairment. Pure-tone audiometry, tympanometry and video-otoscopy were also utilised.

Data from the AEEHS presented in this report include *measured hearing loss only*.

Reported long-term ear or hearing problems (ABS survey data)

In this section



First Nations people (about 131,000 people) **reported having an ear or hearing problem** in 2022–23.

Overview

In 2022–23, the proportion of First Nations people reporting a long-term ear or hearing problem was 13% (about 131,000 people) (Data Table 1.1b). The proportion has remained similar over time, ranging from around 12% (in 2004–05 and 2011–13) to 15% (in 2001) (Data table 1.1e).

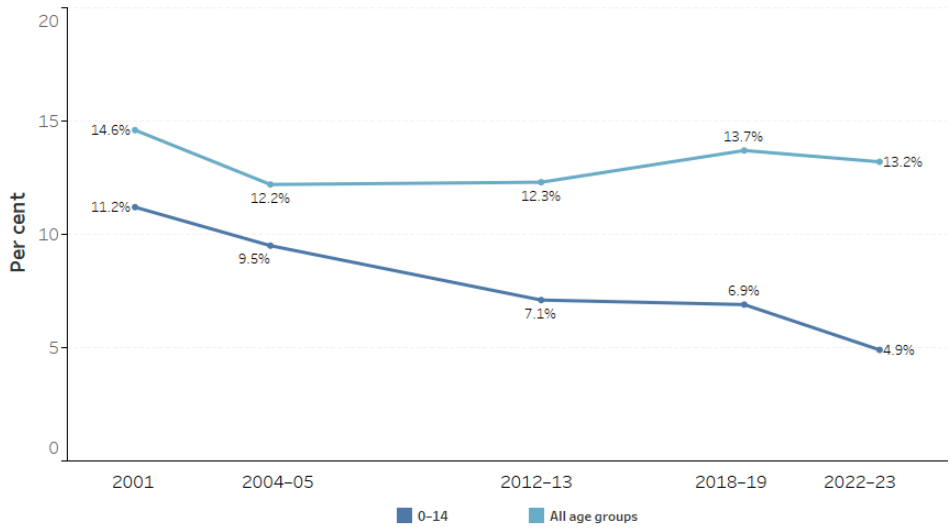
For First Nations children aged 0–14, the proportion reporting an ear or hearing problem decreased from 11.2% in 2001 to 4.9% in 2022–23 (Figure PREVALENCE 1).

The information presented here refers to reported long-term ear or hearing problems. The impact of under-reporting of hearing loss on these results has not been assessed. Unless the level of under-reporting of hearing loss has increased over time, the decrease in the prevalence of reported long-term ear or hearing problems among First Nations children represents an improvement.

Under-reporting of hearing loss

Although the 2022–23 NATSIHS only included reported hearing loss, the 2018–19 NATSIHS also included measured hearing loss for First Nations people aged 7 and over. This allows comparisons of measured and reported hearing loss for the same people, helping to understand the level of under-reporting of hearing loss among First Nations people. These results show that hearing loss is largely under-reported, with 79% of First Nations people with measured hearing loss not reporting hearing loss (ABS 2020). The reasons for under-reporting hearing loss may range from a gradual onset of hearing loss that goes unnoticed, to the fear of the social stigma that hearing loss is associated with ageing. True levels of hearing loss are likely to be much higher than indicated by reported hearing loss in this section.

Figure PREVALENCE 1: Reported long-term ear or hearing problems among First Nations people, by age, 2001 to 2022–23



Line chart showing percent of reported long term hearing problems amongst Firs Nations people has bee declining since 2001 to 2022-23

Source: AIHW analysis of ABS National Health Survey 2001, National Aboriginal and Torres Strait Islander Health Survey 2004–05, Australian Aboriginal and Torres Strait Islander Health Survey 2012–13, National Aboriginal and Torres Strait Islander Health Survey 2018–19 and National Aboriginal and Torres Strait Islander Health Survey 2022–23.

Age and sex

The proportion of First Nations people reporting ear or hearing problems increased with age. In 2022–23, reported problems were lowest among First Nations children aged 0–4 (2.1% or 2,300 children)) and highest among those aged 55 and over (33% or 44,900 people) (Data Table 1.1b, Figure PREVALENCE 2).

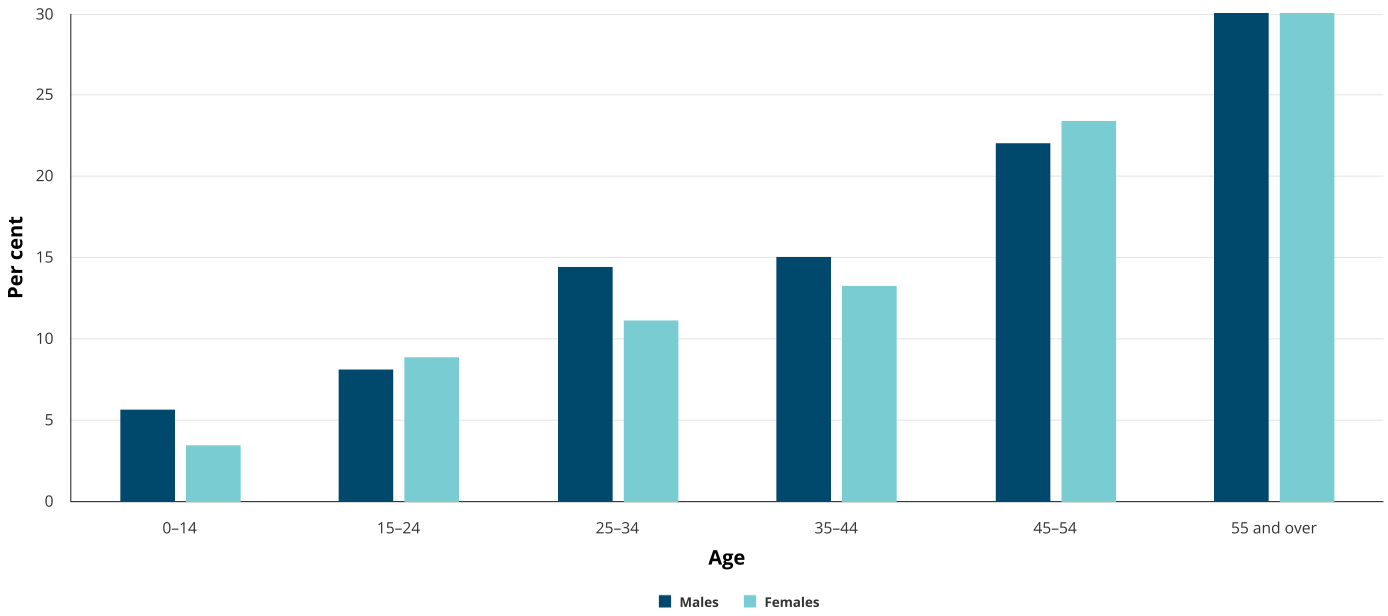
The higher proportion of older First Nations people reporting long-term ear or hearing problems reflects higher rates of hearing loss in that group, which are due to their exposure throughout life to factors that can affect hearing. These factors include middle ear infections in childhood, exposure to loud noise or injuries at any age, and the ageing process itself (WHO 2024).

The overall proportion of First Nations people reporting long-term ear or hearing problems was similar for males (14%) and females (13%) (Data Table 1.1f).

The proportion of older men reporting ear or hearing problems tended to be larger than the proportion of older women. Among those aged 55 years and over, around 35% (22,000) of First Nations men reported long-term ear or hearing problems compared with 31% (22,300) of First Nations women (Figure PREVALENCE 2).

Figure PREVALENCE 2: Reported long-term ear or hearing problem among First Nations people, by age and sex, 2022–23

Measure: Percent



Source: AIHW analysis of National Aboriginal and Torres Strait Islander Health Survey 2022–23.

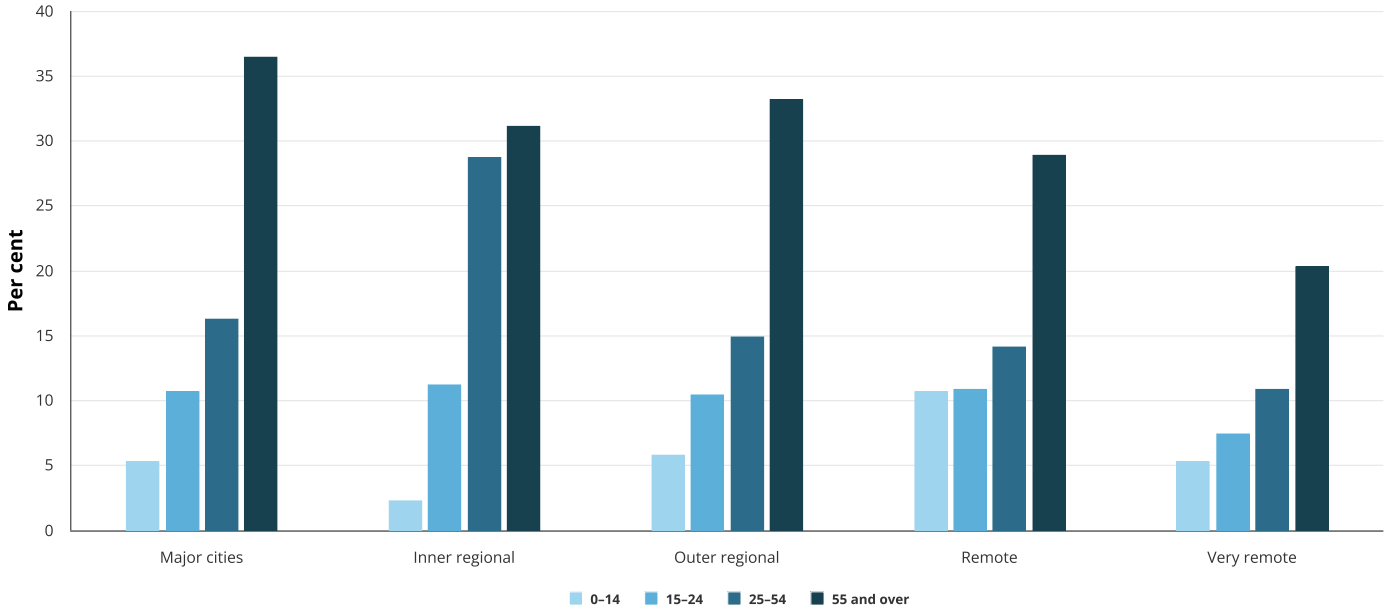
Remoteness

Among First Nations children aged 0–14, reported long-term ear and hearing problems were most prevalent in *Remote* areas (10.7% or 1,900), and least prevalent in *Inner regional* areas (2.3% or 1,900). This trend reported by remoteness may reflect actual prevalence or an availability of services to recognise hearing problems.

In contrast, among First Nations people aged 55 and over, reported long-term ear and hearing problems were most prevalent in *Major cities* (36%, or around 18,000) and least prevalent in *Very remote* areas (20.3%, or around 2,5000) (Figure PREVALENCE 3). In contrast, among First Nations people aged 55 and over, reported long-term ear and hearing problems were most prevalent in *Major cities* (36%, or 18,000) and least prevalent in *Very remote* areas (20.3%, or 2,500) (Figure PREVALENCE 3).

Figure PREVALENCE 3: Reported long-term ear or hearing problems among First Nations people, by remoteness area and age, 2022–23

Measure: Percent



Source: AIHW analysis of National Aboriginal and Torres Strait Islander Health Survey 2022–23.

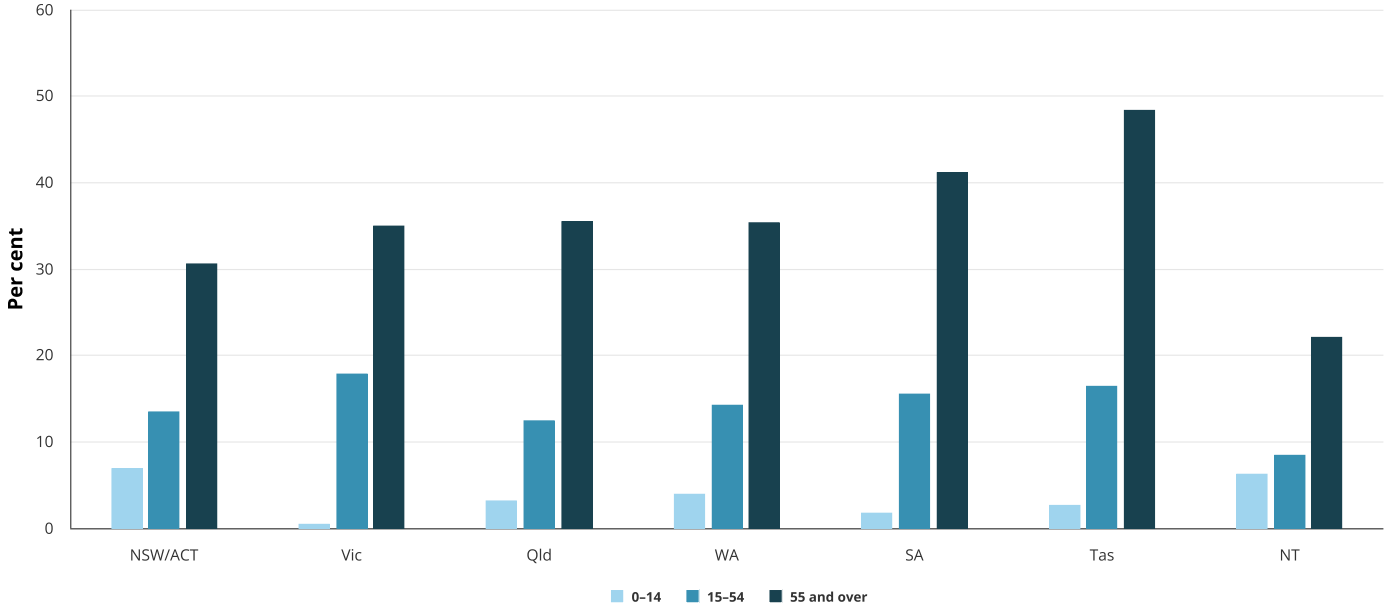
State and territory

Across states and territories, the proportion of reported long-term ear or hearing problems among First Nations children aged 0–14 in 2022–23 ranged from just under 3.1% (about 2,900 children) in Queensland to 6.9% (about 8,200 children) in New South Wales.

Among older First Nations people, across states and territories the proportion of First Nations people aged 55 and over reporting long-term ear or hearing problems ranged from around 22% (about 2,100 people) in the Northern Territory to around 48% (about 2,800 people) in Tasmania (Figure PREVALENCE 4).

Figure PREVALENCE 4: Reported long-term ear or hearing problems among First Nations people, by state/territory and age, 2022–23

Measure: Percent



Source: AIHW analysis of National Aboriginal and Torres Strait Islander Health Survey 2022–23.

Types of long-term ear or hearing problems

Hearing loss was the most common reported long-term ear or hearing problem overall, affecting 7.9% of the First Nations population (78,800 people) (Data Table 1.1a). Long-term hearing loss is more prevalent among older people.

In 2022–23, long-term hearing loss was reported by:

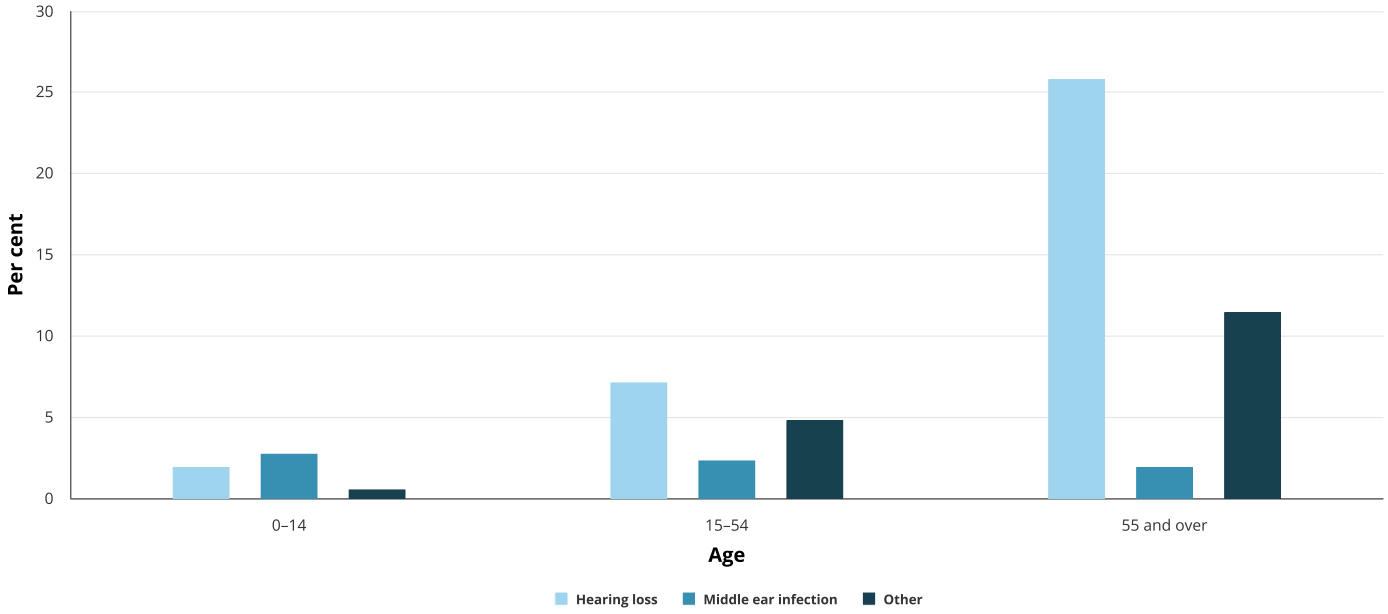
- 1.9% of First Nations children aged 0–14 (6,100 children)

- 7.1% of First Nations people aged 15–54 (37,900 people)
- 26% of First Nations people aged 55 and over (34,700 people).

Middle ear infection was reported as a long-term ear or hearing problem affecting 2.7% of First Nations children aged 0–14 (about 8,800 children) in 2022–23 (Figure PREVALENCE 5).

Figure PREVALENCE 5: Reported long-term ear or hearing problems among First Nations people, by type of problem and age, 2022–23

Measure: Percent



Source: AIHW analysis of National Aboriginal and Torres Strait Islander Health Survey 2022–23.

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Measured hearing loss (AEEHS data)

Measured hearing loss - Australian Eye and Ear Health Survey (AEEHS)

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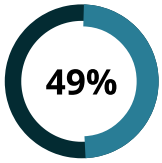


of First Nations AEEHS survey participants aged 50 and over reported bilateral hearing loss over 2022–25

Overview

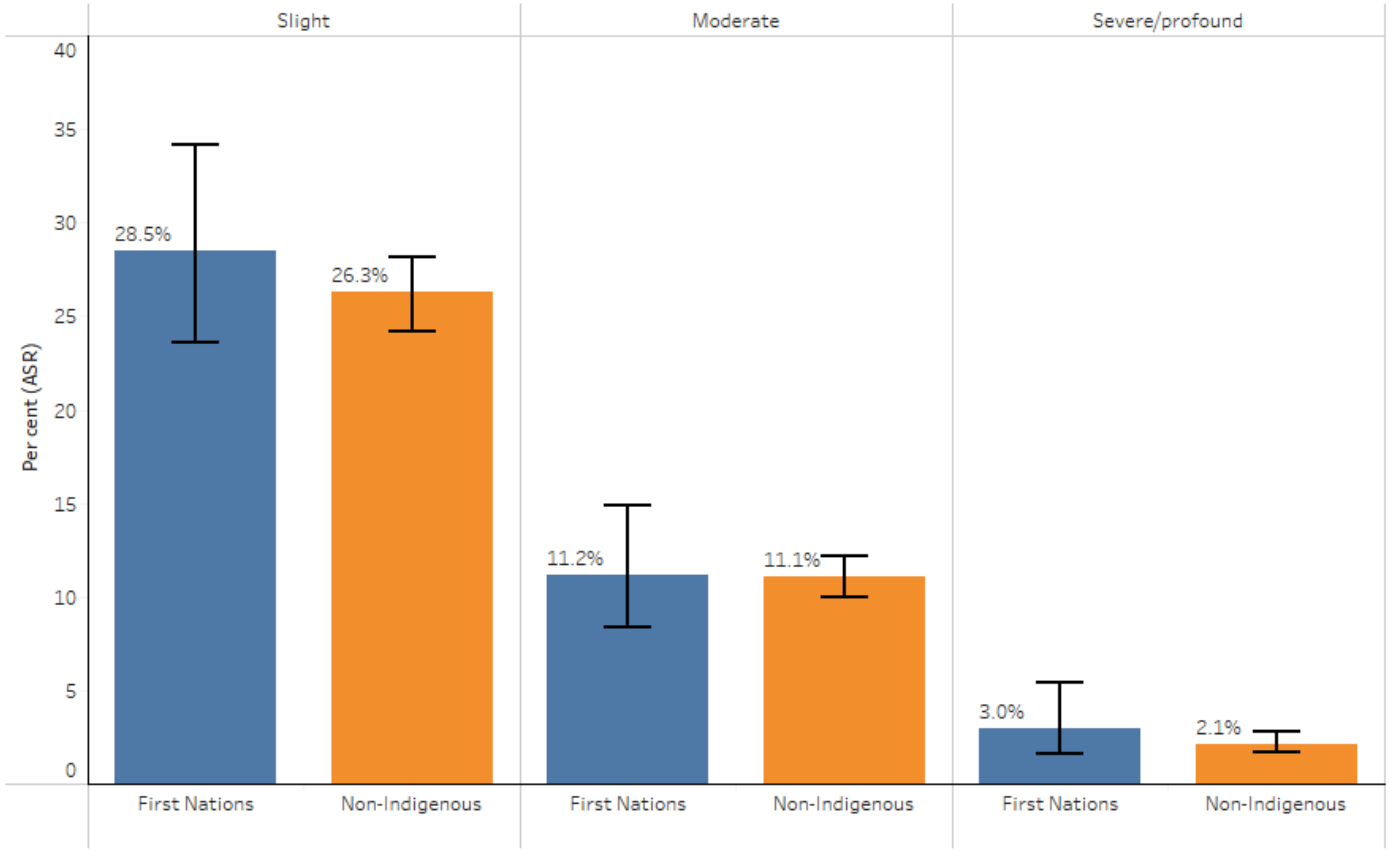
Overall, 49% (225) of First Nations survey participants aged 50 and over reported bilateral hearing loss for the 2022-25 period, consisting of over a third (145) with a slight hearing impairment,13.9% (64) with moderate hearing impairment, and 3.7% (17) with severe or profound hearing impairment.

After age-adjustment among the 2022–25 AEEHS population aged 50 and over:

- 42.8% of Indigenous participants had any bilateral hearing impairment, compared with 39.4% of non-Indigenous participants.
- 14.3% of Indigenous participants had moderate or worse hearing impairment (better ear) compared to 13.2% non-Indigenous participants – not statistically different
- only a marginally greater proportion of Indigenous than non-Indigenous participants had slight, moderate and severe or profound bilateral hearing impairment.

Note however none of these differences observed were statistically significant (Figure PREVALENCE 6).

Figure PREVALENCE 6: Age-standardised proportion of AEEHS participants aged 50 years and over with hearing impairment by severity, by Indigenous status, 2022–25



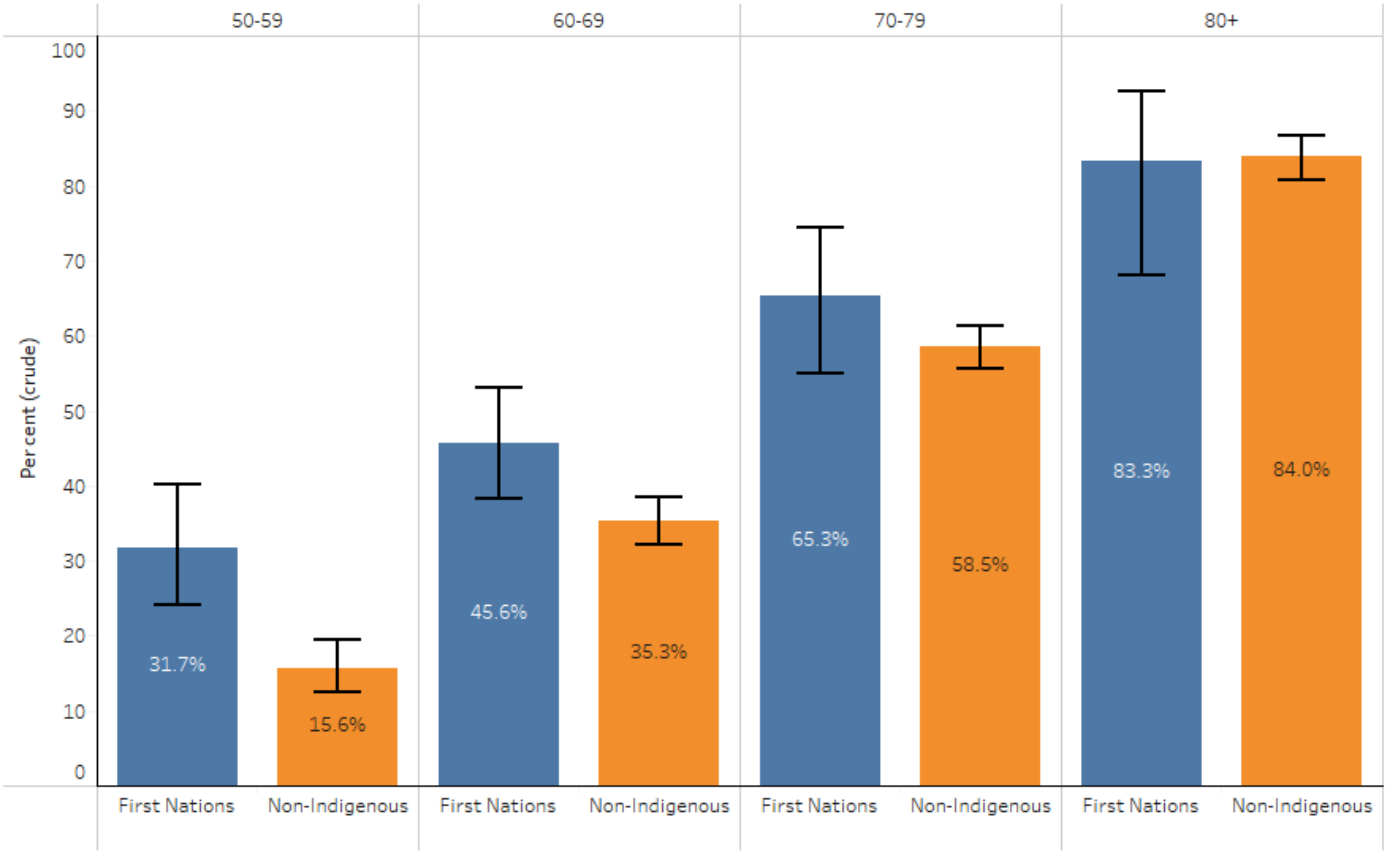
Source: Australian Eye and Ear Health Survey 2025

Age

Bilateral hearing impairment among 2022–25 AEEHS participants aged 50 and over was strongly associated with increasing age, for both First Nations and non-Indigenous. The proportion of any bilateral hearing impairment for First Nations participants increased from 31.7% to 45.6%, 65.3% and 83.3% among those aged 50–59, 60–69, 70–79 and 80+ years respectively. The proportion among non-Indigenous participants rose similarly.

The proportion of any bilateral hearing impairment was also higher among First Nations participants compared to non-Indigenous participants in age groups 50–59, 60–69, and 70–79 years (Figure PREVALENCE 7).

Figure PREVALENCE 7: Age-specific proportion of 2022–25 AEEHS participants with any (>25dB HL) bilateral hearing impairment



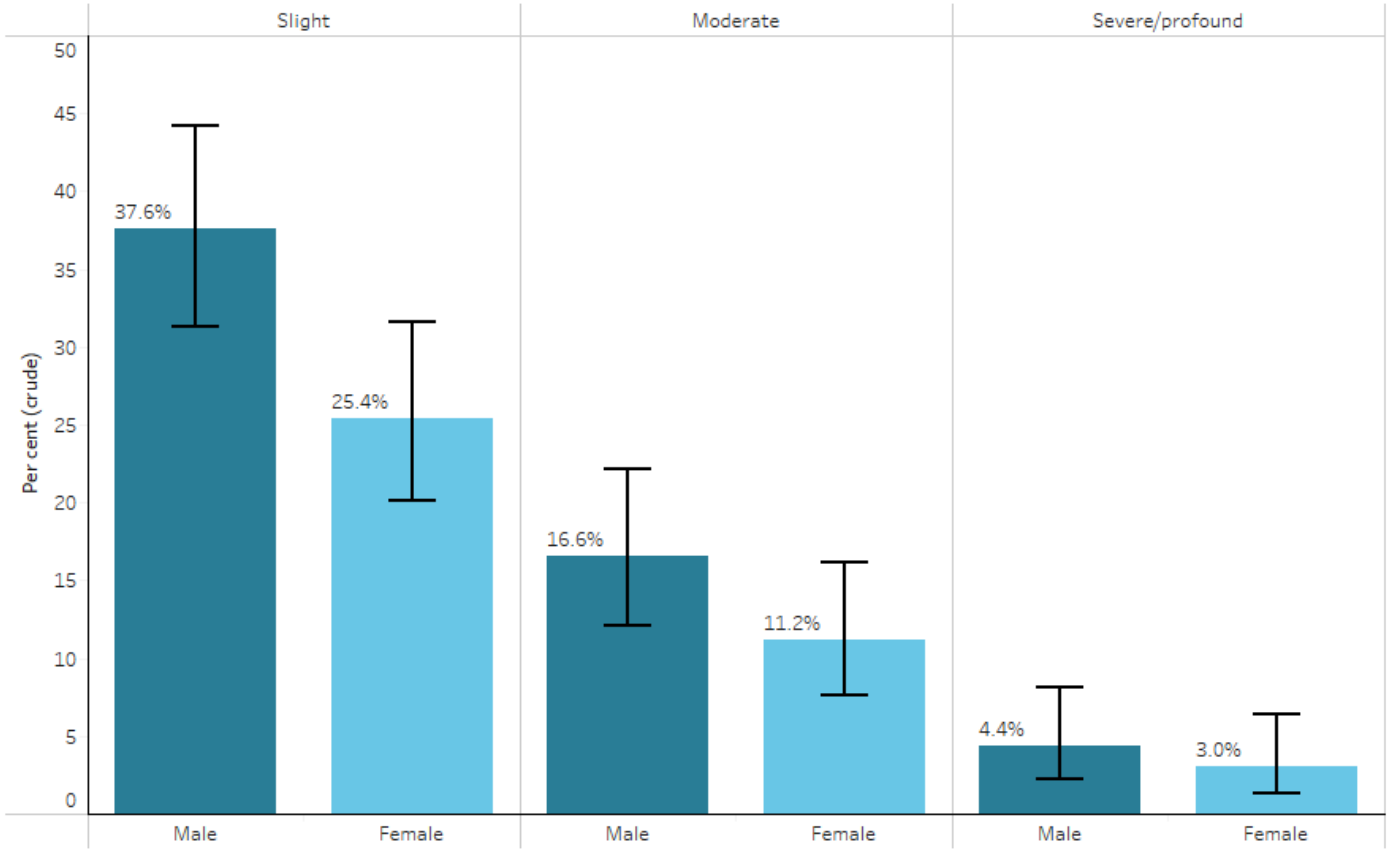
Source: Australian Eye and Ear Health Survey 2025

Sex

The proportion of 2022–25 AEEHS participants with bilateral hearing impairment was considerably higher in males than in females, in both First Nations and non-Indigenous groups.

Among First Nations participants, 58.5% of males had any bilateral hearing impairment, compared to 39.7% of females and the proportion was higher across all severity levels although this difference was only statistically significant for 'slight' hearing impairment (Figure PREVALENCE 8).

Figure PREVALENCE 8: Proportion Indigenous 2022–25 AEEHS participants aged 50 and over with bilateral hearing impairment, by sex



Source: Australian Eye and Ear Health Survey 2025

Ear conditions or hearing loss among Deadly Ears program participants

13%

(1,066) of First Nations children aged 0–14 in the eligible population accessed a **Deadly Ears ENT clinic** and were found to have an **ear condition** between 2022 and 2024.

16%

(1,360) of First Nations children aged 0–14 in the eligible population accessed a **Deadly Ears audiology service** and were found to have **hearing loss** between 2022 and 2024.

Information from service providers can provide insights into the level of ear conditions or hearing loss in the population.

The Queensland Government set up the Deadly Ears Program to reduce the high rates of middle ear disease and hearing loss among First Nations children in Queensland by providing a range of frontline services, such as ear, nose and throat (ENT) clinics and audiology, speech pathology and occupational therapy services.

About the data

In 2025, the Deadly Ears Program had clinical services in the following areas:

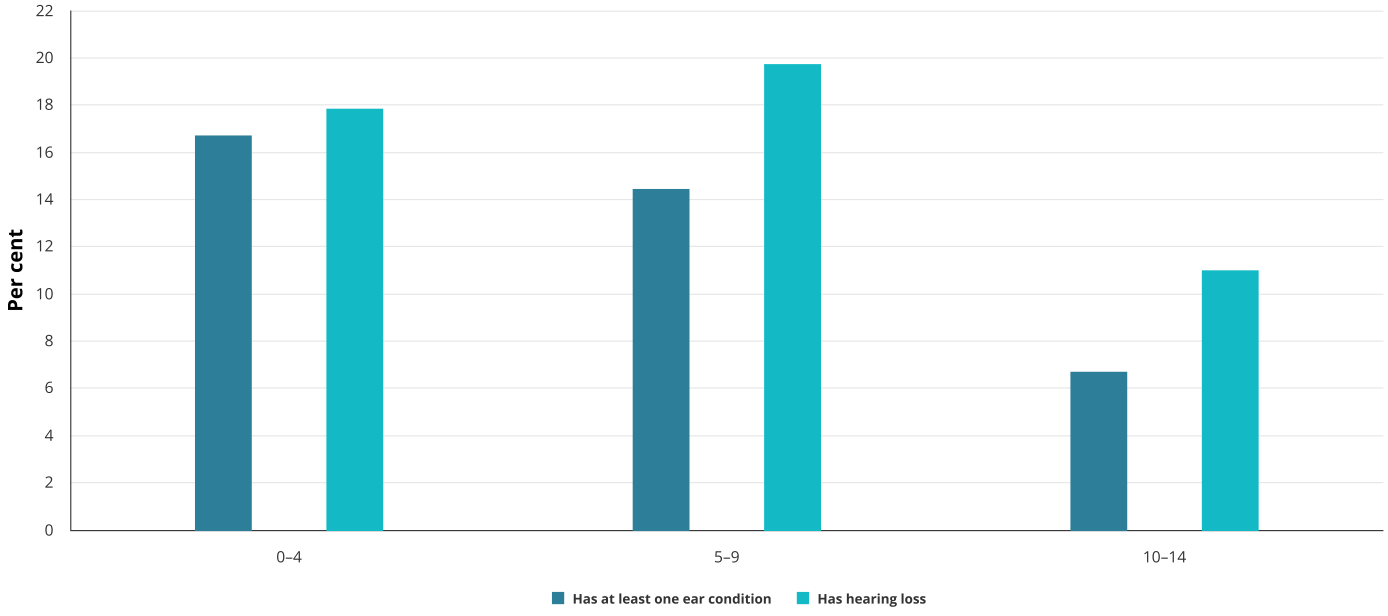
- Thursday Island
- the Northern Peninsula Area
- Palm Island
- Mornington Island
- Doomadgee
- Normanton
- Mt Isa
- Woorabinda
- Cherbourg.

Information about the number of services provided by the Deadly Ears Program can be used to estimate the level of ear conditions or hearing loss among the population of First Nations children aged 0–14 covered by these areas, that is, the 'eligible population'.

This section reports information derived from the Deadly Ears data collection. Data are available from 2007 to 2023. Whether a child has a middle ear related condition is diagnosed by an ENT specialist, while whether a child has hearing loss is diagnosed by an audiologist.

Between 2022 and 2024, for First Nations children in the eligible population aged 0–14 who attended a Deadly Ears audiology service, 12.8% (1,066 children) were found to have an ear condition and 16.3% (1,360 children) were found to have hearing loss. Hearing loss was found to be higher than ear disease in each of the age groups, with hearing loss peaking at 19.7% (556 children) in the 5–9 age group and ear disease peaking at 16.7% (487 children) in the 0–4 age group (Table 1.2b) (Figure PREVALENCE 9).

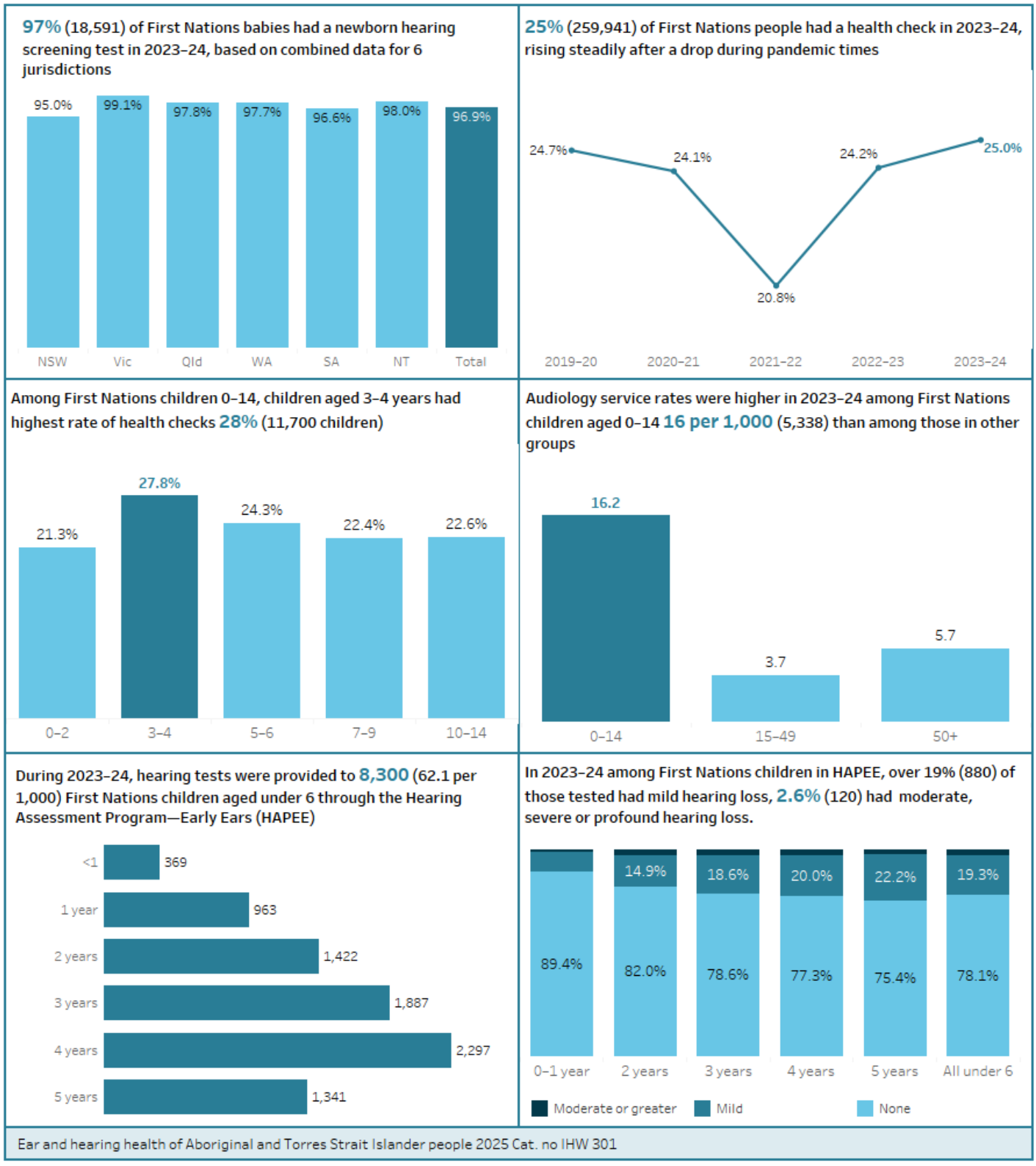
PREVALENCE 9: Percentage of children with ear conditions and hearing loss in the Deadly Ears program, by age group, 2022–24



Source: AIHW analysis of Deadly Ears Program data collection; AIHW population modelling using ABS population estimates and projections.

Screening and diagnosis

Figure SCREENING: Key statistics



Ear and hearing health of Aboriginal and Torres Strait Islander people 2025 Cat. no IHW 301

Timely detection and accurate diagnosis of ear disease and hearing loss are essential for early intervention and prompt access to appropriate treatment and rehabilitation services. Early diagnosis of ear disease and timely and appropriate treatment can prevent associated hearing loss in many cases.

This chapter covers the following information:

- newborn hearing screening, follow-up and diagnosis of ear or hearing conditions (data tables 2.1.1a–2.1.1b and 2.1.2)
- health checks for First Nations people in primary care settings (data tables 2.2a)
- Medicare-subsidised audiology services (data tables 2.3a–2.3e)
- ear health checks and hearing tests for First Nations children aged 0–5 (Hearing Assessment Program – Early Ears) (data tables 2.4.1a–b and 2.4.2a–c).

Data tables in Excel spreadsheet format can be accessed at the Data tab.

About the data

Information in this section comes from newborn hearing screening programs in states and territories, health checks for First Nations people subsidised by Medicare, audiology services subsidised by Medicare, and ear health checks for young children performed through the Hearing Assessment Program – Early Years (HAPEE).

More information about each of these data sources is provided in the following subsections.

Newborn hearing screening

In this section

Newborn screening coverage is high

In 2023–24, newborn hearing screening coverage of First Nations babies, using combined data for six jurisdictions (NSW, Vic, Qld, WA, SA and the NT), was 96.9% (18,591 babies).

Newborn hearing screening aims to identify babies born with moderate to profound bilateral permanent childhood hearing loss, which is estimated to affect at least 1 to 2 babies per 1,000 births (Vos et al 2019). Newborn hearing screening involves a non-invasive hearing test that is quick and painless. Newborn hearing tests are usually performed at the bedside while a baby is still in hospital (Patel and Feldman 2011).

Identifying babies born with hearing loss as soon as possible after birth enables earlier intervention, leading to better language development and other outcomes (Ching et al. 2006; Leigh 2010; Neumann et al. 2019; Pimperton et al. 2016; Sininger et al. 2009).

About the data

This section presents information on the number and proportion of babies who have a newborn hearing test, the proportion who are then referred to audiology for further testing, and the proportions found to have permanent childhood hearing loss or other ear or hearing conditions.

The information comes from newborn hearing screening programs in states and territories. All states and territories have newborn hearing screening programs and collect data on their own programs, but consistent data is not available in all cases (see Table SCREENING 1: Availability of newborn hearing screening information by state and territory and Indigenous status, 2022–23).

The aim of newborn hearing screening is for all eligible babies to be screened for permanent childhood hearing impairment that is present at birth, by 4 weeks of age (based on corrected age, which accounts for the time between premature birth and the due date of a full-term pregnancy). A very small proportion of babies are not eligible for newborn hearing screening, for example due to medical reasons (NHSWG 2013). Parental consent is required for babies to be screened. Children at high risk of hearing loss may be referred directly to audiology services without being screened.

Towards a national data collection

An Australian national data collection for newborn hearing screening would improve the availability and quality of data. Such data would support nationally and internationally consistent measurement, reporting, and standards for evaluating programs and outcomes.

In June 2023, the Department of Health, Disability and Ageing provided additional funding for the AIHW to develop a national data collection for newborn hearing screening. This has led to the establishment of an advisory committee to guide the AIHW on the development of the data collection. It has also resulted in the development of data standards and specifications for 21 data items. These will capture key demographic information such as indigenous status, as well as data on the screening, outcomes, and referrals. The on-going work will progress towards a National Best Endeavours Data Set (NBEDS). Further information is available here: Next steps in developing a national newborn hearing screening data set

The availability of newborn hearing screening information for this report, from each state and territory, is summarised in Table SCREENING 1.

Table SCREENING 1: Availability of newborn hearing screening information by state and territory and Indigenous status, 2023–24

Measure	NSW[ab]	Vic.	Qld[b]	WA[c]	SA	Tas.	ACT	NT[d]
Eligibility for screening	No	Yes	Yes	Yes	Yes	No	No	Yes
Whether completed screening	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Whether completed screening within or after one month of birth	No	Yes	Yes	Yes	Yes	No	No	No
Referral to an audiologist following screening[e]	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Diagnosis outcomes	Yes	Yes	Yes	Yes	Yes	No	No	Yes

Notes:

a. For New South Wales, the number of newborns eligible is for the 2023 calendar year, not the 2023–24 financial year.
b. For New South Wales and Queensland, non-Indigenous includes Indigenous status not stated.
c. For Western Australia, data is for public hospitals only.
d. For the Northern Territory, data is from the Top End Health Service and the Central Australia Health Service.
e. When the screening result is not in the normal range and further testing is required.

Participation

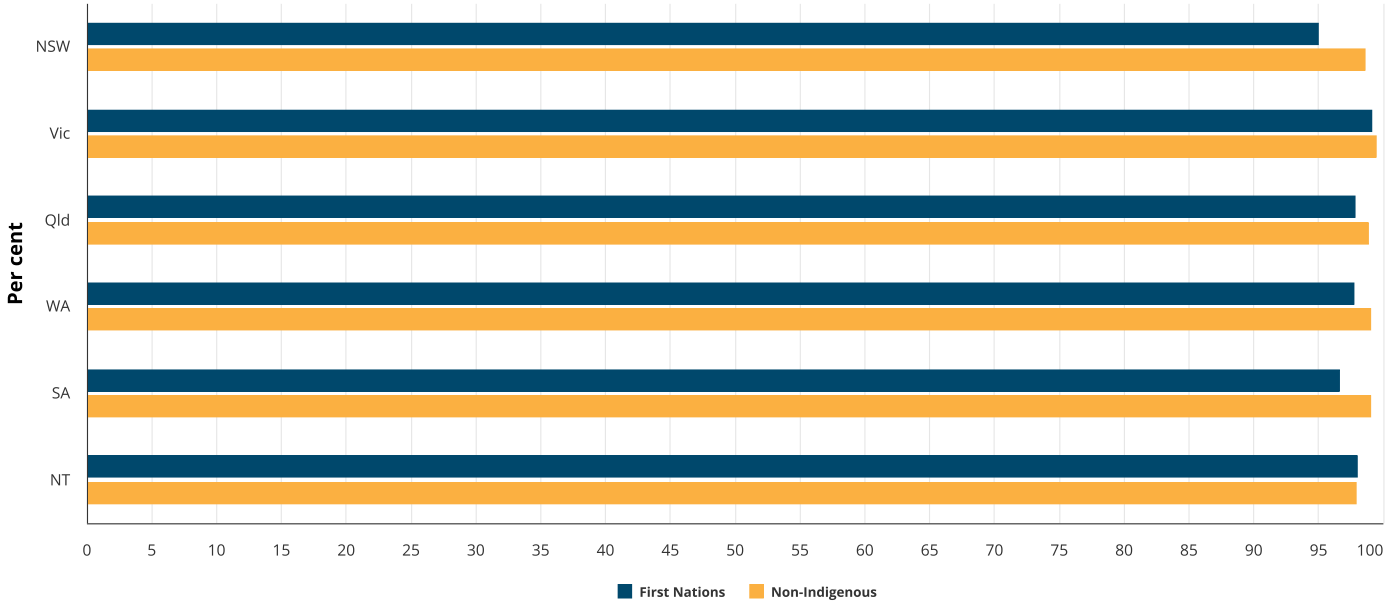
State and territory

In 2023–24, very large proportions of eligible First Nations babies had a newborn hearing screening test, ranging from 95% in New South Wales (6,068 babies) to 99.1% in Victoria (1,485 babies). Newborn hearing screening rates were similar for First Nations babies and non-Indigenous babies (Figure SCREENING 1).

In 2023–24, newborn hearing screening coverage of First Nations babies, using combined data for six jurisdictions (New South Wales, Victoria, Queensland, Western Australia, South Australia and the Northern Territory), was 96.9% (18,591 babies).

Figure SCREENING 1: Babies who completed a newborn hearing screening test, by state/territory and Indigenous status, 2023–24

Measure: Per cent



Source: AIHW analysis of the NSW Statewide Infant Screening–Hearing (SWISH) program (unpublished); The Royal Children's Hospital Melbourne data (unpublished); Queensland Health data (unpublished); Western Australia Department of Health data (unpublished); South Australia Women's and Children's Health Network data (unpublished); Tasmanian Health Service data (unpublished), Northern Territory Health data (unpublished); AIHW National Perinatal Data Collection (unpublished).

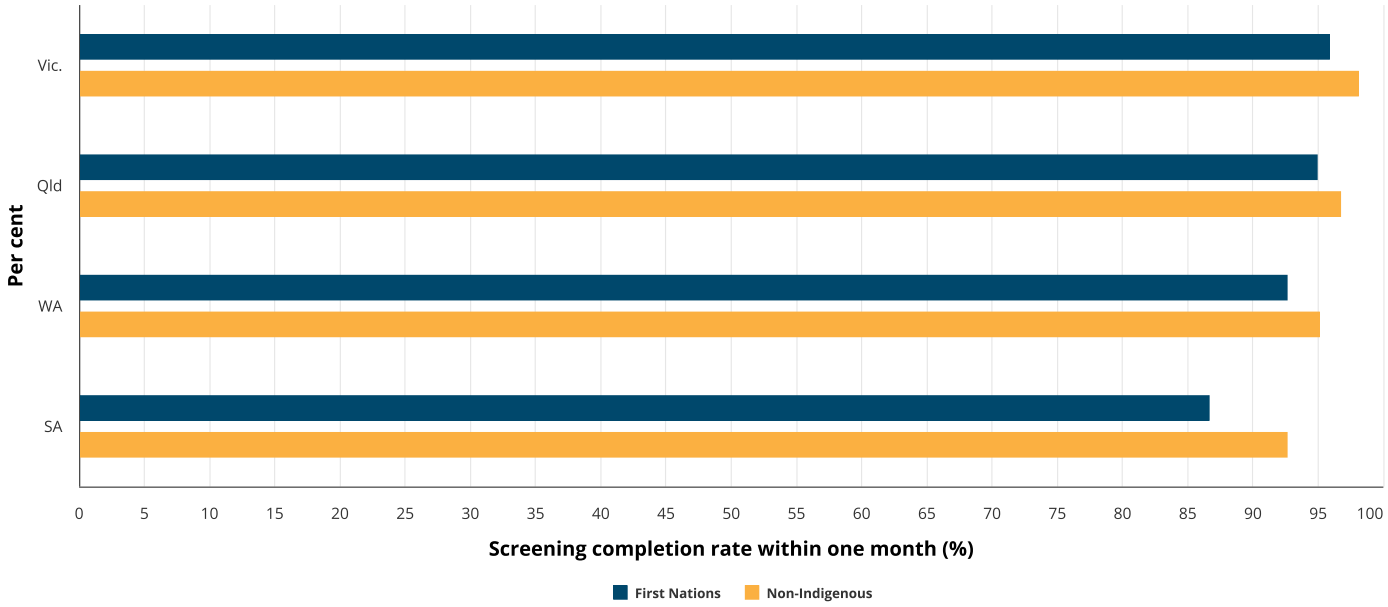
Age at screening

Most newborn hearing screening occurs within one month of birth. In 2023–24, 95.9% (1,485) of eligible First Nations babies in Victoria, 94.9% (6,245) in Queensland, 92.6% (2,131) in public hospitals in Western Australia and 86.6% (963) in South Australia had a newborn hearing test within one month of birth. These data were not available for New South Wales or the Northern Territory.

The proportions of First Nations babies who had a newborn hearing test within one month of birth were slightly lower than non-Indigenous babies, ranging from less than 2 percentage points lower in Queensland to around 6 percentage points lower in South Australia (Figure SCREENING 2).

Figure SCREENING 2: Babies who had a newborn hearing screening test within one month of birth, by state/territory and Indigenous status, 2023–24

Measure: Per cent



Source: AIHW analysis of the NSW Statewide Infant Screening–Hearing (SWISH) program (unpublished); The Royal Children's Hospital Melbourne data (unpublished); Queensland Health data (unpublished); Western Australia Department of Health data (unpublished); South Australia Women's and Children's Health Network data (unpublished); Tasmanian Health Service data (unpublished), Northern Territory Health data (unpublished).

Referral for further testing

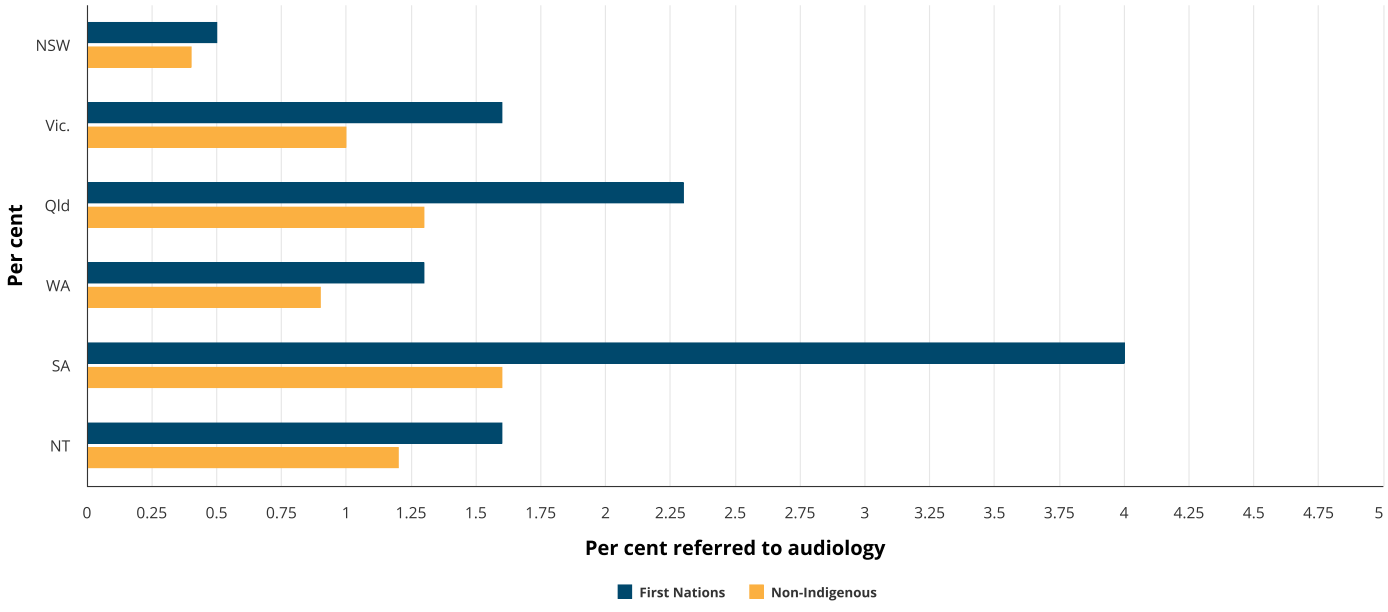
After newborn hearing screening, some babies are referred on to an audiologist for further testing. The technology used for newborn hearing tests in Australia is called the automated auditory brainstem response. Using this technology, the rate of referrals to audiology following newborn hearing screening is expected to be less than 2% (NFNHS, 2025).

For all states in 2023–24, 1.6% (291) First Nations babies were referred to audiology for further testing, out of the approximately 18,591 babies who completed newborn hearing screening. For each state, the proportions of First Nations babies referred to audiology were: 0.5% (29 babies) in New South Wales, 1.3% (29 babies) in Western Australia, to 1.6% (24 babies) in Victoria and the Northern Territory (21 babies), and 4.0% (43 babies) in South Australia.

The proportions of non-Indigenous babies referred to audiology for further testing ranged from 0.4% (298 babies) in New South Wales to 1.6% (278 babies) in South Australia (Figure SCREENING 3).

Figure SCREENING 3: Babies referred to audiology following newborn hearing screening, by state/territory and Indigenous status, 2023–24

Measure: Per cent



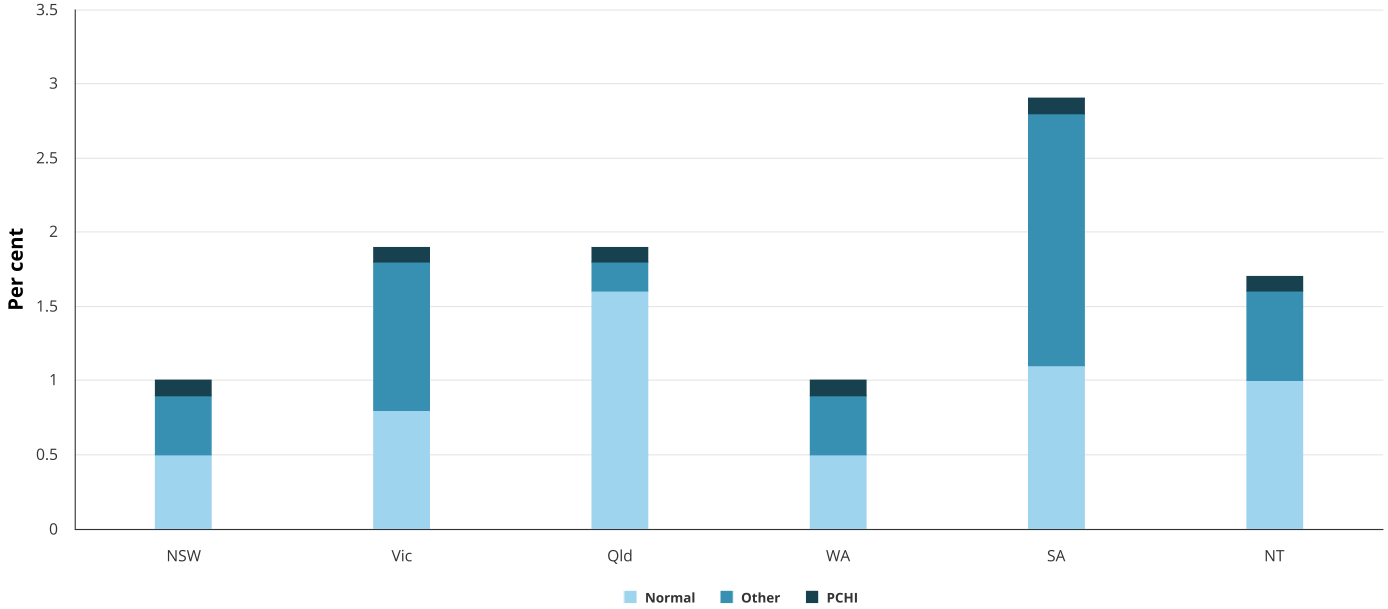
Source: AIHW analysis of the NSW Statewide Infant Screening–Hearing (SWISH) program (unpublished); The Royal Children's Hospital Melbourne data (unpublished); Queensland Health data (unpublished); Western Australia Department of Health data (unpublished); South Australia Women's and Children's Health Network data (unpublished); Tasmanian Health Service data (unpublished), Northern Territory Health data (unpublished).

Diagnosis of hearing loss in babies

Audiological testing determines whether a baby has permanent childhood hearing loss, another hearing or ear condition, or normal hearing.

Based on the combined data from the five states (New South Wales, Victoria, Queensland, Western Australia, South Australia) and the Northern Territory, 34 First Nations babies who had the newborn hearing test from July 2022–June 2024 were diagnosed with permanent childhood hearing loss, a rate of about 0.9 per 1,000 babies eligible for screening (Data table 2.1.2). South Australia and Victoria were the states with the highest number of First Nation babies with hearing conditions other than with permanent childhood hearing loss with 1.7 and 1.0 per cent respectively. (Figure SCREENING 4).

Figure SCREENING 4: Diagnosis outcomes among First Nations babies who participated in screening, by state and diagnosis, July 2022 to June 2024



PCHI = Permanent childhood hearing impairment (bilateral moderate to profound)

Other = Includes conditions other than PCHI.

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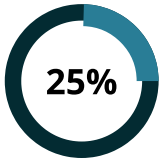
Health checks for First Nations people

In this section



of First Nations people (259,941 people) had a health check in 2023–24. The trend shows a moderate rise from the low during the pandemic of 20.8%.

Development of a new indicator on ear health checks

As part of the AIHW national Key Performance Indicators (nKPI) collection, a set of primary health care indicators for First Nations. a new indicator on ear health checks has been agreed:

PI26: Proportion of First Nations regular clients aged 0–14 who received an ear health check in the previous 12 months, including whether a visual check, tympanic movement check, or both, were performed.

The nKPI collection contains data on First Nations regular clients of organisations that receive funding under the Indigenous Australians' Health Programme.

The indicator is currently in a pilot phase, as the data for it has not yet been fully developed. As an alternative measure, data on the participation of First Nations people in health checks is provided.

Through Medicare, First Nations people can receive health checks from their doctor that are specifically for Aboriginal and Torres Strait Islander people, as well as follow-up services from other health professionals. The health check is an opportunity for First Nations people to have their ears checked. For children 0–14 the health check should include an ear examination and for those aged 15–54 the health check should include an ear examination and hearing test (Department of Health, Disability and Ageing n.d.).

The extent of the hearing check may vary from doctor to doctor, but it is expected that asking the patient about their (or parent about their child's) hearing ability, and at least an otoscopy (visual examination of the ear canal and tympanic membrane) would take place. Conducting an otoscopy is listed in the MBS schedule for item 715.

About the data

This section presents information on First Nations people who had a First Nations-specific health check, including health checks billed to Medicare by Aboriginal Community Controlled Health Services or other health services for First Nations people, as well as by mainstream general practitioners.

The information comes from Medicare Benefits Schedule (MBS) data. The MBS is a list of health services covered by a Medicare rebate. Certain MBS items refer to health checks intended for people of Aboriginal and Torres Strait Islander origin (MBS item numbers 715, 228, 92004, 92011, 92016, and 92023).

As the data are limited to MBS items billed to Medicare, they do not provide a complete picture of health checks provided to First Nations people. For example, First Nations people may receive health care that is not First Nations-specific, that is provided in residential aged care, or through a health care provider who is not eligible to bill Medicare.

The minimum time allowed between health checks is 9 months, so people can have more than one health check in a year.

For more information about First Nations-specific health checks and follow-up services, see Health checks and follow-ups for Aboriginal and Torres Strait Islander people.

Note that different estimates of the First Nations population are used in the calculation of population rates for different analyses, generally depending on whether the information relates to a single time period or change over time. For this reason, there are minor inconsistencies in information across tables.

Overview

In 2023–24, 25% (259,941 people) of First Nations people completed a health check. This was similar to the previous year with 24.2% in 2022–23.

Age and sex

First Nations females (27%) had higher overall uptake of health checks than males (23%). This is in line with previous years; females have consistently had a higher uptake than males over the past decade.

The uptake of health checks generally increased with age. The aged group 65–74 (17,002) showed the highest uptake of health checks in terms of percentage with 38.2% and the 15–24 age group had the lowest in terms of percentage with 20.5% but the highest in terms of numbers, with 40,609 people).

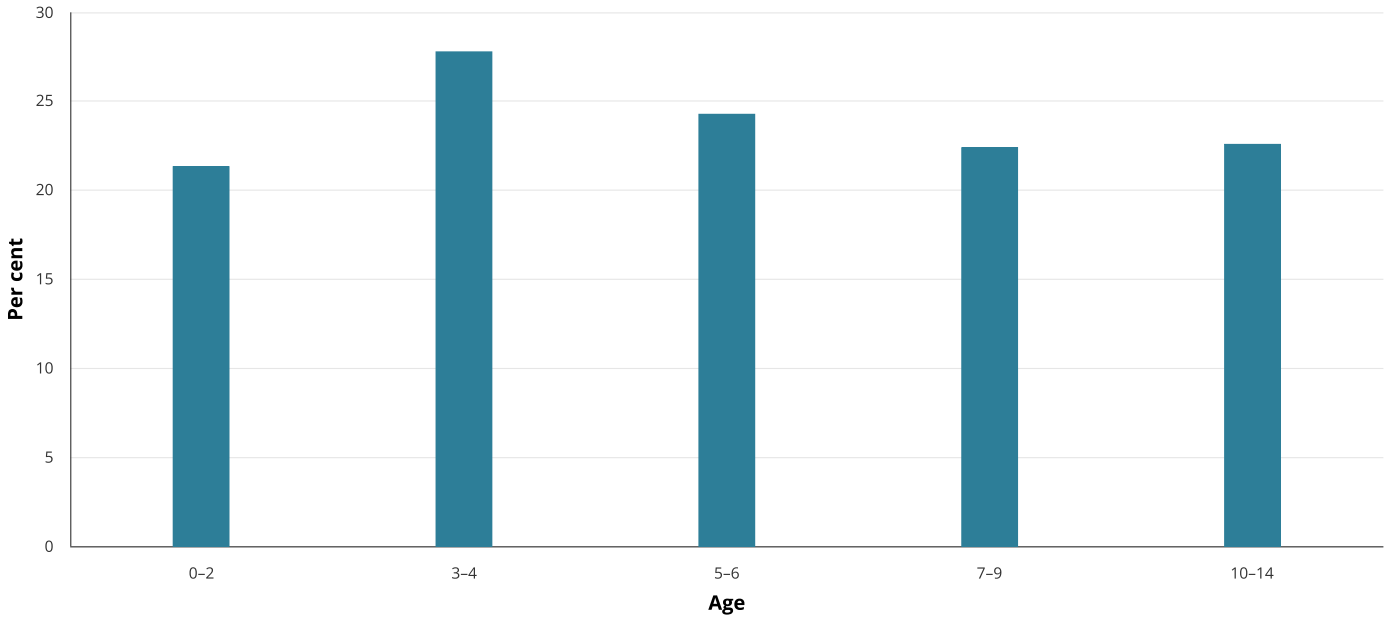
For further information, see: Health checks and follow-ups for Aboriginal and Torres Strait Islander people.

Among First Nations children 0–14, the proportion who had a health check in 2023–24:

- was highest at 27.8% for children aged 3–4 years (11,701 children).
- ranged from 21.3–24.3% for children aged 0–2 years, 5–6 years, 7–9 years and 10–14 years (Figure SCREENING 5).

Figure SCREENING 5: Health checks for First Nations children aged 0–14, by age, 2023–24

Measure: Percent

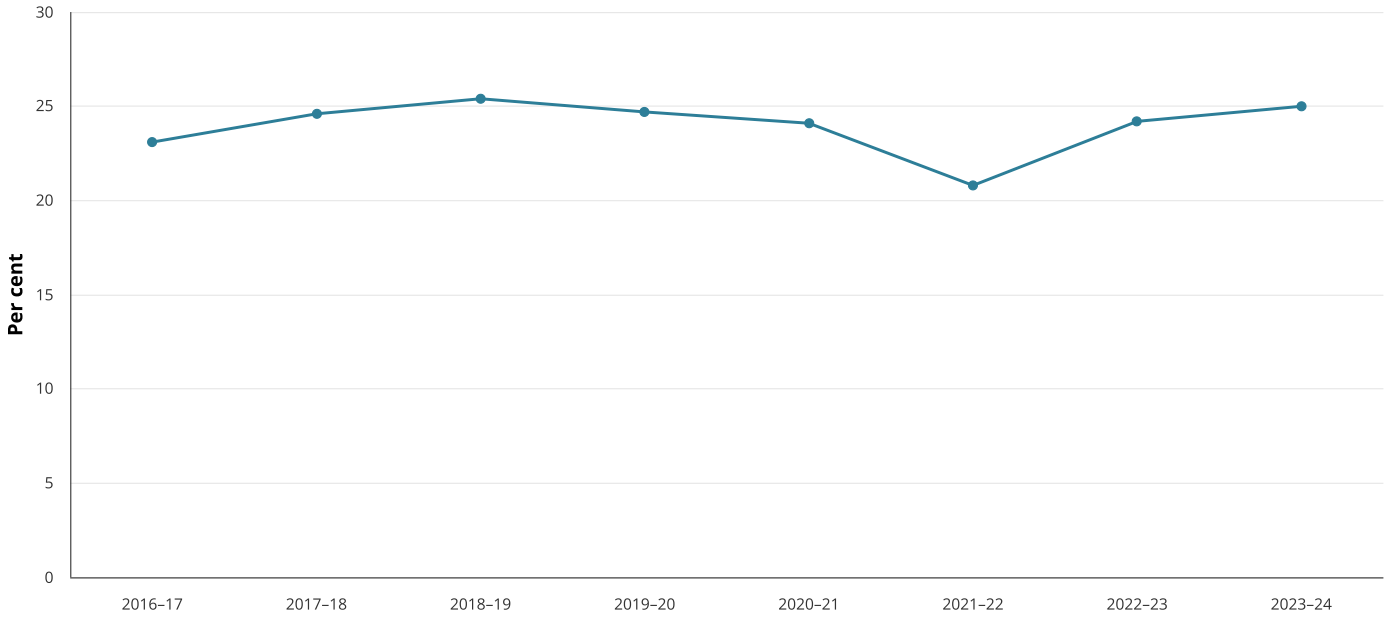


Source: AIHW analysis of MBS data; populations based on ABS data.

For all ages of First Nations people, the percentage of the population receiving health checks is rising steadily after a drop during the pandemic and for 2023-24 the percentage stands at 25% (259,941 people) (Figure SCREENING 6).

Figure SCREENING 6: Health checks for First Nations people, by financial year, 2016–17 to 2023–24

Measure: Per cent



Source: AIHW analysis of MBS data; Populations based on Australian Bureau of Statistics (ABS) data

References

Australian Institute of Health and Welfare (AIHW) 2021. Tracking progress against the Implementation Plan goals for the Aboriginal and Torres Strait Islander Health Plan 2013–2023, AIHW, Australian Government. Viewed 28 September 2024.

AIHW 2024. Health checks and follow-ups for Aboriginal and Torres Strait Islander people, AIHW, Australian Government. Viewed 28 September 2024.

Department of Health, Disability and Ageing website n.d. Medicare Benefits Schedule - Item 715, Viewed 30 September 2024.

Diagnostic audiology services

In this section

8,306 First Nations people received Medicare-subsidised audiology services in 2023–24.

Audiology service rates were higher among First Nations children aged 0–14, at 16.2 per 1,000 population, than among those in other groups.

Audiology services are needed to diagnose, treat and manage a range of ear and hearing conditions. Audiologists are qualified and trained to conduct these services. Medical practitioners may also conduct diagnostic audiology tests.

About the data

This section looks at the number of First Nations people receiving Medicare-subsidised audiology services conducted by an audiologist or medical practitioner.

The information comes from Medicare Benefits Schedule (MBS) data. The MBS is a list of health services covered by a Medicare rebate. MBS items 82300 to 82332 refer to diagnostic audiology testing and procedures. There is no specific diagnostic audiology service solely for First Nations patients.

Whether patients are First Nations people or non-Indigenous Australians is recorded on the Medicare database through the Voluntary Indigenous Identifier. First Nations people can voluntarily identify as being Aboriginal and/or Torres Strait Islander to Medicare, Services Australia. Not all First Nations people choose to identify themselves in this way, so MBS data on audiology services have been adjusted using a scale-up methodology developed by AIHW in consultation with the Department of Health, Disability and Ageing to reflect the size of the First Nations population.

Overview

In 2023–24, there were 8,306 First Nations people (8.1 per 1,000 population) who received Medicare-subsidised audiology services. After adjusting for differences in the age structure of the populations, the rate of First Nations people who received at least one audiology service in 2023–24 was 6.8 per 1,000 population, lower than the rate of 9.4 per 1,000 for non-Indigenous Australians.

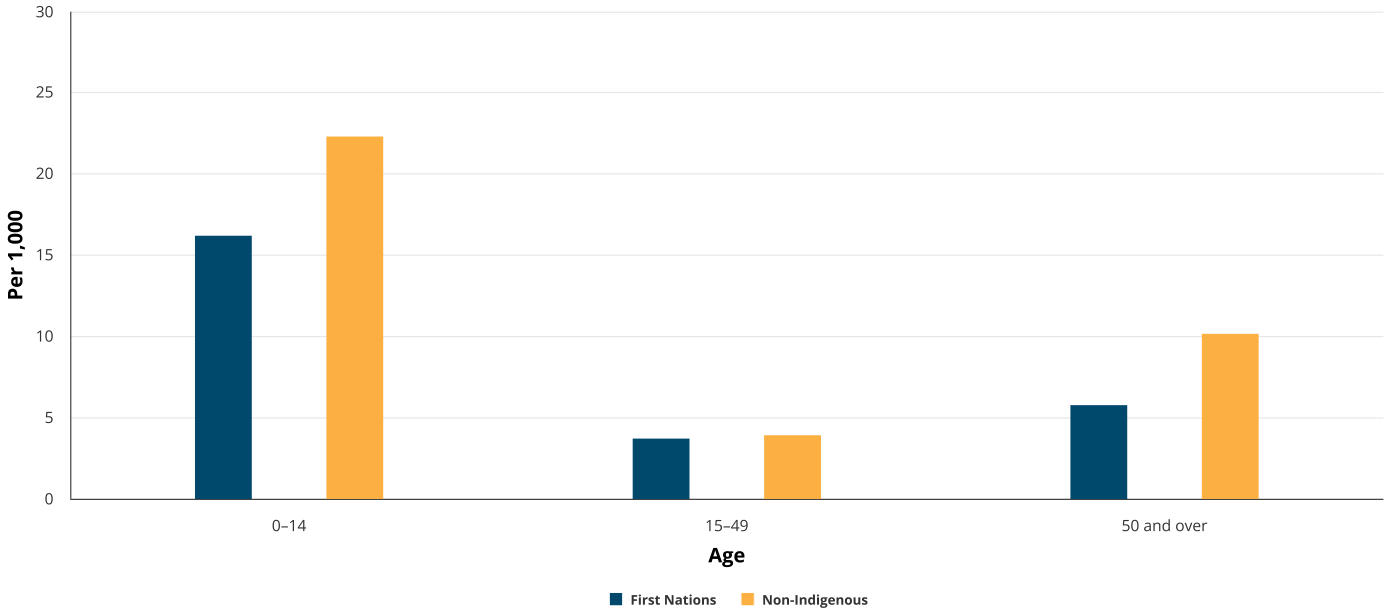
Age and sex

The rate of audiology service use among First Nations people was highest for children aged 0–14 (16.2 per 1,000 population) and lowest for those aged 15–49 (3.7 per 1,000 population).

Rates of audiology service use were higher among non-Indigenous Australians than First Nations people across age groups, most markedly among those aged 0–14 but also for those aged 65+ (Figure SCREENING 7).

Figure SCREENING 7: People receiving MBS audiology services, by age and Indigenous status, 2023–24

Measure: Per 1,000



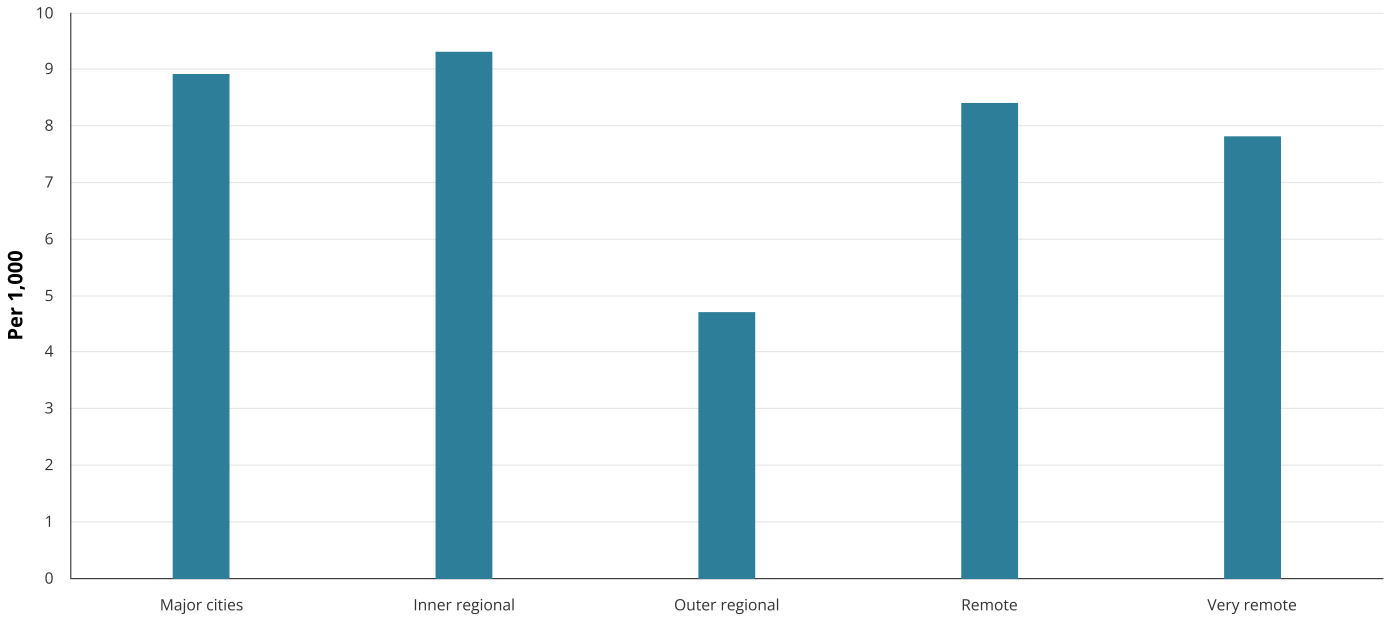
Note: that the rates of service use may be affected by the type of government services available for particular age-groups and the source of funding available to audiologists.
Source: AIHW analysis of MBS data; populations based on ABS data.

Remoteness

The rate of audiology service use among First Nations people was markedly lower in *Outer regional* areas (4.7 per 1,000 population) than in other remoteness areas. It was less than that of *Major cities* (8.9 per 1,000 population), *Inner regional* areas (9.3 per 1,000 population) and *Remote* areas (8.4 per 1,000 population) (Figure SCREENING 8).

Figure SCREENING 8: First Nations people receiving MBS audiology services, by remoteness, 2023–24

Measure: Per 1,000



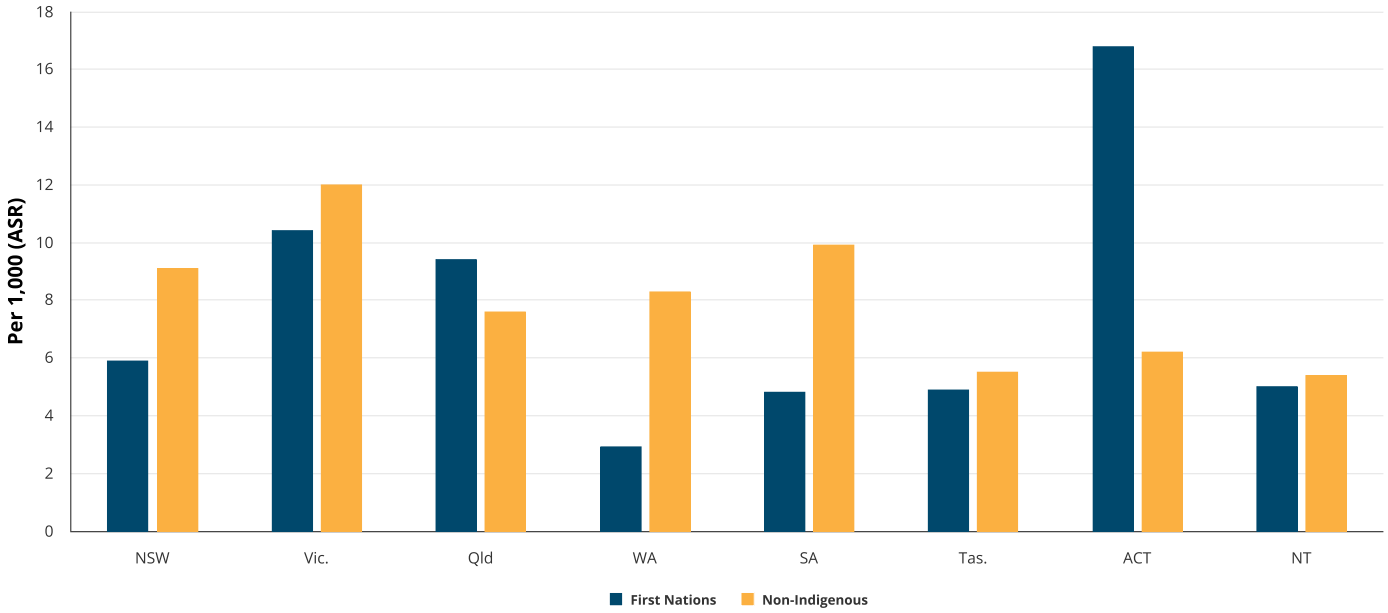
Source: AIHW analysis of MBS data; populations based on ABS data.

State and territory

In 2023–24, age-standardised audiology service rates among First Nations people ranged from 2.9 per 1,000 population (448 people) in Western Australia to 16.8 per 1,000 population (163 people) in the Australian Capital Territory (Figure SCREENING 9).

Figure SCREENING 9: People receiving MBS audiology services, by indigenous status and state/territory, 2023–24

Measure: Per 1,000 (ASR)



ASR = age-standardised rate

The disparity of MBS audiology service use for First Nations people and non-Indigenous people is greatest in the ACT and may be impacted by small numbers of First Nations population. Furthermore, the ACT is a highly urbanised area, which may impact access to audiology services. In Western Australia, First Nations people receive less MBS audiology services than non-Indigenous people, which may be affected by the high number of outer regional areas.

Over time

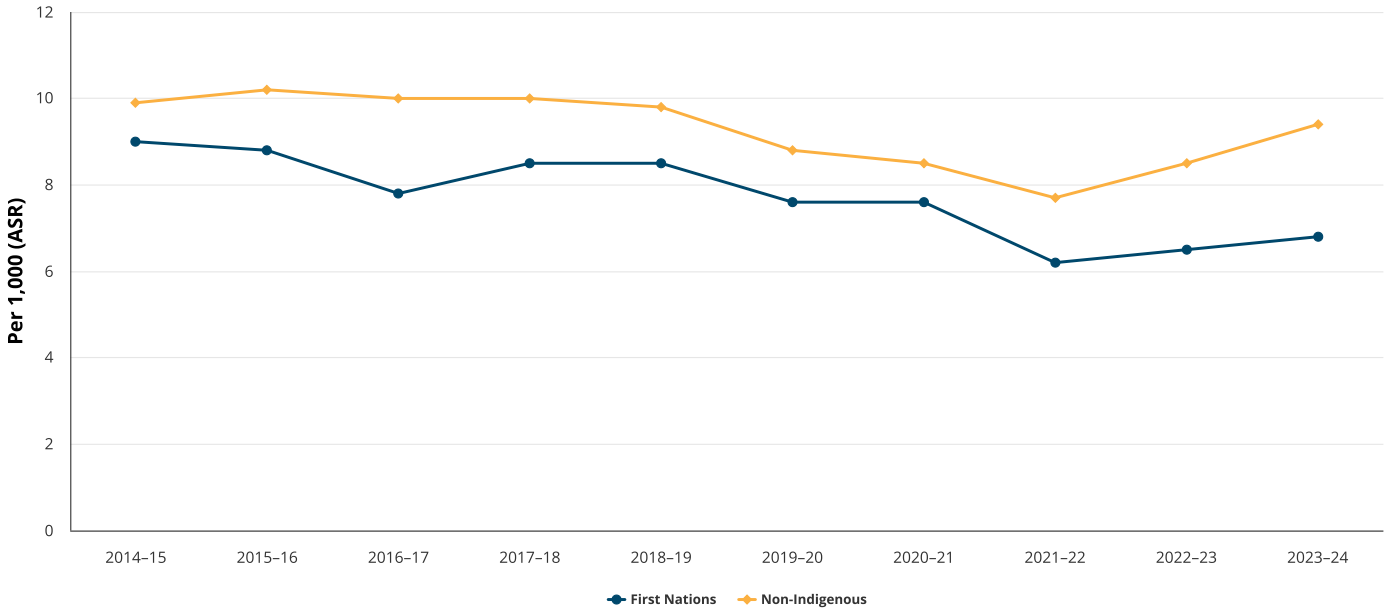
Similar to the trends in uptake of health checks, marked declines in audiology service rates for First Nations people occurred during the COVID-19 pandemic era, when people's movements and activities were restricted to prevent the spread of disease (AIHW 2021).

Audiology service use among First Nations people remained steady from 9.0 per 1,000 (age standardised) in 2014–15 to 8.5 per 1,000 in 2018–19 before declining during the COVID-19 pandemic to 6.2 per 1,000 population in 2021–22. The rate rose slightly after the pandemic to 6.8 per 1,000 population in 2023–24 (Figure SCREENING 10).

In comparison, for non-Indigenous Australians, there was a similar decline in the rate of audiology service use during the pandemic reaching a low at 7.7 per 1,000 population in 2021–22 but the rate rose more sharply afterwards, to 9.4 per 1,000 population in 2023–24.

Figure SCREENING 10: People receiving MBS audiology services, by Indigenous status, 2014–15 to 2023–24

Measure: Per 1,000



ASR = age-standardised rate
Source: AIHW analysis of MBS data; populations based on ABS data.

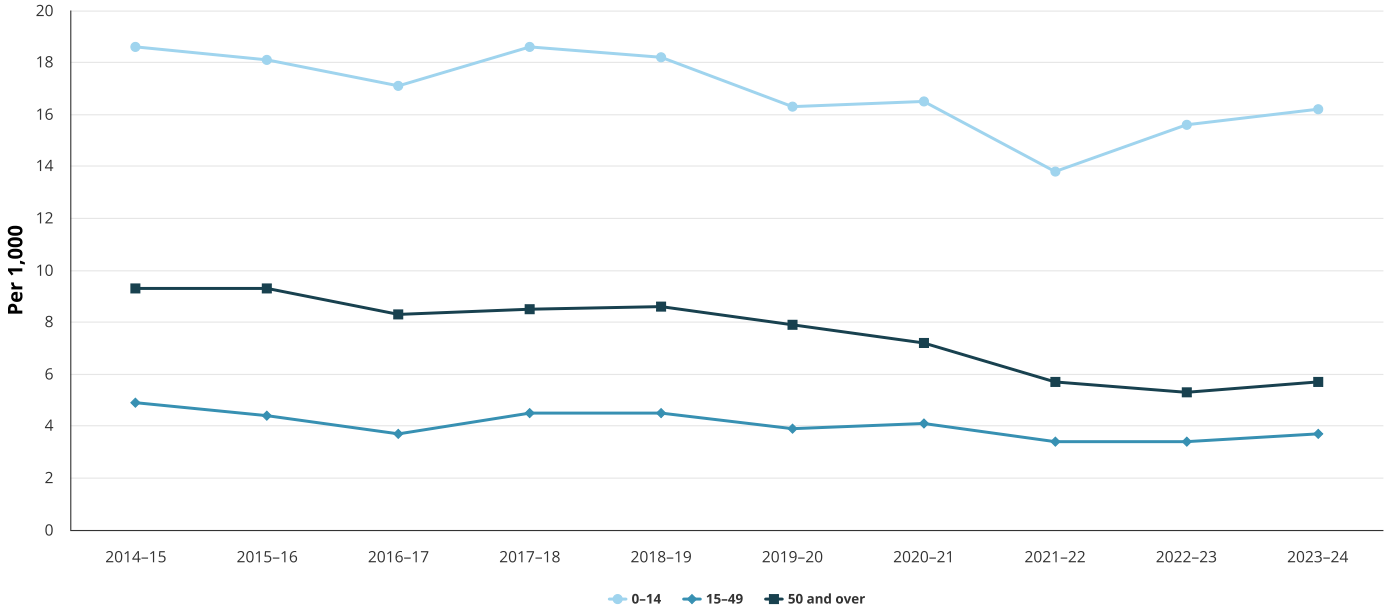
The gap between First Nations and non-Indigenous children receiving audiology services has widened in most recent years.

Audiology service use among First Nations children aged 0–14 has remained stronger than other age groups over time. It fell from a peak of around 18.6 per 1,000 population (5,787 people) before the pandemic to 13.8 per 1,000 (4,502 people) in 2021–22, then increased sharply to 16.2 per 1,000 (5,338 people) in 2023–24 (Figure SCREENING 11).

In contrast, audiology service use rates among First Nations people aged 15–49 and 50 and over has remained relatively stable and has shown more modest increases after the lows in the pandemic.

Figure SCREENING 11: First Nations people receiving MBS audiology services, by age, 2014–15 to 2023–24

Measure: Per 1,000



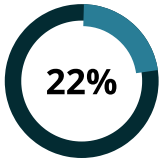
Source: AIHW analysis of MBS data; populations based on ABS data.

References

Australian Institute of Health and Welfare (AIHW) 2021. Tracking progress against the Implementation Plan goals for the Aboriginal and Torres Strait Islander Health Plan 2013–2023, AIHW, Australian Government. Viewed 28 September 2024.

Hearing Assessment Program – Early Ears for young children

In this section



(996) of First Nations children aged under 6 who had a hearing test through the HAPEE were found to have some hearing loss in 2023–24.

The Hearing Assessment Program – Early Ears (HAPEE) is a preventive health program that provides free ear health checks and hearing tests for First Nations children aged under 6 who do not yet attend full-time school. The HAPEE is an Australian Government program developed through a collaboration between Aboriginal Community Controlled Health Service representatives, the Department of Health and Aged Care, representatives from the First Nations hearing health sector and Hearing Australia (Hearing Australia 2021).

As part of the HAPEE:

- primary health care professionals do initial ear health checks, to identify children who need a hearing test
- Hearing Australia audiologists provide hearing tests to First Nations children aged under 6 found to be at risk of hearing loss. Hearing tests are provided at various locations such as Aboriginal Community Controlled Health Services, government clinics, other mainstream primary care clinics, and early childhood education centres.
- Hearing Australia will report back to the primary care clinic if further referrals are recommended, and other Australian Government programs may help families gain timely access to follow-up treatment, for example from ear nose and throat specialists, speech therapy and surgery.

HAPEE also provides training and support for primary health care professionals to do ear health checks, for in-service training for health and education staff, and for community talks to help parents and carers identify signs of hearing loss and maintain good hearing health in their children, manage and monitor potential hearing loss in young children (Hearing Australia n.d.).

About the data

This section presents data from Hearing Australia on the number of First Nations children who had ear health checks and hearing tests in the financial year of 2023–24 through the HAPEE.

To start with, the HAPEE focused on First Nations children in rural and remote areas. Over time, it has expanded to include First Nations children in all areas. Regional and remote areas are still priority locations.

The data on hearing loss are based on the ear with better hearing among HAPEE clients. The lowest levels of sound that can be heard by children with different categories of hearing loss are: normal (up to 25dB); mild (26–40 dB); moderate (41–60 dB); severe (61–80 dB); severe to profound (81–90 dB) and profound (91+ dB).

Data are presented for First Nations children aged under 6.

Ear health checks and hearing tests

Overview

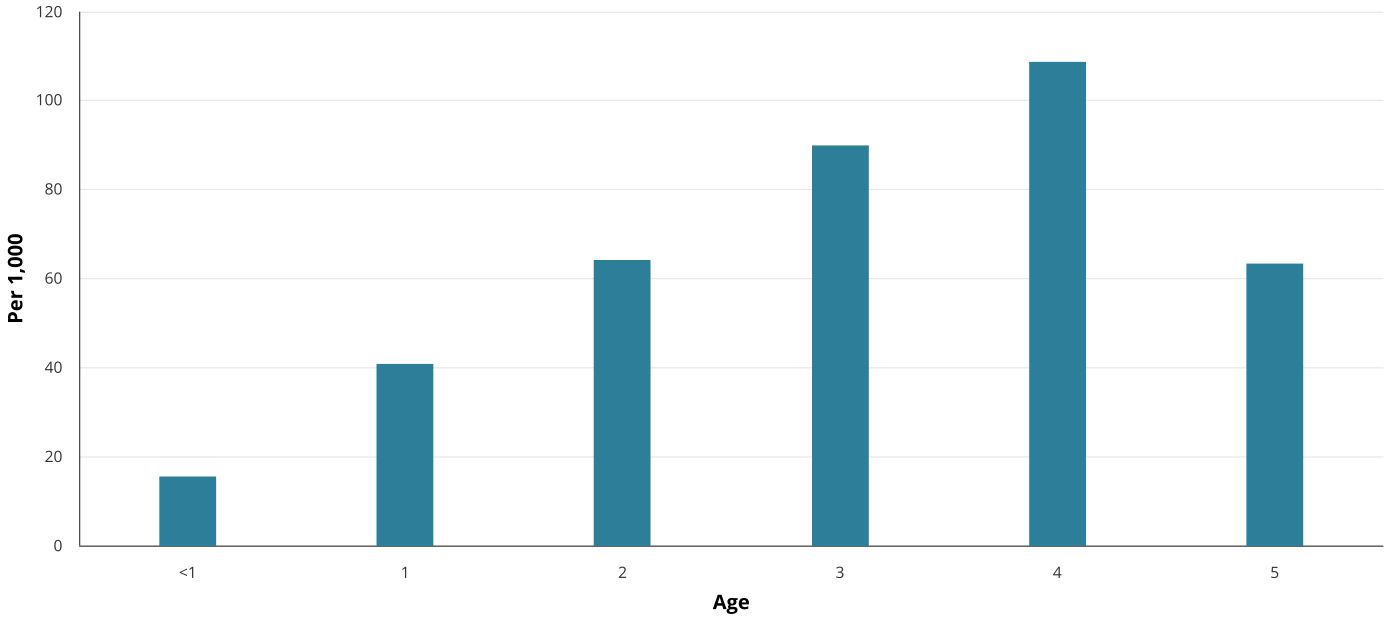
During the 2023–24 financial year, 10,935 ear health checks and hearing tests were provided to 8,279 First Nations children aged under 6.

Age

The rate of ear health check or hearing test services to First Nations children increased with age from 15.4 per 1,000 population among those under 1 year old (369 children), to a peak of 108.6 per 1,000 population among 4-year-olds (2,297 children). The rate of First Nations children receiving an ear health check or hearing test then fell to 63.3 per 1,000 among 5-year-olds (1,341 children) (Figure SCREENING 12). Note, children can receive multiple HAPEE services within a year and are counted separately each time.

Figure SCREENING 12: HAPEE ear health checks and hearing tests among First Nations children, by age, July 2023 – June 2024

Measure: Per 1,000



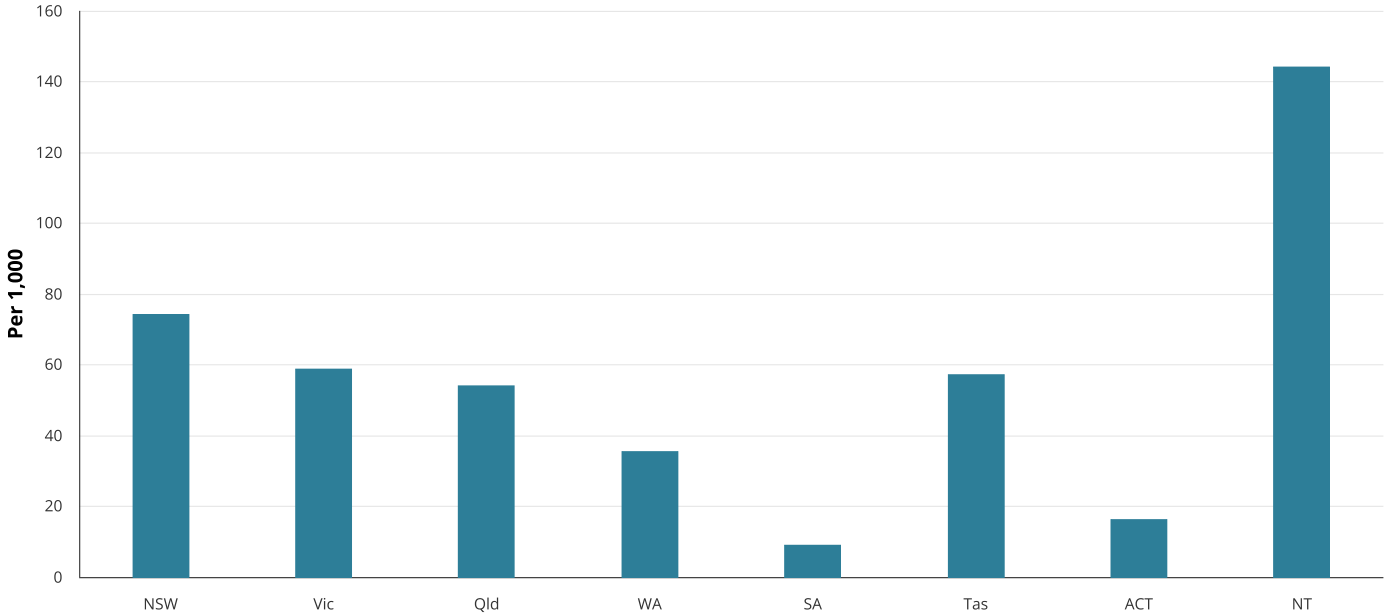
Source: AIHW analysis of Hearing Australia data (unpublished); and ABS population estimates and projections for rate calculations.

State and territory

Most HAPEE ear health checks or hearing tests were delivered in New South Wales (3,495), Queensland (2,116) and the Northern Territory (1,158) (Figure SCREENING 13). Across states and territories, the rate of First Nations children who had an ear health check or hearing test through the HAPEE in 2023–24 was highest in the Northern Territory at 144.1 per 1,000 population and lowest at 9.1 per 1,000 population in South Australia and 16.1 per 1,000 population in the Australian Capital Territory (Figure SCREENING 13).

Figure SCREENING 13: HAPEE ear health checks and hearing tests among First Nations children, by state/territory, 2023–24

Measure: Per 1,000



Source: AIHW analysis of Hearing Australia data (unpublished); and ABS population estimates and projections for rate calculations.

Children with hearing loss

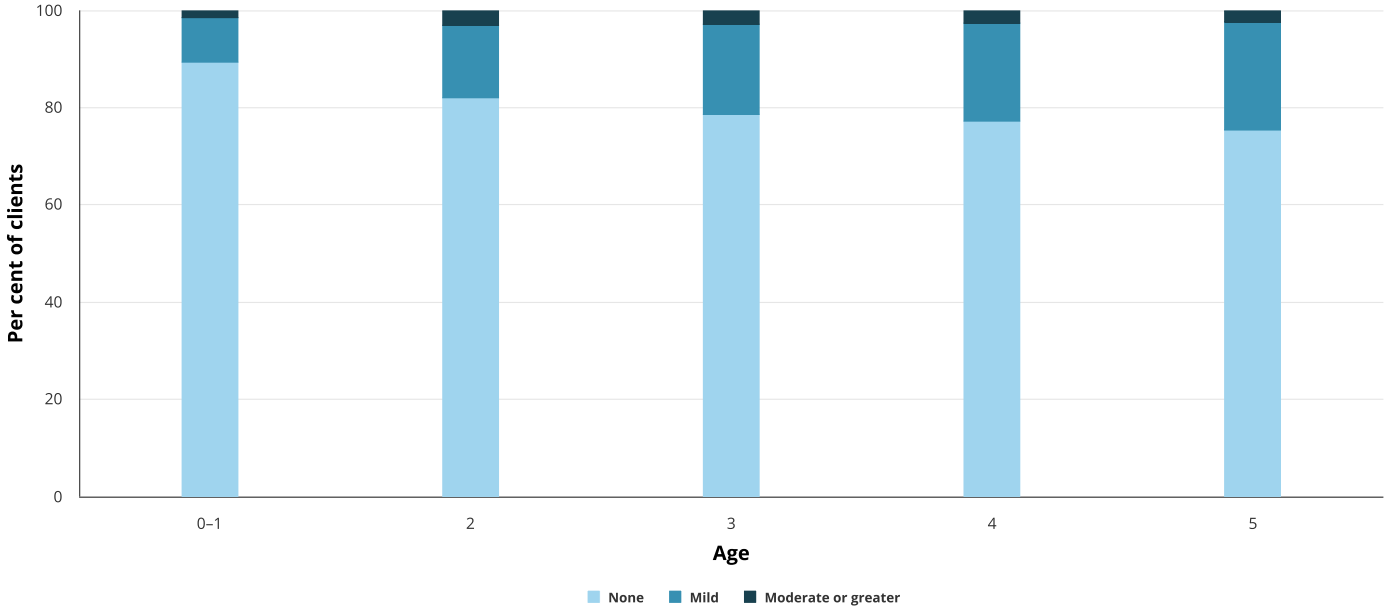
Overview

In 2023–24, 21.9% of First Nations children (996 children) aged under 6 who had a hearing test through the HAPEE were found to have some hearing loss. Of those tested 19.3% (877 children) had mild hearing loss, and 2.6% of those tested (119 children) had moderate, severe or profound hearing loss (Data table 2.4.2a).

Age

For First Nations children aged under 6 who had a hearing test, the proportion of children with some form of hearing loss increased with age. The proportions of children with hearing loss were: 10.6% for children aged 1 or under (15 children),18% for 2-year-olds (76 children), 21.4% for 3-year-olds (271 children), 22.7% for 4-year-olds (381 children), and 24.6% for 5-year-olds (253 children) (Figure SCREENING 14).

Figure SCREENING 14: HAPEE hearing tests among First Nations children aged under 6, by severity of hearing impairment and age, 2023–24



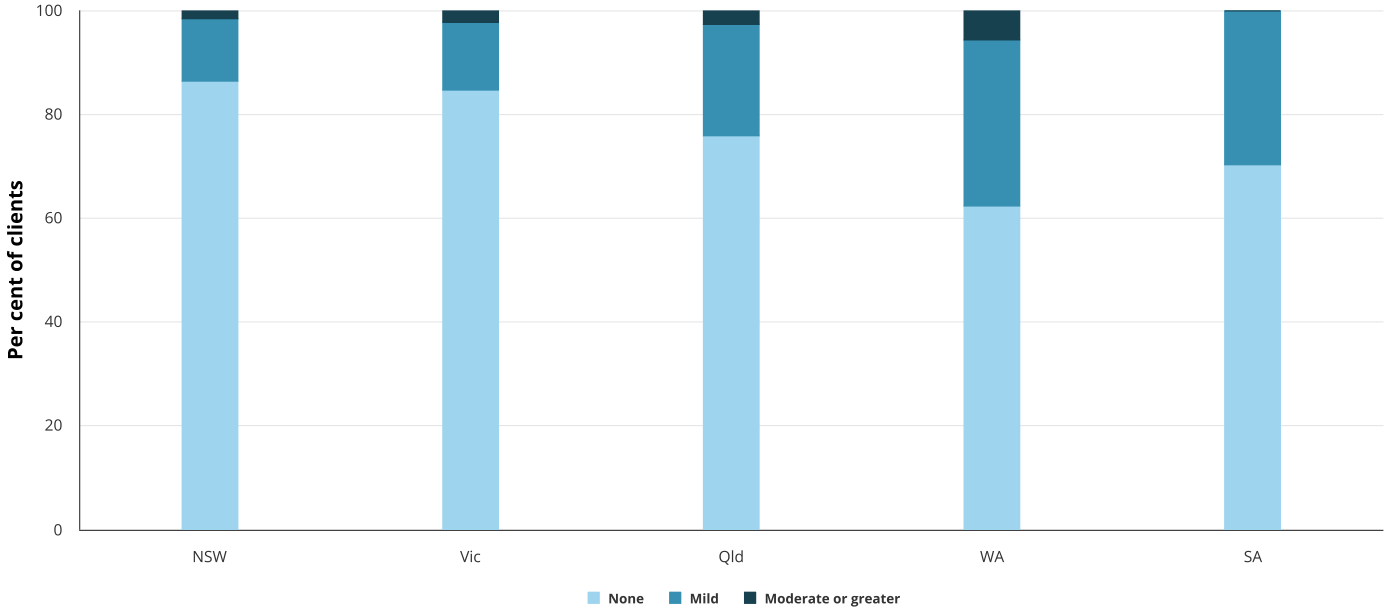
Source: AIHW analysis of Hearing Australia data (unpublished); and ABS population estimates and projections for rate calculations.

State and territory

The proportion of First Nations children found to have some hearing loss after having a hearing test through the HAPEE varied across states and territories. Excluding states and territories with relatively small numbers of program participants (South Australia and the Australian Capital Territory), the proportion with hearing loss ranged from 11.3% in Tasmania (15 children) and 13.6% in New South Wales (259 children) to 37.6% in Western Australia (112 children) and 41.2% in the Northern Territory (245 children).

Among First Nations children who had a hearing test through the HAPEE, moderate or more severe hearing loss was diagnosed in 1.7% of children in New South Wales (33 children), compared with 4.4% in the Northern Territory (26 children), and 5.7% in Western Australia (17 children) (Figure SCREENING 15).

Figure SCREENING 15: HAPEE hearing tests among First Nations children aged under 6, by severity of hearing impairment and state/territory, 2023–24



Source: AIHW analysis of Hearing Australia data (unpublished); and ABS population estimates and projections for rate calculations.

References

Hearing Australia 2021. Urban hearing pathways: the role of accessibility and availability of hearing and ear health services in avoidable hearing loss for urban Aboriginal and Torres Strait Islander children, report to the Australian Government Department of Health, Hearing Australia, accessed 10 September 2024.

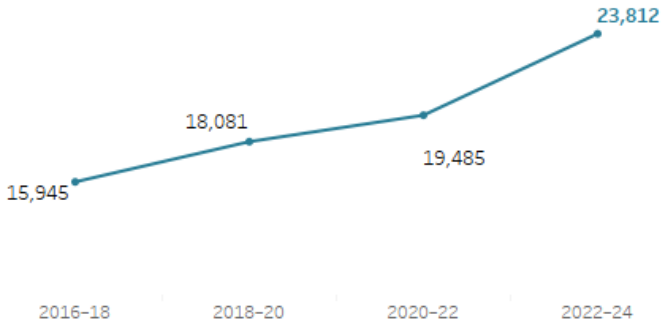
Hearing Australia n.d. The HAPEE Community Toolkit Guide, HAPEE Ears For Early Years, Hearing Assessment Program – Early Ears, How to take action to help prevent avoidable hearing loss in young Aboriginal and Torres Strait Islander children. Available from Hearing Australia. Viewed 17 November 2024.

Mount Sinai 2024. Ear infections. Mount Sinai, Mount Sinai website, accessed 30 September 2024.

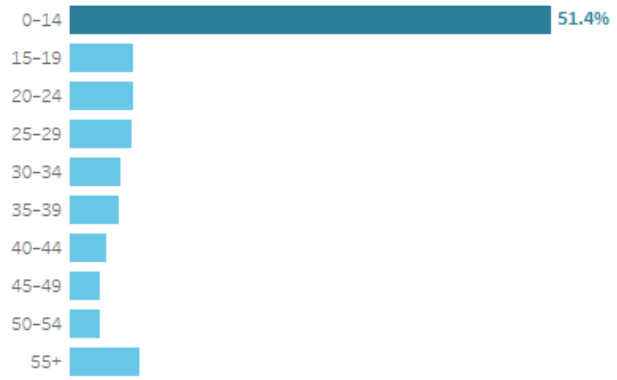
Intervention and treatment

Figure TREATMENT: Key statistics

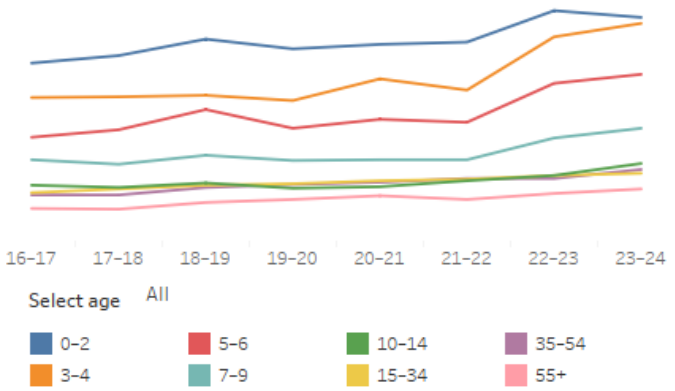
In 2022–24 around **23,800** emergency department visits by First Nations people were for an ear-related main diagnosis



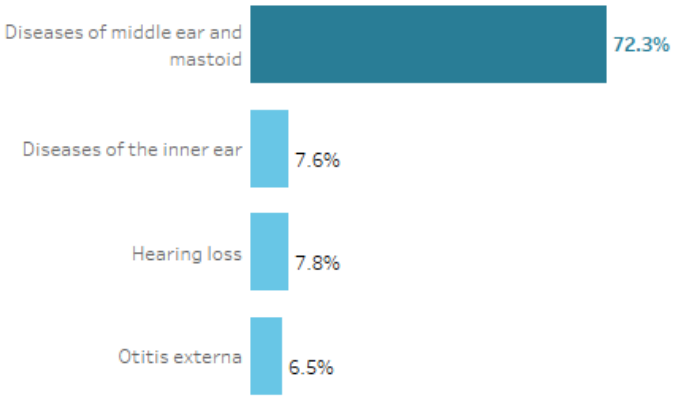
In 2022–24, **around half** (12,250) of all emergency department visits where the main diagnosis was ear related by First Nations people were for children aged 0–14



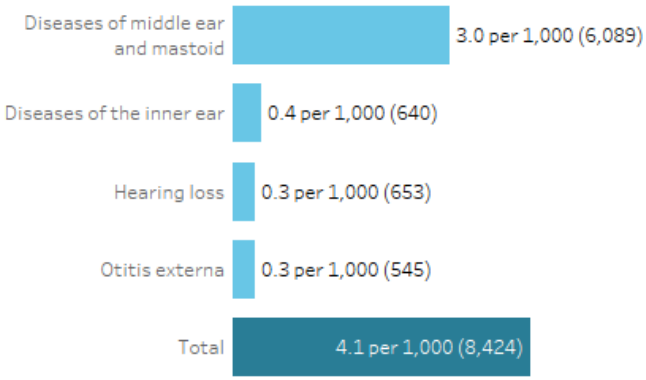
Rates of emergency department visits where the main diagnosis was ear related generally increased from 2016–17 to 2023–24 among First Nations people in all age groups.



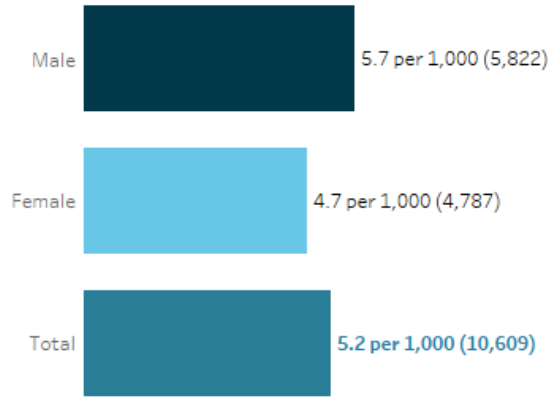
72% (6,100) of ear or hearing related hospitalisations among First Nations people over 2022–24 were for middle ear infections



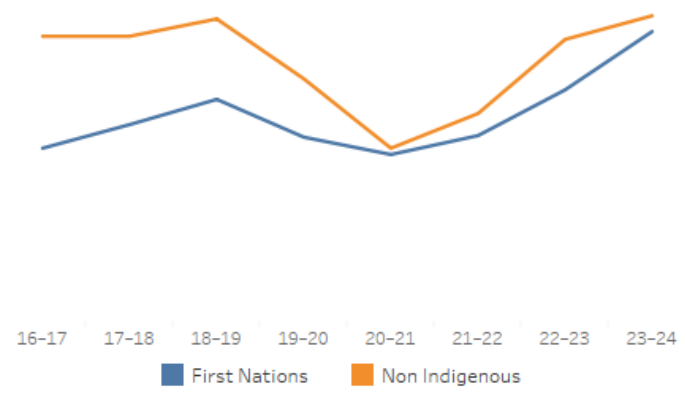
There were over **8,400** (4.1 per 1,000 population) hospitalisations of First Nations people where the main diagnosis was a disease of the ear and mastoid process



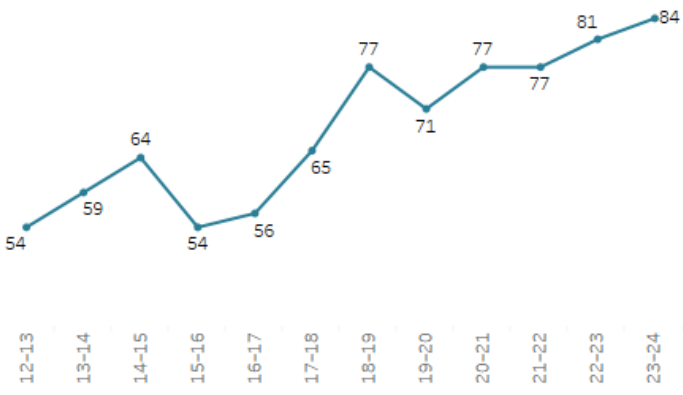
In 2022–24, **10,609** in-hospital ear or hearing related procedures were performed for First Nations patients (5.2 per 1,000 population).



Over 2016–17 to 2023–24 there was a narrowing of the gap for ear and hearing related hospital procedures among Indigenous and non-Indigenous children aged 0–2.



For First Nations people, median waiting time (days) for elective myringotomy increased by **30 days** from 2012–13 to 2023–24



Intervention and treatment services serve to minimise the impact of injury and disease, including ear or hearing related conditions. Measuring the frequency and types of treatment that First Nations people receive for ear disease can provide a better understanding of the treatment pathway. Such information indicates the use of health services and costs and can be used to better target preventive health services in areas of greatest need.

Information on intervention and treatment services is primarily available from hospital settings, where patients may go to seek urgent care, or to have specialised surgery or procedures.

In this section, '*diseases of the ear and mastoid process* refer to diseases which affect the outer, middle, and inner ear, and the mastoid bone behind the ear. *Ear or hearing-related hospital procedures* refers to clinical interventions such as myringotomy, myringoplasty and other medical procedures (see subsection for further details).

This chapter covers the following information:

- emergency department visits for diseases of the ear and mastoid process (data tables 3.1a–3.1g)
- hospital admissions for diseases of the ear and mastoid process and injuries to the ear (data tables 3.2a–3.2j)
- ear or hearing related hospital procedures (data tables 3.3.1a–3.3.1g)
- middle ear related hospital procedures (data tables 3.3.2a–3.3.2g)
- waiting times for elective myringotomy surgery – incision in the eardrum to relieve pressure or drain fluid (data tables 3.4.1a–3.4.1e)
- waiting times for elective myringoplasty surgery – the repair of a hole in the eardrum (data tables 3.4.2a–3.4.2e)
- First nations ear related surgeries delivered by the Eye and Ear Surgical Support Program (data table 3.5).

Data tables in Excel spreadsheet format can be accessed at the Data tab.

About the data

Information in this chapter comes from the AIHW National Hospital Morbidity Database, the AIHW National Non-admitted Patient Emergency Department Care Database and the Eye and Ear Surgical Support Program (EESS).

More information about each of these data sources is provided in the following subsections.

In response to the COVID-19 pandemic, which emerged in early 2020, all non-urgent elective surgery was temporarily suspended from 25 March 2020 in both public and private hospitals. The impact of this may be apparent in data on elective hospital procedures and waiting times.

Emergency department care

In this section

In 2022–24, there were 23,812 visits to an emergency department by First Nations people where the main diagnosis was an ear related condition.

In 2022–24, over half (51% or 12,251) of all emergency department visits where the main diagnosis was an ear related condition by First Nations people were for children aged 0–14.

Emergency departments are a vital part of Australia's health care system, providing care for people who need urgent medical attention.

In 2022–24, there were 23,812 visits to an emergency department by First Nations people where the main diagnosis was a disease of the ear or mastoid process. This was a rate of 11.7 per 1,000 population.

About the data

This section presents information on the number and rate of people who visited the emergency department of a public hospital and whose main diagnosis was a disease of the ear or mastoid process. This includes diseases of the outer, middle and inner ear, hearing loss, and other ear conditions, as listed in the International Classification of Disease (ICD10, 11th edition, Australian modification) under Diseases of the ear and mastoid process (codes H60–H95).

The information comes from the AIHW National Non-admitted Patient Emergency Department Care Database (NNAPEDC).

Most patients who receive care in emergency departments are non-admitted patients – they have not been formally admitted to hospital, although they may be admitted afterwards.

Age and sex

In 2022–24, over half (51%) of all emergency department visits where the main diagnosis was ear related by First Nations people (12,251) were for children aged 0–14.

Rates of emergency department visits where the main diagnosis was ear related were highest among young First Nations children.

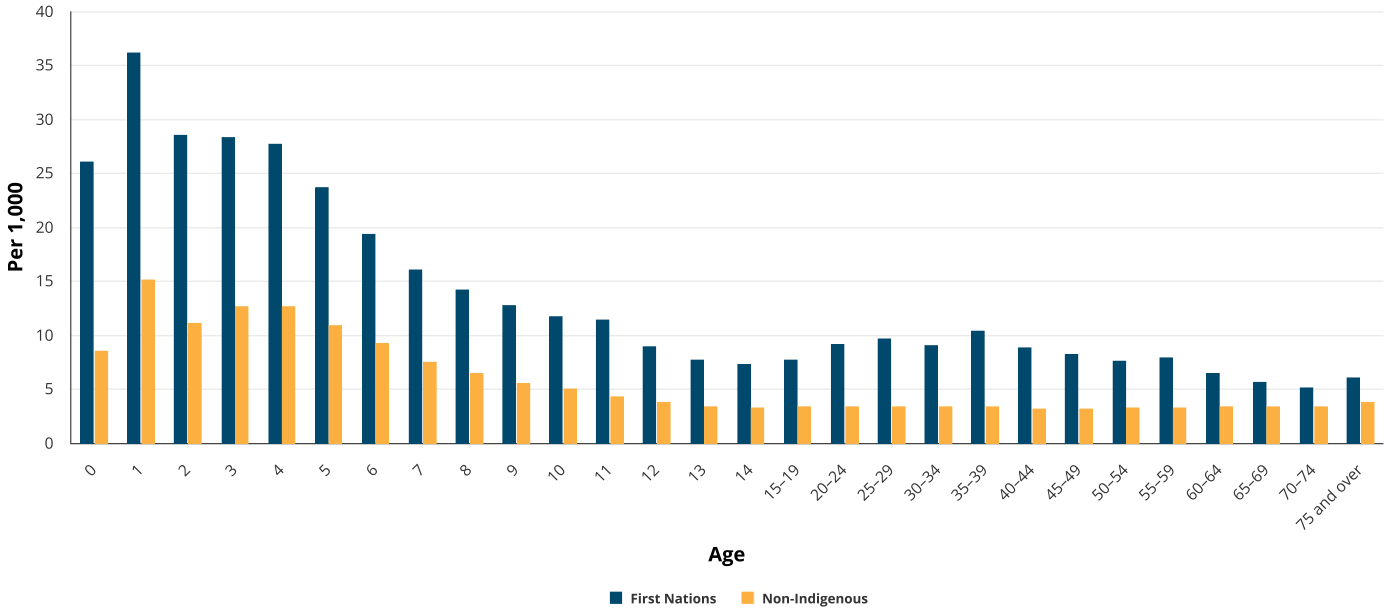
Among First Nations children aged 1, there were 36.1 emergency department visits where the main diagnosis was ear related per 1,000 population (1657 visits) in 2022–24, the highest rate across age groups. Rates of emergency department visits where the main diagnosis was ear related for other First Nations children aged under 5 were around 26 to 28 per 1,000 population.

Higher rates of emergency department visits where the main diagnosis was ear related among young First Nations children than among older First Nations people may be due to high rates of middle ear disease among First Nations children. First Nations children aged 0–14 with middle ear disease accounted for over half of all hospital admissions for a main diagnosis of ear disease among First Nations people in 2022–24. See Hospitalisations for ear and hearing related conditions.

Among First Nations people aged 15 and over, rates of emergency department visits where the main diagnosis was ear related were lower than 9 per 1,000 population.

The age pattern of emergency department visits where the main diagnosis was ear related was similar for First Nations people and non-Indigenous Australians, though the levels were higher among First Nations people for all age groups (Figure TREATMENT 1).

Figure TREATMENT 1: Emergency department visits for main diagnosis of diseases of the ear and mastoid process, by Indigenous status and age, 2022–24



Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database – and ABS population estimates and projections for rate calculations.

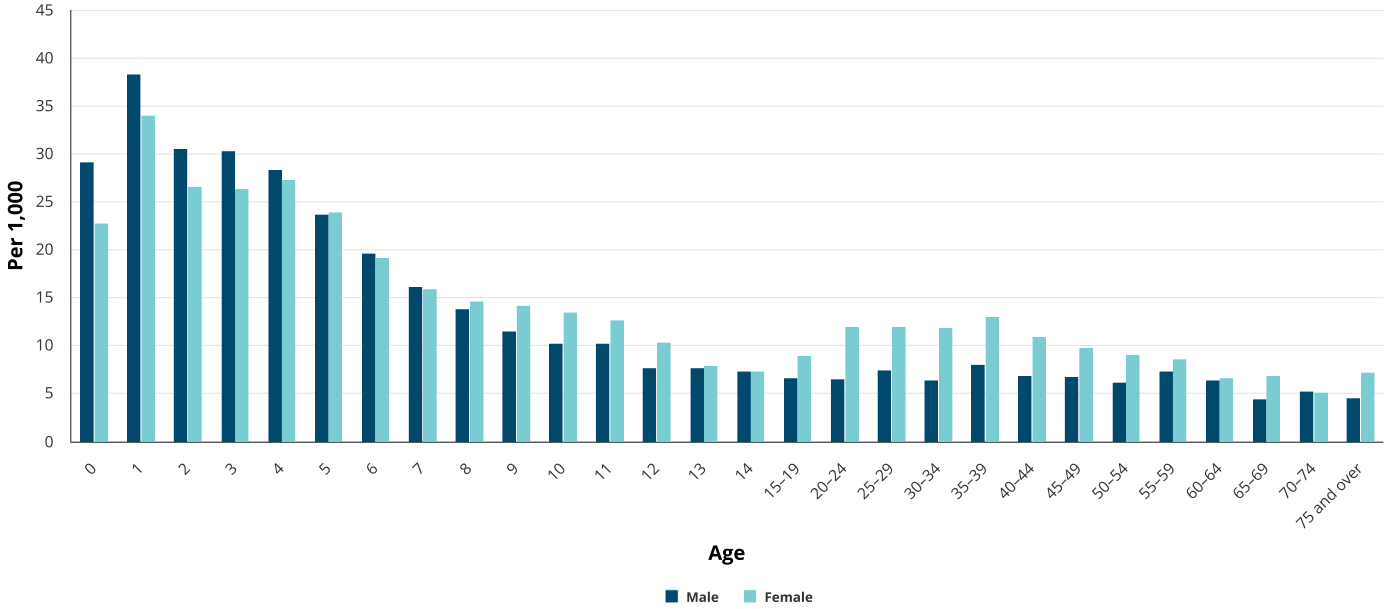
In 2022–24, the rate of emergency department visits where the main diagnosis was ear related among First Nations people was higher for females 12.7 per 1,000 population (12,890) than for males 10.7 per 1,000 population (10,921) (Data Table 3.1b).

Among First Nations children aged 0–4, the rate of emergency department visits where the main diagnosis was ear related was higher for males at 31.3 per 1,000 population (3,560 people) than for females at 27.3 per 1,000 population (2,937 people).

In contrast, among those aged from 20–54, rates of emergency department visits where the main diagnosis was ear related were much higher among First Nations females than males.

Rates of emergency department visits where the main diagnosis was ear related among First Nations males ranged from 6.1 to 7.9 per 1,000 population for those aged 20–54 and ranged from 9.0 to 12.9 per 1,000 population among females aged 20–54 (Figure TREATMENT 2).

Figure TREATMENT 2: Emergency department visits for main diagnosis of diseases of the ear and mastoid process, First Nations people, by age and sex, 2022–24



Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database – and ABS population estimates and projections for rate calculations.

Remoteness

In 2022–24, rates of emergency department visits where the main diagnosis was ear related among First Nations people were:

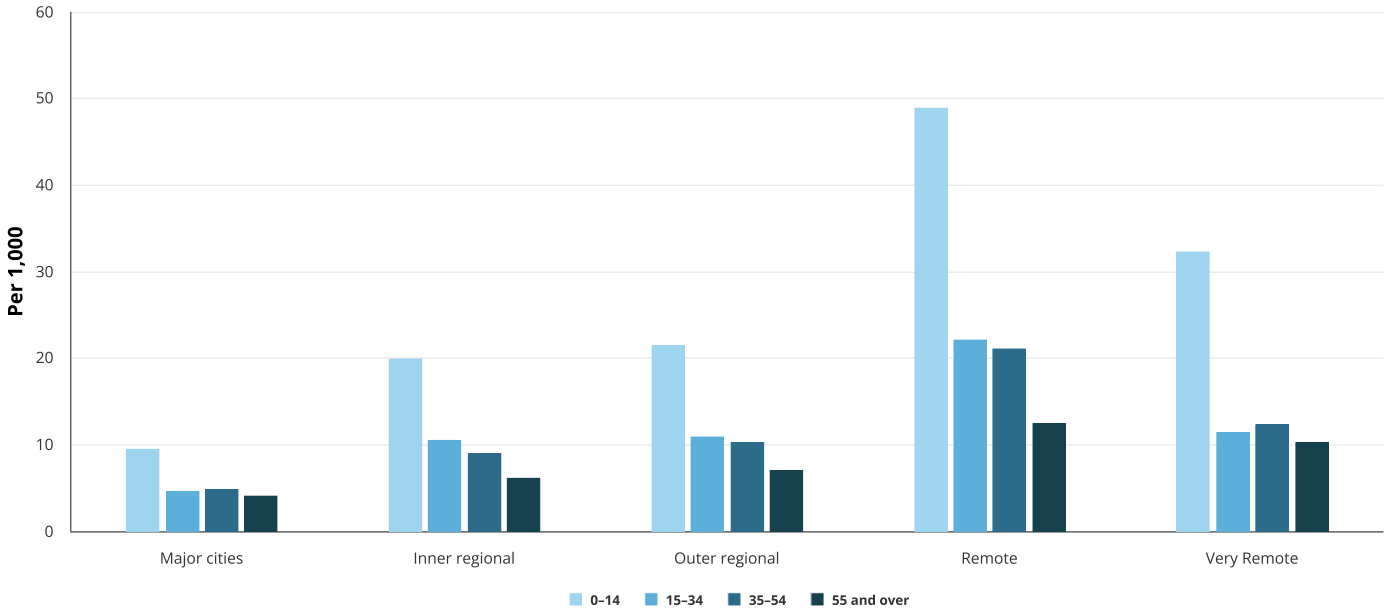
- lowest among those living in *Major cities*, at 6.1 per 1,000 population (5166 people)
- highest in *Remote* areas, at 28.2 per 1,000 population (3,345 people) (Data Table 3.1c).

Rates of emergency department visits where the main diagnosis was ear related among First Nations people aged 0–14 were higher than those for older First Nations people across all remoteness areas.

In *Remote* areas, the rate of emergency department visits where the main diagnosis was ear related among First Nations people aged 0–14 was 48.8 per 1,000 population (1,696 people), compared with around 22.1 and 21.1 per 1,000 First Nations people aged 15–34 and 35–54 respectively (823 and 598 people) (Figure TREATMENT 3).

Figure TREATMENT 3: Emergency department visits for main diagnosis of diseases of the ear and mastoid process, First Nations people, by remoteness and age, 2022–24

Measure: Per 1,000



Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database – AIHW population modelling using ABS population estimates and projections.

The higher number of visits in remote areas compared to very remote areas may reflect the location of emergency department facilities rather than access or need in those areas.

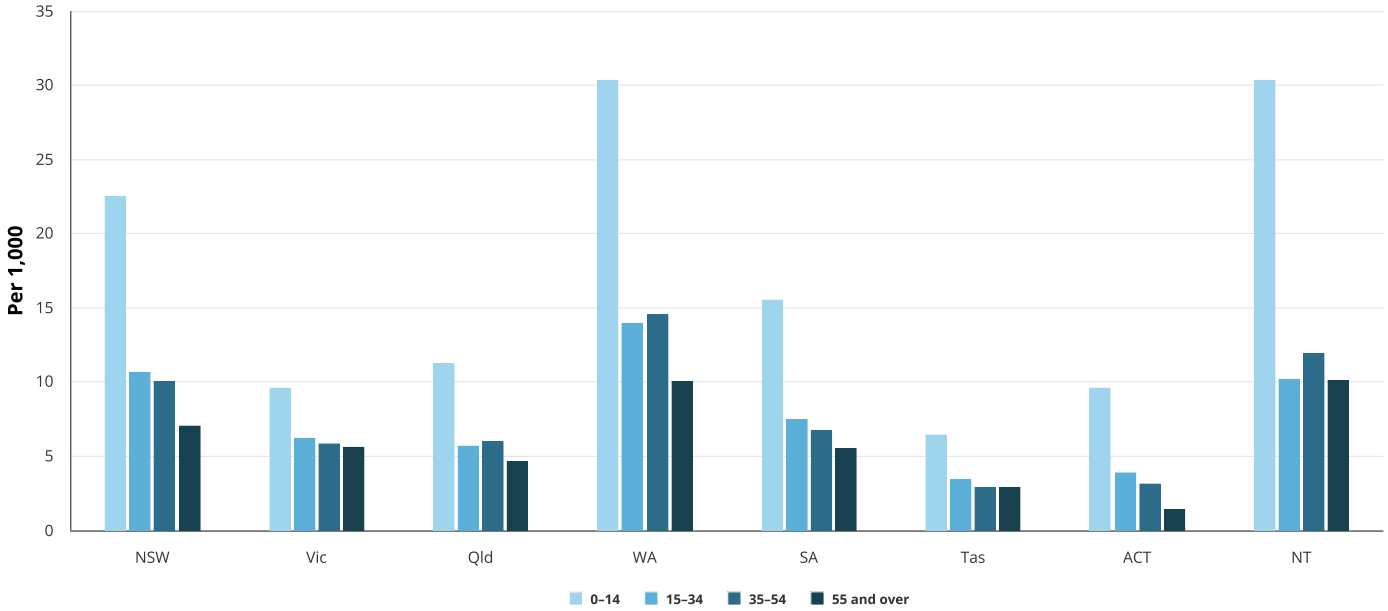
States and territory

Nationally, among First Nations people there were 11.7 per 1000 population (23,812 visits) emergency department visits where the main diagnosis was ear related in 2022–24.

Across states and territories, the rate of emergency department visits where the main diagnosis was ear related among First Nations people ranged from 4.1 per 1,000 population (288) in Tasmania to 18.7 per 1,000 population (4,656) in Western Australia (Data Table 3.1d). Across all states and territories, the rate of emergency department visits where the main diagnosis was ear related was higher among those aged 0–14 than in any other age group (Figure TREATMENT 4).

Figure TREATMENT 4: Emergency department visits for main diagnosis of diseases of the ear and mastoid process, First Nations people, by state/territory and age, 2022–24

Measure: Per 1,000

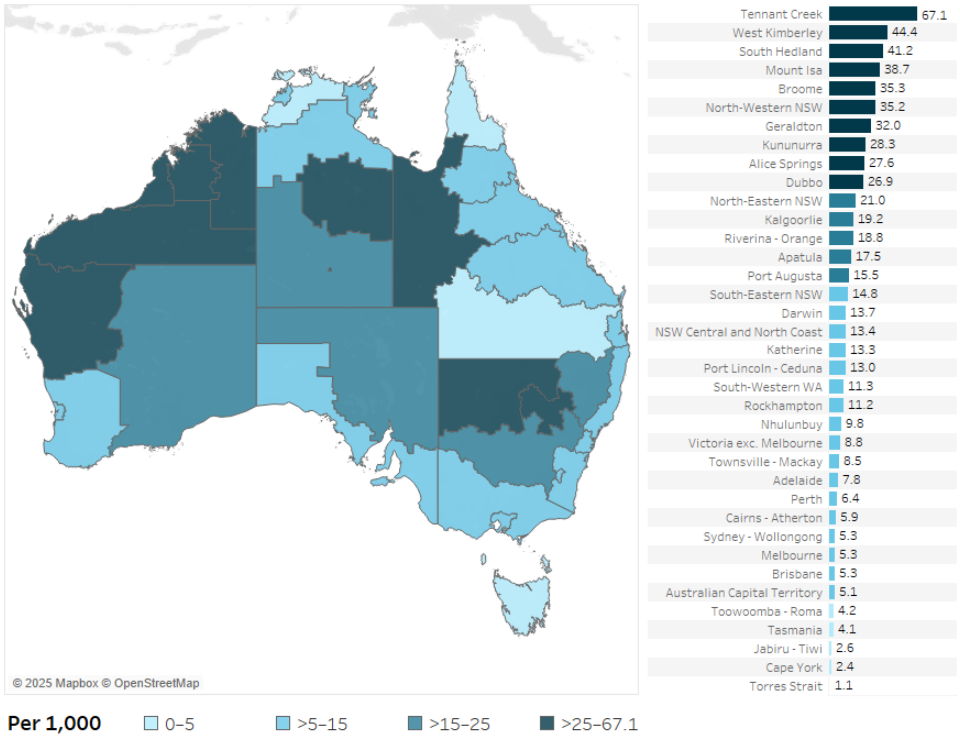


Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database – and ABS population estimates and projections for rate calculations.

Indigenous region

Across Indigenous regions, the rate of emergency department visits where the main diagnosis was ear related by First Nations people in 2022–24 ranged from under 2 per 1,000 population in Torres Strait and Cape York to 67 per 1,000 population in Tennant Creek (Figure TREATMENT 5).

Figure TREATMENT 5: Emergency department visits for main diagnosis of diseases of the ear and mastoid process among First Nations people, Indigenous region, 2022–24



Emergency department visits for main diagnosis of diseases of the ear and mastoid process among First Nations people, Indigenous region, 2022–24

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database – and AIHW population modelling using ABS population estimates and projections for rate calculations.

Over time

Between 2016–17 and 2023–24 the age-adjusted rate of emergency department visits where the main diagnosis was ear related among First Nations people increased from 7.2 to 10.6 per 1,000 population (7,848 and 12,389 people respectively).

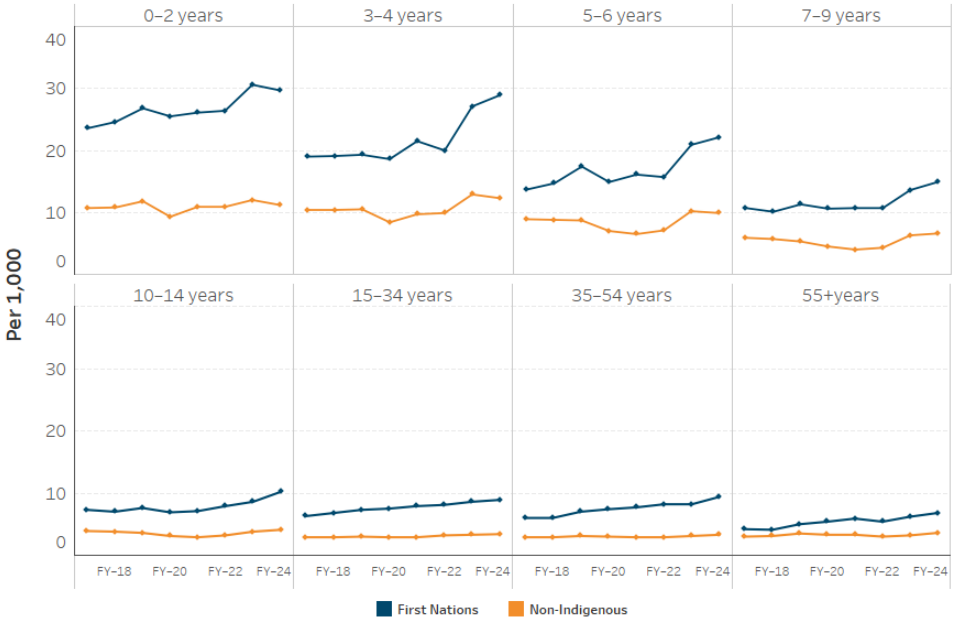
Over the same period the age-adjusted rate of emergency department visits where the main diagnosis was ear related among non-Indigenous Australians increased from 3.8 to 4.3 per 1,000 population (87,240 and 108,137) (Data Table 3.1e).

Rates of emergency department visits where the main diagnosis was ear related generally increased from 2016–17 to 2023–24 among First Nations people in all age groups.

First Nations children aged 0–2 had the highest rate of emergency department visits where the main diagnosis was ear related and the rate increased from 23.6 per 1,000 population in 2016–17 to 29.7 per 1,000 population in 2023–24 (1,528 and 2,079 respectively). In comparison, the rate of emergency department visits where the main diagnosis was ear related among non-Indigenous children aged 0–2 increased slightly from 10.7 per 1,000 population to 11.2 per 1,000 population (9,370 and 9,442 respectively) over the same period.

In older age groups, rates of emergency department visits where the main diagnosis was ear related among First Nations people were lower, but there were large increases from 2016–17 to 2023–24. Among First Nations people aged 15–34, the rate of emergency department visits where the main diagnosis was ear related increased from 6.3 per 1,000 population in 2016–17 to 8.9 per 1,000 population in 2023–24 (1,863 and 3,133 respectively). Among First Nations people aged 35–54, the rate of emergency department visits where the main diagnosis was ear related increased from 6 per 1,000 population in 2016–17 to 9.4 per 1,000 population in 2023–24 (1,156 and 1,990 respectively) (Figure TREATMENT 6).

Figure TREATMENT 6: Emergency department visits for main diagnosis of diseases of the ear and mastoid process, by Indigenous status and age, 2016–17 to 2023–24



Emergency department visits for main diagnosis of diseases of the ear and mastoid process, by Indigenous status and age, 2016–17 to 2023–24

Source: AIHW analysis of National Non-admitted Patient Emergency Department Care Database – and ABS population estimates and projections for rate calculations.

Hospitalisations

In this section

(5,651) of ear or hearing related hospitalisations among First Nations people were for **children aged 0–14** in 2022–24.

(6,089) of ear or hearing related hospitalisations among First Nations people were for **middle ear infections**.

People who are hospitalised with an ear or hearing condition as the main diagnosis generally have more severe ear disease or are admitted to hospital for ear or hearing related surgery or medical procedure.

About the data

The data in this section come from the AIHW National Hospital Morbidity Database (NHMD).

Information about hospitalisations is a count of hospital separations, not patients. The number of separations is a commonly used measure of the utilisation of hospital services.

A hospital separation is an episode of care for a patient admitted to hospital. It can be a total hospital stay that ends in the patient's discharge from hospital, transfer to another hospital or medical facility, or death; or part of a hospital stay that begins or ends with a change in the type of care provided.

Information is presented for hospitalisations where the main diagnosis is an ear or hearing related condition. This includes diseases of the outer, middle, and inner ear, hearing loss, and other ear conditions, as listed in the International Classification of Disease (ICD10, 11th edition, Australian modification) under Diseases of the ear and mastoid process (codes H60–H95).

It can be difficult to determine whether changes in hospitalisation rates represent a situation that is improving or getting worse. Increasing rates of hospitalisation may indicate that a health condition is becoming more prevalent in the population, or that access to hospital services is increasing, or a combination of both factors**.**

Most common diagnoses of ear or hearing related hospitalisations

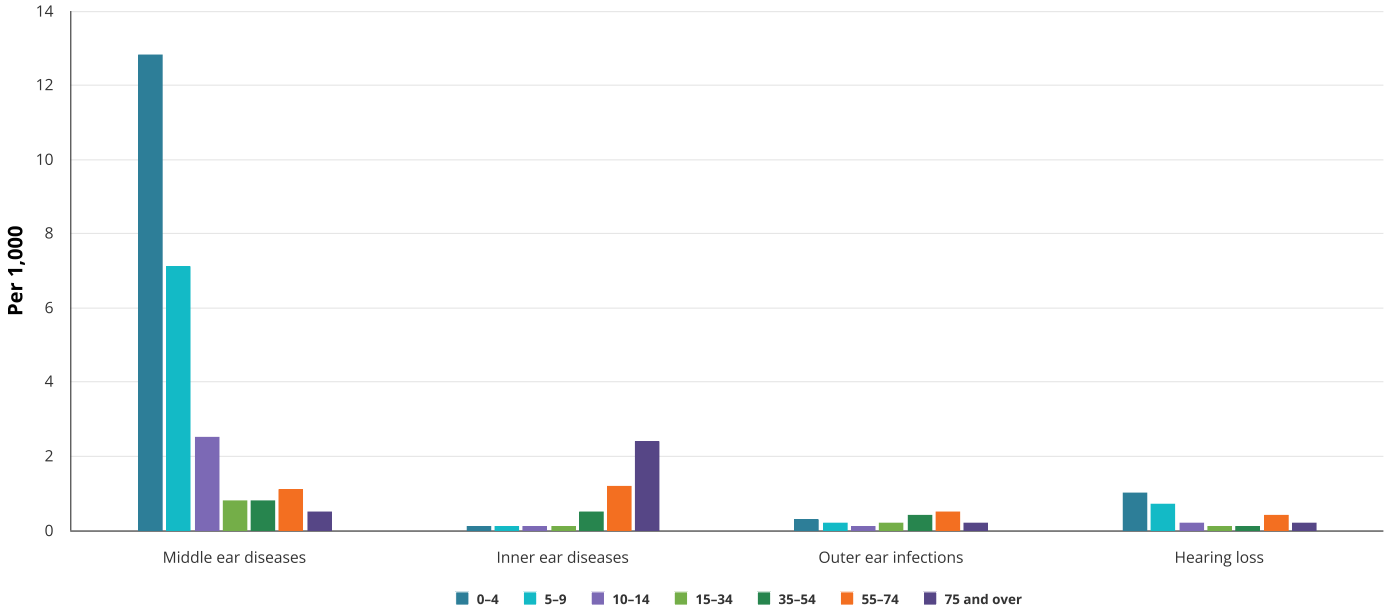
From July 2022 to June 2024, there were 8,424 hospitalisations of First Nations people where the main diagnosis was a disease of the ear and mastoid process (4.1 per 1,000 population).

Middle ear disease was the main diagnosis for over 7 in 10 of these hospitalisations among First Nations people (6,089 hospitalisations) (Data Table 3.2b).

Hospitalisation rates were highest among young First Nations children overall, largely attributable to high rates of middle ear disease in these age groups (Figure TREATMENT 7).

Figure TREATMENT 7: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, First Nations people, by diagnosis and age, 2022–24

Measure: Per 1,000

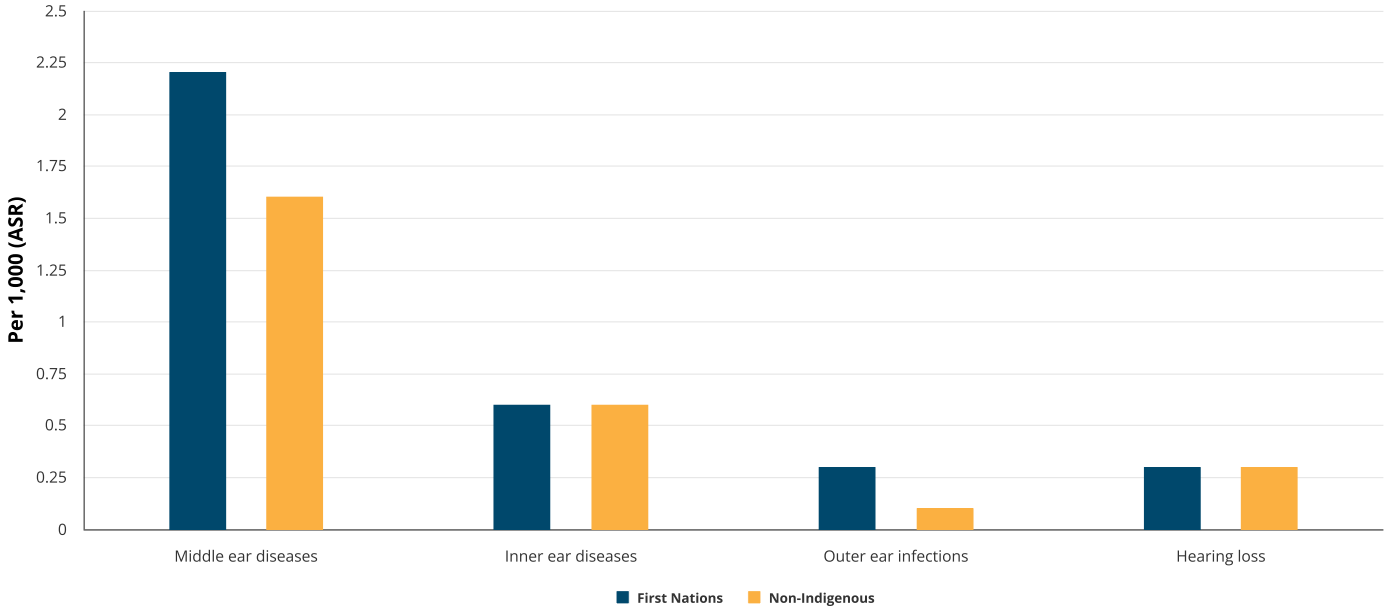


Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Among First Nations people, rates of hospitalisations due to middle ear and outer ear conditions were higher than among non-Indigenous people. Hospitalisation rates for conditions of the inner ear and hearing loss were similar for First Nations people and non-Indigenous Australians (Figure TREATMENT 8).

Figure TREATMENT 8: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, by diagnosis and Indigenous status, 2022–24

Measure: Per 1,000 (ASR)



ASR = age-standardised rate

Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Age and sex

In 2022–24, 67.1% of all ear or hearing related hospitalisations among First Nations people (5,651 hospitalisations) were for children aged 0–14.

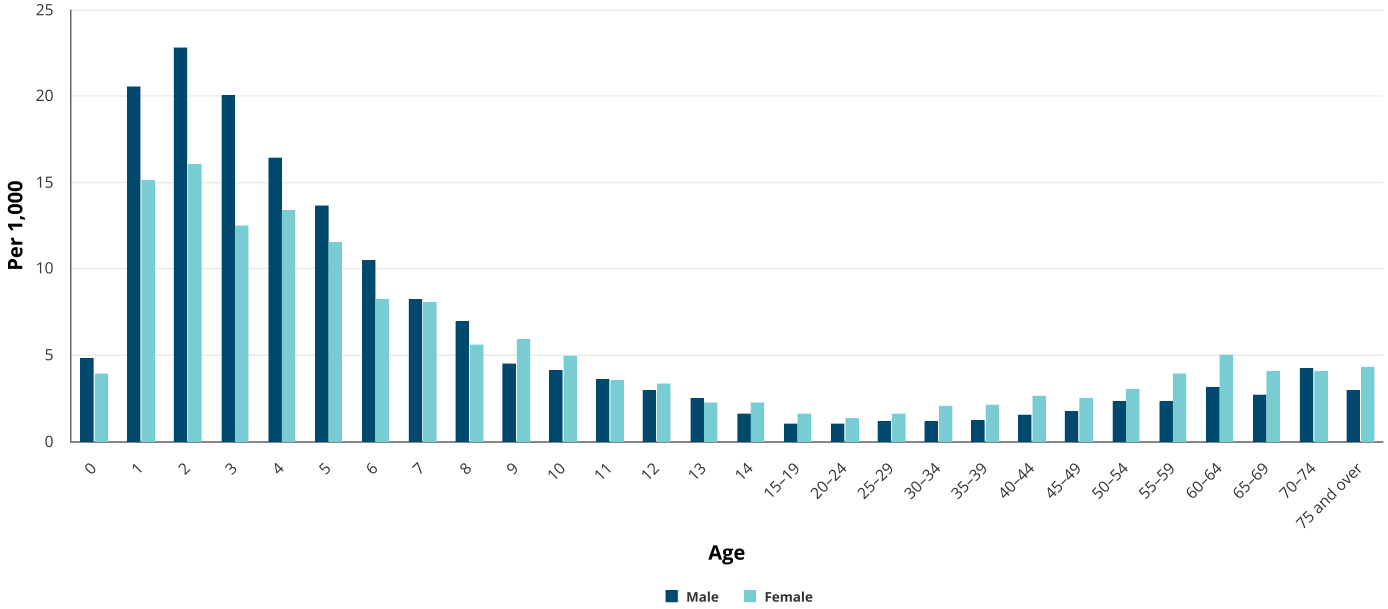
Middle ear disease was the main diagnosis for almost 9 in 10 ear or hearing related hospitalisations among First Nations children aged 0–14 (4,911 hospitalisations) (Data Table 3.2b).

Rates of ear or hearing related hospitalisations were higher among young First Nations children than older First Nations people, similar to the age patterns for emergency department visits.

Among First Nations children aged 0–4 there were 14.4 ear or related hospitalisations per 1,000 population (3,195 hospitalisations), the highest rate of any age group (Table 3.2b).

Ear or hearing related hospitalisation rates for First Nations boys aged 1–6 were 1.2 to 1.6 times higher than rates for girls of the same age (Figure TREATMENT 9).

Figure TREATMENT 9: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, First Nations people, by sex and age, 2022–24



Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Remoteness

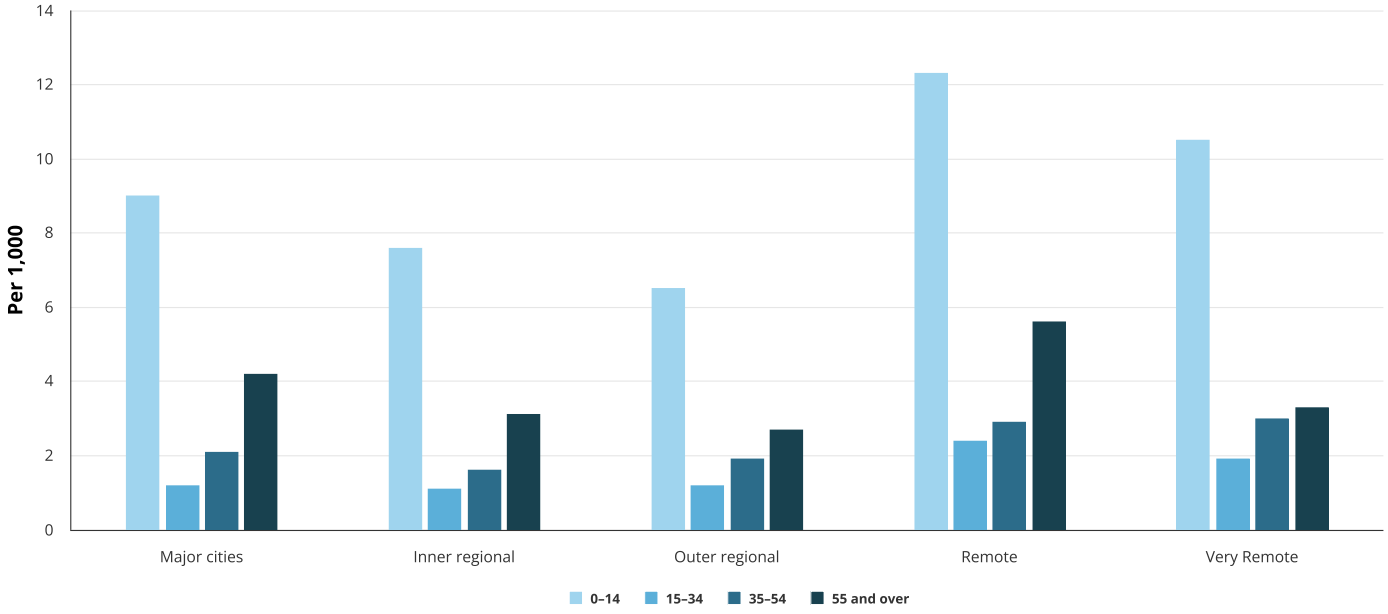
In 2022–24, rates of ear or hearing related hospitalisations among First Nations people were:

- lower among those living in *Major cities* (4.2 per 1,000 population or 3,539 hospitalisations), *Inner regional* areas (3.7 per 1,000 or 1,883 hospitalisations) and *Outer regional* areas (3.3 per 1,000 or 1,283 hospitalisations)
- higher in *Remote* areas (5.9 per 1,000 or 703 hospitalisations) and *Very remote* areas (4.7 per 1,000 or 881 hospitalisations) (Data Table 3.2e).

Similar to the patterns for emergency department visits, rates of ear or hearing related hospitalisations were higher among First Nations children aged 0–14 than First Nations people aged 15 and over across remoteness areas. Again, these differences were greatest in *Remote* and *Very remote* areas (Figure TREATMENT 10).

Figure TREATMENT 10: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, First Nations people, by age and remoteness, 2022–24

Measure: Per 1,000



Source: AIHW analysis of National Hospital Morbidity Database; and AIHW population modelling using ABS population estimates and projections.

State and territory

Nationally, there were 4.1 hospitalisations per 1,000 First Nations people (8,424 hospitalisations) where the main diagnosis was ear related in 2022–24.

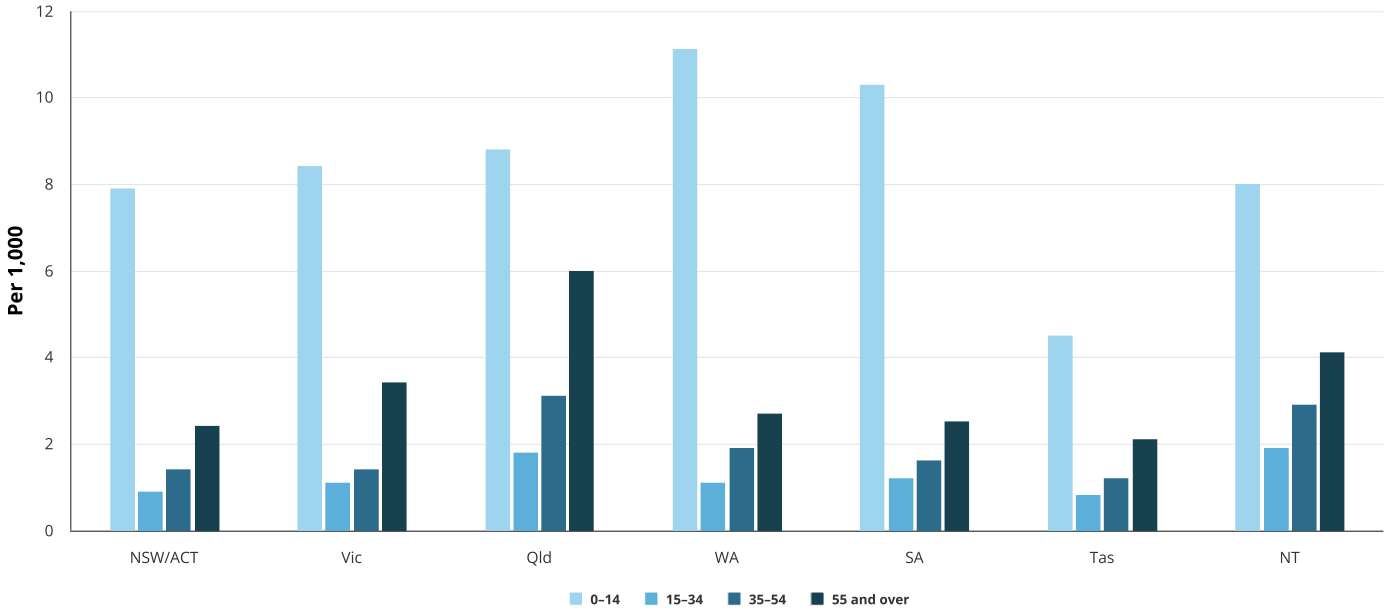
Rates of hospitalisations where the main diagnosis was ear related among First Nations people ranged from 2.2 per 1,000 population (154 hospitalisations) in Tasmania to 4.9 per 1,000 population (2,809 hospitalisations) in Queensland (Table 3.2d).

Rates of hospitalisations where the main diagnosis was ear related were higher among First Nations children aged 0–14 than among older First Nations across all states and territories in 2022–24.

Rates of hospitalisations where the main diagnosis was ear related among First Nations children aged 0–14 ranged from 4.5 per 1,000 population (96 hospitalisations) in Tasmania to 11.1 per 1,000 population (875 hospitalisations) in Western Australia (Figure TREATMENT 11).

Figure TREATMENT 11: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, First Nations people, by age and state/territory, 2022–24

Measure: Per 1,000

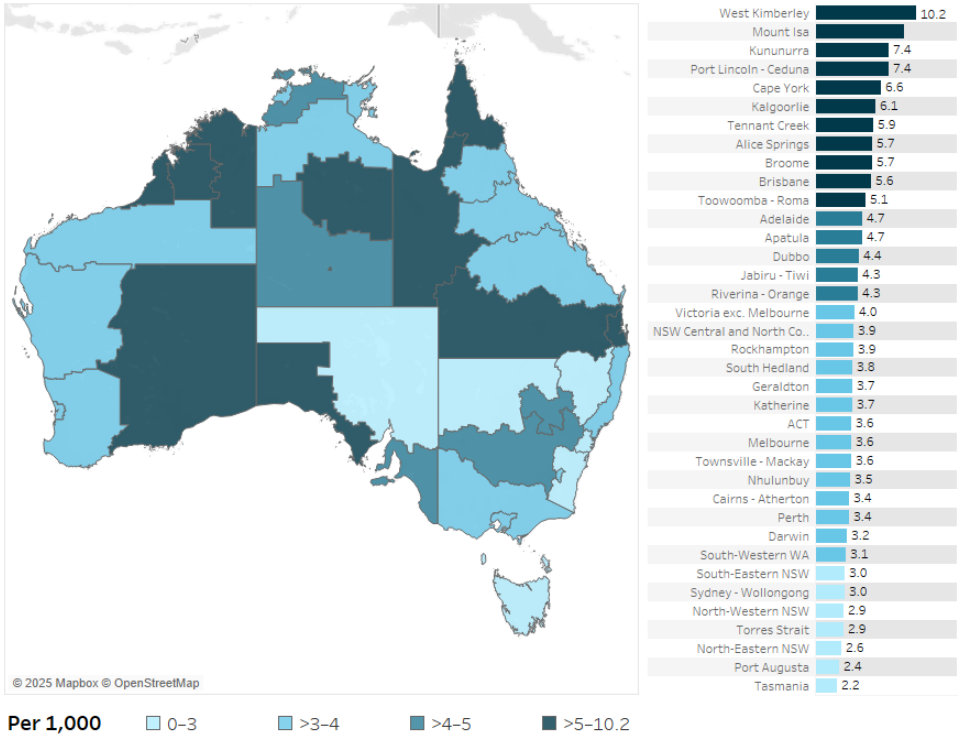


Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Indigenous region

Across Indigenous regions, the rate of hospitalisations where the main diagnosis was ear related of First Nations people in 2022–24 ranged from 2.2 per 1,000 population (154 hospitalisations) in Tasmania to 10.2 per 1,000 population (127 hospitalisations) in West Kimberley (Figure TREATMENT 12).

Figure TREATMENT 12: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, by Indigenous region (IREG), July 2022 to June 2024



Hospitalisations for main diagnosis of diseases of the ear and mastoid process, by Indigenous region (IREG), July 2022 to June 2024

Source: AIHW analysis of National Hospital Morbidity Database; and AIHW population modelling using ABS population estimates and projections.

Over time

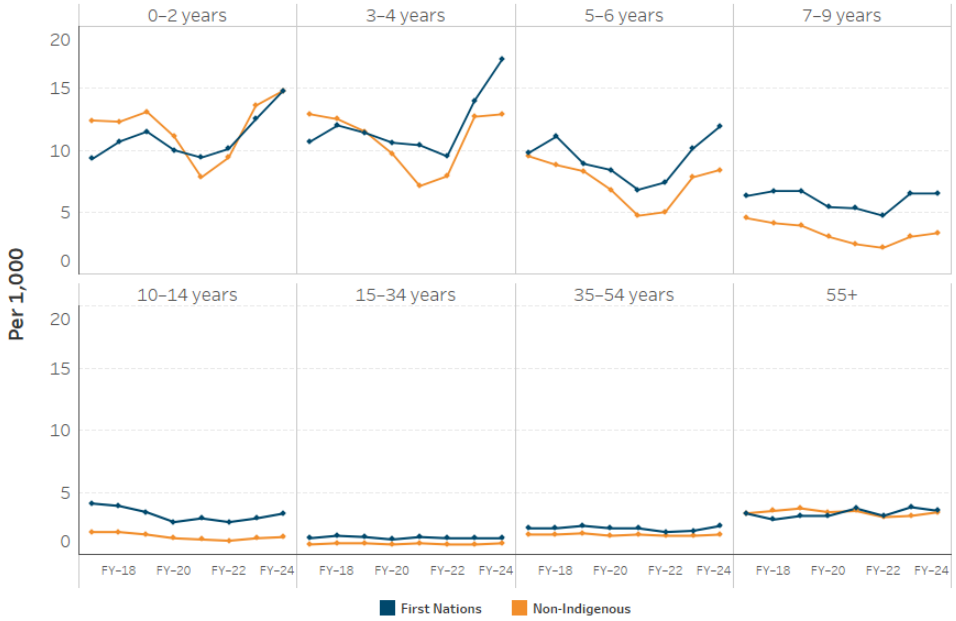
The rates of hospitalisations where the main diagnosis was ear related among First Nations people increased from 3.8 per 1,000 population (crude) in 2016–17 to 4.0 per 1,000 in 2017–18, then generally decreased over the following years before rising to 4.3 per 1,000 in 2023–24 (Data Table 3.2f).

First Nations children aged 3–4 had the highest rate of hospitalisations where the main diagnosis was ear related per 1,000 population across age groups. The rate increased from 10.7 per 1,000 in 2016–17 to 12.0 per 1,000 in 2017–18 the gradually declining to 9.5 in 2021–22, before rising sharply to 17.3 per 1,000 in 2023–24 following pandemic-era declines.

Similarly, the rate of hospitalisations where the main diagnosis was ear related among First Nations children aged 5–6 peaked at 11.1 per 1,000 in 2017–18 before decreasing during the pandemic, then rising to 11.9 per 1,000 in 2023–24.

From 2016–17 to 2023–24, there was relatively little change in the rate of hospitalisations where the main diagnosis was ear related among First Nations adults aged 15–34, 35–54 and 55 and over. (Figure TREATMENT 13).

Figure TREATMENT 13: Hospitalisations for main diagnosis of diseases of the ear and mastoid process, by Indigenous status and age, 2016–17 to 2023–24



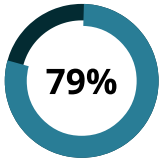
Hospitalisations for main diagnosis of diseases of the ear and mastoid process, by Indigenous status and age, 2016–17 to 2023–24

Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

In 2023–24, among younger age groups there were higher rates of hospitalisations for First Nations compared to non-Indigenous children (except among those 0–2 years). Among those aged 15–34, 35–54 and 55 and over, the rates were relatively low and similar for both First Nations and non-Indigenous. These results may reflect less susceptibility to ear diseases in older age groups or more access to primary health care services, with less cases resulting in hospitalisations. It may also reflect a normalisation of ear disease throughout the lifetime.

Hospital procedures

In this section



(8,423) of all ear or hearing related hospital procedures for First Nations people in 2022–24 were for children aged 0–14.

Hospital procedures include surgical procedures and non-surgical investigations and therapies. The information presented in this section relate to procedures requiring admission to hospital and excludes procedures performed where people are not admitted to hospital, that is, outpatient procedures.

Many ear and hearing related hospital procedures requiring hospital admissions are performed to address medical conditions caused by repeated ear infections.

Among the most common ear and hearing related procedures are:

- a procedure called a myringotomy, which is a surgical incision in the eardrum to relieve pressure or drain fluid, and may include inserting a small tube called a grommet to allow air to ventilate the middle ear and stop fluid building up again
- other application, insertion or removal procedures' including the removal of myringotomy tubes
- an operation called a myringoplasty to repair a hole in the eardrum, often caused by middle ear infection or from grommet insertion

About the data

The data in this section come from the AIHW National Hospital Morbidity Database (NHMD).

Information is presented for procedures on the ear and mastoid process (ACHI procedure block codes 300–334). Common procedures include Myringotomy (ACHI procedure block code 309); Application, insertion or removal procedures on eardrum or middle ear (ACHI procedure block code 308); and Myringoplasty (ACHI procedure block 313). For this report, procedure codes 41632-02 and 41632-03 (Insertion of myringotomy tube, unilateral and bilateral), which are usually included under procedure block code 308, have been excluded from block code 308 and included under procedure block code 309 (Myringotomy).

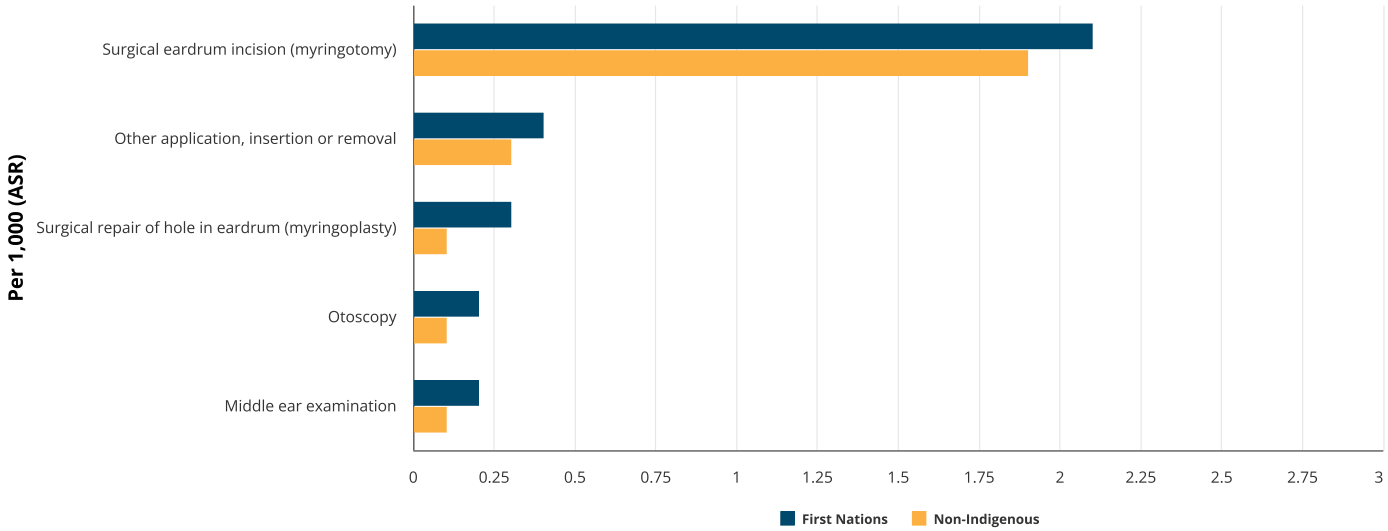
Overview

In 2022–24, 10,609 in-hospital ear or hearing related procedures were performed for First Nations patients (5.2 per 1,000 population). The most common procedure was surgical eardrum incision (myringotomy) with or without insertion of ear ventilation tubes (grommets), which accounted for 61.4% of the procedures performed (6,516 procedures or 3.2 per 1,000 population) (Figure TREATMENT 14).

First Nations children aged 0–14 accounted for 79.4% (8,423) of all ear or hearing related hospital procedures for First Nations people, at a rate of 12.8 per 1,000 population.

Figure TREATMENT 14: Top 5 ear or hearing related hospital procedures, by Indigenous status, 2022–24

Measure: Per 1,000 (ASR)



ASR = age-standardised rate

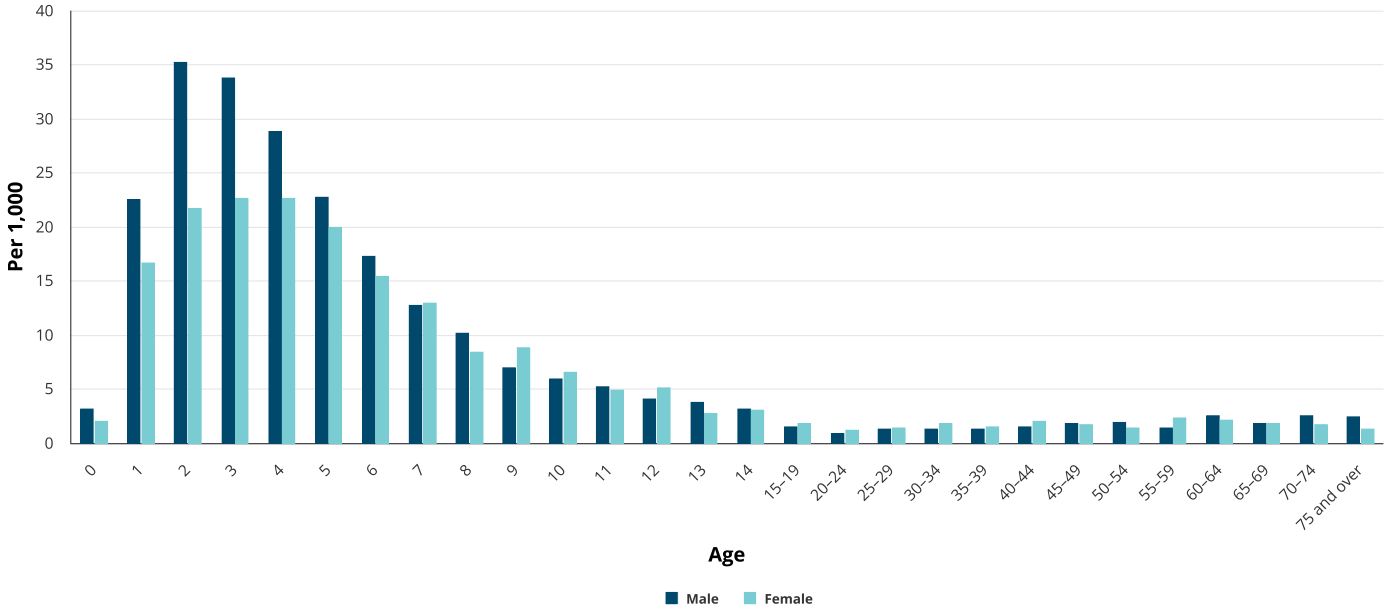
Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Age and sex

In 2022–24:

- the highest ear or hearing related procedure rates for First Nations children were at age 2 for boys (35.2 per 1,000 population) and ages 3 and 4 for girls (both at 22.6 per 1,000 population).
- ear or hearing related procedure rates for First Nations boys aged 1–4 were 1.3 to 1.6 times as high as those for girls of the same age (Figure TREATMENT 15).

Figure TREATMENT 15: Ear or hearing related hospital procedures, First Nations people, by sex and age, 2022–24



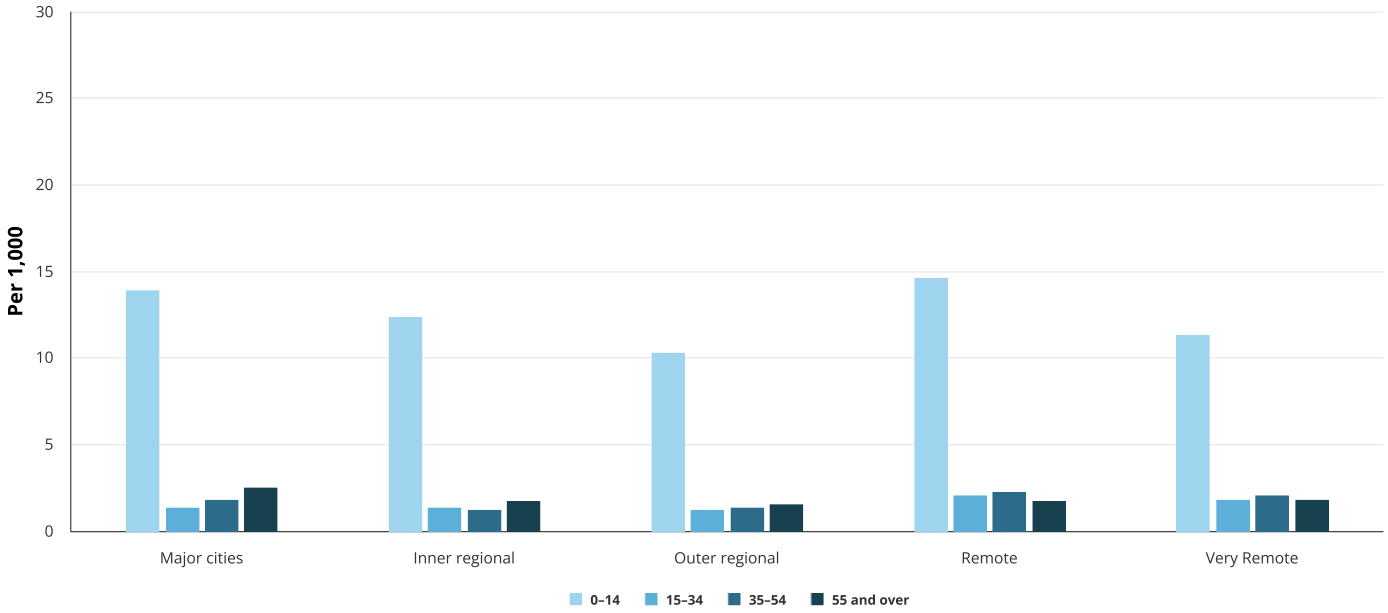
Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Remoteness

In 2022–24, the rate of ear or hearing related procedures among First Nations people was highest for those living in *Remote* areas (5.7 per 1,000 population) and lowest in *Outer regional* areas (4.2 per 1,000 population) (Figure TREATMENT 16).

Figure TREATMENT 16: Ear or hearing related hospital procedures, First Nations people, by age and remoteness, 2022–24

Measure: Per 1,000



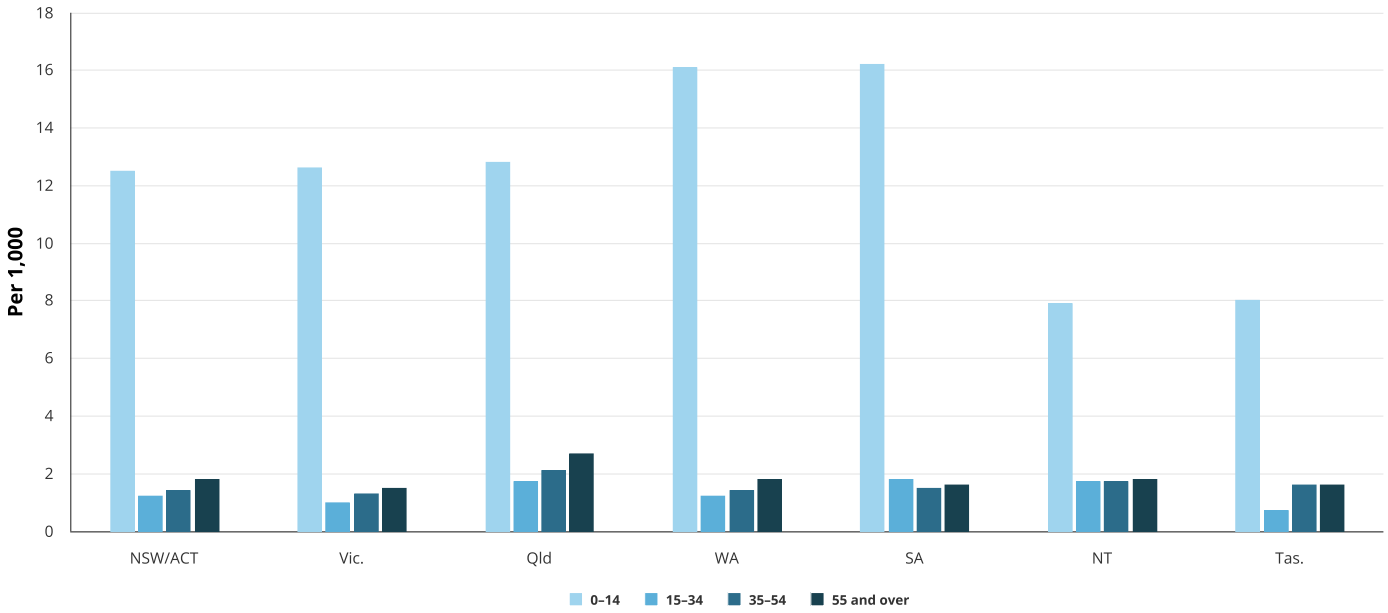
Source: AIHW analysis of National Hospital Morbidity Database; and AIHW population modelling using ABS population estimates and projections.

State and territory

In 2022–24, the rate of ear or hearing related hospital procedures ranged from 3.3 per 1,000 population in Tasmania to 6.4 per 1,000 population in South Australia (Figure TREATMENT 17).

Figure TREATMENT 17: Ear or hearing related hospital procedures, First Nations people, by age and state/territory, 2022–24

Measure: Per 1,000

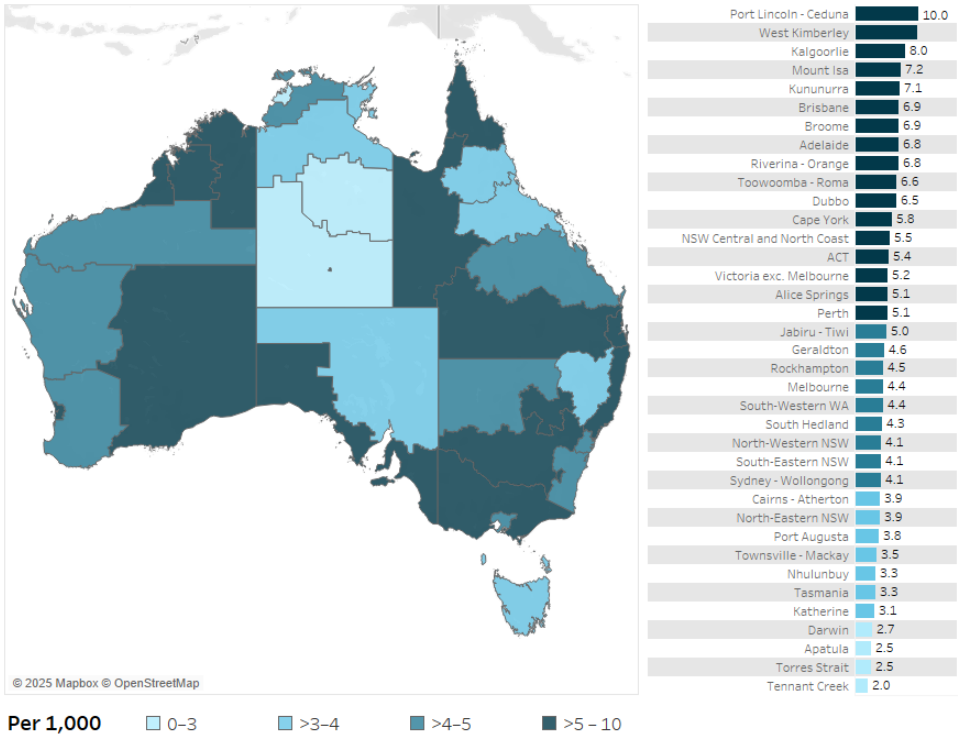


Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Indigenous region

Across Indigenous regions, the rate of ear or hearing related hospital procedures among First Nations people in 2022–24 ranged from 2.0 per 1,000 population in Tennant Creek to 10.0 per 1,000 population in Port Lincoln - Ceduna (Figure TREATMENT 18).

Figure TREATMENT 18: Ear or hearing related hospital procedures, First Nations people, by Indigenous region (IREG), July 2022 to June 2024



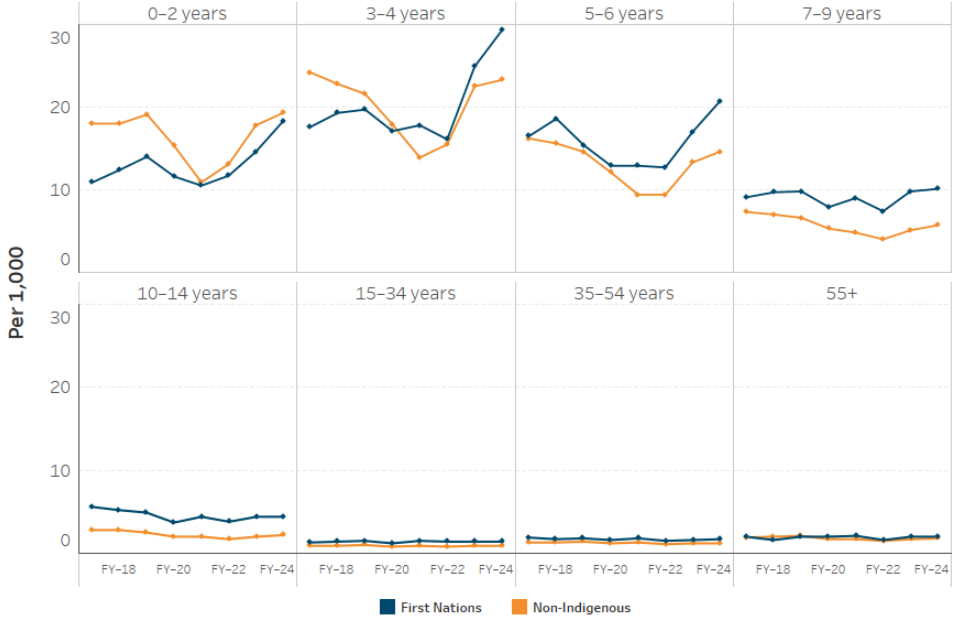
Ear or hearing related hospital procedures, First Nations people, by Indigenous region (IREG), July 2022 to June 2024

Source: AIHW analysis of National Hospital Morbidity Database; AIHW modelling using ABS population estimates and projections for rate calculations.

Over time

Rates of ear or hearing related procedures among First Nations children aged 0–6 peaked around 2017–18 and 2018–19, and following pandemic-era declines, increased again in 2023–24. Since 2016–17, rates have risen overall among First Nations children aged 0–6, while remaining relatively constant for non-Indigenous children in the same age group (Figure TREATMENT 19).

Figure TREATMENT 19: Ear or hearing related hospital procedures, by Indigenous status and age, 2016–17 to 2023–24



Ear or hearing related hospital procedures, by Indigenous status and age, 2016–17 to 2023–24

Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

The long-term trend shows that the gap between the ear or hearing related hospital procedures rates for First Nations children and non-Indigenous children has remained over time in the younger age groups, except for those aged 0-2 years where the gap has narrowed. The rates for the age groups 15–34, 35–54 and 55+ were low and similar for both First Nations and non-Indigenous adults.

Middle ear procedures for children

Middle ear related hospital procedures among children

On this page:

Middle ear procedures among First Nations children aged 0–14 increased to 7.3 per 1,000 in 2023–24, almost back to the pre-pandemic peak of 7.4 per 1,000.

This section focuses on middle ear related procedures occurring during hospitalisations with a main diagnosis of middle ear disease for children aged 0–14.

Overview

From July 2022 to June 2024, 4,537 in-hospital middle ear related procedures were performed for First Nations children aged 0–14. The middle ear procedure rate was higher among First Nations children (6.9 per 1,000 population) than among non-Indigenous children (5.6 per 1,000 population) (Data Table 3.3.2a).

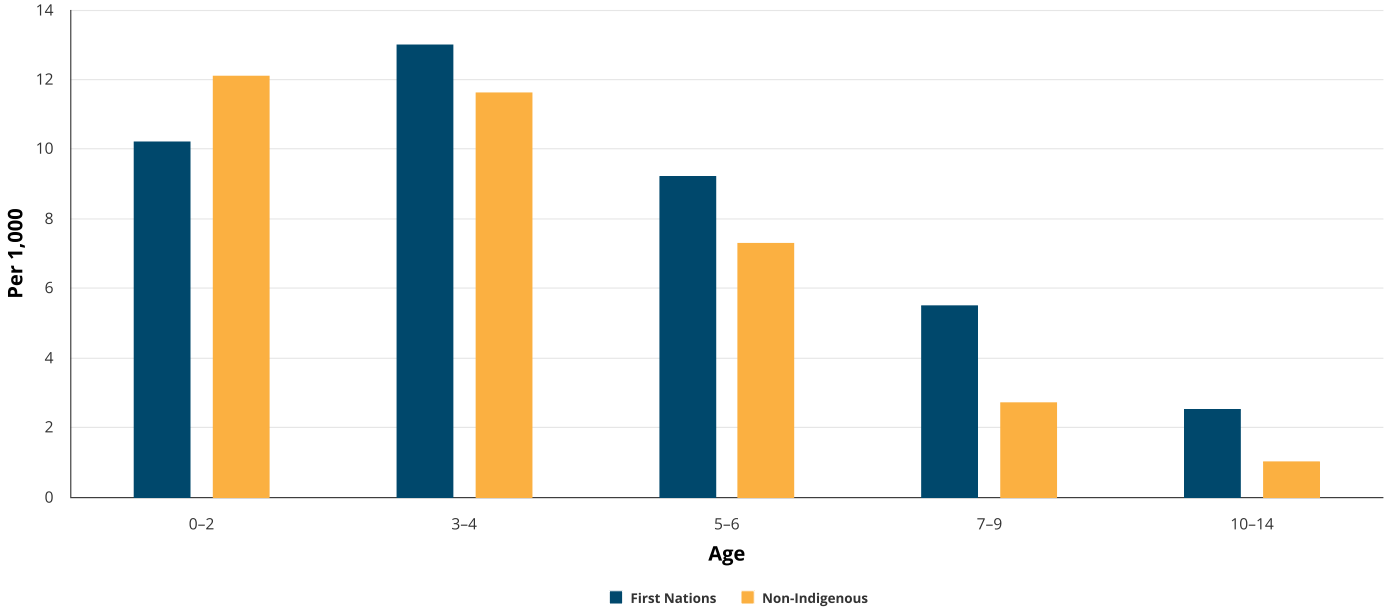
Age and sex

For First Nations children, middle ear procedure rates were highest among those aged 3–4 years (13 per 1,000 population). In comparison, for non-Indigenous children, middle ear procedure rates were highest among those aged 0–2 (12.1 per 1,000 population).

Among First Nations children, middle ear procedures rates were 1.2 to 2.1 times as high for boys aged 1–6 as for girls of the same age (Data Table 3.3.2b).

Figure TREATMENT 20: Middle ear related procedures among children aged 0–14, by Indigenous status and age, 2022–24

Measure: Per 1,000



Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

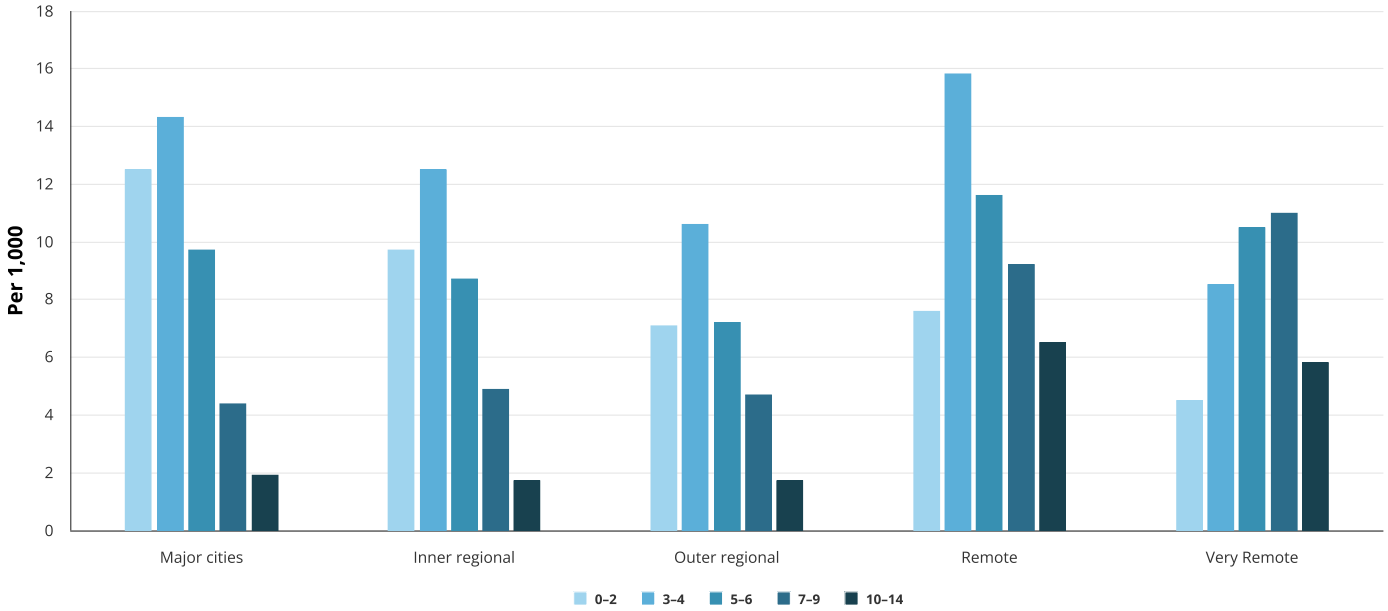
Remoteness

Middle ear procedure rates were generally highest among First Nations children aged 3–4 living in *Major cities* (14.3 per 1,000 population), *Inner regional* areas (12.5 per 1,000), *Outer regional* areas (10.6 per 1,000) and *Remote* areas (15.8 per 1,000).

The pattern was different in *Very remote* areas, where the middle ear procedure rate was highest among First Nations children aged 7–9 (11.0 per 1,000 population) (Figure TREATMENT 21).

Figure TREATMENT 21: Middle ear related procedures among children aged 0–14, First Nations people, by remoteness and age, 2022–24

Measure: Per 1,000



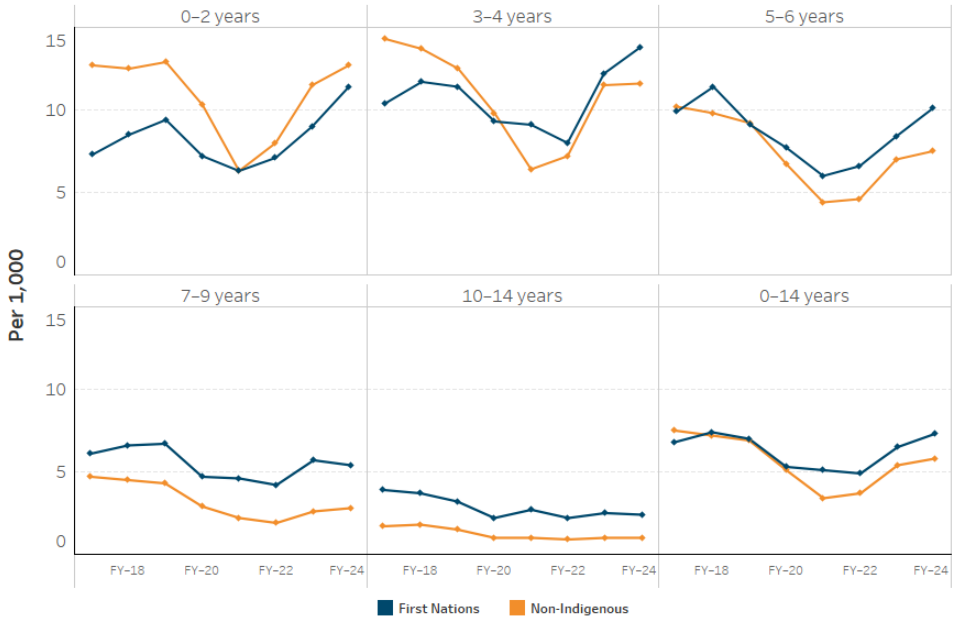
Source: AIHW analysis of National Hospital Morbidity Database; and AIHW population modelling using ABS population estimates and projections.

Over time

Middle ear related hospital procedure rates for First Nations children aged 0–6 peaked around the years 2017–18 and 2018–19. Following decreases in the rates coinciding with the COVID-19 pandemic, the rates have increased again recently. A similar trend is apparent for non-Indigenous children in the same age group.

Rates for First Nations children aged 7–14 have remained higher than rates for non-Indigenous children from 2016–17 to 2023–24 (Figure TREATMENT 22).

Figure TREATMENT 22: Middle ear related hospital procedures among children aged 0–14, by Indigenous status and age, 2016–17 to 2023–24



Middle ear related hospital procedures among children aged 0–14, by Indigenous status and age, 2016–17 to 2023–24.

Source: AIHW analysis of National Hospital Morbidity Database; and ABS population estimates and projections for rate calculations.

Waiting times for myringotomy surgery

In this section

Median waiting time for elective myringotomy surgery was 84 days for First Nations people in 2022–24.

Elective surgery is planned surgery that can be booked in advance as a result of a specialist clinical assessment and the patient being placed on a waiting list. Data on waiting times measure the amount of time elapsed from a person being placed on a waiting list to admission for their procedure.

About the data

The data in this section come from the AIHW National Hospital Morbidity Database (NHMD).

The information on elective surgery waiting times presented here refers to the time between when a patient is added to a public hospital elective surgery waiting list and when they are admitted to hospital for surgery, either as an elective or emergency admission.

The data do not include the length of time for other steps in the clinical pathway for elective surgery to take place, including the time taken to diagnose the condition and refer the patient to a specialist, the time spent waiting for an appointment with a specialist and any delays between the patient seeing the specialist and being put on the surgical waiting list. It is important to note that patients may not be put straight on a surgical waiting list after seeing a specialist – other treatment or management strategies may be tried first.

Some information on elective surgery waiting times is presented by categories of urgency:

- Category 1, treatment within 30 days is recommended – the most urgent
- Category 2, treatment within 90 days is recommended
- Category 3, treatment within 365 days is recommended – the least urgent.

Data on elective surgery waiting times (for hospital admissions from public hospital elective surgery waiting lists) are available for the common ear related procedures myringotomy – an incision in the eardrum to relieve pressure or drain fluid – and myringoplasty – the repair of a hole in the eardrum.

The COVID-19 pandemic has had an ongoing impact on surgery activity, including elective surgery activity, since its emergence in early 2020. More information about the impacts for the whole population is available in Australia's hospitals at a glance (AIHW 2023). The different geographic distribution of the First Nations and non-Indigenous populations, for example by remoteness, may also be a relevant consideration. More analysis is required to better understand the factors driving some of the results presented.

Overview

In 2022–24, there were 1,707 admissions for First Nations people from public hospital waiting lists for elective myringotomy surgery. Of these patients:

- 50% waited at least 84 days (nearly 3 months) for admission, which was similar to the result for non-Indigenous Australians (83 days)
- 90% were admitted within 269 days (around 9 months).

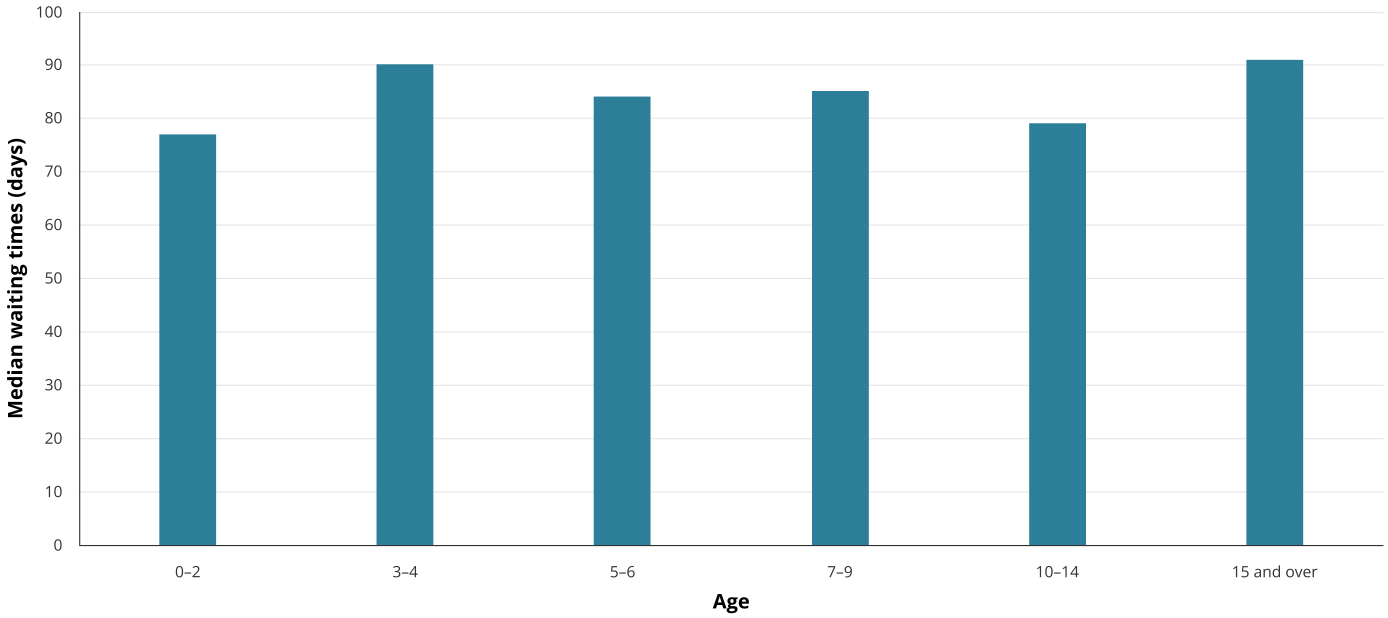
In 2022–24, a small proportion of First Nations people admitted for myringotomy (7.0%) were classified as Category 1 urgency (the most urgent, with treatment recommended within 30 days) and 92% were admitted for surgery within that time. There were 68.6% of First Nations people admitted for myringotomy surgery were classified as Category 2 urgency, needing treatment within 90 days. Of these patients, 60% were admitted within the recommended time (Data table 3.4.1e).

Age

In 2022–24, around 9 in 10 admissions of First Nations people from public hospital waiting lists for elective myringotomy surgery were for children aged 0–14 and 5 in 10 were for First Nations children aged 0–4 (Data Table 3.4.1a).

The median waiting time for myringotomy surgery was lowest for First Nations children aged 0–2 (77 days) and highest for First Nations people aged 15 and over (91 days) (Figure TREATMENT 23).

Figure TREATMENT 23: Waiting times for elective myringotomy, First Nations people, by age, 2022–24

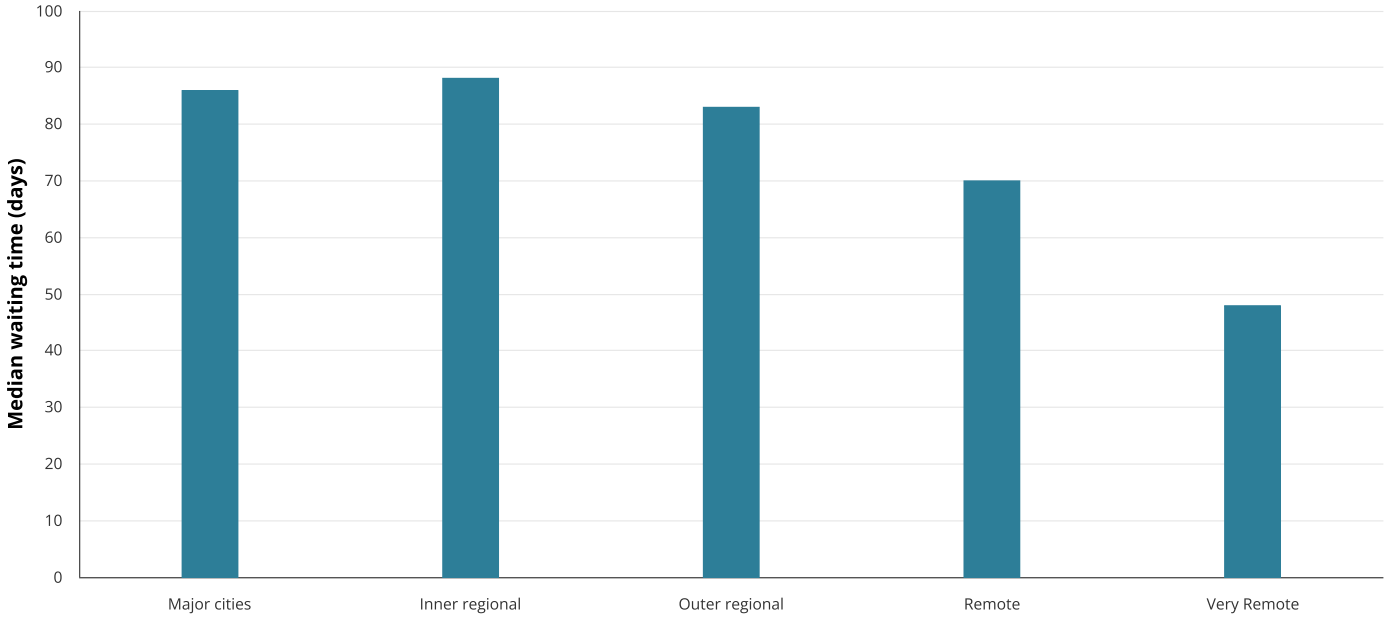


Source: AIHW analysis of National Hospital Morbidity Database.

Remoteness

In 2022–24, median waiting times for admission for First Nations people were generally shorter in more remote areas. Half (50%) of First Nations patients living in *Remote* areas were admitted within 70 days, or 48 days for those living in *Very remote* areas, while half of those living in *Major cities* waited 86 days (Figure TREATMENT 24).

Figure TREATMENT 24: Waiting times for elective myringotomy, First Nations people, by remoteness, 2022–24

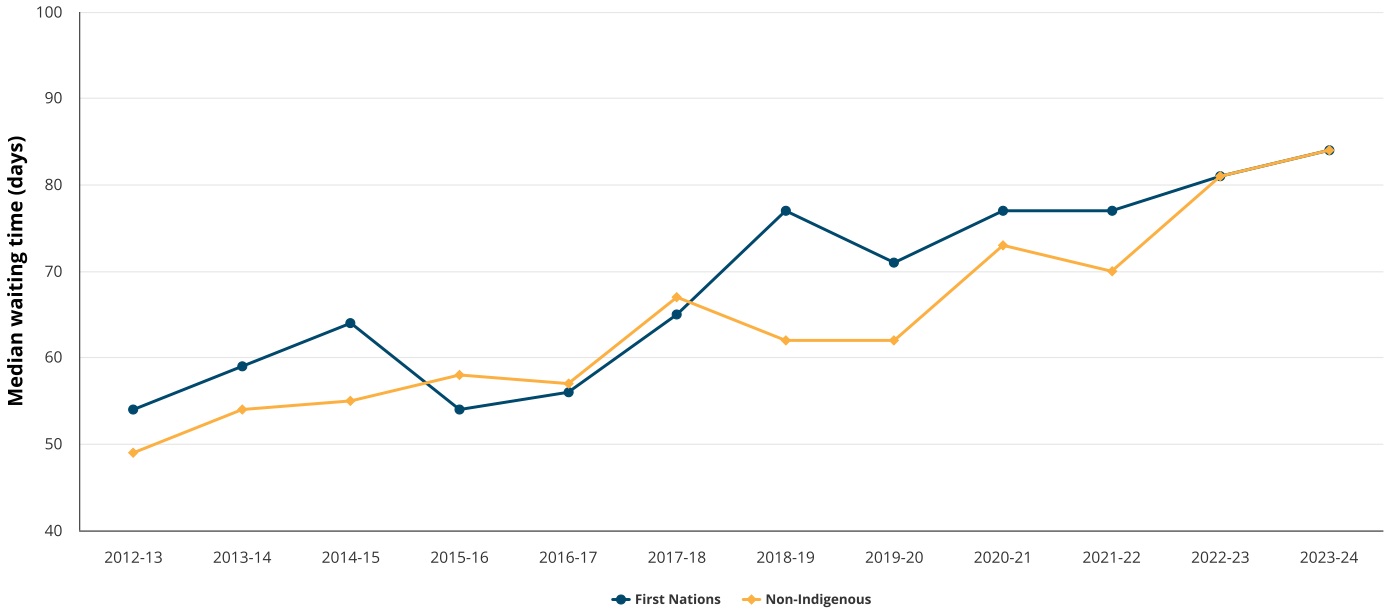


Source: AIHW analysis of National Hospital Morbidity Database.

Over time

Between 2012–13 and 2023–24, the median waiting time for First Nations people for myringotomy increased by 30 days (from 54 to 84 days). Waiting times were comparable to those for non-Indigenous people over the same period (Figure TREATMENT 25).

Figure TREATMENT 25: Waiting times for elective myringotomy, by Indigenous status, 2012–13 to 2023–24



Source: AIHW analysis of National Hospital Morbidity Database.

Waiting times for myringoplasty surgery

In this section

Median waiting time for elective myringoplasty surgery was 176 days for First Nations people in 2022–24.

Elective surgery is planned surgery that can be booked in advance as a result of a specialist clinical assessment and the patient being placed on a waiting list. Data on waiting times measure the amount of time elapsed from a person being placed on a waiting list to admission for their procedure.

About the data

The data in this section come from the AIHW National Hospital Morbidity Database (NHMD).

The information on elective surgery waiting times presented here refers to the time between when a patient is added to a public hospital elective surgery waiting list and when they are admitted to hospital for surgery, either as an elective or emergency admission.

The data do not include the length of time for other steps in the clinical pathway for elective surgery to take place, including the time taken to diagnose the condition and refer the patient to a specialist, the time spent waiting for an appointment with a specialist and any delays between the patient seeing the specialist and being put on the surgical waiting list. It is important to note that patients may not be put straight on a surgical waiting list after seeing a specialist – other treatment or management strategies may be tried first.

Some information on elective surgery waiting times is presented by categories of urgency:

- Category 1, treatment within 30 days is recommended – the most urgent
- Category 2, treatment within 90 days is recommended
- Category 3, treatment within 365 days is recommended – the least urgent.

Data on elective surgery waiting times (for hospital admissions from public hospital elective surgery waiting lists) are available for the common ear related procedures myringotomy – an incision in the eardrum to relieve pressure or drain fluid – and myringoplasty – the repair of a hole in the eardrum.

The COVID-19 pandemic has had an ongoing impact on surgery activity, including elective surgery activity, since its emergence in early 2020. More information about the impacts for the whole population is available in Australia's hospitals at a glance (AIHW 2023). The different geographic distribution of the First Nations and non-Indigenous populations, for example by remoteness, may also be a relevant consideration. More analysis is required to better understand the factors driving some of the results presented.

Overview

In 2022–24, there were 503 admissions for First Nations people from public hospital waiting lists for elective myringoplasty surgery. Of these patients:

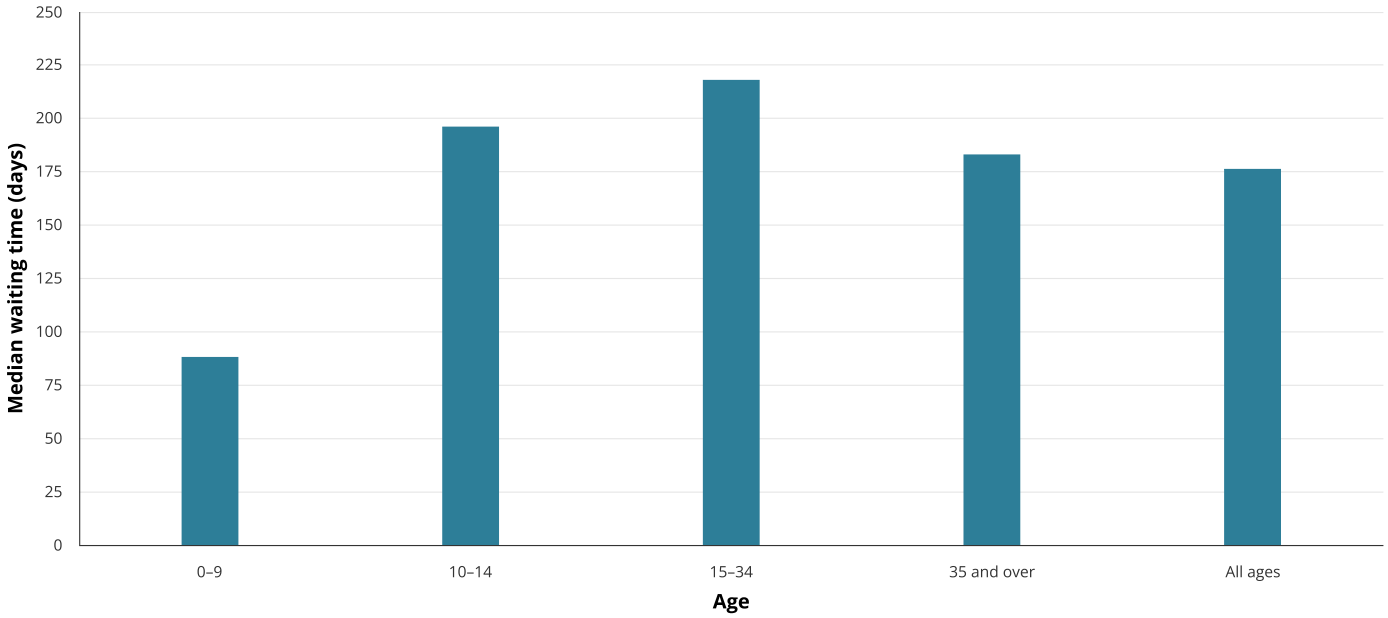
- 50% waited at least 176 days (around 6 months) for admission, which was shorter than for non-Indigenous Australians at 287 days (over 9 months)
- 90% were admitted within 677 days.

In 2022–24, most First Nations people admitted for myringoplasty (63.0%) were classified as Category 3 urgency (the least urgent, needing treatment within 365 days) – 57% in this urgency category were admitted for surgery within that time. There were 31.0% of First Nations people admitted for myringoplasty surgery classified as Category 2 urgency (needing treatment within 90 days) – 45% of these patients were admitted within the recommended time (Data table 3.4.2e).

Age

In 2022–24, around half (50%) of admissions for First Nations people from public hospital waiting lists for myringoplasty surgery were for children aged 0–14 (Data Table 3.4.2a). (Figure TREATMENT 26).

Figure TREATMENT 26: Waiting times for elective myringoplasty, First Nations people, by age, 2023–24

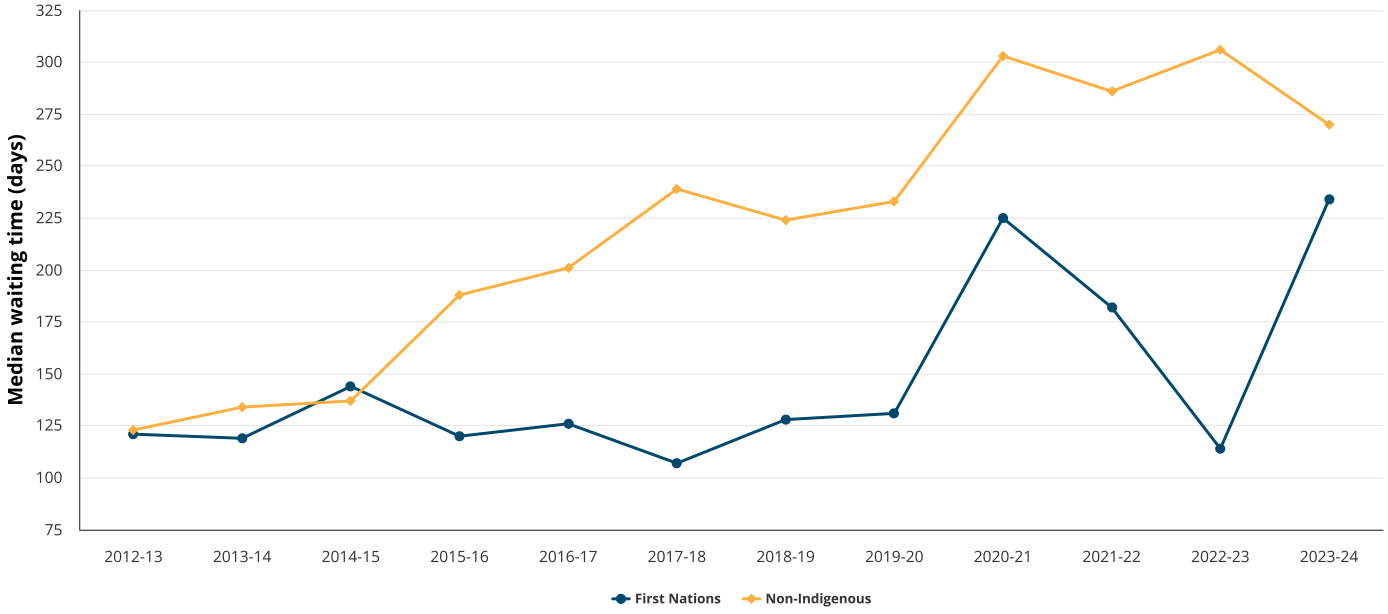


Source: AIHW analysis of National Hospital Morbidity Database.

Over time

The median waiting time for admission of First Nations myringoplasty patients was largely stable between 2012–13 and 2019–20, rising sharply in 2020–21 then falling in 2021–22 and 2022–23. However, in 2023–24 it rose sharply again to levels above those seen in 2020–21 during the COVID-19 pandemic and has become closer to that of non-Indigenous patients. The increase in the median waiting time in 2020–21 was likely due to restrictions put in place in 2019–20 on elective surgery (as part of the early response to the COVID-19 pandemic), which led to an increase in waiting times for most intended procedures in the following year (Figure TREATMENT 27).

Figure TREATMENT 27: Waiting times for elective myringoplasty, by Indigenous status, 2012–13 to 2023–24



Source: AIHW analysis of National Hospital Morbidity Database.

Ear Surgical Support Program

282 ear-related surgeries were delivered through the Eye and Ear Surgical Support Program from July 2023 to June 2024.

The Ear Surgical Support Program makes it easier for First Nations people to access ear surgery, especially those living in rural and remote locations. The program aims to provide a culturally safe surgical pathway at the nearest available location to the patient's home, access to hospital theatre time and access to bulk-billing surgeons. The program also arranges travel and accommodation for the surgical patient and carer, where needed.

From July 2023 to June 2024, there were 282 ear-related surgeries delivered through the Ear Surgical Support Program.

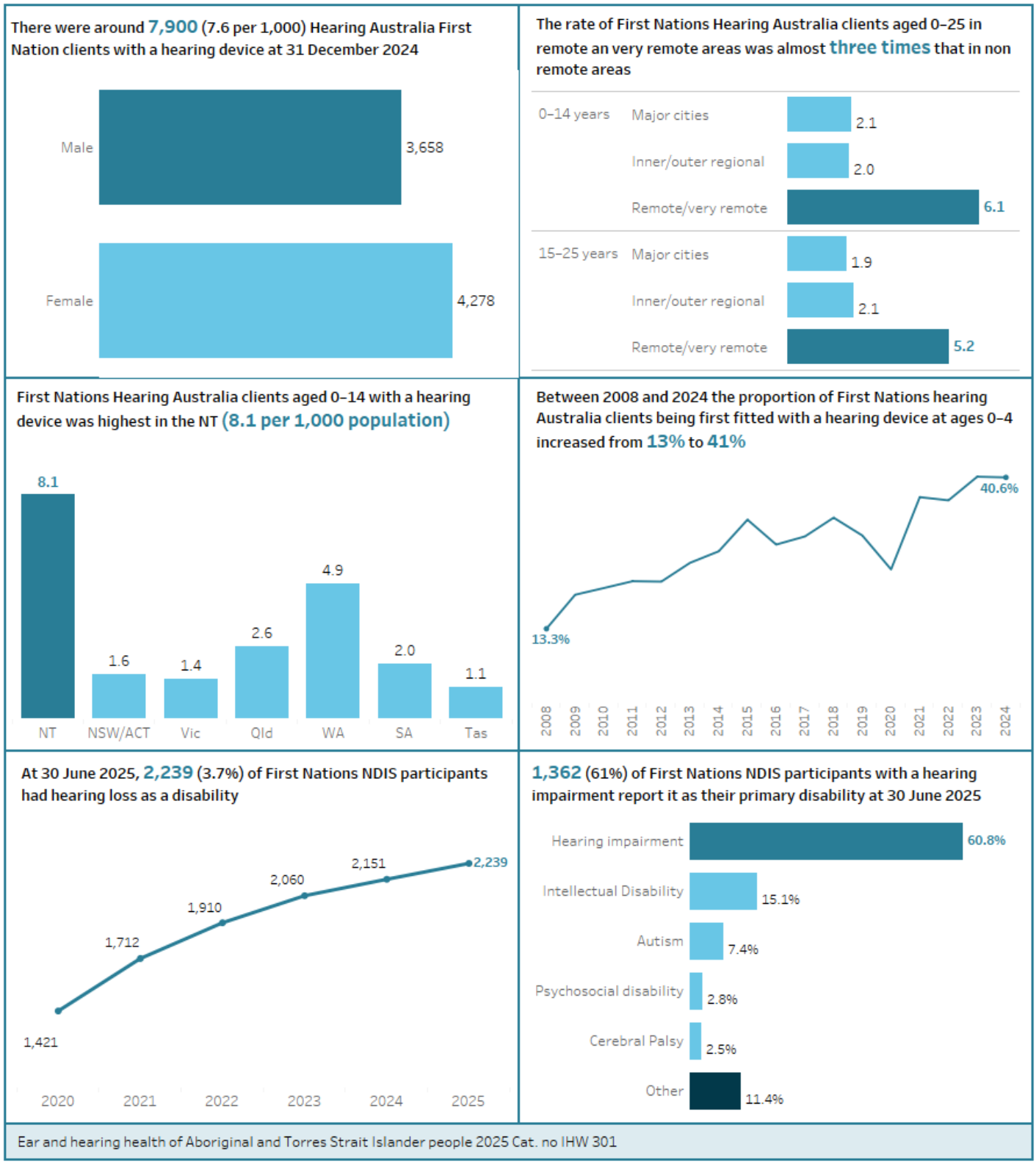
Surgeries were delivered in New South Wales (80 or 28.4% of these surgeries), Victoria (6 or 2.1%), Queensland (57, 20.2%), Western Australia (61 or 21.6%), South Australia (46 or 16.3%) and Tasmania (32 or 11.3%).

Tasmania (9.1 per 10,000 population) and South Australia (8.5 per 10,000 population) had the highest rates of ear-related surgeries supported through the Ear Surgical Support Program.

Ear Surgical Support Program data were not available for the Northern Territory or the Australian Capital Territory.

Rehabilitation

Figure REHABILITATION: Key statistics



Rehabilitation refers to care that can help people recover their health and functioning in daily life. Rehabilitation can be beneficial for most ear and hearing problems that First Nations people experience. Information about rehabilitation services can be used to better target health services in areas of greatest need.

Rehabilitation services for those with ear or hearing problems include:

- fitting of hearing aids and cochlear implants
- providing other listening devices that can help people with hearing problems, such as hearing loops – a special type of sound system for people with hearing aids

- audiology-related counselling, speech and occupational therapy, audiology services and other allied health services.

Rehabilitation can be assisted by a hearing inclusive environment, for example by:

- making hearing loops available in public spaces
- better design of spaces to reduce background noise
- the use of Australian sign language, known as Auslan, and other interpreting services
- using text captions on a visual display such as a television to capture the sound component of a program
- efforts to reduce hearing loss stigma and discrimination.

This chapter covers the following information:

- Hearing Australia clients with a hearing aid or cochlear implant (data tables 4.1.1a–4.1.1g)
- age when first hearing aid or cochlear implant was fitted (data tables 4.1.2a–4.1.2d)
- NDIS participants with hearing loss (Data Tables 4.2a–4.2i).

Data tables in Excel spreadsheet format can be accessed at the Data tab.

About the data

Information in this section comes from Hearing Australia.

More information about this data source is provided in the following subsections.

Hearing aids and cochlear implants

In this section

There were 7,947 Hearing Australia First Nation clients with a hearing device at 31 December 2024.

Hearing aids and cochlear implants help many people with hearing loss to hear better. While they work in different ways, these and other hearing devices can enable people to understand speech, even in noisy environments. Using a hearing device can improve people's mood and physical health and increase social participation. When children with hearing loss are fitted with hearing devices at a young age, they are more likely to have better speech and language development (Ching et al. 2018).

About the data

This section presents information about First Nations people with a hearing aid or cochlear implant who received support services from Hearing Australia through the Hearing Services Program. Information presented includes demographic characteristics, the severity and type of hearing loss, and age when the hearing device was first fitted.

The information comes from Hearing Australia, which provides specialist hearing rehabilitation services and hearing devices to eligible people under the community service obligation component of the Hearing Services Program (Hearing Australia 2021).

Differences in rates between First Nations and non-Indigenous clients of Hearing Australia, particularly for those aged 26 and over, may influenced by different Hearing Services Program eligibility criteria for the two groups.

The data on hearing loss presented in this section are based on the ear with better hearing among Hearing Australia clients fitted with a hearing device. The lowest levels of sound that can be heard by people with different categories of hearing loss are: normal (up to 20dB); mild (21-40 dB); moderate (41-60 dB); severe (61-80 dB); severe to profound (81-90 dB); and profound (91+ dB).

Hearing Australia clients with hearing aids or cochlear implants

Overview

As at 31 December 2024, there were 207,546 Hearing Australia clients with a hearing device (hearing aid or cochlear implant). There were 7,947 Hearing Australia First Nations clients with hearing devices (4% of total), and most of these had hearing aids (99%) (Data Table 4.1.1a, Data Table 4.1.1f).

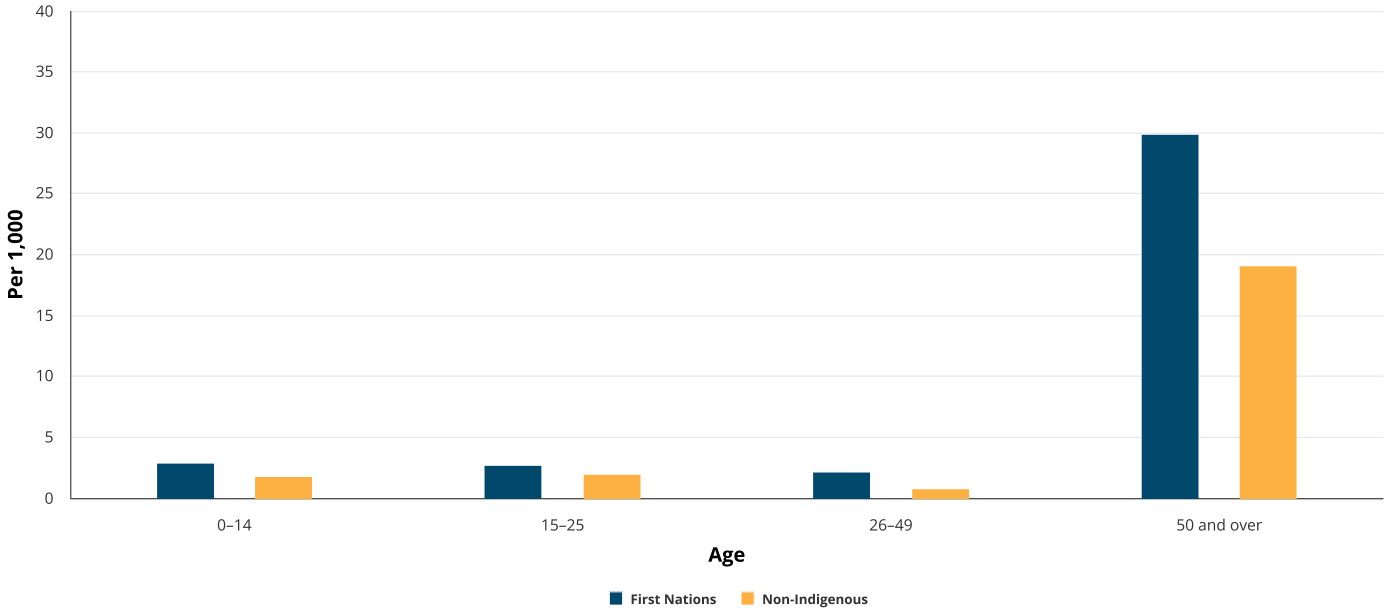
Age

Of the 7,947 First Nations Hearing Australia clients with hearing devices, 73% (5,803) were aged 50 and over.

Similarly, reflecting the higher prevalence of hearing loss in the older population, a much higher rate of First Nations people aged 50 and over were Hearing Australia clients with hearing devices (29.8 per 1,000 population), compared with younger First Nations people (2.1 per 1,000 population aged 26-49, and 2.6 per 1,000 population aged 15–25 and 2.8 per 1,000 population aged 0–14) (Figure REHABILITATION 1).

Figure REHABILITATION 1: Hearing Australia clients with a hearing aid or cochlear implant, by Indigenous status and age, as at 31 December 2024

Measure: Per 1,000



Source: AIHW analysis of Hearing Australia data, unpublished; and ABS population estimates and projections for rate calculations.

Adults over 50 years are likely more affected by sensorineural hearing loss and an amplification device such as a hearing aid is an appropriate solution. Children are more likely to experience conductive hearing loss linked to middle ear disease and a device such as a hearing aid is unlikely to be the first option however may be considered if surgery or other treatments have not been successful.

Children

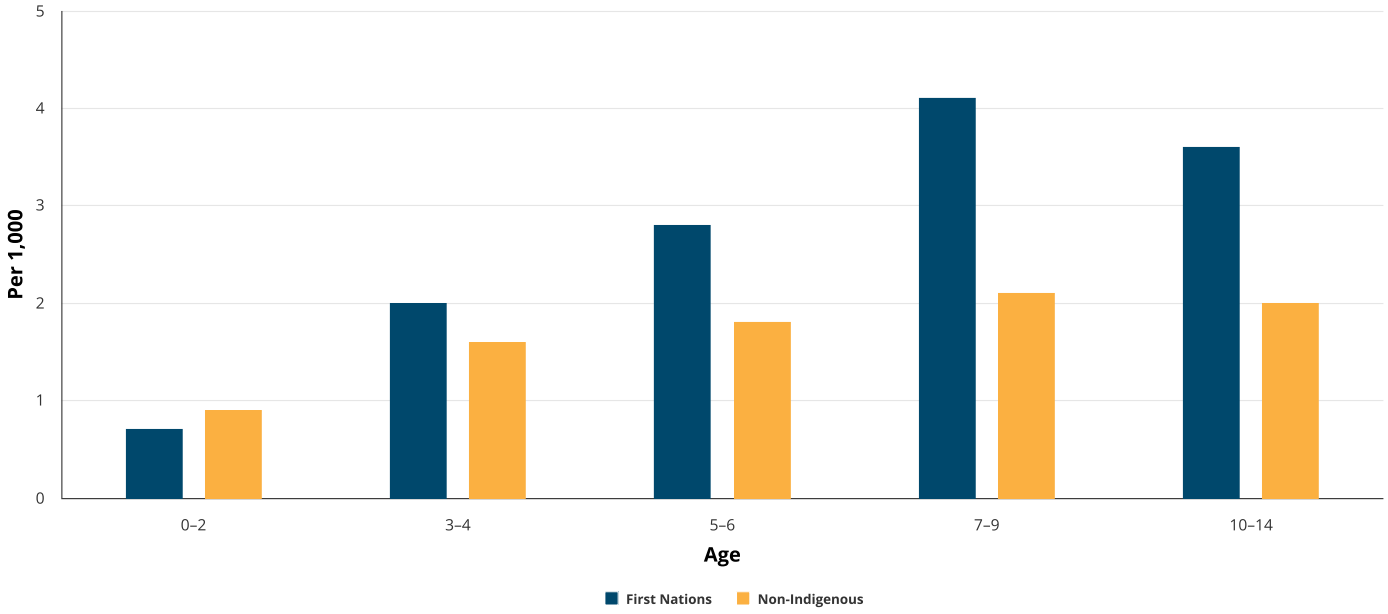
For all age groups except those aged 0–2, the rate of First Nations people who were Hearing Australia clients with a hearing device was higher than that of non-Indigenous Australians

The rate of First Nations children who were Hearing Australia clients with a hearing device was higher among those aged 7–9 (265 children, 4.1 per 1,000 population) and 10–14 (393, 3.6 per 1,000 population) than children in lower age groups between 0–14 (Data Table 4.1.1a).

First Nations children aged 0–14 were over 1.5 times as likely as non-Indigenous children to be Hearing Australia clients with a hearing device, with a rate of 2.8 per 1,000 population compared to 1.7 per 1,000 population for non-Indigenous children (Figure REHABILITATION 2).

Figure REHABILITATION 2: Hearing Australia clients aged 0–14 with a hearing aid or cochlear implant, by Indigenous status and age, as at 31 December 2024

Measure: Per 1,000



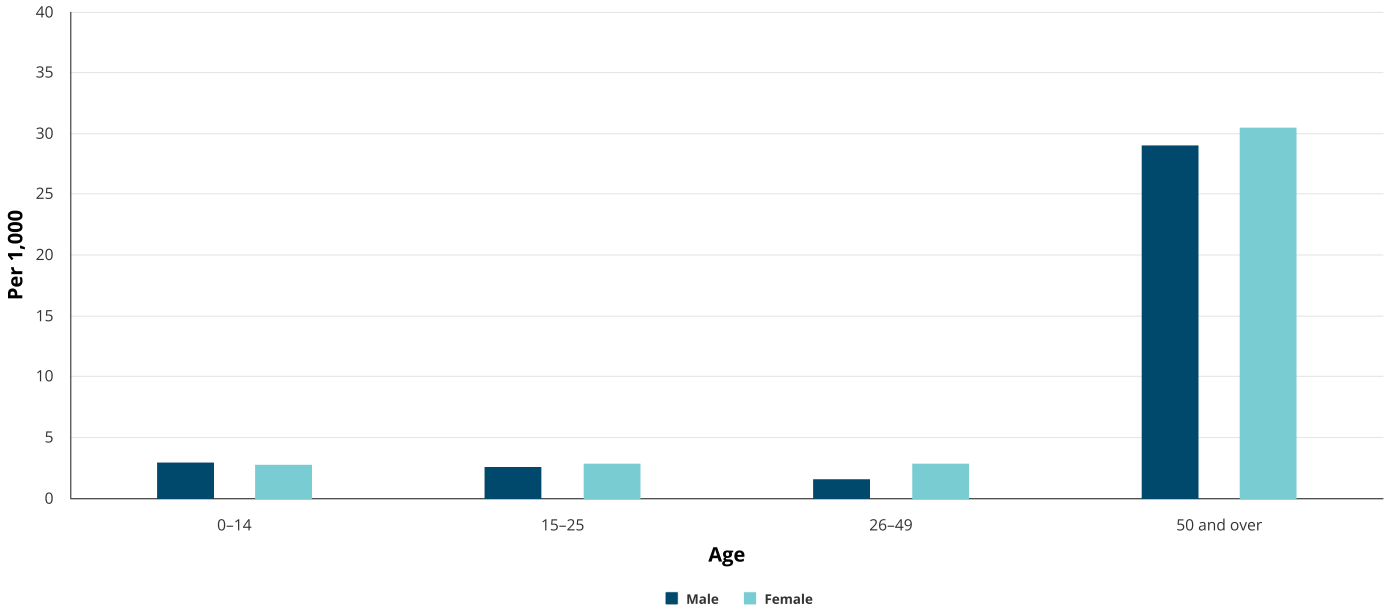
Source: AIHW analysis of Hearing Australia data, unpublished; and ABS population estimates and projections for rate calculations.

Sex

There were 3,658 First Nations Hearing Australia male clients (6.9 per 1,000 population) and 4,278 female clients (8.2 per 1,000 population). The largest difference between males and females in the rates of First Nations Hearing Australia clients was observed in the 26-49 age group, where the rate for females was nearly double that of males (2.8 and 1.5 per 1,000 population respectively). (Figure REHABILITATION 3). This may reflect differences in health-seeking behaviour, access to services, or underlying patterns in ear health conditions.

Figure REHABILITATION 3: First Nations Hearing Australia clients with a hearing aid or cochlear implant, by sex and age, as at 31 December 2024

Measure: Per 1,000



Source: AIHW analysis of Hearing Australia data, unpublished; and ABS population estimates and projections for rate calculations.

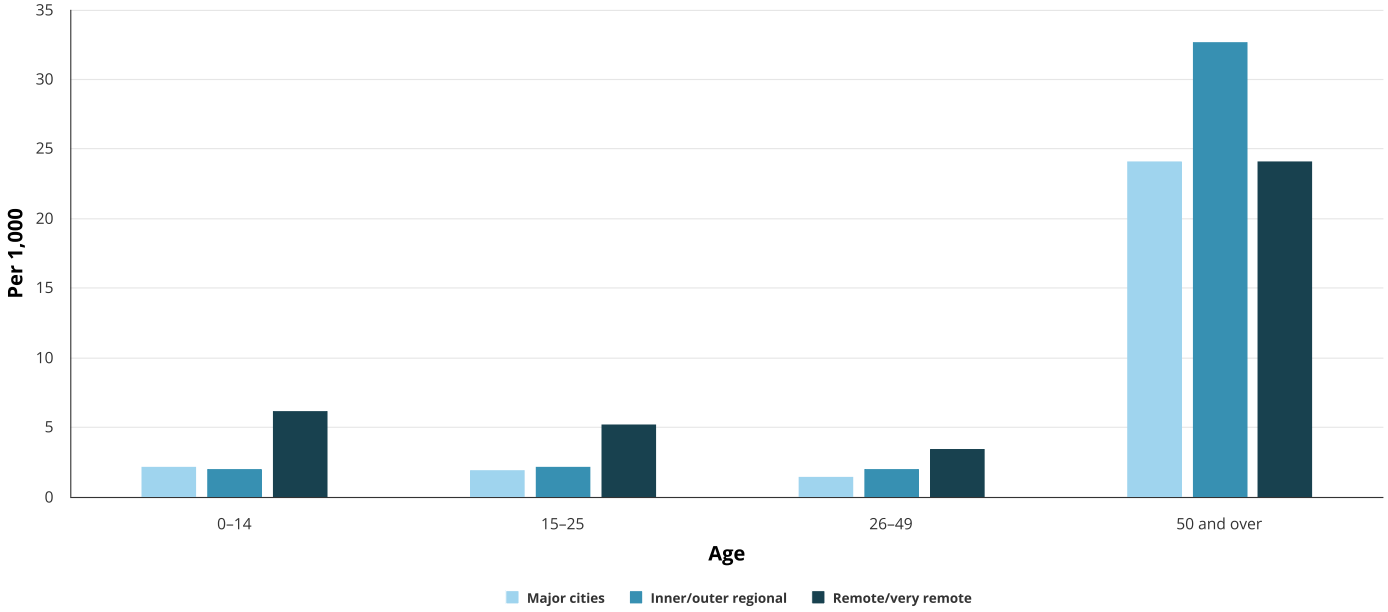
Remoteness

The rate of First Nations Hearing Australia clients increased with remoteness, from 5.5 per 1,000 population in *Major cities*, to 8.1 per 1,000 in *Inner and outer regional* areas, and around 8.7 per 1,000 in *Remote and very remote* areas.

In particular, the rate of First Nations Hearing Australia clients was markedly higher in *Remote and very remote* areas than in non-remote areas among the younger age groups. For those aged 0–14 and those aged 15–25, the rates in *Remote and very remote areas* were nearly 3 times those in *Major cities* or *Inner and outer regional* areas (Figure REHABILITATION 4).

Figure REHABILITATION 4: First Nations Hearing Australia clients with a hearing aid or cochlear implant, by remoteness and age, as at 31 December 2024

Measure: Per 1,000



Source: AIHW analysis of Hearing Australia data, unpublished; and ABS population estimates and projections for rate calculations.

Among the 0–14 and 15–25 age groups, higher rates of chronic middle ear disease in remote and very remote areas may partly explain the higher rates of First Nations clients receiving hearing aids and cochlear implants in those areas.

State and territory

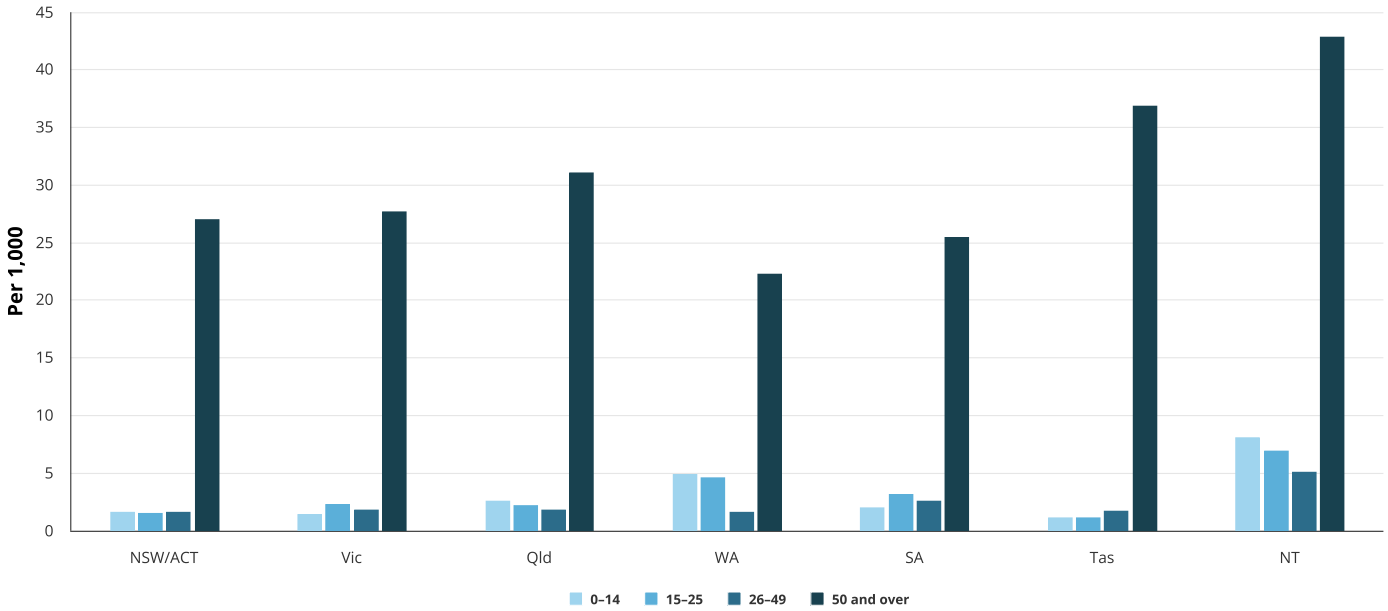
Across states and territories, First Nations Hearing Australia clients with a hearing aid or cochlear implant ranged from 6.4 per 1,000 population (2,311) in New South Wales to 13.3 per 1,000 population (1,044) in the Northern Territory (Figure REHABILITATION 5).

The rate of First Nations Hearing Australia clients with a hearing aid or cochlear implant was highest in the 50 years and over age group for all states and territories, ranging from 22.3 per 1,000 (508) in Western Australia to 42.8 per 1,000 (627) in the Northern Territory.

Among those aged 0–14, the rate of First Nations Hearing Australia clients with a hearing aid or cochlear implant ranged from 1.1 per 1,000 population (12) in Tasmania to 8.1 per 1,000 population (168) in the Northern Territory.

Figure REHABILITATION 5: First Nations Hearing Australia clients with a hearing aid or cochlear implant, by state/territory and age, as at 31 December 2024

Measure: Per 1,000



Source: AIHW analysis of Hearing Australia data, unpublished; and ABS population estimates and projections for rate calculations.

Type of device

As at 31 December 2024, 7,911 First Nations Hearing Australia clients with a hearing device (99.5%) had a hearing aid and about 78 (1%) had a cochlear implant. Some clients had both devices.

Among First Nations Hearing Australia clients with a hearing device, larger proportions of children 0–14 had a cochlear implant compared with those aged 15 and over, although across all age groups the majority had hearing aids. Of First Nations Hearing Australia clients with a hearing device:

- 99.1% (909) of children 0–14 had a hearing aid, 2.7% (25) had a cochlear implant
- 99.7% (574) of those aged 15–25 had a hearing aid, 1.6% (9) had a cochlear implant
- 98.9% (644) of those aged 26–49 had a hearing aid, 1.8% (12) had a cochlear implant
- 99.7% of those aged 50 and over (5,784) had a hearing aid, 0.6% (32) had a cochlear implant (Data table 4.1.1f).

Cochlear implants are primarily suitable for people with severe or profound hearing loss. Given that only a relatively small proportion of people have this level of hearing loss, the proportion of people receiving cochlear implants is also relatively small.

Level of hearing loss

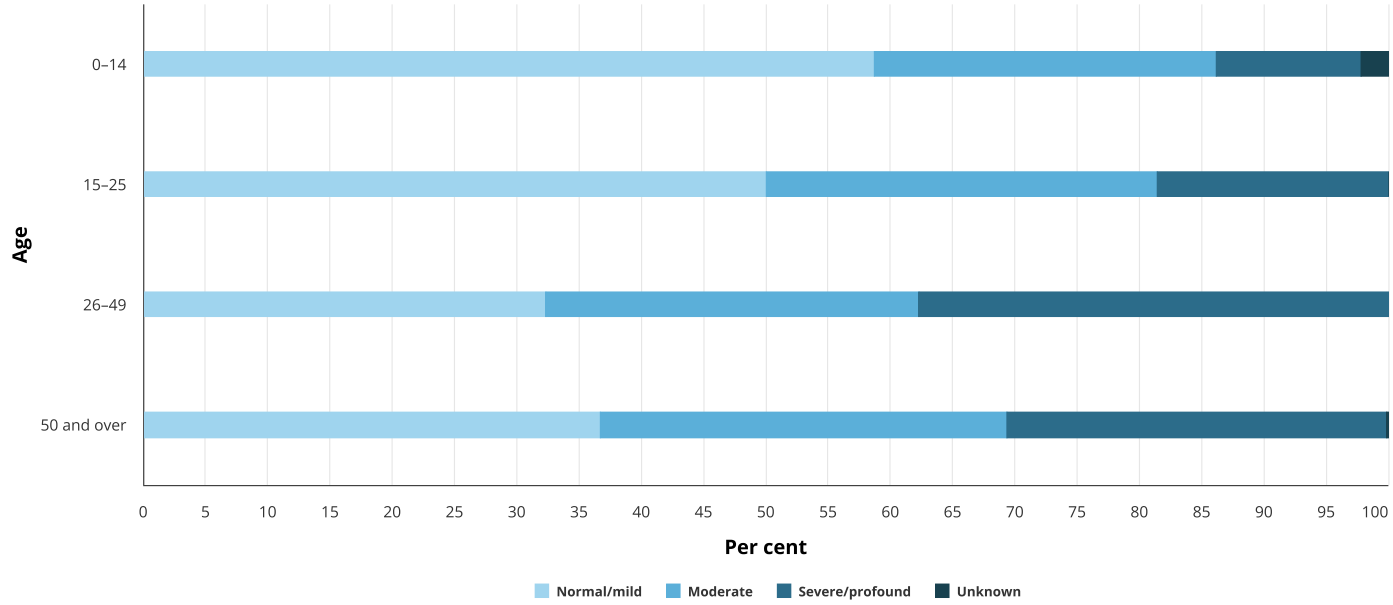
The level of hearing loss is based on the level of hearing loss in the better ear, using a classification of severity of hearing loss for children.

As at 31 December 2024, at their latest hearing test, for First Nations Hearing Australia clients with hearing devices:

- 3,168 (39.9%) had normal hearing or mild hearing loss (could hear sounds in the range 0–40dB)
- 2,525 (31.8%) had moderate hearing loss (41–60dB)
- 2,228 (28.0%) had severe or profound hearing loss (61–90dB).

Across age groups, the proportion with moderate to severe/profound hearing loss was greatest among First Nations clients aged 26–49 (68%) (Figure REHABILITATION 6).

Figure REHABILITATION 6: First Nations Hearing Australia clients with a hearing aid or cochlear implant, by severity of hearing loss and age, as at 31 December 2024



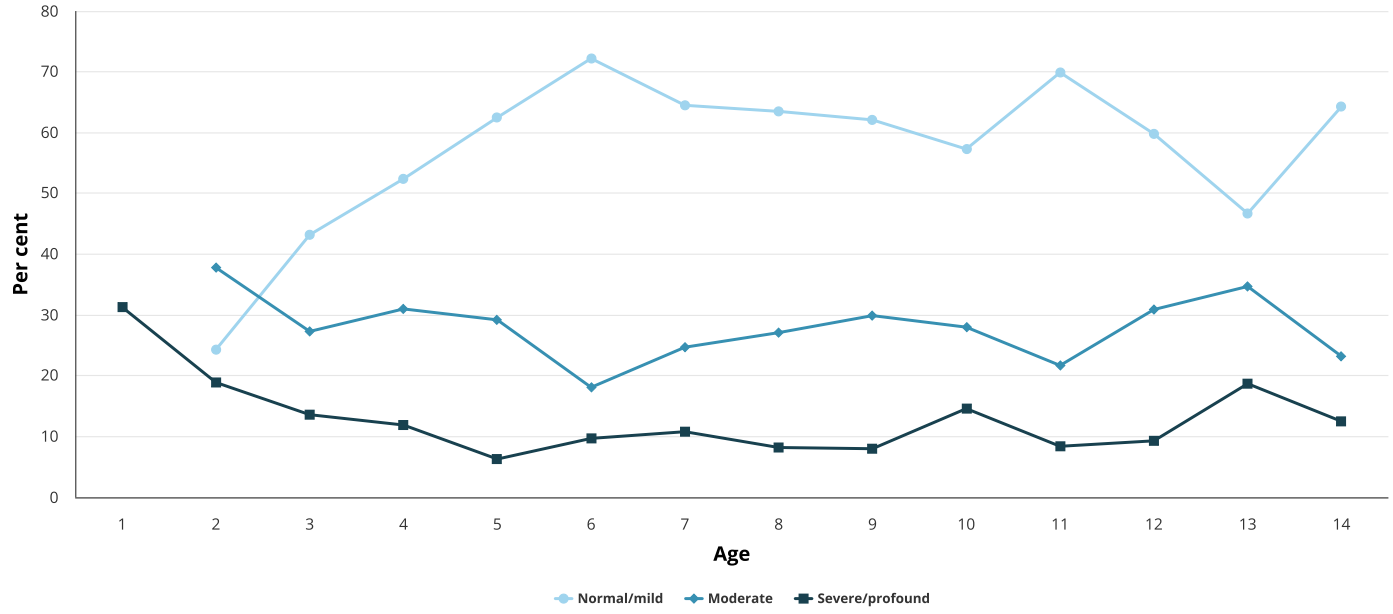
Source: AIHW analysis of Hearing Australia data, unpublished; and ABS population estimates and projections for rate calculations.

As at 31 December 2024, at their latest hearing test, for First Nations Hearing Australia clients with hearing devices aged 0–14:

- 538 (58.7%) had normal hearing or mild hearing loss
- 252 (27.4%) had moderate hearing impairment
- 106 (11.6%) had severe or profound hearing impairment

These results show that most of those who wear hearing devices have normal hearing or mild hearing loss, while a smaller proportion have moderate hearing loss and a smaller proportion again have severe or profound hearing loss. (Figure REHABILITATION 7). That is, very broadly, these results reflect the prevalence in the population of hearing loss at these different levels of severity.

Figure REHABILITATION 7: First Nations Hearing Australia clients aged 0–14 with a hearing aid or cochlear implant, by severity of hearing loss and single year of age, as at 31 December 2024



* Eligibility criteria differ for First Nations and non-Indigenous Hearing Australia clients aged 26 and over, affecting comparisons by Indigenous status.
Source: AIHW analysis of Hearing Australia data, unpublished.

Age when hearing device was first fitted

For Hearing Australia clients aged 0–25 with a hearing aid or a cochlear implant, information on the age when their hearing device was first fitted is available for the period 2008 to 2024.

Overview

There were 6,071 First Nations clients of Hearing Australia aged 0–25 who had been fitted with a hearing aid or cochlear implant between 2008 and 2024. Of these, most (5,375 or 88.5%) were aged 0–14.

Age

In 2024, 436 First Nations people aged 0–25 were fitted with a hearing aid or cochlear implant for the first time. Of these:

- 40.6% (177) were aged 0–4 when fitted with their hearing device
- 31.4% (137) were aged 5–9 when fitted with their hearing device
- 13.1% (57) were aged 10–14 when fitted with their hearing device
- 14.9% (65) were aged 15–25 when fitted with their hearing device.

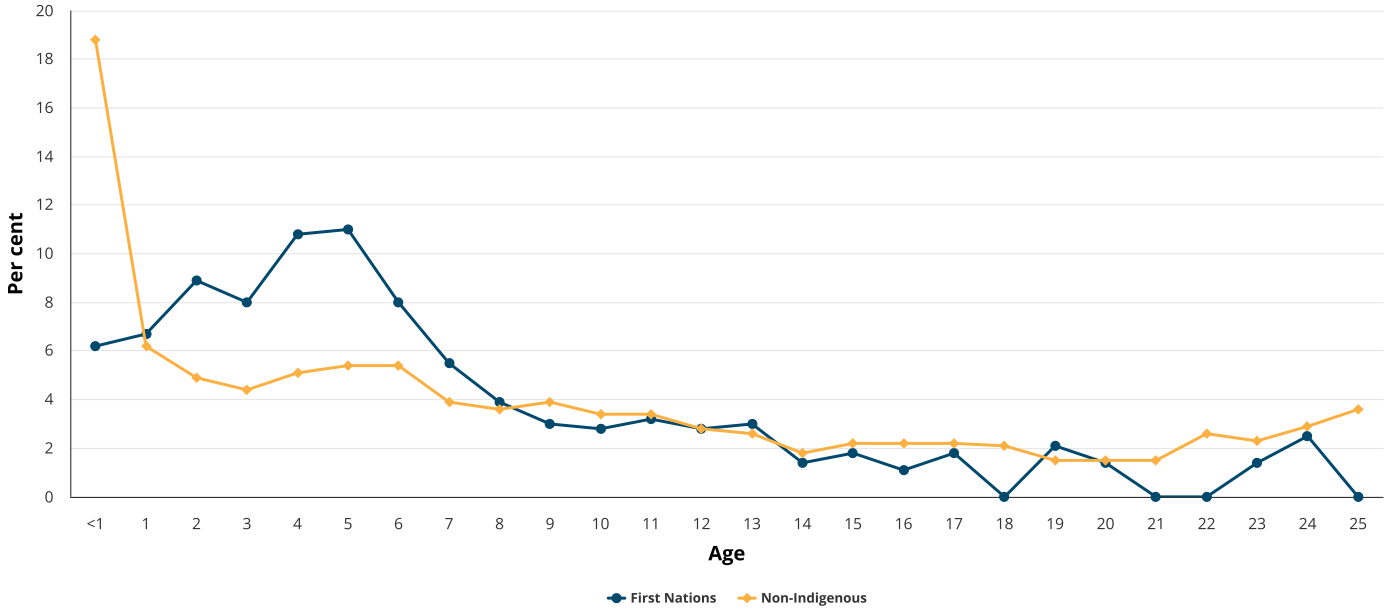
The peak ages of first hearing device fitting for First Nations Hearing Australia clients aged 0–25 in 2024 were from 2–6 years, with the proportion fitted at each of these ages ranging from 8.0% to 11.0%. In total, about 46.8% of First Nations people aged 0–25 first fitted with a hearing device in 2024 were aged 2–6.

For non-Indigenous Hearing Australia clients aged 0–25 in 2024, the peak age of first hearing device fitting was under one year of age (18.8% or 565 people), with a smaller, secondary peak at age 5 and 6 (both 5.4% or 162) (Figure REHABILITATION 8).

The differences between First Nations children and non-Indigenous children in the early ages reflect the different causes of hearing loss, rather than access to services. Non-Indigenous children are more often referred for sensorineural hearing loss, which is detected by newborn hearing screening, and are often fitted in the first year or two of life. In contrast, First Nations children are often fitted due to hearing loss from chronic middle ear infection, frequently occurring between the ages of 2 and 6 years.

Figure REHABILITATION 8: Hearing Australia clients, by age first fitted with a hearing aid or cochlear implant and Indigenous status, 2024

Measure: Per cent



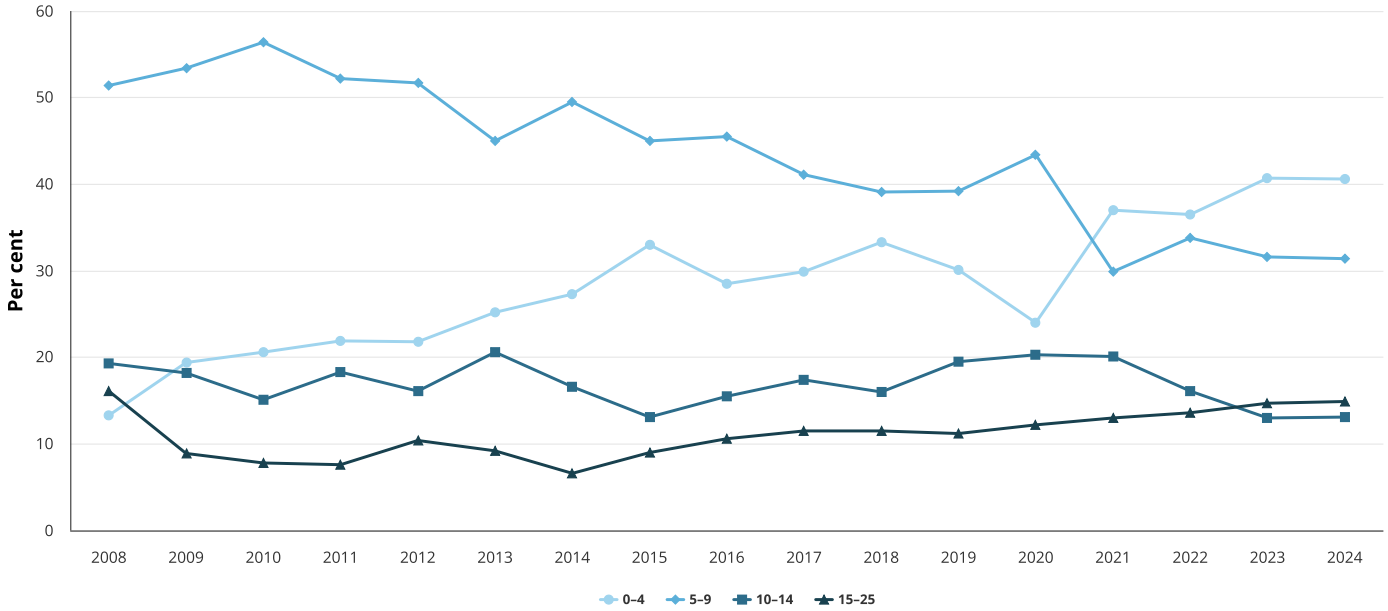
Source: AIHW analysis of Hearing Australia data, unpublished.

Over time

Between 2008 and 2024, there was a trend towards First Nations Hearing Australia clients being fitted with their hearing device at a younger age. The proportion first fitted with their hearing device aged 0–4 increased from 13.3% (29) in 2008 to 40.6% (177) in 2024 (Figure REHABILITATION 9).

Figure REHABILITATION 9: First Nations Hearing Australia clients, by age first fitted with a hearing aid or cochlear implant, 2008 to 2024

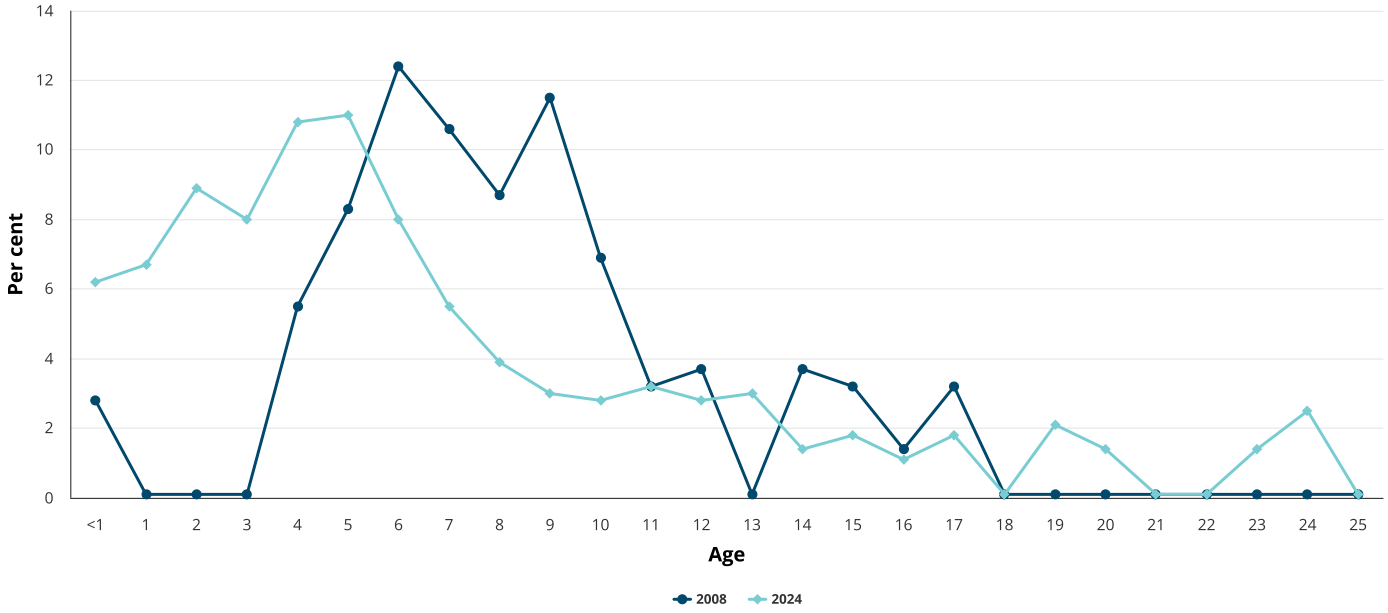
Measure: Per cent



Source: AIHW analysis of Hearing Australia data, unpublished.

The peak age at which the hearing device was first fitted fell from 6 years (12.4%) in 2008 to 5 years of age (11.0%) in 2024 (Figure REHABILITATION 10).

Figure REHABILITATION 10: First Nations Hearing Australia clients, by age first fitted with a hearing aid or cochlear implant, 2008 and 2024



Source: AIHW analysis of Hearing Australia data, unpublished.

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National Disability Insurance Scheme

In this section

The number of First Nations NDIS participants with hearing impairment as a disability was 2,239 in 2025 an increase from 1,421 in 2020.

of First Nations NDIS participants with a hearing impairment (1,362) report it as their primary disability.

The NDIS supports eligible Australians with a permanent disability, helping them perform everyday activities (NDIA 2021b).

The NDIS funds public hearing services for participants with confirmed hearing impairment, including hearing aids (NDIA 2021a). This may include funding towards maintenance and replacement of hearing aids, additional assistive listening devices, and interpreting services. The NDIS funds hearing supports for NDIS participants aged 26 and over who are not eligible for the Hearing Services Program (HSP). The NDIS also funds additional reasonable and necessary hearing supports for participants if they are not available through the HSP. This includes people under the age of 26. For those aged under 7, a streamlined NDIS pathway enables children who are newly diagnosed with a hearing impairment to access early intervention supports. For more information see: NDIS Hearing supports.

About the data

This section presents information on First Nations participants in the National Disability Insurance Scheme (NDIS) who reported hearing impairment as a disability.

The data is presented as at 30 June, rather than over the financial year.

For more information on the NDIS data, see National Disability Insurance Agency (NDIA) – Business Systems

Overview

As at 30 June 2025, there were around 60,529 First Nations people who were active participants in the NDIS. Of these:

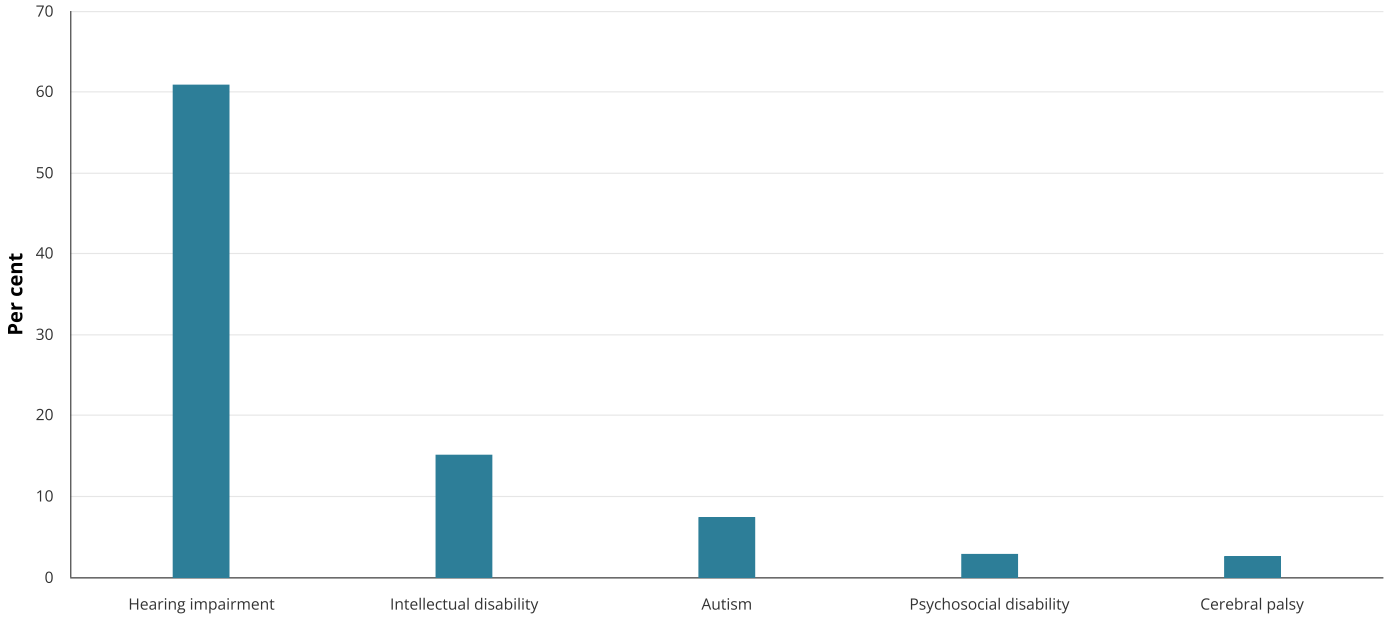
- 3.7% (2,239 people) reported hearing impairment as a disability
- 2.3% (1,362) reported hearing impairment as their primary disability (Data Table 4.2c, Data Table 4.2a).

Of the 2,239 First Nations NDIS participants with hearing impairment, the top 3 primary disability groups were:

- hearing impairment (60.8%)
- intellectual disability (15.1%)
- autism (7.4%) (Figure REHABILITATION 11).

Figure REHABILITATION 11: First Nations NDIS participants with hearing impairment as a disability, by top 5 primary disability groups, as at 30 June 2025

Measure: Per cent



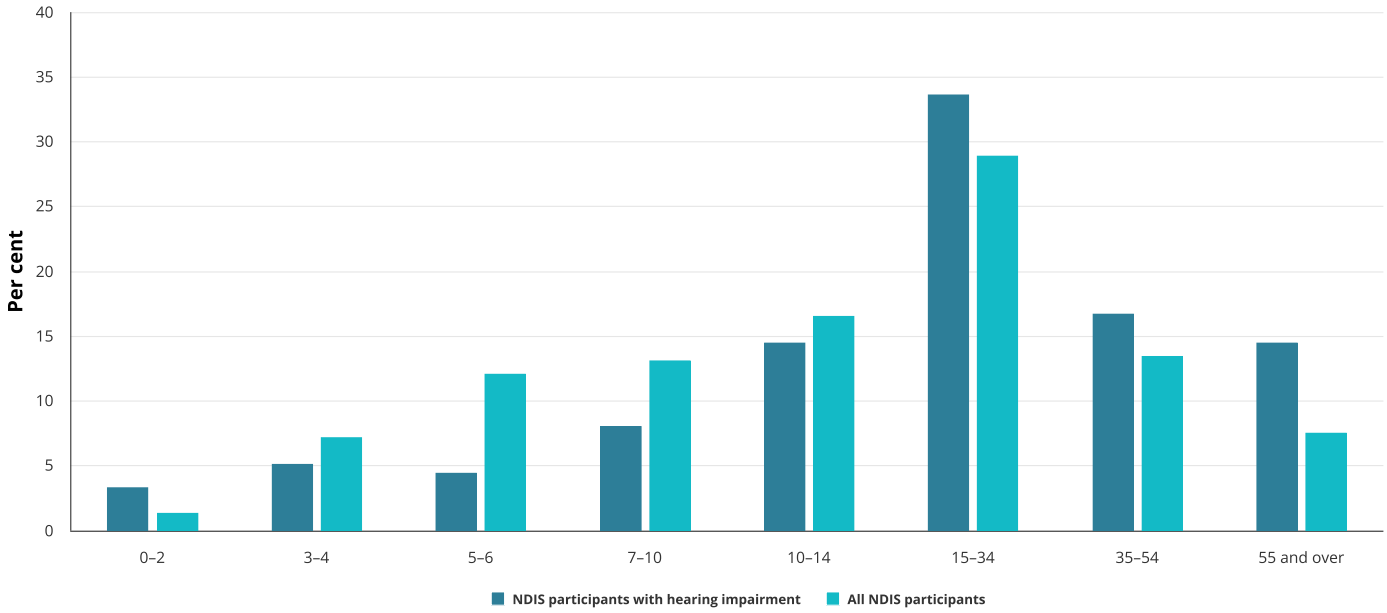
Source: AIHW analysis of NDIA data (unpublished).

Age

There were 64.8% of First Nations NDIS participants with hearing impairment as a disability aged 15 and over, compared with 49.8% of all First Nations participants, as at 30 June 2025 (Figure REHABILITATION 12).

Figure REHABILITATION 12: First Nations NDIS participants with hearing impairment as a disability, by age, as at 30 June 2025

Measure: Per cent



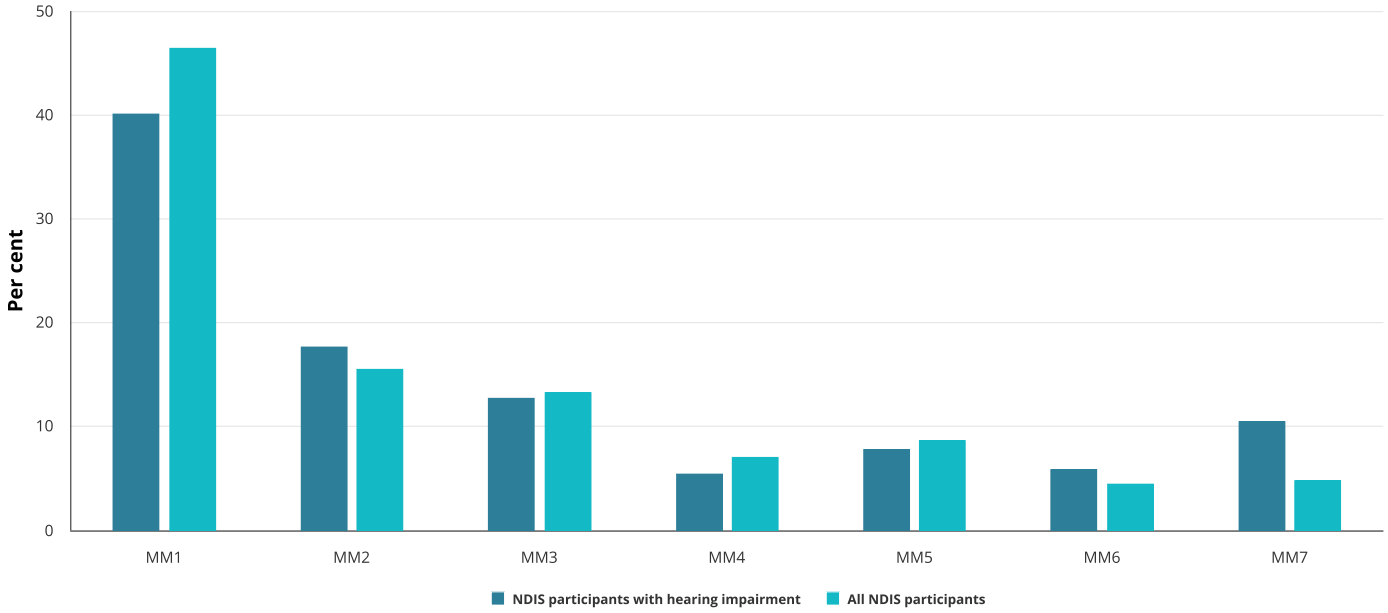
Source: AIHW analysis of NDIA data (unpublished).

Remoteness

As at 30 June 2025, around 10.5% (234) of First Nations NDIS participants with hearing impairment as a disability lived in *Very remote* communities, compared with 4.8% (2,920) of all First Nations NDIS participants (Figure REHABILITATION 13).

Figure REHABILITATION 13: First Nations NDIS participants, those with hearing impairment as a disability and all NDIS participants, by remoteness, as at 30 June 2025

Measure: Per cent



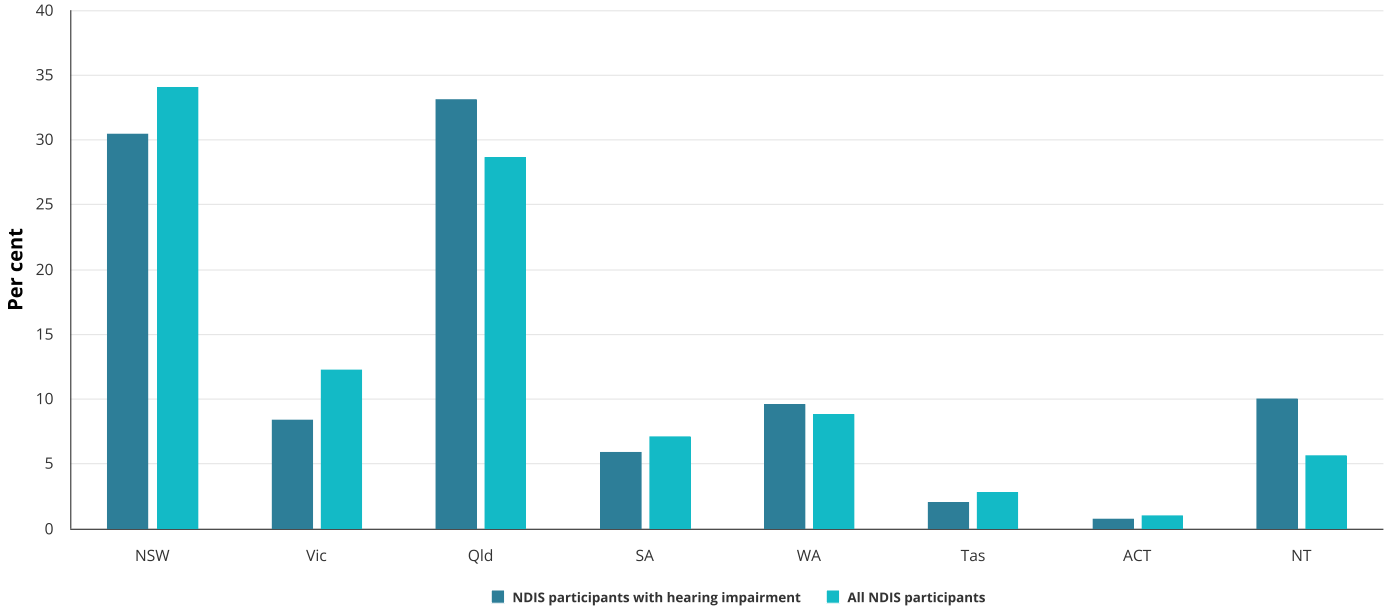
Source: AIHW analysis of NDIA data (unpublished).

State and territory

Of the First Nations NDIS participants with hearing impairment as a disability on 30 June 2025, around one third lived in Queensland (33.1%) and around another third lived in New South Wales (30.4%) (Figure REHABILITATION 14).

Figure REHABILITATION 14: First Nations NDIS participants, those with hearing impairment as a disability and all NDIS participants, by state/territory, as at 30 June 2025

Measure: Per cent

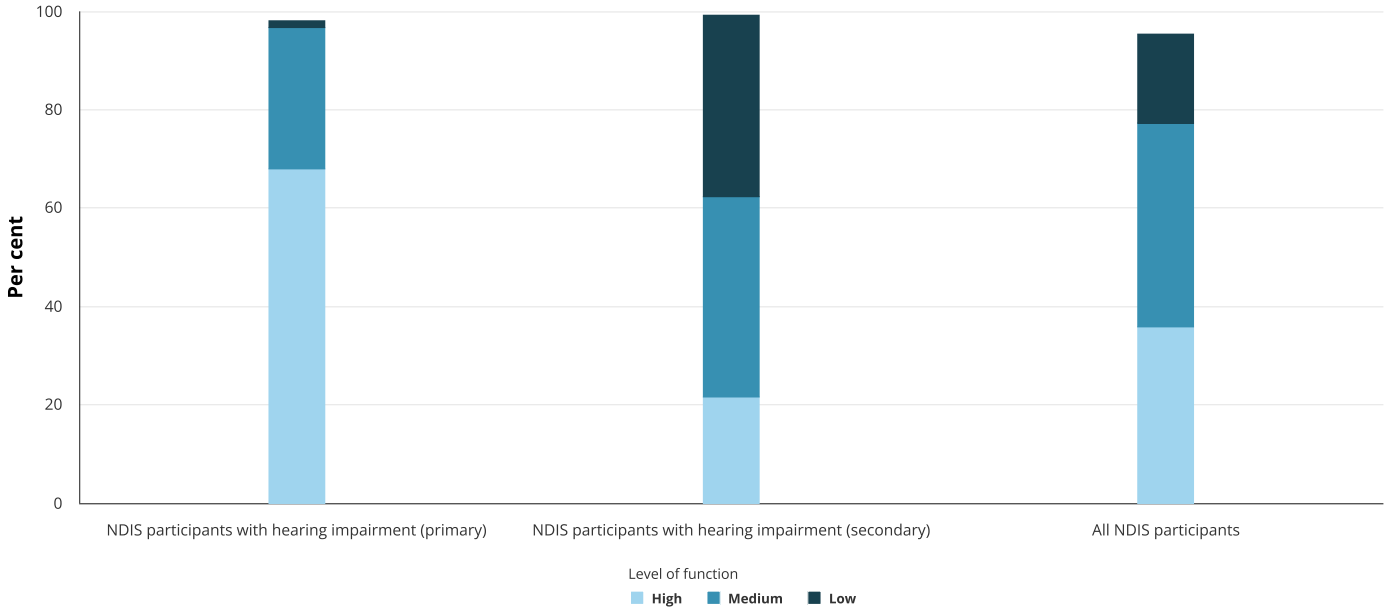


Source: AIHW analysis of NDIA data (unpublished).

Level of function

As at 30 June 2025, 68.0% of First Nations NDIS participants with hearing impairment as a primary disability had a high level of function, compared to 35.9% across all First Nations NDIS participants (Figure REHABILITATION 15).

Figure REHABILITATION 15: First Nations NDIS participants, those with hearing impairment as a primary disability, as a secondary disability, and all NDIS participants, by level of function, as at 30 June 2025



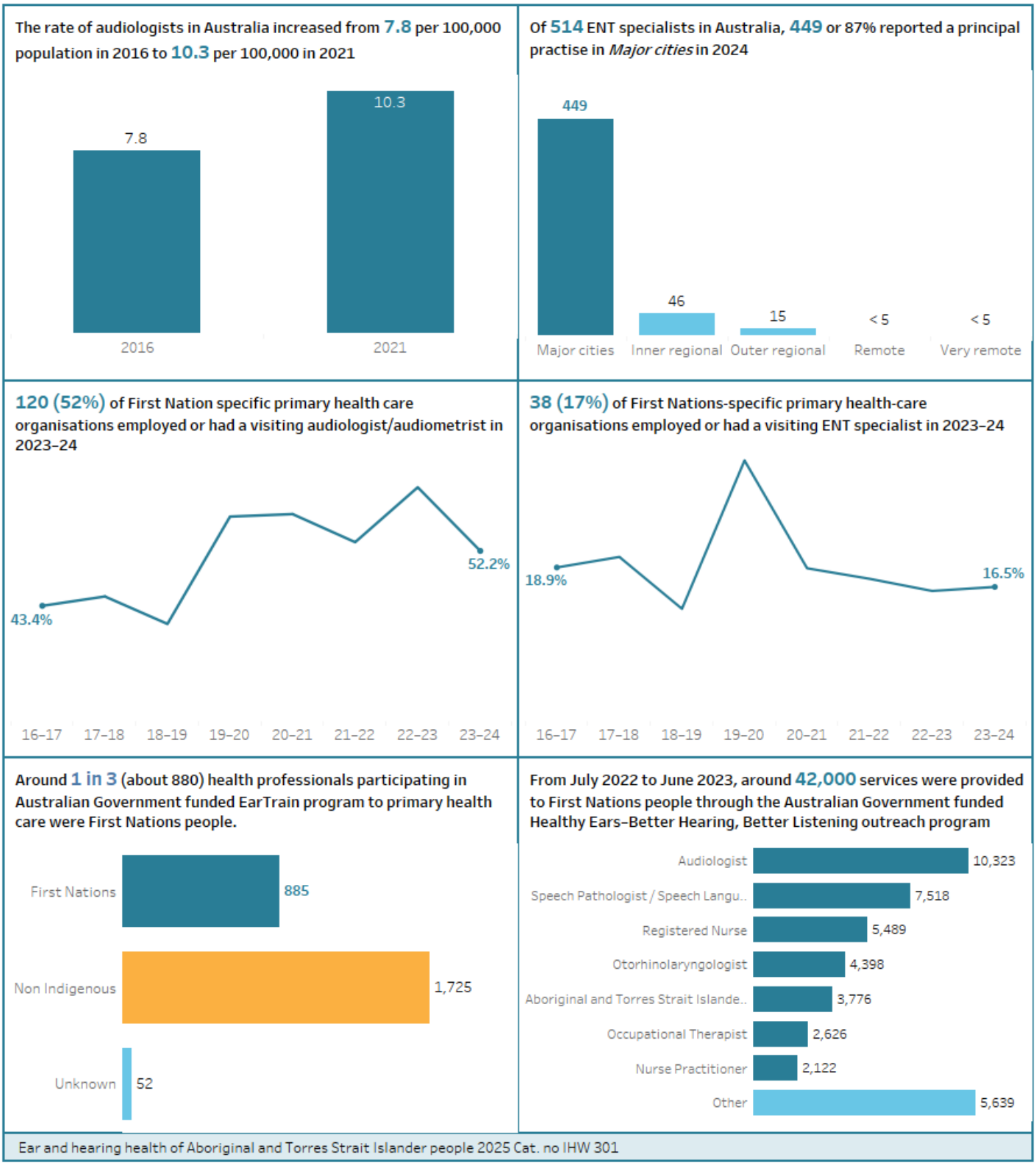
Source: AIHW analysis of NDIA data (unpublished).

Over time

The number of First Nations NDIS participants with hearing impairment as a disability increased from 1,421 as at 30 June 2020 to 2,239 as at 30 June 2025 (Data Table 4.2a).

Workforce

Figure WORKFORCE: Key statistics



Access to culturally safe ear and hearing health specialist services is crucial for First Nations people to seek and receive timely diagnosis and treatment. The ear and hearing health workforce is diverse and often provides complementary services as part of a team (see Ear and hearing health and the ear health system in Australia).

While the workforce is critical to delivering ear and hearing health services, it faces challenges, including high staff turnover, competing demands from multiple programs and insufficient staff training. These challenges reduce the capacity of the ear and hearing health workforce, particularly in rural and remote communities (Siggins Miller 2017). There is also insufficient access to culturally appropriate services.

Outreach services (such as the Better Hearing, Better Listening program) is key in addressing disparities in the provision of services to communities in need. Outreach services face challenges such as limited transportation options, time constraints for the doctors, lack of available facilities, a burden of paperwork, and inconsistent funding. One important step toward advancing the effectiveness of outreach services would be improving the outreach participant network and establishing an ENT outreach national register (Tavener, Lithgow, 2025).

Data on the ear and hearing health workforce can indicate the availability of specialised ear health services.

This chapter covers the following information:

- audiologists (data tables 5.1a–d)
- ear, nose and throat specialists (data tables 5.2a–c)
- EarTrain workforce training – for primary health professionals (data tables 5.3a–d)
- Healthy Ears – Better Hearing, Better Listening outreach services (data tables 5.4a–c).

Data tables in Excel spreadsheet format can be accessed at the Data tab.

About the data

Information in this chapter comes from the ABS 2021 Census of Population and Housing (the Census), the 2021 National Health Workforce Dataset, the Online Services Report, data supplied from the training program EarTrain, data supplied by the Department of Education, and data from the Australian Government program Healthy Ears – Better Hearing, Better Listening (Healthy Ears).

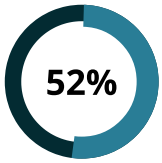
References

Siggins Miller Consultants 2017. Examine Australian Government Indigenous Ear and Hearing Health Initiatives Final Report. Canberra: Australian Government Department of Health.

Tavener M, Lithgow S, 2025 Mapping the locations of Ear, Nose and Throat (ENT) surgeons and outreach activities across Australia. Australian Society of Otolaryngology Head & Neck Surgery Ltd.

Audiologists

In this section



of First Nations-specific primary health care organisations (120 organisations) employed or had a visiting audiologist or audiometrist in 2023–24.

Audiologists provide hearing tests and rehabilitative services, including counselling, communication strategies and hearing aid fitting. They also assess and support other ear related conditions, such as balance problems.

About the data

Data in this section are from the 2021 Census and the Department of Education Higher Education Student data collection. Information about state or territory of usual place of work, as well as place of usual residence, is available from the Census. Information about remoteness area is only available for place of usual residence.

Overview

In 2022, about 160 university students completed an audiology course in Australia (AIHW analysis of Department of Employment Higher Education Student data collection).

In the 2021 Census, 2,636 Australians reported their occupation as an audiologist. This is a rate of 10.3 audiologists per 100,000 population, up from 7.8 in 2016. Fewer than 15 of these audiologists identified as First Nations people (Table 5.1a, ABS 2021).

Employment characteristics

Around 1,560 (59%) audiologists reported working full time (35 hours or more per week), while around 910 (35%) reported working part time (less than 35 hours per week) (information about full time or part time status was not determined for the remainder). In 2021 most audiologists reported working in the private sector (around 2,340, 89%), a large increase from 66% in 2016. Remaining audiologists reported working for a state or territory government (232, 8.8%) or the Australian Government (49, 1.9%) (ABS 2021).

Age and sex

The median age of audiologists was 36, and over 50% of audiologists were aged 25–39. Only 75 (3%) audiologists were aged 65 and over.

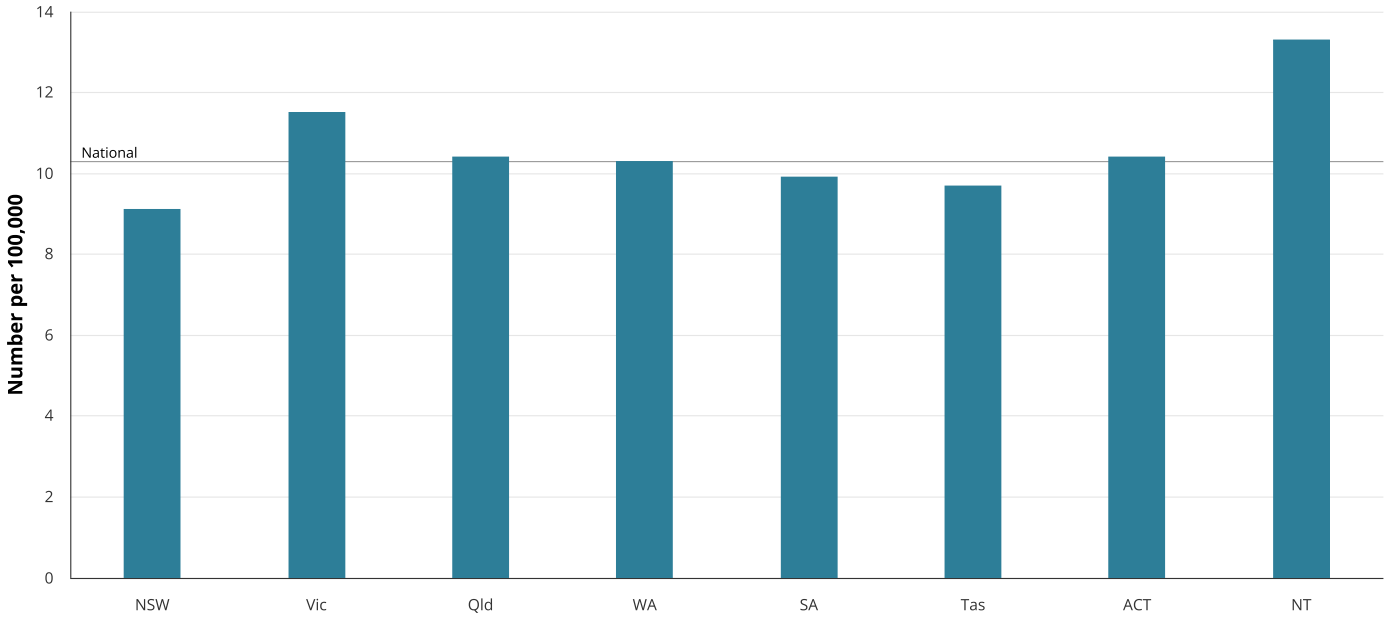
Around 3 in 4 audiologists were women (2,030, 77%) and 1 in 4 were men (600, 23%).

State and territory

Of the 2,600 audiologists in Australia, 760 worked in Victoria and 740 worked in New South Wales. However, the rate of audiologists was highest in the Northern Territory (about 13 per 100,000 population) and Victoria (about 12 per 100,000) (Figure WORKFORCE 1).

Figure WORKFORCE 1: Audiologists in Australia, by state/territory of place of work, 2021

Measure: Per 100,000



Source: AIHW analysis of ABS (2021) Census of Population and Housing, 2021, Customised report; and ABS population estimate for rate calculations.

Remoteness

In 2021, most audiologists lived in *Major cities* (around 2,040 or 77%).

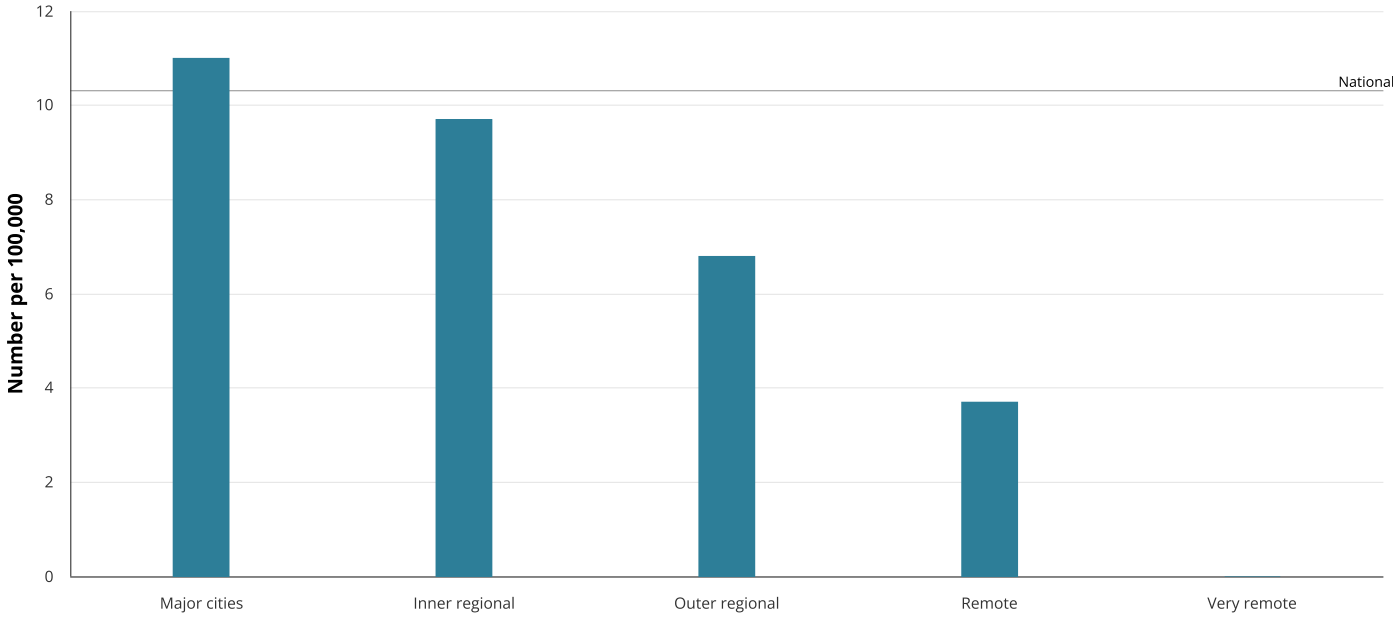
The rate was highest in *Major cities* and decreased with remoteness, as follows:

- *Major cities* – 11.0 audiologists per 100,000 population
- *Inner regional* areas – 9.7 per 100,000
- *Outer regional* areas – 6.8 per 100,000
- *Remote* areas – 3.7 per 100,000.

No audiologists lived in *Very remote* areas (Figure WORKFORCE 2).

Figure WORKFORCE 2: Audiologists in Australia, by remoteness area of usual residence, 2021

Measure: Per 100,000



Source: AIHW analysis of ABS (2021) Census of Population and Housing, Customised report; AIHW population modelling using ABS population estimates and projections.

Specialist services in First Nations-specific primary health-care organisations

The proportion of First Nations-specific primary health-care organisations which employed or had a visiting audiologist or audiometrist almost doubled between 2013–14 and 2023–24, from 28% (56 organisations) to 52% (120 organisations) (AIHW analysis of the AIHW Online Services Report database collection, data table 5.1d).

Ear, nose and throat specialists

In this section

of ENT specialists (around 500 FTE) report their principal place of practice to be in **Major cities** in 2024.

of ENT specialists (around 450 FTE) reported that they mainly worked in a **private practice** in 2024.

Ear, nose and throat specialists, often referred to as ENTs, are specialist surgeons who investigate and treat conditions involving the ear, nose, throat, head and neck.

About the data

Data in this section are from the Department of Health, Disability and Ageing's National Health Workforce Dataset (NHWDS). NHWDS data comes from the annual registration process for 14 health professions, along with information from a workforce survey that is voluntarily completed at the time of registration. The Australian Health Practitioner Regulation Agency (AHPRA), in conjunction with the national health professional registration boards, is responsible for the national registration process.

Data in the NHWDS includes demographic and employment information for registered health professionals – for example, labour force status, location of main job, area of practice and work setting.

For more information see: National Health Workforce Dataset.

The information reported includes a measure of the full-time equivalent (FTE) workforce. This is a standard measure of the size of a workforce that considers both the number of workers and the hours that each works. For ENT specialists, 40 hours per week is assumed to be the full-time workload of 1 worker. On that basis, if for example a workforce was made up of 2 people working 20 hours per week each, that would be a FTE of 1 worker.

Overview

In 2024, 514 ENT specialists were employed in Australia. On average, ENTs worked 45 hours per week. This is greater than the assumed standard working week of 40 hours, so the full-time equivalent ENT specialist workforce was 567. This is a rate of 2.1 ENTs (full-time equivalent) per 100,000 (Data Table 5.2a).

Fewer than 5 ENT specialists identified as First Nations people.

Age and sex

Around 6 in 10 ENT specialists were aged 35–54 (61% or 311 specialists, 372 FTE) and nearly 2 in 10 (19% or 89 specialists, 65FTE) were aged 65 and over.

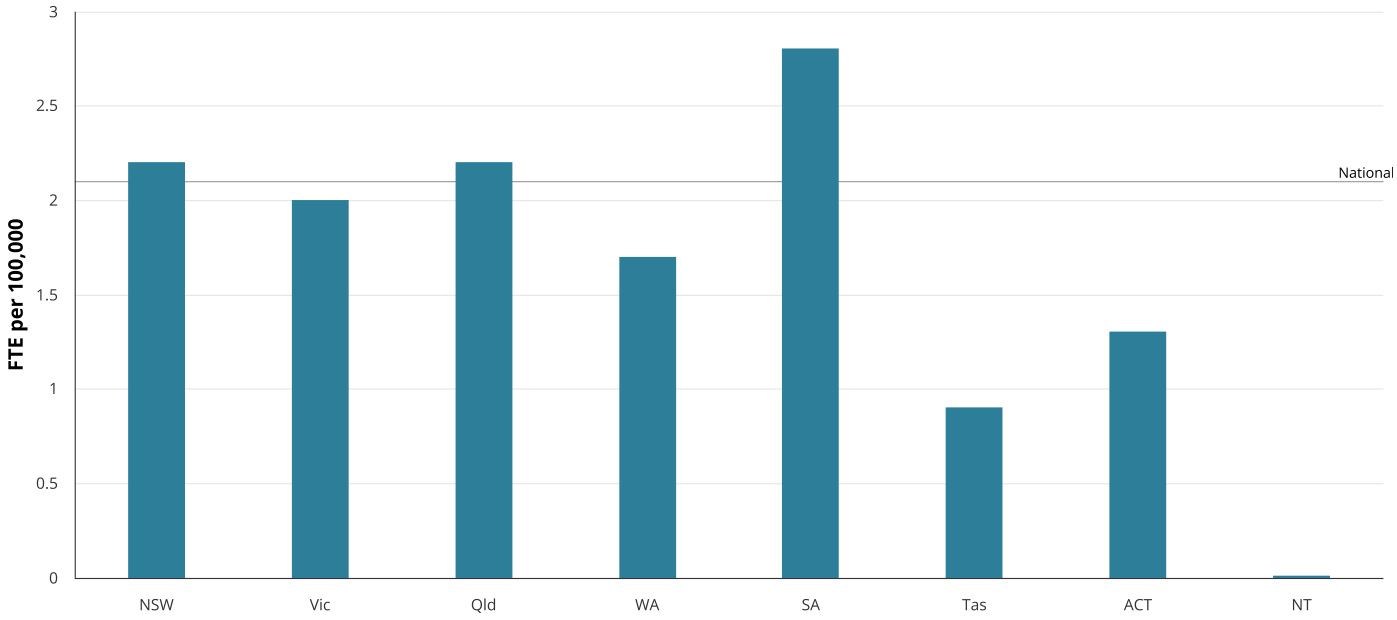
Around 20% of ENT specialists were women (102 specialists, 114 FTE) and 80% were men (412 specialists, 454 FTE).

State and territory

The highest proportion of ENT specialists were in New South Wales, with 33% (169 specialists, 190 FTE) indicating that state as their principal place of practice. South Australia had the highest rate of ENT specialists (2.8 FTE per 100,000 population) (Figure WORKFORCE 5).

Figure WORKFORCE 5: ENT specialists, number of FTE, by state/ territory of work, 2024

Measure: Per 100,000



Source: Source: AIHW analysis of Australian Government Department of Health National Health Workforce Dataset, 2023; and ABS population estimates for rate calculations.

Remoteness

The principal place of practice of over 4 in 5 ENT specialists was in *Major cities* (87%, 449 ENT specialists, 495 FTE) (data table 5.2c).

Job setting

There were 407 ENT specialists (79.8%, 454 FTE) reported that they mainly worked in private practice (Data Table 5.2d).

Over time

The number of ENT specialists employed in Australia increased from 420 (485 FTE) in 2013 to 514 (567 FTE) in 2024. However, this increase in numbers has just kept pace with growth in the overall population over this period – the number of ENT specialists per 100,000 population remained stable within the range of 2.0 to 2.2 per 100,000 population in the decade to 2024 (Table WORKFORCE 1).

Table WORKFORCE 1: ENT specialists employed in Australia, 2013 to 2024

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Number of ENTs	420	427	443	459	455	458	475	481	498	498	500	514
FTE	484	472	499	525	530	516	540	510	533	547	559	567
FTE per 100,000	2.1	2.0	2.1	2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	2.1

Notes:

1. ENT specialists are medical practitioners employed in Australia with the surgical specialisation of otolaryngology.
2. FTE rate is per 100,000 Australian population.

Source: AIHW analysis of Australian Government Department of Health National Health Workforce Dataset, 2023; and ABS population estimates for rate calculations.

Specialist services in First Nations-specific primary health-care organisations

In 2023–24, 38 (16.5%) of First Nations-specific primary health-care organisations reporting data to the AIHW Online Services Report database collection either employed or had visiting ENT specialists. The proportion of these organisations with an ENT specialist generally increased from 12.3% in 2013–14 to 20.2% in 2017–18. A large decrease in 2018–19 (to 13.8%) was followed by a peak of 32.1% in 2019–20.

EarTrain workforce training

In this section

Around 1 in 3 (885) health professionals

participating in the EarTrain program were First Nations people.

of all EarTrain participants (1,106 participants) were nurses directly involved in assessing and treating ear health.

EarTrain is a program that provides training to primary health care professionals to identify and manage middle ear infections and other hearing conditions in First Nations communities. Most training is online but there are also workshops on practical skills, which are delivered in communities in person.

About the data

This report presents information on the number of people who have participated in the EarTrain program since it began in 2020 through to 30 June 2024.

The information comes from the EarTrain program, which is funded by the Australian Government and delivered nationally by TAFE New South Wales. For more information, see The EarTrain program.

Overview

From the time it began in 2020 to 30 June 2025, 2,662 primary health care professionals have participated in training provided by EarTrain,with 885, or around 1 in 3, were First Nations people (Data table 5.3a).

State and territory

The highest numbers of EarTrain participants were from New South Wales (816 or 30.7%) and Queensland (778 or 29.2%).

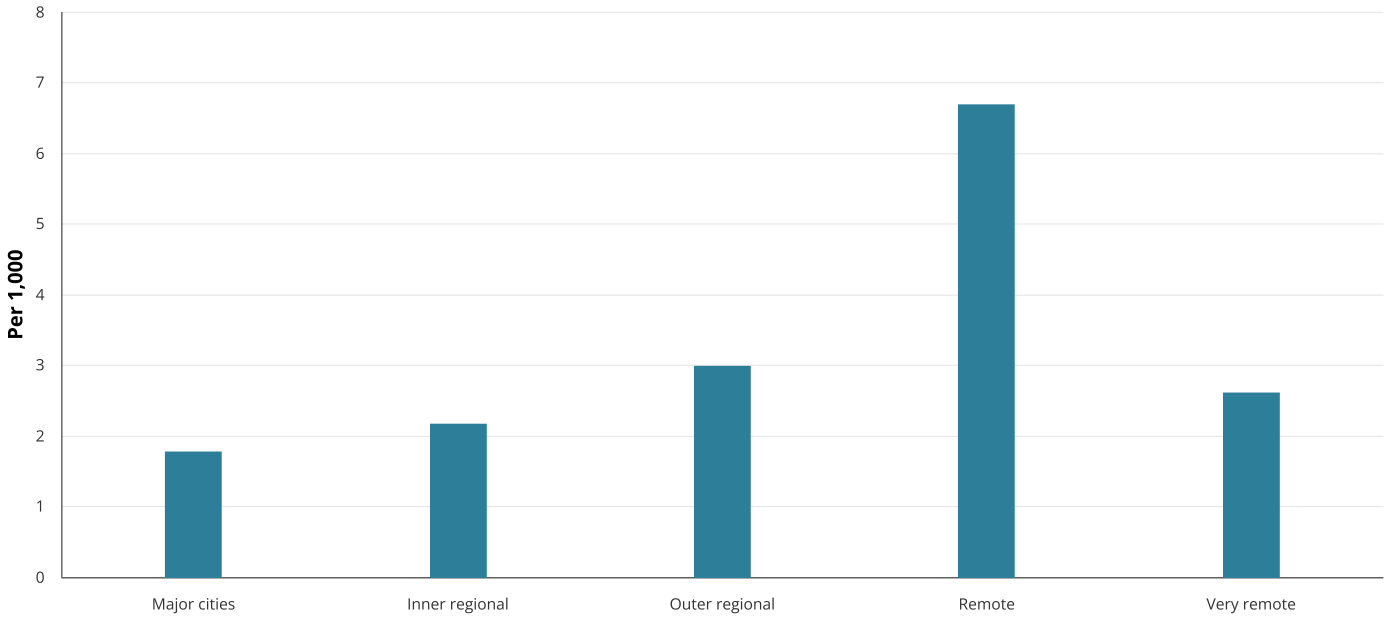
The highest rate of EarTrain participants relative to the size of the First Nations population was in the Northern Territory (5.7 per 1,000 First Nations population) (Data table 5.3b).

Remoteness

The highest numbers of EarTrain participants were from *Major cities* (781 or 29.3%), *Outer regional* areas (602 or 22.6%) and *Inner regional* areas (573 or 21.5%).

The rate of EarTrain participants was 6.7 per 1,000 First Nations population in *Remote* areas, the highest rate across remoteness areas. In comparison, the rate of EarTrain participants for *Outer regional* areas was 3.0 per 1,000 First Nations population, 2.2 per 1,000 in *Inner regional* areas and *Very remote* areas, and 1.8 per 1,000 in *Major cities* (Figure WORKFORCE 6).

Figure WORKFORCE 6: EarTrain participants, by remoteness, as at 30 June 2025



Source: EarTrain data (unpublished); AIHW population modelling using ABS population estimates and projections.

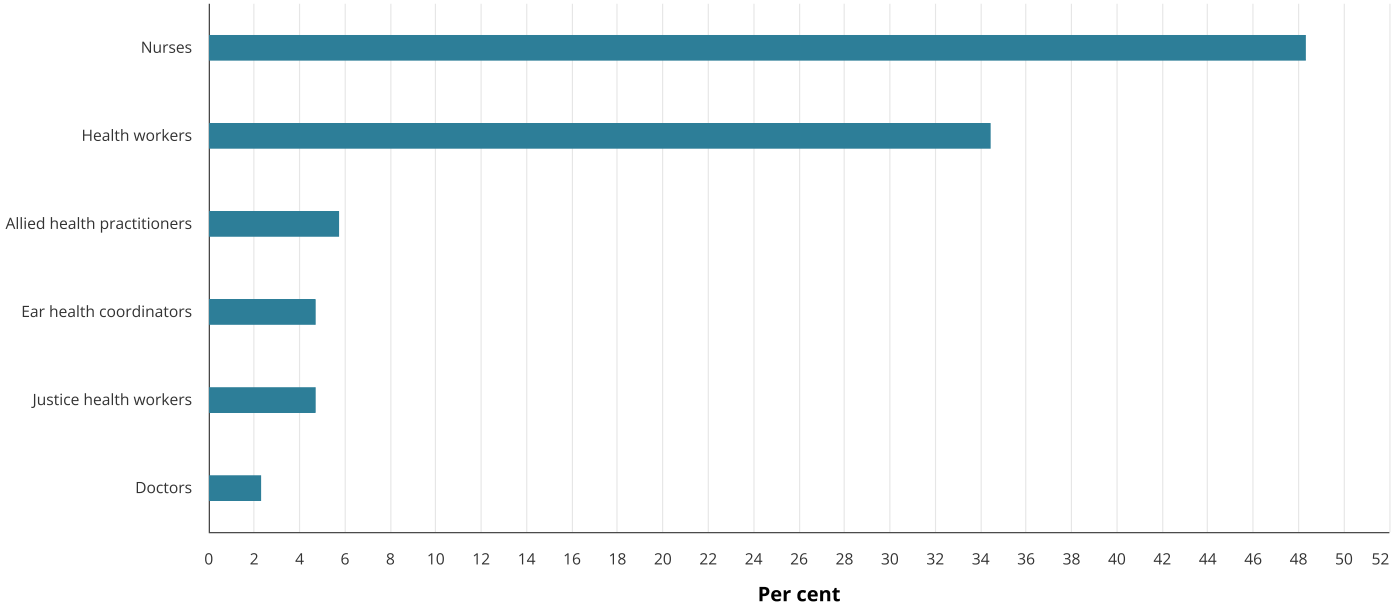
Job role

Almost half of all EarTrain participants were nurses (1,287 or 48.3% of participants), and most of these were directly involved in assessing and treating ear health.

Health workers made up 34.4% (915) of EarTrain participants . Of these, 45.4% were directly involved in the assessment and management of ear and hearing health, while over half (54.6%) were involved in public health campaigns or working with families and health promotion.

Ear health coordinators, allied health practitioners, doctors and people working in justice health made up the remaining 17% of participants (Data Table 5.3d, Figure WORKFORCE 7).

Figure WORKFORCE 7: EarTrain participants by job role, as at 30 June 2025



- Over 90% of doctors participating in EarTrain were directly involved in ear health assessment and treatment.
- Around 87% of nurses participating in EarTrain were directly involved in ear health assessment and treatment.
- Around 45% of health workers participating in EarTrain were directly involved in ear health assessment and treatment.

Source: EarTrain data (unpublished)

Healthy Ears – Better Hearing, Better Listening outreach services

In this section

There were 41,891 services were delivered to First Nations people through the Healthy Ears program between July 2023 to June 2024.

The Healthy Ears – Better Hearing, Better Listening (Healthy Ears) program supports outreach health services. Outreach health services are provided by health professionals who travel from other areas to provide care. The Healthy Ears program provides funding for primary health care professionals, including general practitioners, nurses and audiologists, to screen and treat First Nations children and young people for ear and hearing problems. The program also provides funding to improve access to follow-up or ongoing care like speech pathology or specialist treatment.

Healthy Ears program funding supports health professionals to provide outreach services by coordinating their participation in service delivery, paying for travel and accommodation, backfilling salaried medical staff, and paying allowances for absences from practice.

The Healthy Ears program is funded by the Australian Government and managed and delivered by organisations in each state.

Most Healthy Ears outreach services are provided in regional and remote areas where there are fewer audiologists and ENT specialists. These services are intended to compensate for the uneven distribution of the health workforce and to improve access to health services across Australia. Information from such programs on the availability and uptake of services can provide insights into people's access to and use of these services.

About the data

This report presents information on services delivered through the Healthy Ears program from July 2022 to June 2024. Healthy Ears services are delivered in all states and are not delivered in the Australian Capital Territory or the Northern Territory.

Overview

From July 2023 to June 2024, 47,286 services were delivered through the Healthy Ears program. Most of these (41,891 or 88.5%) were delivered to First Nations people (Data table 5.4a).

Remoteness

There were 17,871 Healthy Ears services delivered to First Nations children and young people in *Remote* and *Very remote areas* (43%) and another 13,763 were delivered *Inner* and *Outer regional* areas (32.9%).

Of the 17,871 services delivered in *Remote* and *Very remote* areas, around 1 in 3 were provided by audiologists (5,679).

Just over 40% of the 4,398 Healthy Ears services provided by ENT specialists were delivered in *Remote* and *Very remote* areas (1,818 or 41.3%) (Data table 5.4c).

State and territory

Most Healthy Ears services provided to First Nations people were delivered in the three states with the largest First Nations populations living in regional and remote areas:

- Queensland – nearly 35% or 14,580 services
- Western Australia – over 28% or 11,926 services
- New South Wales – around 28% or 11,896 services.

A much smaller proportion of Healthy Ears services provided to First Nations people were delivered in South Australia (around 6% or 2,527), Victoria (around 2% or 764 services) and Tasmania (0.5% or 198 services). Healthy Ears services are not delivered in the Australian Capital Territory or the Northern Territory.

There are hearing health outreach services in the Northern Territory – these are funded by the Australian Government mainly through the National Partnership on Northern Territory Remote Aboriginal Investment (NTRAI) (for children under 16). Detailed analysis of ear and hearing health services delivered to First Nations children and young people as part of the NTRAI is reported regularly in a series of annual AIHW reports.

The latest report on hearing health outreach services for First Nations children in the Northern Territory shows that in 2023:

- Around 2,343 audiology services were provided to 2,057 First Nations children and young people
- Around 724 Ear, Nose and Throat (ENT) services were provided to 646 First Nations children and young people
- Around 1,165 clinical nurse specialist services were provided to 1,060 First Nations children and young people (AIHW 2024).

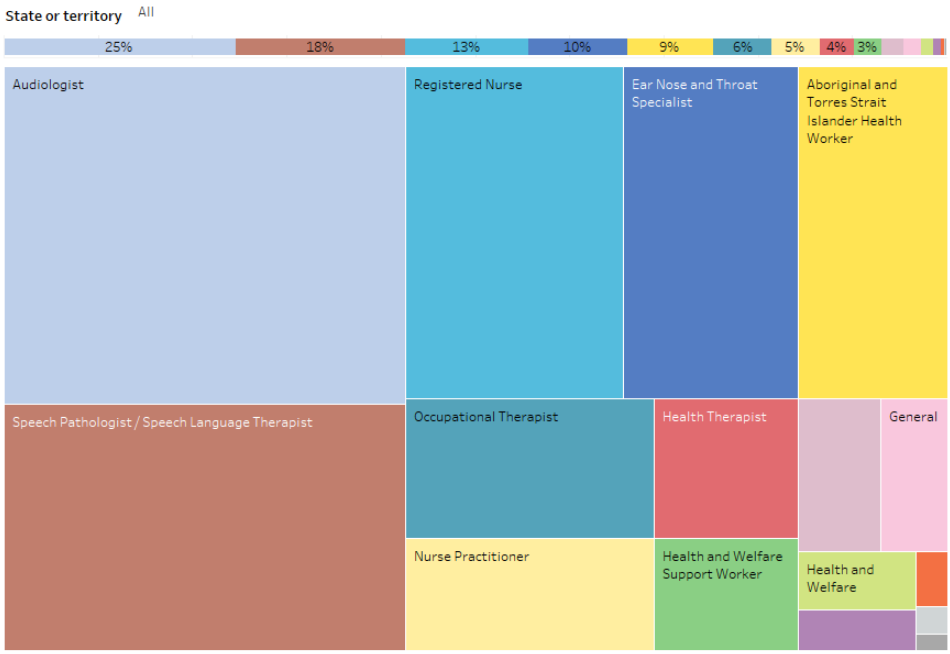
Profession

The largest proportions of Healthy Ear services delivered to First Nations young people were provided by:

- audiologists – around 10,300 services or 25% of the total
- speech pathologists – around 7,500 or 18%
- ENT specialists – around 4,400 or 10%
- Aboriginal health workers or health practitioners – around 3,800 or 9%.

The proportion of services delivered by health care professionals in different occupations varied across states and territories and remoteness areas. In New South Wales, the largest proportion of Healthy Ears services were provided by speech pathologists/speech language therapists (4,700 or 40%). The largest proportion of services were provided by audiologists in Queensland (3,800 or 26%) and Western Australia (3,900 or 33%) (Figure WORKFORCE 8).

Figure WORKFORCE 8: Occasions of service delivered to First Nations clients through Healthy Ears - Better Hearing, Better Listening (HEBHBL) program, by profession type, 2023–24



Notes
1. Aboriginal and Torres Strait Islander Health Worker includes 674 occasions of service for Aboriginal Health Practitioners.
2. No occasions of services were provided to the ACT and NT through HEBHBL.
3. Occupation categories are based on the Australia New Zealand Standard Classification of Occupations.

Occasions of service delivered to First Nations clients through Healthy Ears - Better Hearing, Better Listening (HEBHBL) program, by profession type, 2023–24

Source: program data from Healthy Ears – Better Hearing, Better Listening (HEBHBL) (unpublished).

Australian Government
Australian Institute of Health and Welfare

Technical notes

Data sources

In this section

Australian Eye and Ear Health Survey (AEEHS)

The AEEHS was conducted between August 2022 and March 2025 with results published on 9 October 2025. Funded by the Australian Government Department of Health, Disability and Ageing and led by the Westmead Institute of Medical Research, University of Sydney.

The survey recruited a total of 4,519 participants for the eye survey component, of whom 617 (13.6%) were Indigenous and 3,902 (86.4%) were non-Indigenous. Living at 30 randomly selected sites across the six states and two territories, determined using stratified multi-stage random cluster sampling to select recruitment sites target population of Indigenous and non-Indigenous Australians aged 50 years and older.

Data adjusted for age are available for comparisons between Indigenous and non-Indigenous participant responses. Population estimates have not been calculated so AEEHS results are only representative of the sample selected.

Census of Population and Housing (Census)

The Census of Population and Housing (Census) is Australia's largest statistical collection. It is undertaken by the Australian Bureau of Statistics (ABS) every five years. Census data tells us about the economic, social and cultural make-up of the country. The latest Census was in 2021.

The Census uses the standard Indigenous status question and it is asked for each household member. The Census form may be completed by one household member on behalf of others.

The processing of information from Census forms is now mostly automated. Quality assurance procedures are used during Census processing to ensure processing errors are minimised.

Sample checking is undertaken during coding operations, and corrections are made where necessary. When completing their Census form, some people do not answer all the questions that apply to them. In these instances, a 'not stated' code is allocated during processing, with the exception of non-response to age, sex, marital status and place of usual residence. Other Census data issues relate to the accuracy of the Census count itself, for example, whether people are counted more than once, or not at all. The ABS Post Census Review (previously called the Post Enumeration Survey) is run shortly after the Census to assess the completeness of the Census count.

The ABS publish population estimates and projections for Aboriginal and Torres Strait Islander (First Nations) people every 5 years following each Census. There is usually a substantial lag (approximately 3 years) between each Census and the release of updated estimates and projections. First Nations population estimates for the actual Census year are available much earlier. Preliminary estimates for 30 June 2021 (based on the 2021 Census) were released in September 2022 and were revised in August 2023. Time series estimates based on the 2021 Census will not be available until 2024.

More information about the 2021 Census is available at: Guide to Census data

Deadly Ears Program data collection

The Deadly Ears Program was established by the Queensland Government to address the high rates of chronic middle ear disease and conductive hearing loss among Aboriginal and Torres Strait Islander children in Queensland. The data used in this report are gathered by staff employed by the Deadly Ears Program. The child's middle ear status is diagnosed by an ENT specialist and the child's hearing status is diagnosed by an audiologist.

The Deadly Ears data collection contains information on ENT clinic, audiology assessment and ENT surgery services from 2007 onwards.

More information: Queensland's Deadly Ears Program—Indigenous children receiving services for ear disease and hearing loss

EarTrain

EarTrain is a training program to identify and treat otitis media and other hearing conditions in First Nations communities. Training can be accessed by primary health-care professionals, including First Nations health workers, nurses and GPs, and is freely available for all primary health-care professionals providing care to First Nations people. It is primarily delivered online through a selection of topics, but also offers in-person practical skills workshops,

delivered in communities. EarTrain is funded by the Australian Government and delivered nationally by TAFE New South Wales.

More information: The Ear Train Program

Hearing Assessment Program – Early Ears (HAPEE)

To combat the high levels of ear disease and associated hearing loss among First Nations children, the Australian Government provides funding for the HAPEE, led by Hearing Australia. The HAPEE provides free ear health checks and diagnostic hearing assessments for First Nations children aged 0–6 who do not yet attend full-time school.

The HAPEE initially focused on First Nations children in rural and remote areas. Over time, it has expanded to include First Nations children in all areas, with regional and remote areas continuing to be priority locations.

More information: Hearing Australia

Healthy Ears – Better Hearing, Better Listening (HEBHBL)

The HEBHBL program provides funding for ear health outreach services aimed at First Nations children aged 0–21. The program supports outreach services by a range of health professionals – including medical specialists, GPs, nurses, audiologists and speech pathologists – by coordinating their participation in service delivery, paying for travel and accommodation, backfilling salaried medical staff, and paying allowances for absences from practice. Data provided by Australian Government Department of Health and Aged Care.

Hearing Australia

Hearing Australia data presented in this report are on the characteristics of First Nations people with hearing loss who have been fitted with a hearing device and who were provided services by Hearing Australia through the Hearing Services Program (HSP).

More information:

- Hearing Australia
- Hearing services program

Medicare Benefits Schedule (MBS) data

The Medicare Benefits Scheme (MBS) is part of Australia's public health insurance scheme. Through the MBS the Australian Government subsidises the costs of a broad range of health services. The MBS subsidies pay all or part of the costs of these services, dependent on factors such as patient eligibility, the type of service and choices by health practitioners regarding the fees they charge for their services.

MBS benefits are claimable only for services rendered by an appropriate health practitioner and which are listed on the Medicare Benefits Schedule. Data presented by state and territory and by remoteness area are based on the address information recorded in the patient's Medicare record. Data presented by remoteness area were classified according to the Australian Standard Geographical Classification.

More information: Medicare Benefits Schedule (MBS) data collection

Indigenous identification in Medicare data

People accessing Medicare-funded services may choose to identify to Services Australia as being of Aboriginal and/or Torres Strait Islander descent. This information is provided on a voluntary basis, and is referred to as the Voluntary Indigenous Identifier (VII). First Nations people are not required to enrol on the VII to access Medicare services, but doing so helps with understanding their use of services and with evaluating and improving health policies and programs (Services Australia, 2023).

Not all First Nations people have identified as being of Aboriginal and/or Torres Strait Islander descent in the VII. As at March 2016, an estimated 65% of the First Nations population had identified as being of Aboriginal and/or Torres Strait Islander origin through the VII process. VII coverage varies by age group and state and territory. The incomplete coverage of the VII means that Medicare data generated using the VII enrolments alone do not represent actual Medicare use by all First Nations people.

The AIHW, in consultation with the Department of Health and Aged Care (DoHAC), has developed a scale-up methodology for estimating use of Medicare services by First Nations people. The methodology compensates for the incompleteness of VII coverage by adjusting VII data based on its level of coverage compared with the total estimated First Nations population.

Before the current edition of this report, the scale-up factors were calculated by the DHAC (see Voluntary Indigenous Identifier (VII) Framework). For this report they have been calculated by the AIHW, however, the estimates obtained are consistent with those produced by the DHAC.

National Aboriginal and Torres Strait Islander Health Survey (NATSIHS)

The National Aboriginal and Torres Strait Islander Health Survey (NATSIHS) 2018–19 is the largest health survey of First Nations people, conducted by the Australian Bureau of Statistics (ABS) between July 2018 and April 2019. This survey collected information on a range of topics including long-term health conditions, disability, lifestyle factors, physical harm and use of health services. It collected information from Aboriginal and Torres Strait Islander people of all ages in non-remote and remote areas of Australia, including discrete First Nations communities. The ABS conducts a periodic detailed health survey of the Aboriginal and Torres Strait Islander population only. The survey sample was designed to be representative of First Nations people. Previous surveys were conducted in 2012–13 and 2004–05. Of the 8,707 households included in the final sample, 6,388 (73.4%) were fully or adequately responding households. The sample included 10,579 people from these households. The population benchmark that the survey results were weighted to meet was 814,013. This was the projected First Nations population at 31 December 2018, excluding persons in non-private dwellings.

More information on the survey methodology and data quality statement are available on the ABS website: National Aboriginal and Torres Strait Islander Health Survey methodology.

National Disability Insurance Scheme (NDIS) Public Data Collection

The NDIS Public Data Collection includes information on:

- population demographics
- plans, support types and plan budgets
- market supply
- goals and outcomes
- NDIA performance.

The NDIA is responsible for data collection and, in accordance with legislation, policies, guidelines and any specific conditions, for use applicable to that data. As custodians, the NDIA seeks to use NDIS data to advance participant disability support and afford them choice and control.

More information: Public data sharing

National Health Workforce Data Set (NHWDS)

The Australian Health Practitioner Regulation Agency (AHPRA), in conjunction with the national health professional registration boards, is responsible for the national registration process for 14 health professions. The data from the annual registration process, together with data from a workforce survey that is voluntarily completed at time of registration, forms the Department of Health's National Health Workforce Data Set (NHWDS). Data in the NHWDS includes demographic and employment information (for example, labour force status, location of main job, area of practice, work setting) for registered health professionals. In this report, the data on optometrists and ophthalmologists come from the NHWDS as reported by AIHW. Audiology is not part of the register of practitioners or of the National Health Workforce Dataset.

More information: National Health Workforce Dataset

National Hospital Morbidity Database (NHMD)

Data about hospitalisations were extracted from the AIHW National Hospital Morbidity Database (NHMD), which is a compilation of episode-level records from admitted patient care data collection systems in Australian hospitals in each state and territory. Information on the characteristics, diagnoses and care of admitted patients in public and private hospitals is 5 provided annually to the AIHW by state and territory health departments. Data are based on financial years.

Data are a count of hospital separations (episodes of admitted patient care, which can be a total hospital stay, or a portion of a hospital stay that begins or ends in a change of type of care) and not of patients. Patients who separated from hospital more than once in the year will be counted more than once in the data set. The number and pattern of hospitalisations can be affected by differing admission practices among the jurisdictions and from year to year, and differing levels and patterns of service delivery.

NHMD data presented by state and territory and remoteness area in this report are based on the patient's place of usual residence. There is some under-identification of First Nations people in the NHMD, but NHMD data for all states and territories are considered to have adequate Indigenous identification from 2010–11.

A data quality statement for the NHMD is available at: Data quality statement: National Hospital Morbidity Database 2014–15

See also:

- Data quality statement: Admitted Patient Care 2017–18
- Data Quality Statements – National Hospital Morbidity Database

National Neonatal Hearing Screening Programs (states and territories) (NNHS)

Neonatal hearing screening is used to detect bilateral moderate to profound permanent congenital hearing impairment in infants, which occurs in 1 to 2 infants per 1,000 births. Each jurisdiction has their own reporting mechanisms and there is no standardised national data collection to support comparable reporting on neonatal screening programs nationally.

National Non-admitted Patient Emergency Department Care Database (NNAPEDCD)

The National Non-Admitted Patient Emergency Department Care Database (NNAPEDCD) is a compilation of episode-level data for emergency department presentations in public hospitals.

Non-admitted patients are patients who do not go through a hospital's formal admission process.

Most patients who receive care in emergency departments are non-admitted patients, and they may subsequently become admitted. NNAPEDCD information includes type of presentation, principal diagnosis, state/ territory and demographic information.

All state and territory health authorities collect a core set of nationally comparable information on emergency department presentations in public hospitals within their jurisdiction, and the AIHW compiles this data annually.

The quality of the data reported for Indigenous status in emergency departments has not been formally assessed. In addition, the scope of the NNAPEDCD may not include some emergency services provided in areas where the proportion of First Nations people (compared with other Australians) is higher than average. Therefore, the information on Indigenous status presented in this report should be used with caution.

The latest data quality statement for the NNAPEDCD is available at: Australian Institute of Health and Welfare: Metadata Online Registry

See also:

Emergency department care 2019-20 – Appendixes [PDF 700kB]

Northern Territory Remote Aboriginal Investment (NTRAI) Hearing Health Program

The Northern Territory Remote Aboriginal Investment (NTRAI) Hearing Health Program is funded by the Commonwealth Department of Health to improve the hearing health of First Nations children and young people aged under 21 in the Northern Territory. The program provides ENT teleology services; outreach audiology services; clinical nurse specialist services; and awareness and education activities.

More information: Oral health outreach services for Aboriginal and Torres Strait Islander children in the Northern Territory: July 2012 to December 2022

Online Services Report (OSR) collection

The Online Services Report (OSR) collects organisation-level information from Aboriginal and Torres Strait Islander specific health care organisations funded by the Australian Government under its Indigenous Australians' Health Programme (IAHP), with data provided to the AIHW.

It includes information about services offered at primary health-care and other organisations and activities undertaken.

Information on data quality for the OSR collection is available at Online Services report – Interpreting OSR data

Population estimates

Estimates of the First Nations population used in the calculation of population rates

Australian Bureau of Statistics (ABS) estimates of the Aboriginal and Torres Strait Islander population are used in the calculation of population rates for many measures used in AIHW and other national reporting. The population rate is a measure such as the number of hospitalisations (numerator) expressed as a fraction of the total population (denominator).

Every five years, following each Census, the ABS recalculates the estimated resident population (ERP) of First Nations people, along with an updated time series population trend for previous periods ('backcast') and for forward periods ('projections') based on the best available demographic information (for example, births, deaths and migration) and forward assumptions of demographic change.

In late July 2024, the ABS released 2021 Census-based estimates of the First Nations population.

Previously, following the 2016 Census population rebase, the AIHW used 'backcast' estimates of the First Nations population to calculate population rates.

However, between 2016 and 2021, the Census-based Aboriginal and Torres Strait Islander population estimates increased by around 25%, with less than half of this increase (around 44%) due to demographic factors (births, deaths and migration). The remaining increase (around 56%) was due to other (non-demographic) factors, including changes in the propensity of people to identify as an Aboriginal and Torres Strait Islander person.

Due to the large non-demographic change, there are concerns about using the 2021 Census-based backcast populations for historical reporting, as follows.

Potential for a numerator/denominator bias in historical rates

This may result when the backcast population estimates include large numbers of people who have not identified as an Aboriginal and Torres Strait Islander person in the numerator data. As a result, historical rates may be artificially deflated.

Plausibility of rates for younger age groups

A large proportion of non-demographic change recorded by the ABS was among young people and this seems to be affecting the 2021 Census-based backcast population results. For example, the 2021 Census-based backcast estimates suggest that the population of Aboriginal and Torres Strait Islander children aged under 1 declined between 2011 and 2021. This is in contrast to trends in registered births of Aboriginal and Torres Strait Islander babies which increased over this period.

At the time of the 2024 report publication, discussions were underway across government agencies to agree on the most appropriate denominators to use. Pending a decision on this, the 2024 report used the 2016 Census-based population backcast estimates and forward projections as the source of denominator for analysis of population rates that includes numerators prior to 2021.

The current (2025) report has adopted the approach subsequently agreed upon by the Productivity Commission, AIHW, and ABS, which is that **2021 Census-based backcast estimates and projections be used as the denominator for rates**. For the analysis in this report, the time trends have been limited back to the year 2016, due to the extent of non-demographic change.

This limitation was not applied to the MBS audiology rates, which used the 2024 weighted VII (Voluntary Indigenous Identifier) data. As indigenous identification at the latest time period was effectively 'backcast' to the earlier periods by the VII weighting methodology, longer time trend (prior to 2016) analysis was possible.

Please note that any comparison of population rates between the current and previous reports must consider the differences in population backcasts.

Each data table includes a footnote indicating the source and reference period of the population estimates used.

Table POPULATIONS 1: Population estimates used in each report data table

Data tables	Analysis in the report	Population estimates used
Newborn hearing screening (2.1.1a–b) Health checks (2.2a–a & b) HAPEE checks and diagnosis (2.4.1a–b, 2.4.2a–c) Hearing Australia clients (4.1a–d) EarTrain participants (5.3b–c)	Point-in-time, single year (calendar or financial) July 2021 or later	2021 Census-based population estimates and projections
Deadly Ears analysis 2022–24 (1.2.4a–b) Newborn hearing diagnosis 2022–24 (2.1.2) Emergency visits Jul 2022–Jun 2024 (3.1a–d & f–g) Hospitalisations Jul 2022–Jun 2024 (3.2a–e & g–j) Ear procedures Jul 2022–Jun 2024 (3.3.1a–d & f–g) Middle ear procedures Jul 2022–Jun 2024 (3.3.2a–c & e–g) Adenoidectomies Jul 2022–Jun 2024 (3.6a–c)	Point-in-time, multiple years combined All July 2021 or later	2021 Census-based population estimates and projections

Health checks (2.2b) Emergency visits (3.1e) Hospitalisations (3.2f) Ear procedures Jul 2021–Jun 2023 (3.3.1e) Middle ear procedures Jul 2021–Jun 2023 (3.3.2d) Adenoidectomies Jul 2021–Jun 2023 (3.6d)	Time series, single year (calendar or financial) Starting before July 2021	2021 Census-based population estimates and projections.
Audiology services (2.3a–e)	Point-in-time or time series using the 2024 MBS VII weighted file	Use 2021 Census-based population estimates and projections.
Reported ear and hearing problems, reported and measured hearing loss (1.1a–f, 1.2.1a–c, 1.2.2a–c, 1.2.3) Newborn hearing screening (2.1.1a–b) Waiting times (3.4.1a–e, 3.4.2a–e) Hearing Australia clients (4.1.1e–g, 4.1.2a–d) NDIS tables (4.2a–i) Audiologist etc and ENT workforce (5.1a–d, 5.2a–c) EarTrain participants (5.3a & d) HEBHBL (5.4a–c)	Analysis not requiring Census-based First Nations population estimates and projections	No action required

Glossary

Aboriginal and/or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also First Nations people.

Aboriginal and Torres Strait Islander health practitioner: A person who has completed a Certificate IV in Aboriginal and/or Torres Strait Islander Primary Health Care (Practice) and is registered with the Aboriginal and Torres Strait Islander Health Practice Board of Australia. The practitioner may undertake higher levels of clinical assessment and care within their agreed scope of practice.

Aboriginal and Torres Strait Islander health worker: An Aboriginal and/or Torres Strait Islander with a minimum qualification in the field of primary health-care work or clinical practice. This includes Aboriginal and Torres Strait Islander health practitioners who are one speciality stream of health worker. Health workers liaise with patients, clients and visitors to hospitals and health clinics, and work as a team member to arrange, coordinate and deliver health care in community health clinics.

Aboriginal Community Controlled Health Services: Primary health-care services initiated and operated by local First Nations communities to deliver comprehensive, holistic and culturally appropriate health care to the community that controls it through a locally elected board of management. These services range from large multi-functional services employing several medical practitioners to small services that rely on nurses and/or Aboriginal health workers. For more information, see the National Aboriginal Community Controlled Health Organisation (NACCHO) website. See also Indigenous-specific primary health care organisations.

acute: A term that describes a medical condition that comes on suddenly and lasts for a limited time.

acute otitis media (AOM): The general term for both acute otitis media without perforation and acute otitis media with perforation. It is the presence of fluid behind the tympanic membrane plus at least one of the following: bulging tympanic membrane, fever, ear pain or irritability. See also tympanic membrane.

admission: The process whereby the hospital accepts responsibility for the patient's care and/or treatment. Admission follows a clinical decision based upon specified criteria that a patient requires same-day or overnight care or treatment. See also METEOR ID: 327206.

admitted patient: A patient who undergoes a hospital's formal admission process to receive treatment and/or care. This treatment and/or care is provided over a period of time, and can occur in hospital and/or in the person's home (for hospital-in-the-home patients). See also METEOR ID: 268957.

age-standardisation: A way to remove the influence of age when comparing populations with different age structures. This is usually necessary because the rates of many diseases vary strongly with age. The age structures of the different populations are converted to the same 'standard' structure, and then the disease rates that would have occurred with that structure are calculated and compared.

allied health professional: A health professional who is not a doctor, nurse or dentist. Allied health professionals include (but are not limited to) audiologists, chiropractors, occupational therapists, optometrists, osteopaths, pharmacists, physiotherapists, podiatrists, psychologists and speech pathologists.

antenatal: The period from conception up to the time of birth. Synonymous with prenatal.

audiologist: A person who provides hearing diagnostic assessments and rehabilitative services, including counselling, speech reading and hearing aid fitting. They also assess and support other ear-related conditions, such as balance problems. Audiologists have a masters degree in audiology.

audiometrist: A medical technician who provides hearing diagnostic services and hearing aid fitting. Audiometrists must complete a 2-year diploma. They have a narrower scope of practice than audiologists.

audiometry nurse: A registered nurse accredited through the Australian College of Nursing. Audiometry nurses work mostly in Community Health Centres offering a range of hearing health assessments and education.

bilateral hearing loss: Hearing loss in both ears.

bimodal hearing: Hearing that combines the benefits of a hearing aid in one ear and a cochlear implant in the other. Bimodal hearing can make the best of hearing in the ear without the cochlear implant and hearing technology for situations with background noise.

child: A person aged 0–14 unless otherwise stated.

cholesteatoma: A cyst formed due to accumulation and abnormal growth of ear skin cells in a retraction pocket or through a perforation of the tympanic membrane, or in the middle ear space. Due to hyperproliferation of the skin cells, the cyst grows, becoming space occupying, often with infection. A cholesteatoma caused by middle ear disease most often occurs in the attic region of the tympanic membrane. Cholesteatomas, where untreated, are arguably the most destructive form of middle ear disease.

chronic: Describes something that is persistent and long lasting.

chronic diseases/conditions: A diverse group of diseases/conditions, such as heart disease, cancer and arthritis, which tend to be long lasting and persistent in their symptoms or development. Although these features also apply to some communicable diseases (infectious diseases), the term is usually confined to non-communicable diseases.

chronic suppurative otitis media (CSOM): Persistent ear discharge through a perforation in the tympanic membrane lasting 2 weeks or more. On otoscopy, the perforation must be viewed and be greater than or equal to 2% of the pars tensa (the tense part of the tympanic membrane).

Cochlear implant: A device that can assist people with moderate to profound sensorineural hearing loss for whom hearing aids have only limited benefits. Rather than amplify sounds, a cochlear implant does some of the work of the inner ear and turns sounds into electrical signals, delivering them directly to the nerve endings in the ear. The cochlear implant directly stimulates auditory nerve fibres in the cochlea to bypass impaired sections of the inner ear. While a cochlear implant does not restore normal hearing, it provides a representation of sounds which can be used to understand speech.

community hearing health worker: A person who provides health awareness, clinical, rehabilitation and training services, including conducting ear and hearing screening.

community/primary health care nurse: A nurse working in the community (acute or non-acute) or primary health-care setting. This often incorporates a wide variety of roles, such as chronic disease management, child and family health and refugee health.

conductive hearing loss: Hearing loss that results from dysfunction of the outer or middle ear that interferes with the efficient transfer of sound to the inner ear.

congenital hearing loss: Hearing loss that is present from or soon after birth. Some causes of congenital hearing loss include genetic factors, infections during pregnancy, premature birth, low birthweight, severe jaundice at birth, and ototoxic medications.

corrected age: A baby's chronological age minus the number of weeks or months early they were born, to reflect their actual development and growth.

data linkage: The bringing together (linking) of information from 2 or more different data sources that are believed to relate to the same entity (for example, the same individual or the same institution). This linkage can yield more information about the entity and, in certain cases, provide a time sequence – helping to 'tell a story', show 'pathways' and perhaps unravel cause and effect. The term is used synonymously with 'record linkage' and 'data integration'.

decibels (dB): A unit of measuring for sound, based on a logarithmic scale.

disability groups: A categorisation in the National Disability Insurance Scheme based on factors such as underlying health condition, type of impairment, activity limitations and participation restrictions. The disability groups are reported as hearing impairment, acquired brain injury, autism, cerebral palsy, intellectual disability, developmental delay, global developmental delay, Down syndrome, multiple sclerosis, psychosocial disability, spinal cord injury, stroke, vision impairment, and other.

diseases of the inner ear: These diseases include all conditions affecting the inner ear, they can affect balance and spatial orientation as well as cause hearing loss. Diseases of the inner ear include:

- otosclerosis
- Ménière's Disease
- Tinnitus
- Vestibular Disorders
- Benign paroxysmal positional vertigo (BPPV)

diseases of the middle ear and mastoid ('middle ear'): These diseases include all conditions affecting the middle ear and mastoid. The most common is otitis media, a bacterial or viral middle ear infection. Other conditions include:

- perforations of the tympanic membrane
- cholesteatoma, a pocket of skin growth in the middle ear
- mastoiditis, a bacterial infection of the mastoid air cells at the back of the ear often caused by untreated middle ear infections
- and Eustachian tube dysfunction.

dry perforation: The presence of a perforation (hole) in the tympanic membrane without any signs of discharge, infection or fluid behind it. This can also be known as inactive chronic suppurative otitis media (CSOM) or CSOM without discharge.

ear health coordinator: A person who supports Aboriginal Medical Services in focusing on ear health issues, supporting training, skill development and health awareness approaches in primary health care and in improving integration between primary health care and specialist ear health services.

ear toileting: A procedure where a medical professional clears wax, debris or foreign bodies from the ear canal. It is often used in treating patients with recurrent infections of the ear canal.

elective surgery: Planned surgery that can be booked in advance as a result of a specialist clinical assessment resulting in placement on an elective surgery waiting list. METEOR ID: 568780.

elective surgery waiting time: The time that a patient is on a hospital waiting list for planned elective surgery in a public hospital (or private hospital if a public patient is treated there). Patients are placed on a waiting list and assigned an urgency category that indicates the clinically recommended maximum time they should wait for the surgery. The time a patient waits for elective surgery is calculated from the date a patient is placed on the hospital's waiting list to the date of admission for the surgery. The waiting time is an indication of how easy the service is to access.

emergency department: A hospital facility that provides triage, assessment, care or treatment for non-admitted patients suffering from a medical condition or injury.

ear, nose and throat specialist (ENT specialist or otolaryngologist): A medical doctor who specialises in diagnostic, preventive and surgical treatment for diseases of the ear, nose and throat.

Eustachian tube: an opening connecting the middle ear with the nasal-sinus cavity that helps to balance pressure in the middle ear.

First Nations people: People who have identified themselves, or have been identified by a representative (for example, their parent or guardian) as being of Aboriginal and/or Torres Strait Islander origin. See also Aboriginal or Torres Strait Islander.

full-time equivalent (FTE) workforce or workload: A standard measure of the size of a workforce that takes into account both the number of workers and the hours that each works. For ENT specialists, an FTE of 1 is assumed to be 40 hours in a week. For example, if a workforce comprises 2 people working full time 40 hours a week and 2 working half time 20 hours a week, this is the same as 3 working full time – that is, an FTE of 3.

general practitioner (GP): A medical practitioner who provides comprehensive and continuing care to patients and their families within the community. They can conduct ear checks, manage the treatment of many ear conditions, and provide referrals to specialist services.

grommet: A small tube surgically placed across the eardrum to re-establish ventilation to the middle ear. It is also called a 'ventilation tube', 'pressure equalisation tube' or a 'tympanostomy tube'.

hearing: The sense for perceiving sounds, including regions within the brain where the signals are received and interpreted.

hearing aid: A device to help people with ongoing hearing loss to make the best use of the hearing they have. They do not change a person's hearing, but they make speech louder and clearer so it is easier to hear.

hearing impairment: A term that describes the degree of impairment associated with hearing loss in the 'better hearing ear', using a scale of mild, moderate, severe and profound. It is essentially based on how loud sounds need to be for them to be heard.

hearing loss: Any hearing threshold response outside the normal range, to any sound stimuli, in either ear. Hearing loss in a population describes the number of people who have abnormal hearing. Hearing loss may affect one ear (unilateral hearing loss) or both ears (bilateral hearing loss). This includes conductive, sensorineural and other forms of hearing loss. Audiometry is used to test a person's ability to hear various sound frequencies.

hospitalisation: An episode of hospital care that starts with the formal admission process and ends with the formal separation process. An episode of care can be completed by the patient's being discharged, being transferred to another hospital or care facility, dying, or by a portion of a hospital stay starting or ending in a change of type of care (for example, from acute to rehabilitation).

household: A group of one or more persons who usually reside in the same dwelling.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. Used interchangeably with Aboriginal and Torres Strait Islander. See also Aboriginal or Torres Strait Islander and First Nations people.

Indigenous-specific primary health-care organisations: Primary health-care organisations that receive funding from the Department of Health to provide primary health-care services mainly to Aboriginal and Torres Strait Islander people. The primary health-care organisations include Aboriginal Community Controlled Health Services, state and territory managed organisations, Primary Health Networks and other non-government organisations.

Indigenous status: A term that describes whether or not a person identifies as being of Aboriginal and/or Torres Strait Islander origin.

infant: A child aged under 1 year.

International Classification of Diseases and Related Health Problems **(ICD):** The World Health Organization's internationally accepted classification of death and disease. The 11th revision (ICD-11) is currently in use. The Australian modification of the ICD-11 (ICD-10-AM) is used for diagnoses and procedures recorded for patients admitted to hospitals.

level of function: A term used about a person's disability for accessing the National Disability Insurance Scheme – their disability must substantially reduce their functional capacity to undertake one or more of the following activities: moving around, communicating, socialising, learning, or undertaking self-care or self-management tasks. Functional capacity may affect participation at home, at school, at work or in social situations. Level of function indicates the impact an NDIS participant's disability has on how a person is able to perform tasks and actions in a life area, as represented by a 'severity score'. 'High functioning' indicates lower service and support requirements with a lower severity score, and 'low functioning' indicates higher service and support requirements with a higher severity score.

mastoid: Part of the skull located behind the ear.

mastoidectomy: A procedure that involves removing diseased mastoid air cells. Air cells are air-filled cavities made of bone located in the mastoid. Mastoid cells often become diseased as a result of an ear infection that has spread to the skull. A mastoidectomy can also be used to remove cholesteatoma, a buried pocket of skin growth in the middle ear often caused by repeated middle ear infections.

median: The middle number; found by ordering all data points and picking out the one in the middle (or if there are two middle numbers, taking the average of those two numbers).

median waiting time: The mid-point in waiting times for patients who received elective surgery after being placed on a public waiting list. Half of all patients who received a particular type of elective surgery waited less than or equal to the median number of days, while half were on the list for longer than the median waiting time.

Medical technician: Medical Technicians operate anaesthetic, cardiac, operating theatre and medical testing equipment, perform and assist with laboratory tests, and fill prescriptions in support of Health Professionals.

Medicare: A national, government-funded scheme that subsidises the cost of personal medical services for all Australians and aims to help them afford medical care. The Medicare Benefits Schedule (MBS) is the listing of the Medicare services subsidised by the Australian Government.

Ménière's disease: A disorder of the inner ear, involving episodes of vertigo, hearing loss and tinnitus, often with nausea and vomiting.

middle ear: Contains three small bones with the function of transmitting sound from the outer ear to the inner ear.

Middle ear procedures: These refer to procedures under the ACHI 11th edition procedure block numbers 307–316 (inclusive), which cover procedures on eardrum and middle ear. Common middle ear procedures include myringotomy and myringoplasty.

mild hearing impairment: On average, the quietest sounds that people can hear with their 'better' ear are 21 – 40dB. People with a mild hearing impairment may hear speech, but soft sounds are hard to hear, such as whispers or the consonants on the end of words like 'shoes' or 'fish'. Counselling and hearing aids may be needed.

mixed hearing loss: Hearing loss that has conductive and sensorineural components combined.

moderate hearing impairment: On average, the quietest sounds that people can hear with their 'better' ear are 41–70 dB HL. These people are able to hear and repeat words spoken in a raised voice at 1 metre and have difficulty keeping up with conversations without using a hearing aid.

Modified Monash Model: The model measures remoteness and population size on a scale of Modified Monash (MM) categories MM 1 to MM 7, where MM 1 is a major city and MM 7 is very remote. MMM classifications are based on the Australian Statistical Geography Standard – Remoteness Areas.

My Health Record: An online platform for storing a person's health information, including their Medicare claims history, hospital discharge information, diagnostic imaging reports and details of allergies and medications.

myringoplasty: The repair of a perforation (hole) of the tympanic membrane (eardrum). A perforation can occur due to otitis media, other chronic infections, or a grommet. The surgeon repairs the hole with a graft.

myringotomy: Surgical incision in the eardrum to relieve pressure or drain fluid. This takes place with or without grommet insertion. The procedure involves making a small cut in the eardrum and sucking out the fluid in the middle ear. A grommet is a small ventilation tube designed to allow air to flow into the middle ear and prevent a build-up of fluid. If required, it is inserted into the eardrum once the fluid is drained.

non-Indigenous: A term that describes people who indicated they are not of Aboriginal and/or Torres Strait Islander origin. See also other Australians.

nurse: A person who provides health awareness, clinical, rehabilitation and training services, including conducting ear and hearing screening and coordinating care.

occupational therapist: A person who assesses functional limitations of people resulting from illnesses and disabilities, and provides therapy to enable people to perform their daily activities and occupations.

other Australians: People who indicated they are not of Aboriginal and/or Torres Strait Islander origin and those who did not state their Indigenous status. See also non-Indigenous.

other disorders of the external ear: Other disorders affecting the outer ear, such as a build-up of wax, stenosis (narrowing) of the external ear canal, deformities of the external ear and other infections of the external ear.

other ear conditions: All other conditions affecting the ear and hearing, such as ear pain and swelling, disorders of the ear related to surgery, and any other disorders of the ear.

other procedures: Procedures that can occur in many areas of the ear and include insertions, removals, excisions, reconstructions and repairs.

otitis externa: An inflammatory condition of the external ear canal that is sometimes known as swimmer's ear. It is commonly caused by a bacterial or fungal infection, but can be caused by dermatological conditions such as eczema, psoriasis, dermatitis and acne.

otitis media: All forms of inflammation and infection of the middle ear. Active inflammation or infection is nearly always associated with a middle ear effusion (fluid in the middle ear space). It is usually a result of infection, resulting in temporary hearing loss, particularly in children.

otitis media with effusion (OME): The presence of an intact eardrum and middle ear fluid without symptoms or signs of acute infection. Other terms used to describe OME include 'glue ear', 'serous otitis media' and 'secretory otitis media'. OME may be episodic or persistent.

otosclerosis: A cause of deafness in adults affecting certain bones in the ears so they cannot conduct sound normally.

otoscopy: a clinical procedure used to examine the ear, especially the external ear canal, eardrum and middle ear.

ototoxic: A term that describes medications or chemicals that have a toxic effect on the ear or its nerve supply. Hearing loss, balance disorders and tinnitus can result from ototoxic medications, which include non-steroidal anti-inflammatory drugs such as ibuprofen or naproxen, certain aminoglycoside antibiotics, salicylates, platinum-based anti-cancer therapeutics, the anti-malarial drug quinine, and some diuretic drugs. Ototoxic chemicals include some solvents, asphyxiants, nitriles, and metals and compounds such as mercury and lead.

outreach: The activity of providing services to any population that might not otherwise have access to those services due to remote location.

paediatrician: A doctor who focuses on the health of infants, children and teenagers. Paediatricians help detect, treat, manage and prevent physical, behavioural and developmental issues that affect children.

perinatal: Pertaining to, or occurring in, the period shortly before or after birth (usually up to 28 days after).

prenatal: The period covering conception up to the time of birth. Synonymous with antenatal.

prevention (of ill health or injury): Action to reduce or eliminate the onset, causes, complications or recurrence of ill health or injury.

primary disability: The impairment that has most impact on daily functioning. National Disability Insurance Scheme participants may have more than one disability; participants have one primary disability and may have multiple additional disabilities recorded. See also reported disability.

primary health care: Services delivered in many community settings, such as general practices, community health centres, Aboriginal health services and allied health practices (for example: physiotherapy, dietetic and chiropractic practices) and come under numerous funding arrangements.

principal diagnosis: The diagnosis established after study to be chiefly responsible for occasioning an episode of patient care (hospitalisation), an episode of residential care or an attendance at the health-care establishment. Diagnoses are recorded using the relevant edition of the *International statistical classification of diseases and related health problems, 11th revision, Australian modification* (ICD-11-AM).

profound hearing impairment: On average, the quietest sounds that people can hear with their better ear are 91+ dB HL either in soundproof conditions or non-soundproof conditions. These people are unable to hear and understand even a shouted voice. People with profound hearing impairment will need additional rehabilitation: hearing aids may help in understanding words, and cochlear implants, lip-reading and sometimes signing may be necessary.

remoteness areas: Regions defined by the Australian Statistical Geographical Standard and based on the Accessibility/Remoteness Index of Australia, which uses the road distance to goods and services (such as to general practitioners, hospitals and specialist care) to measure relative accessibility of regions around Australia. The 5 Remoteness Areas are *Major cities*, *Inner regional*, *Outer regional*, *Remote* and *Very remote*.

reported disability: The primary disability and all other disabilities reported by a participant in the National Disability Insurance Scheme (NDIS). NDIS participants may have more than one disability recorded – one primary disability and multiple additional disabilities. See also primary disability.

sensorineural hearing loss: Hearing loss that results from dysfunction in the inner ear (especially the cochlea).

severe hearing impairment: On average, the quietest sounds that people can hear with their better ear are 71–90 dB HL, either in soundproof conditions or non-soundproof conditions. These people are able to hear some words when shouted into the 'better' ear. Hearing aids are needed; if no hearing aids are available, lip-reading and signing may be necessary.

social determinants of health: The circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies and politics.

speech pathologist: A person who provides diagnostic assessment and management of disorders of communication and swallowing through direct intervention, education, consultancy, advocacy, or a combination of these approaches.

suppurative: A term that describes a situation where pus is produced in response to inflammatory bacterial infections.

tinnitus: A continual noise in the ears or head, such as ringing, buzzing or clicking.

tympanic membrane: The ear drum, a membrane which divides the external auditory canal from the middle ear.

unable to be determined: A term used to describe a situation where a definitive hearing diagnosis is unable to be made, usually due to challenges associated with performing the diagnostic assessment.

unilateral hearing loss: Hearing loss in one ear.

Notes

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Data

Data tables: Ear and hearing health of Aboriginal and Torres Strait Islander people - Prevalence

Data

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Data tables: Ear and hearing health of Aboriginal and Torres Strait Islander people - Screening and diagnosis

Data

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Data tables: Ear and hearing health of Aboriginal and Torres Strait Islander people - Intervention and treatment

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Data tables: Ear and hearing health of Aboriginal and Torres Strait Islander people - Rehabilitation

Data

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Data tables: Ear and hearing health of Aboriginal and Torres Strait Islander people - Workforce

Data

XLSX 172kB

Report editions

- Ear and hearing health of Aboriginal and Torres Strait Islander people 2025 |
  Web report | 12 Dec 2025
  This release
- Ear and hearing health of Aboriginal and Torres Strait Islander people 2024 |
  Web report | 05 Dec 2024
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