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Australian Institute of Health and Welfare

AIHW

Eye health measures for Aboriginal and Torres Strait Islander people 2022

in-brief

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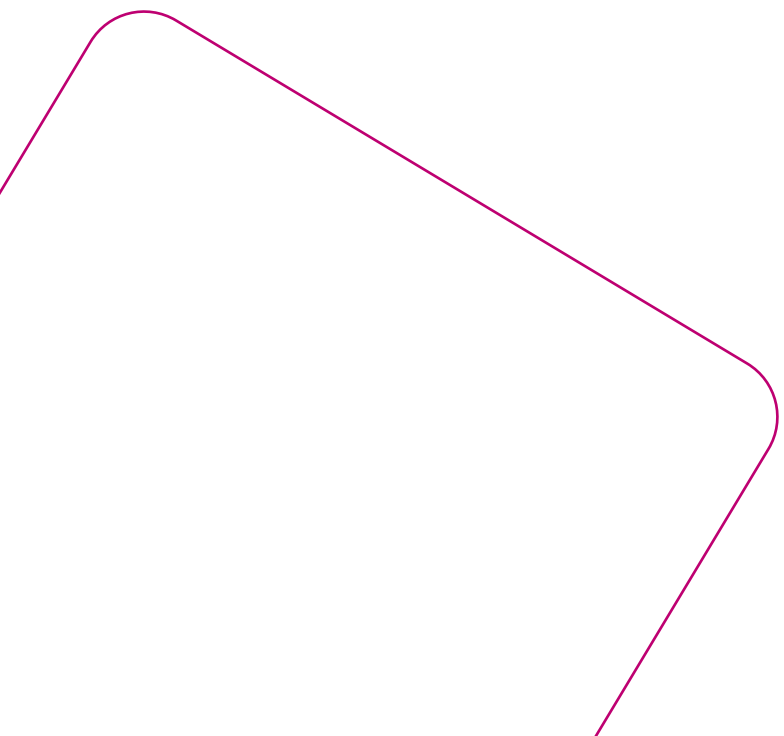

Introduction

This in-brief summarises the findings from the annual Eye health measures for Aboriginal and Torres Strait Islander people report, *Eye health measures for Aboriginal and Torres Strait Islander people 2022* and accompanying web report.

These reports bring together the latest available data on the 22 eye health measures for Aboriginal and Torres Strait Islander people with ongoing data collections (see table '*Eye health measures for Aboriginal and Torres Strait Islander people*'). They include information on:

- the prevalence and causes of vision loss and blindness
- diagnosis and screening
- treatment
- the workforce
- outreach programs.

The full report, web report and online tables are available at http://www.aihw.gov.au/reports/indigenous-australians/indigenous-eye-health-measures-2022.

Population rates

There are 3 types of population rates used to present data in this report:

- Crude rates are the number of events divided by the total population.
- Age-specific rates are the number of events for a specified age group divided by the population in that age group.
- Age-standardised rates are the crude rates for different groups, such as Indigenous and non-Indigenous Australians, applied to a standard population to produce a summary rate.

Crude rates are used to look at differences within a population, such as the Indigenous population. These can be misleading, however, when comparing populations with different age structures, such as Indigenous and non-Indigenous Australians. It is important to take into account these differences, particularly when looking at conditions that are age related, such as refractive error and cataracts.

Age-specific rates allow populations with different age structures to be compared. These comparisons provide information about the measures of interest for different age groups but are difficult to summarise and present. Age-standardised rates control for the effects of age and provide a summary rate for each of the populations of interest. The resulting rates, however, are not the 'real' or reported rates that occur in the population.

Eye health measures for Aboriginal and Torres Strait Islander people

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1

How do eye health problems affect Indigenous Australians?

Eye diseases and vision problems are the most common long-term health conditions reported by Aboriginal and Torres Strait Islander people. Around one-third of Indigenous Australians report long-term eye conditions. Indigenous children have a lower incidence of poor vision than non-Indigenous Australian children, but Indigenous people over the age of 40 have 3 times the rate of vision loss of non-Indigenous Australians.

Most vision loss is potentially preventable or amenable to treatment through spectacle correction and cataract surgery.

Monitoring the size and causes of vision impairment in the population over time can help governments and service providers to develop more effective eye health policies and programs.

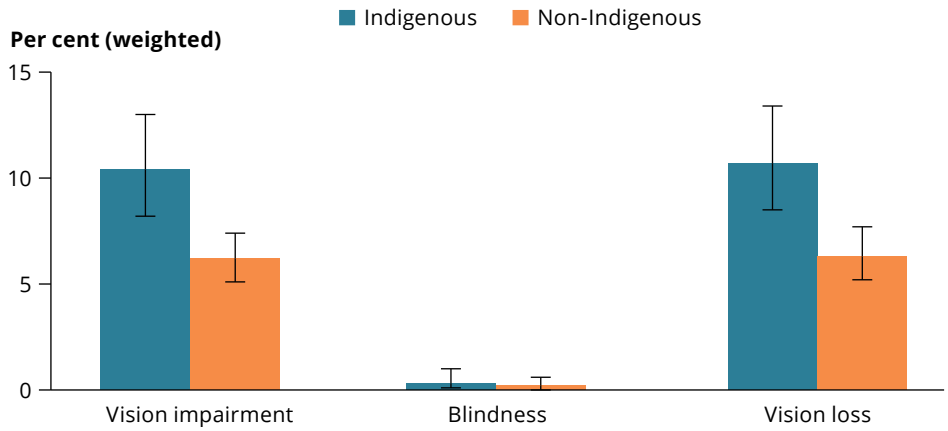
The 2016 National Eye Health Survey (NEHS) is the main source of data on the prevalence of eye health problems among Indigenous Australians. The survey used eye examinations to assess vision loss and blindness. The key results from this survey are presented in this section.

How common is vision impairment and blindness?

In 2016, an estimated 1 in 10 (10.4%) Indigenous Australians aged 40 and over were visually impaired in both eyes and 1 in 330 (0.3%) were blind in both eyes.

Indigenous Australians of this age were nearly 3 times as likely to suffer vision impairment or blindness compared with non-Indigenous Australians aged 50 and over.

Vision loss (vision impairment and blindness), by Indigenous status, 2016

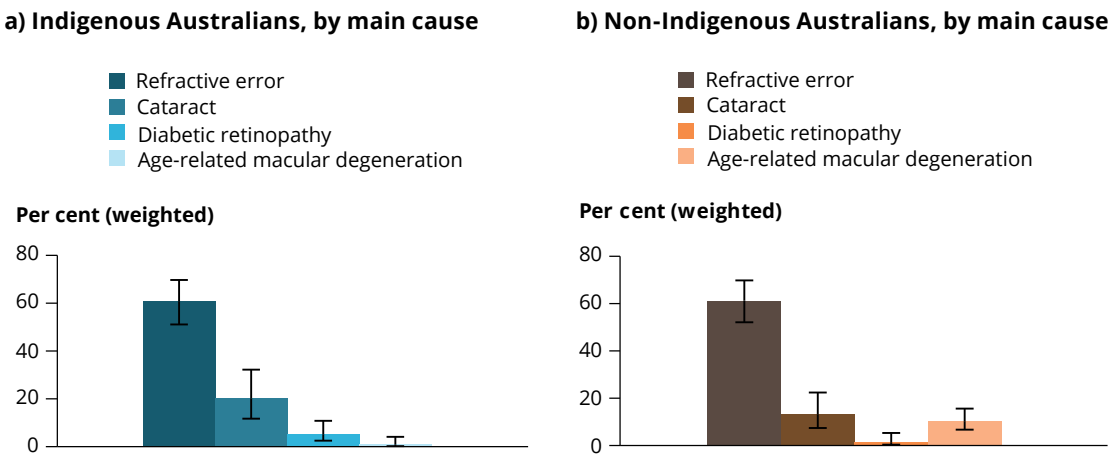


Note: Data have been survey weighted to account for sampling protocol.

Sources: AIHW analysis of Foreman et al. 2017, NEHS data 2016.

The 3 main causes of vision loss (vision impairment and blindness combined) for Indigenous Australians aged 40 and over in 2016 were refractive error (61%), cataract (20%) and diabetic retinopathy (5.2%). For non-Indigenous Australians, the main causes were refractive error (61%), cataract (13%) and age-related macular degeneration (10%).

Main causes of vision loss, by Indigenous status, 2016



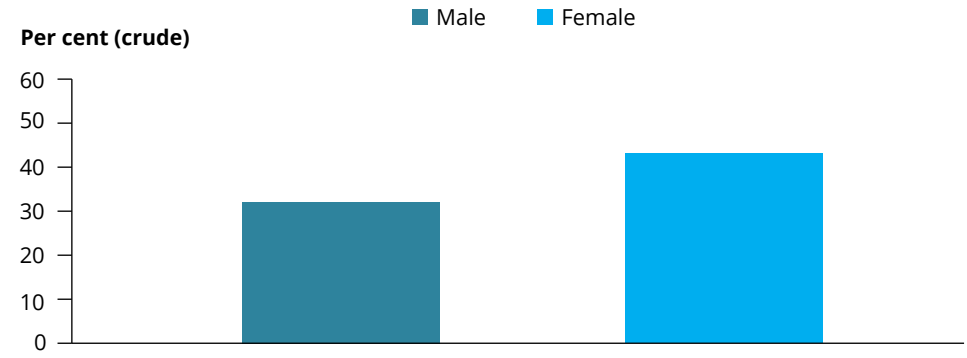
Note: Data have been survey weighted to account for sampling protocol.

Sources: AIHW analysis of Foreman et al. 2017; NEHS data 2016.

Self-reported eye or sight problems

In 2018–19, nearly 4 in 10 Indigenous people (38%, or 307,300 people) reported long-term eye or sight problems. The prevalence of self-reported eye or sight problems was higher for Indigenous females than Indigenous males.

Self-reported eye/sight problems, Indigenous Australians, by sex, 2018–19

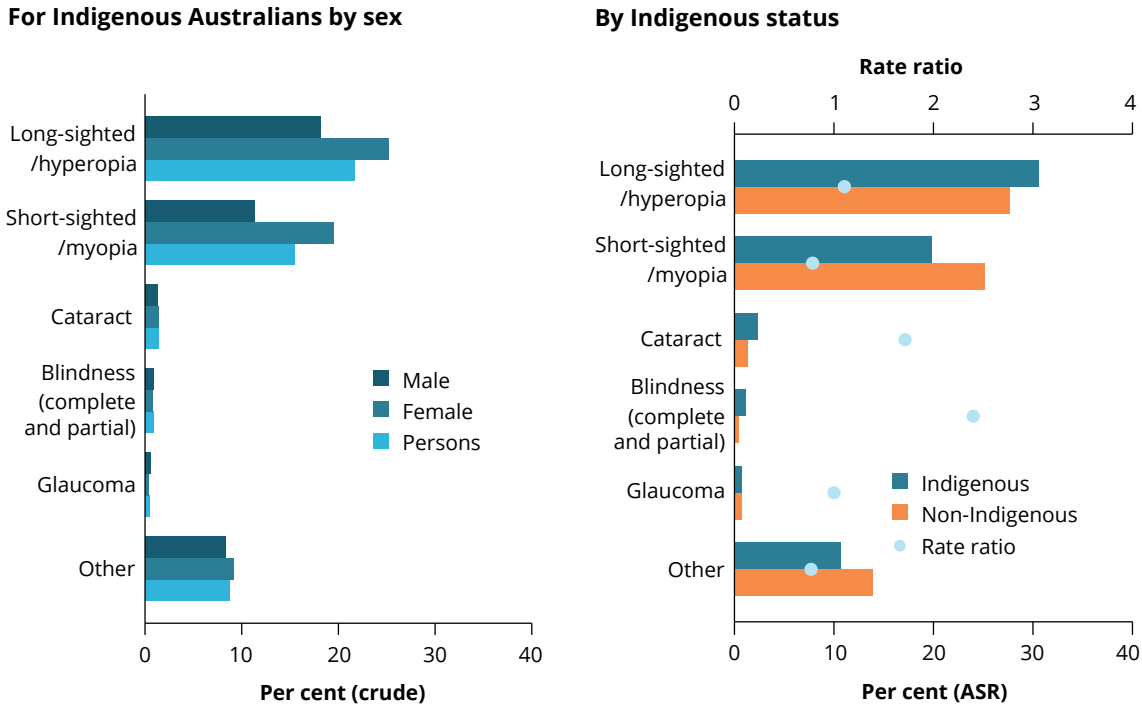


Source: AIHW analysis of ABS 2018–19 NATSIHS.

The main causes of sight problems reported by Aboriginal and Torres Strait Islander Australians were long-sightedness (22%), short-sightedness (16%), and cataract (1.4%).

Adjusting for age, Indigenous Australians were more likely than non-Indigenous Australians to report blindness (2.4 time as likely) or having a cataract (1.7 times as likely) as a cause of sight problems.

Prevalence of eye/sight problems, by main cause, 2018–19

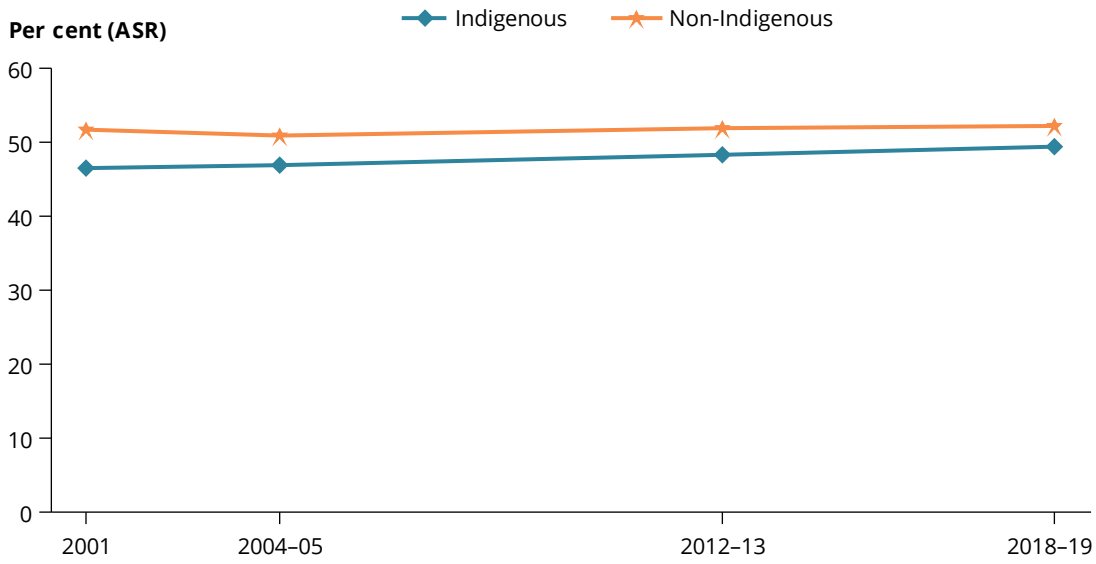


Note: The estimate for glaucoma for Indigenous males, females and persons and the estimate for blindness for Indigenous females have a relative standard error between 25% and 50% and should be used with caution. Multiple responses are allowed for these questions, so proportions may add to more than 100%.

Sources: AIHW analysis of ABS 2018–19 NATSIHS and 2017–18 National Health Survey.

Since 2001, the age-standardised proportion of Indigenous Australians who had an eye or sight problem rose from 47% to 49% in 2018–19, whereas for non-Indigenous Australians it remained stable at around 52% across this period.

Australians with self-reported eye/sight problems, by Indigenous status, 2001 to 2018–19 (ASR)



Source: AIHW analysis of ABS 2018–19 NATSIHS, ABS 2017–18 National Health Survey, ABS 2012–13 Aboriginal and Torres Strait Islander Health Survey (AATSIHS).

2

How are eye health problems identified?

This section provides Medical Benefits Schedule (MBS) data on health checks undertaken by general practitioners (GPs); eye examinations provided by eye care specialists (optometrists and ophthalmologists); and screening for diabetic retinopathy.

MBS items related to Indigenous health assessments

Indigenous specific health checks relate to MBS items 715 and 228 on health checks undertaken in the community, in addition to the following temporary items introduced in response to the COVID-19 pandemic:

- MBS items 92004, 92011, 92016, 92023 for telehealth checks provided via videoconference or teleconference from March 2020
- MBS items 93470 and 93479 for health checks undertaken in Residential Aged Care facilities, which were available from October 2020.

Health assessments

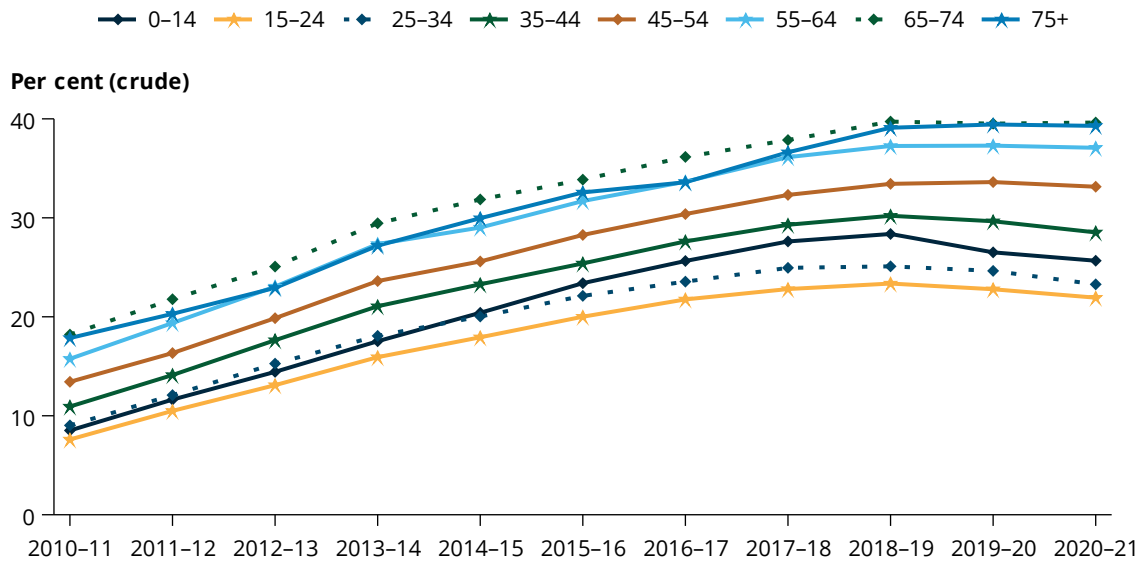
Eye health checks are a mandatory component of Indigenous health assessments undertaken by GPs. While eye health checks are required as part of health assessments, they are not always conducted and specific data on the provision of eye health checks as part of health assessments is not available.

Just over one-quarter (27% or 236,609) of Indigenous Australians had an Indigenous-specific health assessment in 2020–21. This included over 11,000 (about 5%) health assessments provided via videoconference or teleconference.

Between 2010–11 and 2019–20, the age-standardised proportion of Indigenous Australians who had a health assessment (including a telehealth assessment) grew from 11% in 2010–11 to 30% in 2018–19, before declining slightly over the next 2 years to 29% in 2020–21.

The proportion of Indigenous Australians who had a health assessment was highest in age groups 65 and over and lowest in age group 15 to 24.

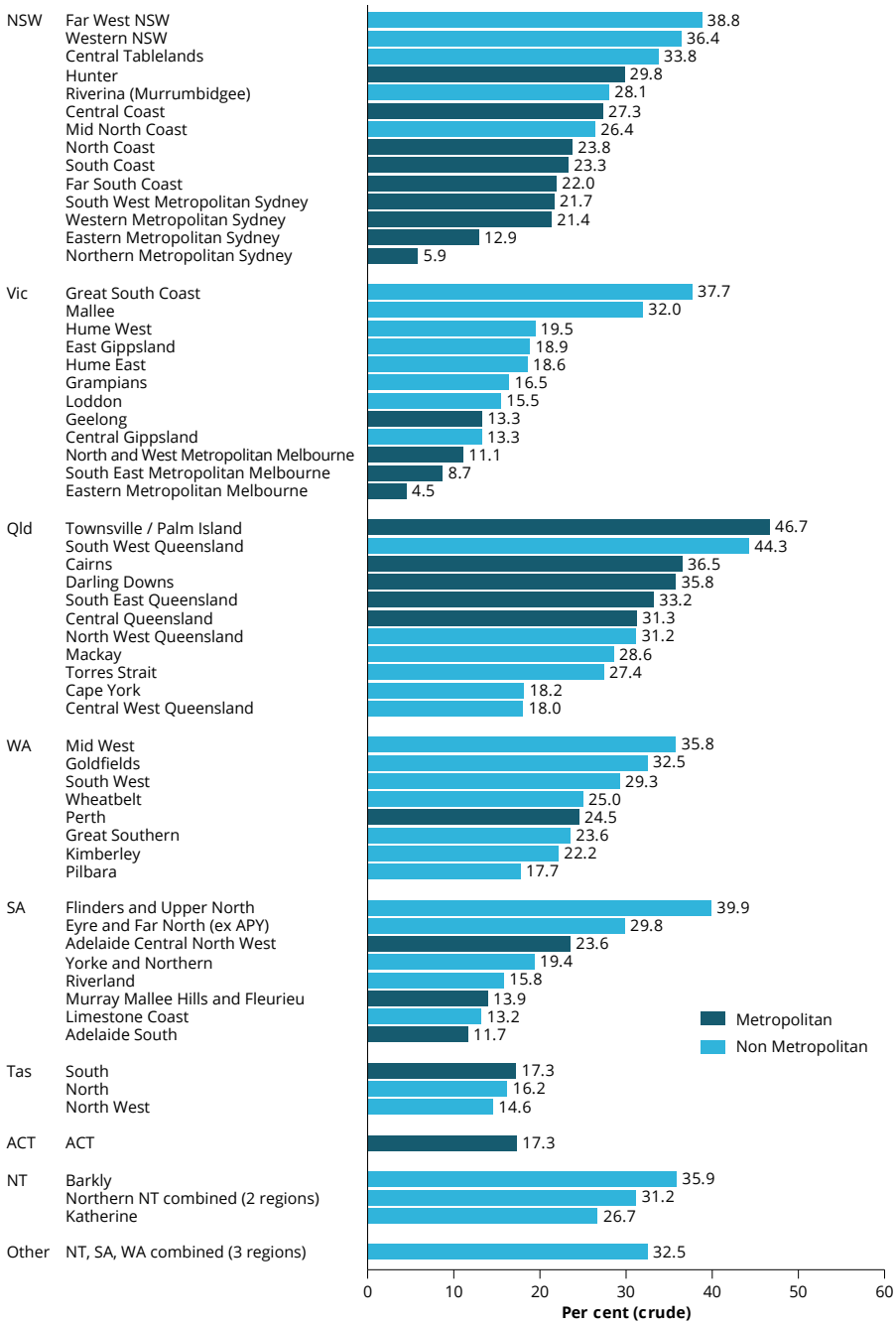
MBS health assessments, Indigenous Australians, by age group, 2010–11 to 2020–21



Source: AIHW analysis of MBS data.

The proportion of the Indigenous population who had a health assessment varied across Australia. In 2020–21, across Roadmap regions the rate ranged from 4.5% in *Eastern Metropolitan Melbourne* in Victoria to 46.7% in *Townsville/Palm Island* in Queensland.

MBS health assessments, Indigenous Australians, by Roadmap region, 2020–21



Source: AIHW analysis of MBS data.

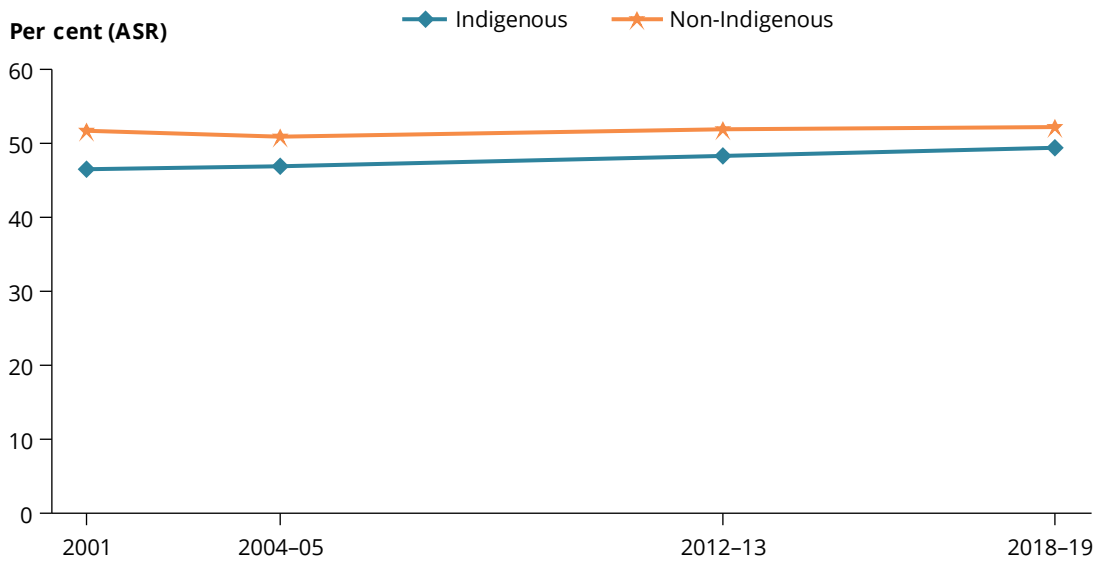
Eye examinations

In 2019–20, around 104,300 (12%) Indigenous Australians had an eye examination by an optometrist or ophthalmologist in the previous 12 months.

In the period from 2007–08 to 2019–20, the total age-standardised proportion of the Indigenous population that had an eye examination increased from 14% to 17%.

Over the same period, the proportion for non-Indigenous Australians increased from 19% to 24%, indicating a widening of the gap.

Eye examinations, by Indigenous status, 2007–08 to 2019–20



Source: AIHW analysis of MBS data.

Eye examinations among target population

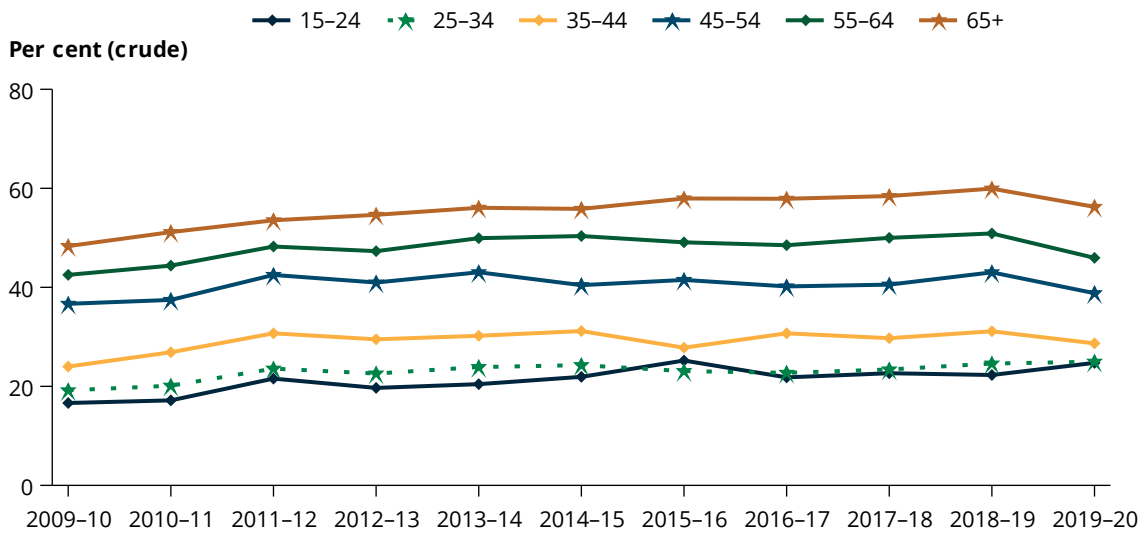
Current guidelines recommend an annual eye examination for Indigenous Australians with diabetes to screen for diabetic retinopathy, an eye condition that can cause vision impairment and blindness in people who have diabetes.

To understand if people with diabetes are accessing retinopathy screening, we look at the rate of eye examinations among those tested for diabetes. Indigenous Australians who had a diabetes test may not have been found to have diabetes so this proxy measure may be an underestimate.

In 2019–20, nearly 42% or around 13,400 Indigenous Australians who had a diabetes test in the previous two years also had an eye examination.

The proportion of Indigenous Australians who had a diabetes test who also had an eye examination increased with age, from over 20% of 15–24-year-olds to over 55% of those aged 65 and over.

Population who had an eye examination among those tested for diabetes, Indigenous Australians, by age group, 2009–10 to 2019–20



Source: AIHW analysis of MBS data.

Did you know?

In 2016, estimated 387 million people worldwide were diagnosed with diabetes, which is predicted to increase to 592 million by 2035. Ninety-three million people are globally affected by diabetic retinopathy. Prevalence of diabetic retinopathy is 77.3% in type 1 diabetes patients and 25.1% in type 2 diabetes patients (Shukla & Tripathy 2022).

3

How are eye health problems treated?

Different eye problems require different treatments. For example, surgery is required to remove cataracts, while refractive error is treated by using visual aids, such as glasses and contact lenses.

This section includes data on hospitalisations for eye diseases and injuries, and for cataract surgery and the treatment of diabetic retinopathy. Information on subsidised glasses comes from state or territory government data.

Did you know?

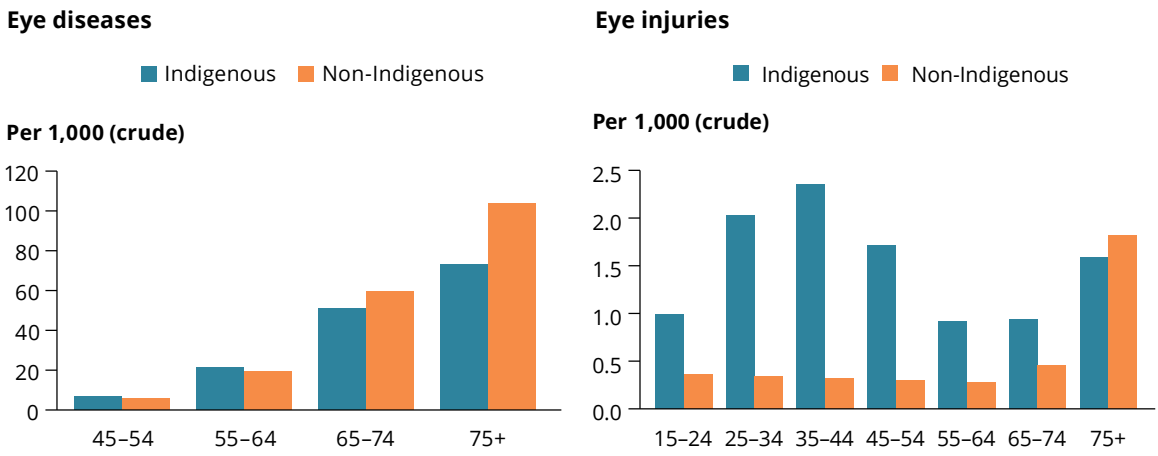
A new World Health Organization (WHO) guide titled 'Eye care in health systems: guide for action', which aims to help countries tackle the global eye care crisis, was launched on 24 May 2022. The guide provides an evidence-based framework to help countries assess their eye health services and tools to support countries to achieve WHO's global eye health targets. These include recommended national eye care indicators and planning tools for budgeting and human resources.

Hospitalisations for diseases and injuries of the eye

In the 2-year period 2018–20, there were around 10,141 (6 per 1,000 population) hospitalisations of Indigenous Australians for eye diseases and 2,000 (1.2 per 1,000) for eye injuries.

Hospitalisation rates for eye diseases increased with age, peaking at 75 and over, while rates for eye injuries peaked in the middle years (ages 25–54).

Hospitalisations for diseases of the eye and injuries of the eye, by Indigenous status and age group, 2018–20



Source: AIHW analysis of NHMD.

Between 2012–13 and 2019–20, the age-standardised hospitalisation rate for diseases of the eye for Indigenous Australians increased from 9.3 to 10.5 per 1,000, while the rate for non-Indigenous Australians fell from 13.0 to 12.5 per 1,000.

The age-standardised hospitalisation rate for injuries of the eye for Indigenous Australians and non-Indigenous Australians was fairly constant for the same period.

Did you know?

According to a study of hospitalisation records in Sweden, low socio-economic status is associated with increases in a number of age-related eye diseases—suggesting the importance of community-level factors in preventing hospitalisations for eye disease (Hamano et al. 2015).

Cataract surgery

In 2018–20, there were around 6,200 hospitalisations for Indigenous Australians for cataract surgery. The number of hospitalisations over the 2-year period was below the estimated annual number of Indigenous people needing cataract surgery (around 15,000).

Hospitalisation rates for cataract surgery for Indigenous Australians were generally higher in regional Roadmap regions than in metropolitan areas.

Did you know?

It is estimated the Australian public hospital system provides around 29% of cataract surgeries for non-Indigenous Australians[1] and 80% of cataract surgeries for Indigenous Australians[2]. Hence, delays or interruptions to the public health service provision disproportionately impact Indigenous Australians with cataract.

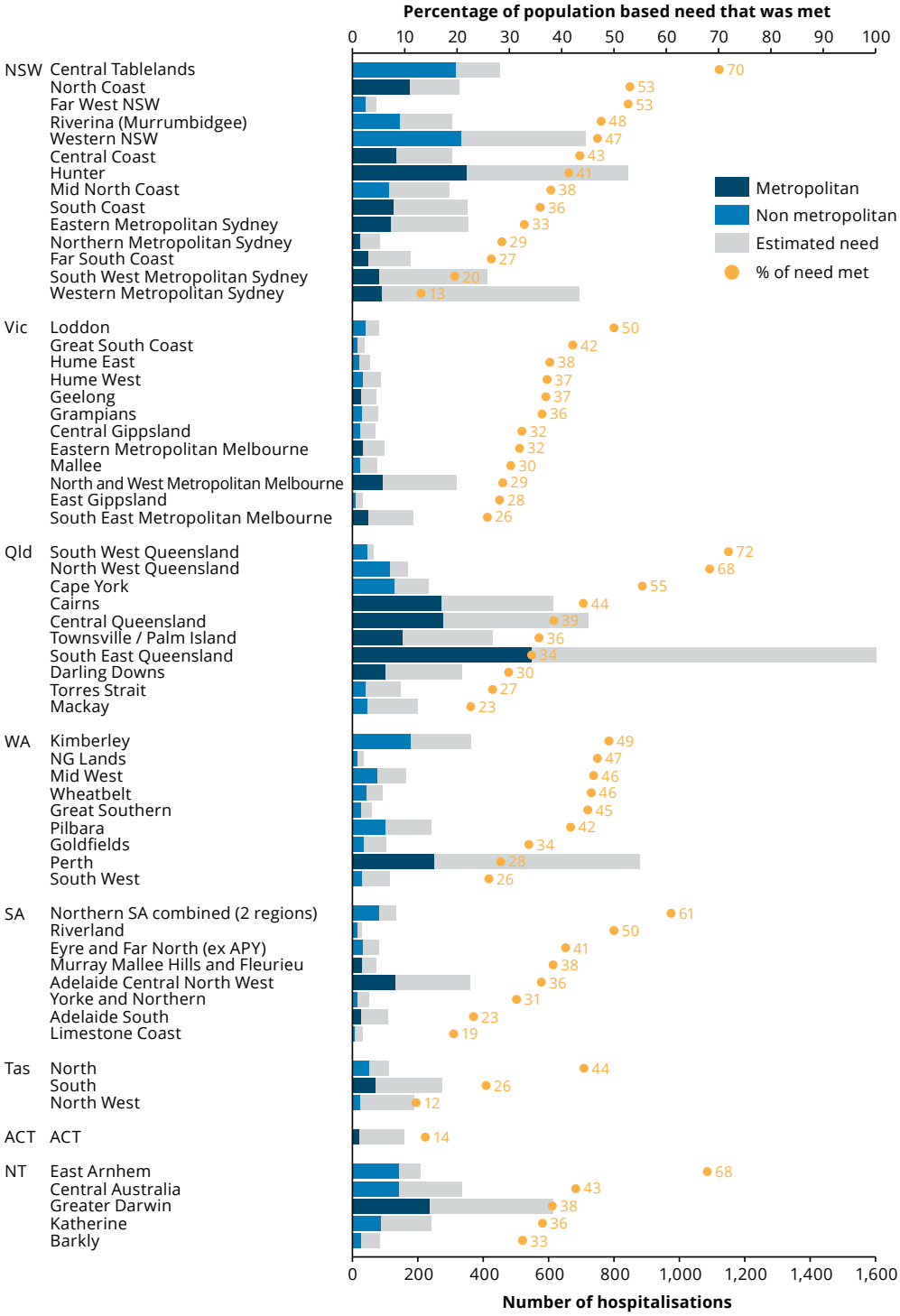
A likely contributing factor to this is the lower proportion of Indigenous adults having private health insurance (estimated at 20% compared to 57% of all Australian adults living in non-remote areas in 2012–13)[3].

[1] Australian Commission on Safety and Quality in Health Care and Australian Institute of Health and Welfare (2017)

[2] Randall et al. (2014)

[3] Australian Institute of Health and Welfare (2015)

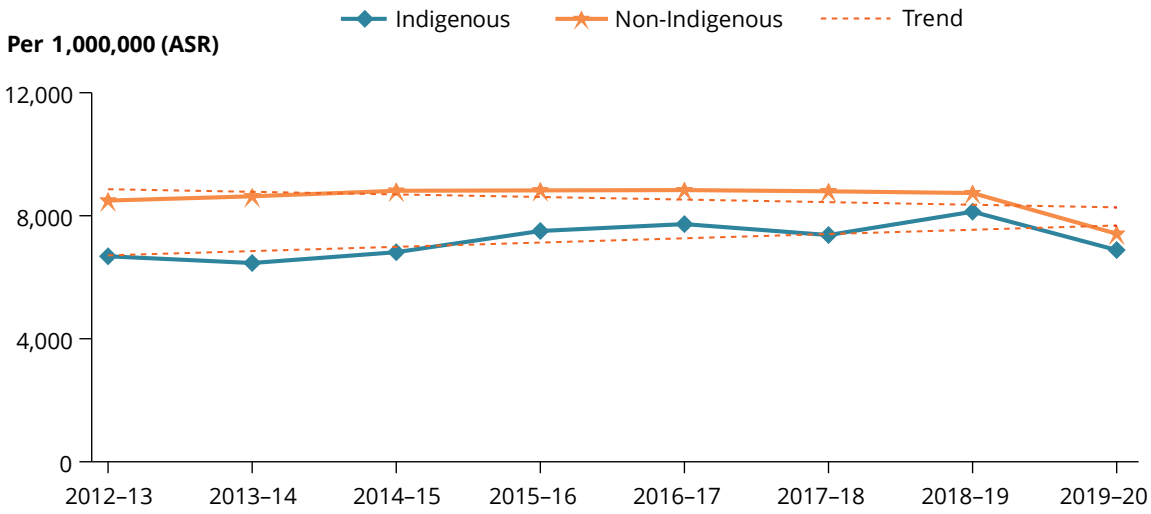
Hospitalisations and estimated population-based need for cataract surgery, Indigenous Australians, by Roadmap region, 2018–20



Source: AIHW analysis of NHMD and AIHW analysis of calculator for the delivery and coordination of eye care services (IEHU).

The gap in age-standardised cataract surgery rates between Indigenous and non-Indigenous Australians has narrowed over the last 10 years, mostly due to rise in rates for Indigenous Australians.

Cataract surgery, by Indigenous status, 2012–13 to 2019–20



Source: AIHW analysis of NHMD data.

Between 2012–13 and 2018–19, the hospitalisation rate for Indigenous Australians for cataract surgery generally increased for all age groups over time, before declining for all age groups between 2018–19 and 2019–20.

The rate for non-Indigenous Australians remained relatively constant across all age groups over 45.

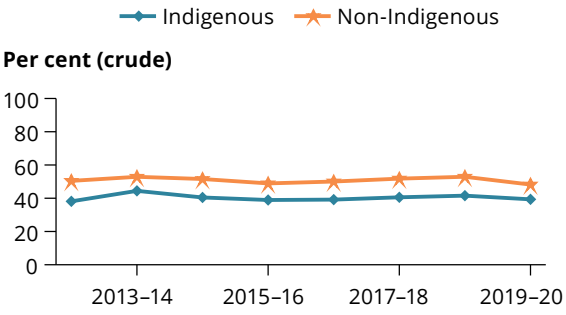
In 2019–20, Indigenous Australians waited longer for cataract surgery (a median number of 130 days) than non-Indigenous Australians (95 days).

The proportion of Indigenous Australians who waited more than 365 days for cataract surgery (5.2%) was slightly higher than the proportion of non-Indigenous Australians who waited this long (4.7%).

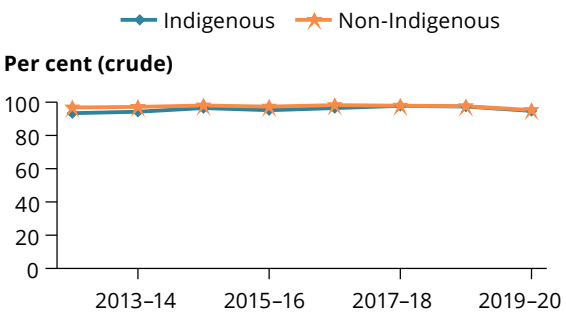
Between 2012–13 and 2019–20, the proportion of both Indigenous and non-Indigenous Australians who were treated within 90 days for elective cataract surgery remained relatively stable. The proportion of Indigenous and non-Indigenous Australians treated within 365 days was also relatively stable over this period.

Waiting times for elective cataract surgery

Time trend, treated within 90 days, 2012–13 to 2019–20



Time trend, treated within 365 days, 2012–13 to 2019–20



Source: AIHW analysis of NHMD data.

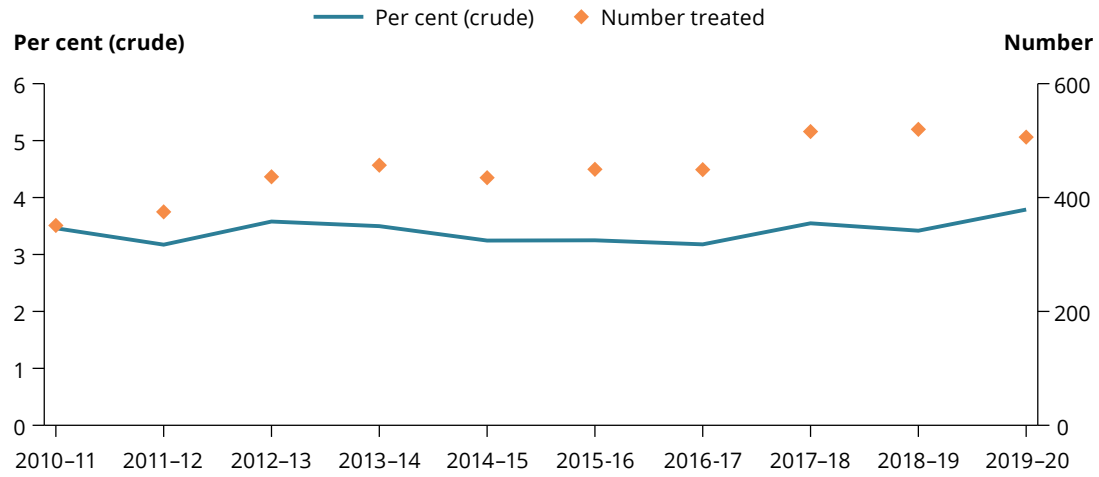
Treatment for diabetic retinopathy

In 2019–20, 506 Indigenous Australians, screened for diabetic retinopathy underwent treatment. This was 3.8% of those screened for diabetic retinopathy.

The rate ratio of the age-standardised proportion of Indigenous and non-Indigenous Australians who were treated was 0.9.

Between 2010–11 and 2019–20, the number of Indigenous Australians screened for diabetic retinopathy who underwent treatment increased from 351 in 2010–11 to 506 in 2019–20.

Population treated for diabetic retinopathy among those screened for diabetic retinopathy, Indigenous Australians, 2010–11 to 2019–20



Source: AIHW analysis of MBS data.

Did you know?

The timely treatment of diabetic retinopathy can prevent vision loss. Treatment generally involves injections into the eye or laser therapy. Recent development involving newer retinal diagnostics are proving beneficial in optimizing both initiation and maintenance of therapy. Recent advances in novel pharmaceutical agents and ocular drug delivery methods show promise in better controlling the disease as well reducing the burden treatment (Mansour et al. 2020).

Subsidised spectacles

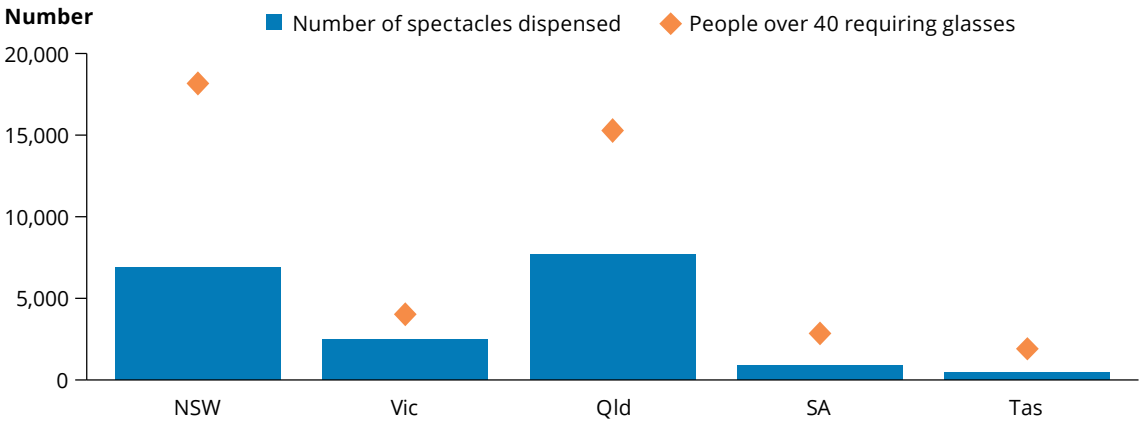
All states and territories have schemes that provide eye care and visual aids, including glasses, to eligible people at low or no cost. Only 5 states, however, could provide data on the number of spectacles dispensed to Indigenous Australians.

In 2020–21, the number of spectacles dispensed to Indigenous Australians under state schemes was:

- 6,912 in New South Wales (24 per 1,000)
- 7,679 in Queensland (32 per 1,000)
- 2,454 in Victoria (39 per 1,000)
- 879 in South Australia (19 per 1,000)
- 449 in Tasmania (15 per 1,000).

The number of spectacles dispensed in Victoria was closest to meeting the estimated number of Indigenous people aged over 40 who needed them—with an estimated 61% having their needs met.

Spectacles dispensed to Indigenous Australians and estimated need, by jurisdiction, 2020–21



Sources: AIHW analysis of NSW Department of Family and Community Services data (unpublished); Australian College of Optometry Victorian data (unpublished); Queensland Health data (unpublished); SA Department of Human Services (unpublished); Tasmania Health Service data (unpublished); and calculator for the delivery and coordination of eye care services (IEHU).

Did you know?

The provision of spectacles is a low-cost measure that can address the main cause of vision loss for Indigenous Australians.

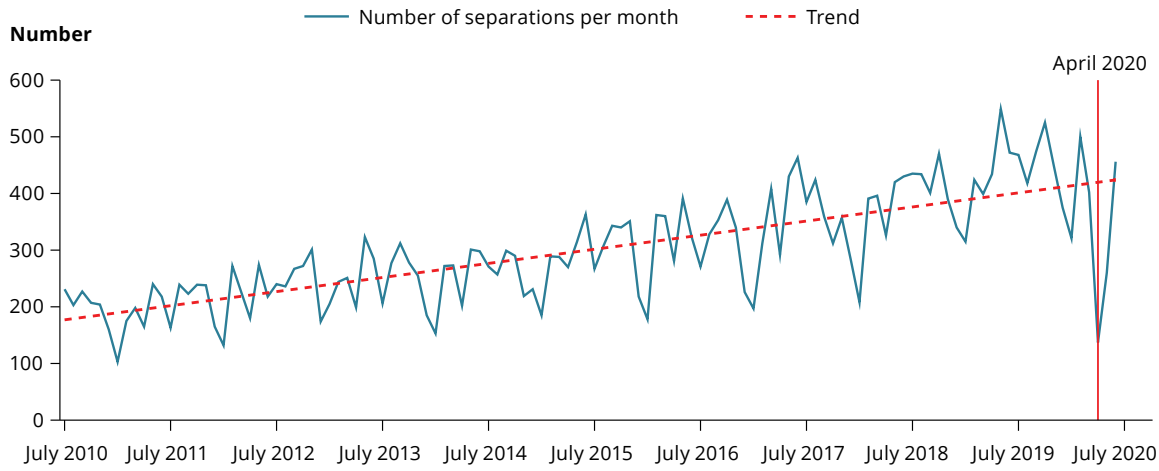
Impacts of COVID-19

Early 2020 saw the emergence of a global pandemic of the novel coronavirus disease COVID-19. Restrictions imposed by the Australian and State and Territory governments limited people's movements and activities to limit the spread of the disease. Many people changed their behaviours to protect themselves and others from the risk of exposure.

In 2020–21, claims for Indigenous health checks fell across nearly all age groups. The uptake of telehealth increased. Telehealth accounted for more than 11,000 claims (5%) in 2020–21 compared with just under 9,000 claims (4%) in 2019–20.

All non-urgent elective surgery was temporarily suspended from 25 March 2020 in both public and private hospitals, this resulted in a large drop in elective eye procedures in April 2020 – 67 percentage points below the 10-year trend. Emergency eye procedures were largely unaffected during this period.

Monthly number of Indigenous hospital separations for eye procedures, July 2010 to July 2020



Source: AIHW analysis of NMHD data.

4

Trachoma

Trachoma is an infectious disease of the eye that, left untreated, can result in scarring, in-turned eyelashes (trichiasis) and blindness. Trachoma is highly infectious and easily spread. Antibiotics, facial cleanliness, and environmental improvements are used to treat trachoma, while surgery is required to prevent blindness for people who have trichiasis.

Trachoma is not commonly found in high-income countries, but it is endemic in some remote Indigenous communities in Western Australia, South Australia, and the Northern Territory.

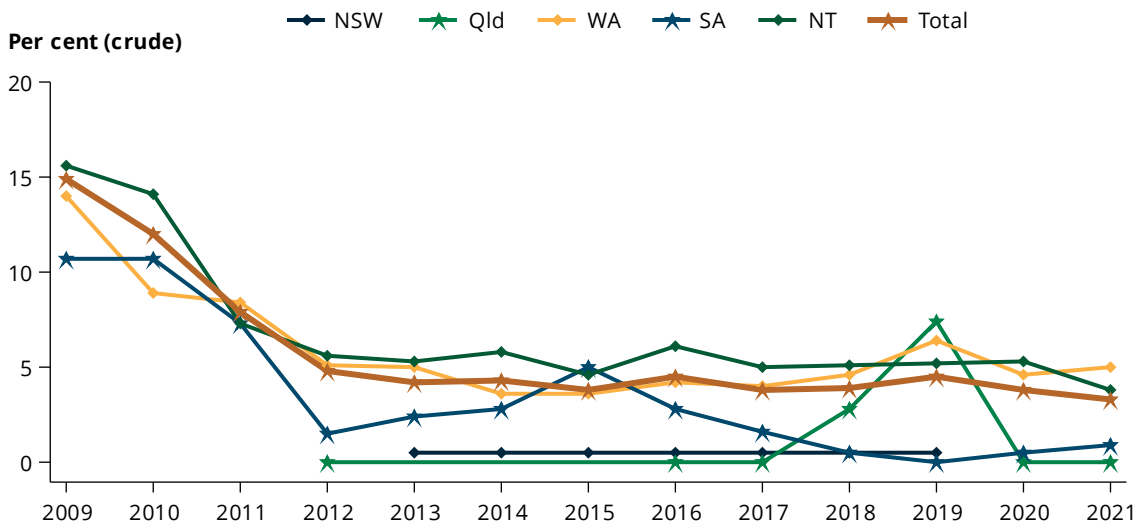
The Australian Government funds trachoma control, surveillance, and reporting. National data on trachoma comes from the Australian Trachoma Surveillance Reports from the Kirby Institute.

How common is trachoma?

In 2021, trachoma screening and treatment was undertaken among children aged 5–9 in 82 at-risk communities across Queensland, Western Australia, South Australia, and the Northern Territory.

Overall trachoma prevalence among children aged 5–9 fell from 15% in 2009 to 3.3% in 2021.

Overall trachoma prevalence among Indigenous children aged 5–9 in at-risk communities, 2009 to 2021



Source: AIHW analysis of Australian Trachoma Surveillance report 2021 (Kirby Institute 2023 (forthcoming)).

Trachoma screening and treatment

In 2021, 1,833 Indigenous children aged 5–9 were screened for trachoma in 82 communities. There was 90% screening coverage for this group, above the recommended 85% for trachoma control.

Most (82 out of 92) of the communities that required screening and/or treatment received the required services. All children found to have active trachoma received treatment.

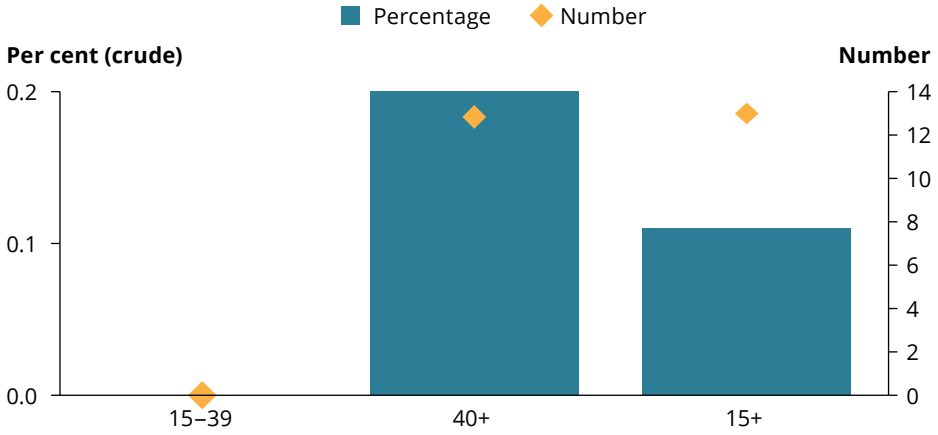
Trachoma-related trichiasis

Screening for trichiasis is undertaken through a range of strategies, including during adult health assessments.

In 2021, screening data were reported for 122 at-risk communities in 4 jurisdictions (Queensland, Western Australia, South Australia, and the Northern Territory):

- Around 4,500 Indigenous adults aged 15–39, and just under 7,000 Indigenous adults aged 40 and over, were screened for trichiasis.
- 13 cases of trichiasis were identified—all of them were aged 40 and over.

Prevalence of trichiasis in at-risk Indigenous communities, by age group, 2021



Source: AIHW analysis of Australian Trachoma Surveillance report 2021 (Kirby Institute 2023 (forthcoming)).

5

What is the size and location of the eye health workforce?

Optometrists and ophthalmologists play an important role in Indigenous eye health.

Optometrists perform eye examinations and vision tests to determine the presence of visual, ocular, and other abnormalities; ocular diseases; and systemic diseases with ocular manifestations. They also prescribe lenses, other optical aids, therapy, and medication to correct and manage vision problems and eye diseases.

Ophthalmologists provide diagnostic, treatment and preventative medical services related to diseases, injuries and deficiencies of the human eye and associated structures.

Data on the size and location of the eye health workforce can indicate the availability of specialised services in different regions. Annual data on the number of registered optometrists and ophthalmologists are available from the National Health Workforce Dataset.

Full-time equivalent (FTE)

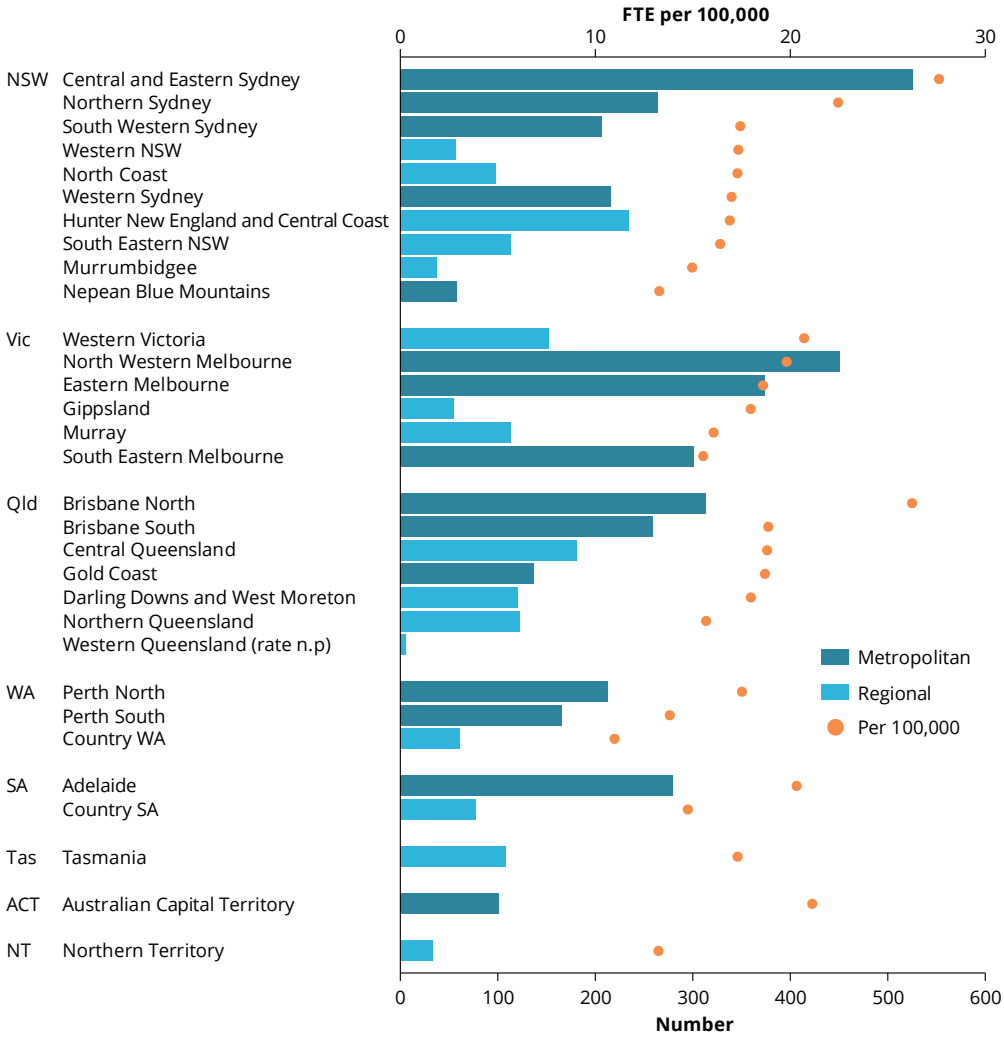
The FTE is a measure used to present data on the eye health workforce. This is calculated by dividing the total hours worked by employees in an occupation, by the standard hours worked.

Optometrists

In 2020, around 5,440 optometrists were employed in Australia (19 FTE per 100,000), an increase of 1,115 since 2014 (4,322 optometrists).

The number and rate of optometrists were higher in metropolitan areas. Central and Eastern Sydney PHN had the highest rate, while Country WA PHN had the lowest rate.

Optometrists, by PHN, 2020



Note: Rates have not been published (n.p.) where the number employed for any occupation was fewer than 10 people.

Source: AIHW analysis of National Health Workforce Dataset.

Did you know?

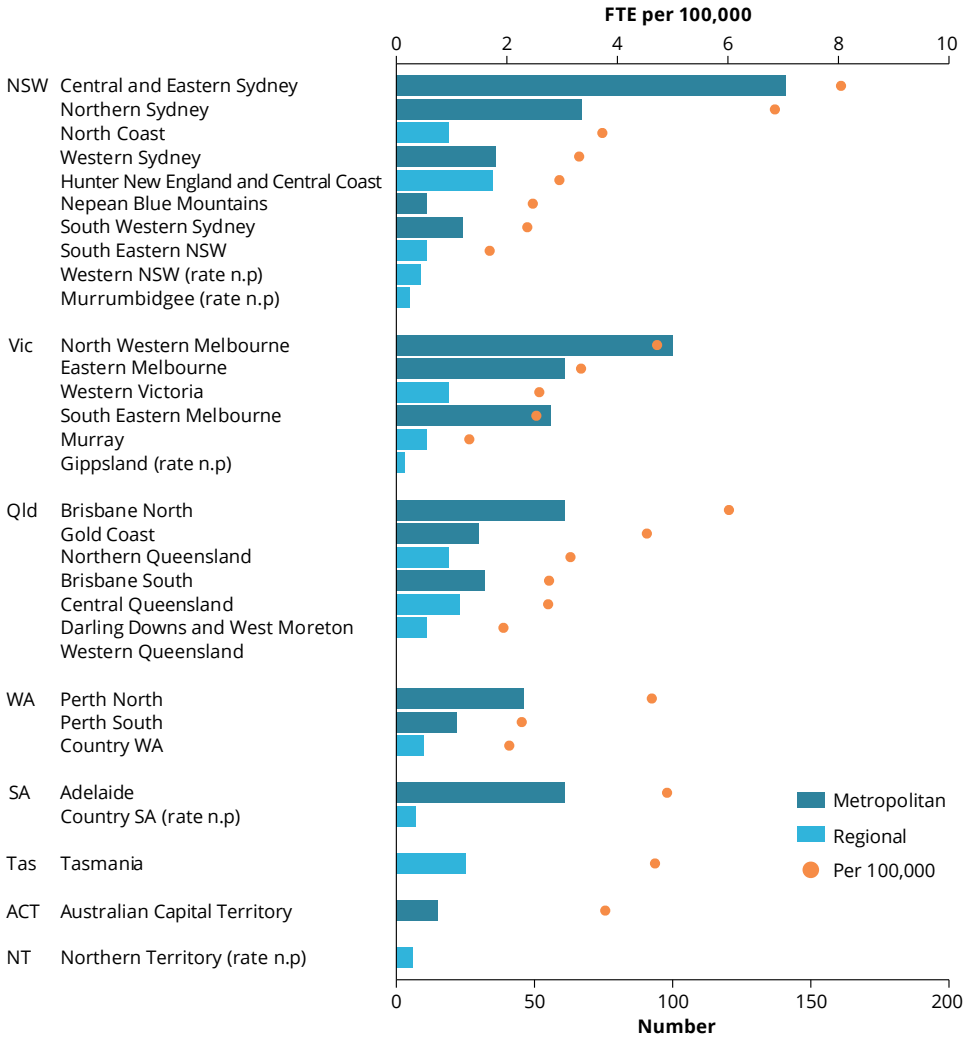
An optometrist is often your first port of call for any problems with your eyes or vision. Being a primary health provider, they play a key role in providing accessible eye care to their communities.

Ophthalmologists

The ophthalmologist workforce is smaller than the optometrist workforce with 977 ophthalmologists employed in Australia (3.7 FTE per 100,000) in 2020.

Ophthalmologists were primarily located in metropolitan areas, with the highest rates in the Central and Eastern Sydney PHN (141 and 8.0 FTE per 100,000).

Ophthalmologists, by PHN, 2020



Note: Rates have not been published (n.p.) where the number employed for any occupation was fewer than 10 people.

Source: AIHW analysis of National Health Workforce Dataset.

Did you know?

An ophthalmologist is a medical specialist, also known as an eye doctor or eye surgeon. Most people come across an ophthalmologist by way of referral for an eye disease or visual disorder.

6

What support is provided through outreach and other programs?

Australian Government outreach programs are designed to address the uneven distribution of the health workforce and to improve access to eye health services across Australia. There are 3 programs that provide specialist eye health services, primarily in regional and remote areas of Australia: the Visiting Optometrists Scheme (VOS), the Rural Health Outreach Fund (RHOF) and the Medical Outreach Indigenous Chronic Disease Program (MOICDP). The Eye and Ear Surgical Support Services (EESS) program is also designed to expedite access to surgery for Indigenous Australians who require eye surgery. In 2020–21 around 38,600 occasions of services for Indigenous patients were provided by eye health professionals under combined outreach services (VOS, RHOF and MOICDP).

Services provided

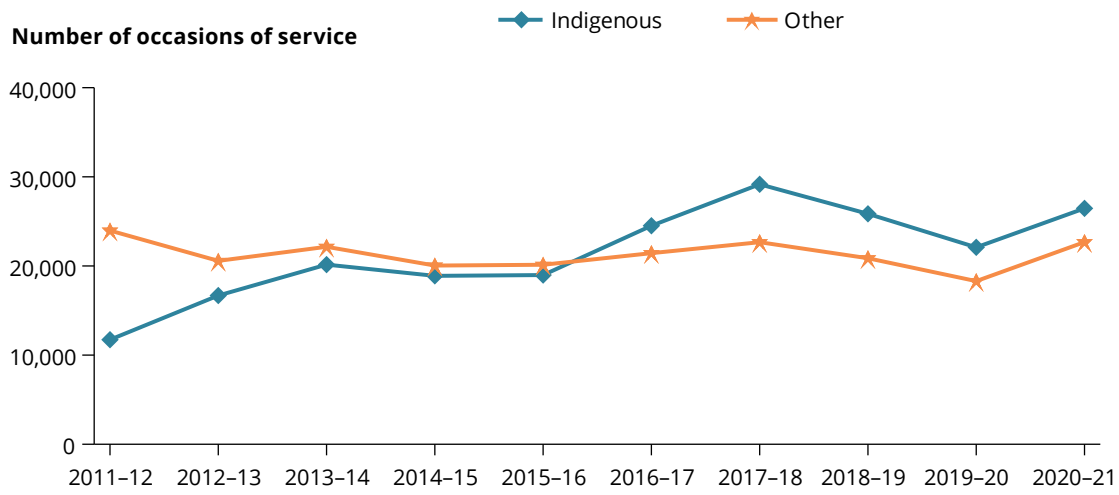
In 2020–21, the number of occasions of service for outreach programs delivered to Indigenous patients was:

- 26,459 provided through the Visiting Optometrist Scheme (VOS)
- 2,996 provided under the Rural Health Outreach Fund (RHOF)
- 9,158 provided under the Medical Outreach Indigenous Chronic Disease Program (MOICDP)
- 1,296 provided under the Eye and Ear Surgical Support Program (EESS).

VOS occasions of service for Indigenous patients increased nearly fourfold between 2009–10 and 2020–21, rising from 6,975 to 26,459.

Services provided through the VOS to Indigenous patients exceeded those provided to other patients (that is, to those of non-Indigenous and unknown Indigenous status) since 2016–17.

VOS occasions of service, by Indigenous status, 2011–12 to 2020–21

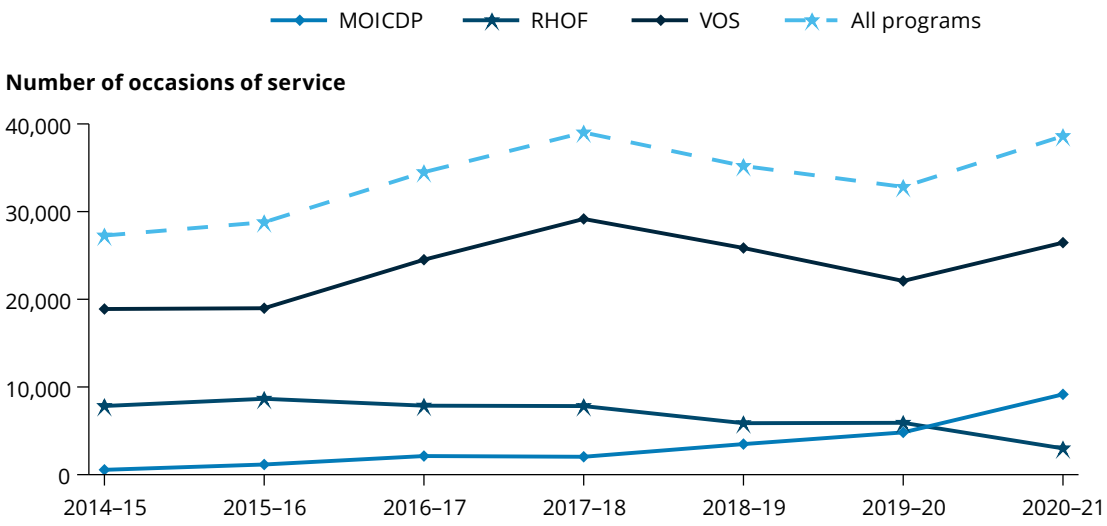


Source: AIHW analysis of Fundholder data (unpublished).

Did you know?

Eye health is one of the 4 main priorities of the Rural Health Outreach Fund – along with chronic disease management, maternity and paediatric health, and mental health.

Outreach programs occasions of service, Indigenous Australians, 2014–15 to 2020–21



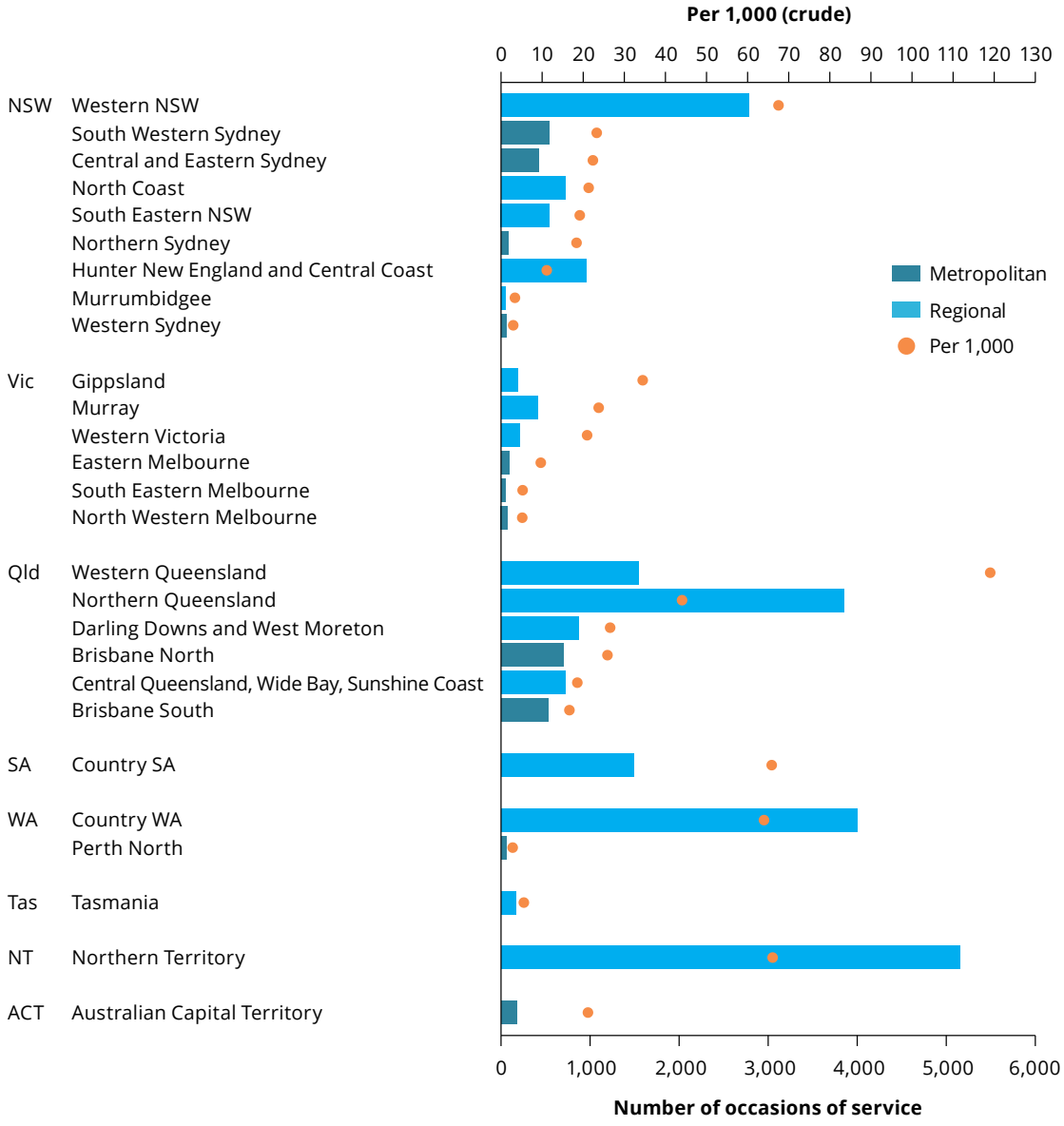
Source: AIHW analysis of Fundholder data (unpublished).

Where are outreach services provided?

Outreach services generally cover areas where there are low numbers of registered optometrists and ophthalmologists.

The highest number of occasions of service for VOS, for example, were provided in the Northern Territory and Country WA.

VOS occasions of service, by PHN, 2020–21



Source: AIHW analysis of Fundholder data (unpublished).

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This report provides an overview of the latest Aboriginal and Torres Strait Islander people eye health data. It includes information on the prevalence of eye health conditions, diagnosis and treatment services, the eye health workforce and outreach services.

Eye health measures for Aboriginal and Torres Strait Islander people 2022 is a companion to this report.

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