Australian Government

Australian Institute of Health and Welfare

AIHW

Indigenous eye health measures 2021

in-brief

AIHW

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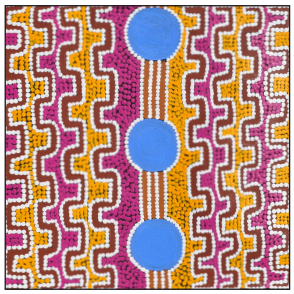

Cover art

Ngurlu Jukurrpa (Native Seed Dreaming) by Gloria Napangardi Gill.

Please note that there is the potential for minor revisions of data in this report. Please check the online version at www.aihw.gov.au for any amendments.

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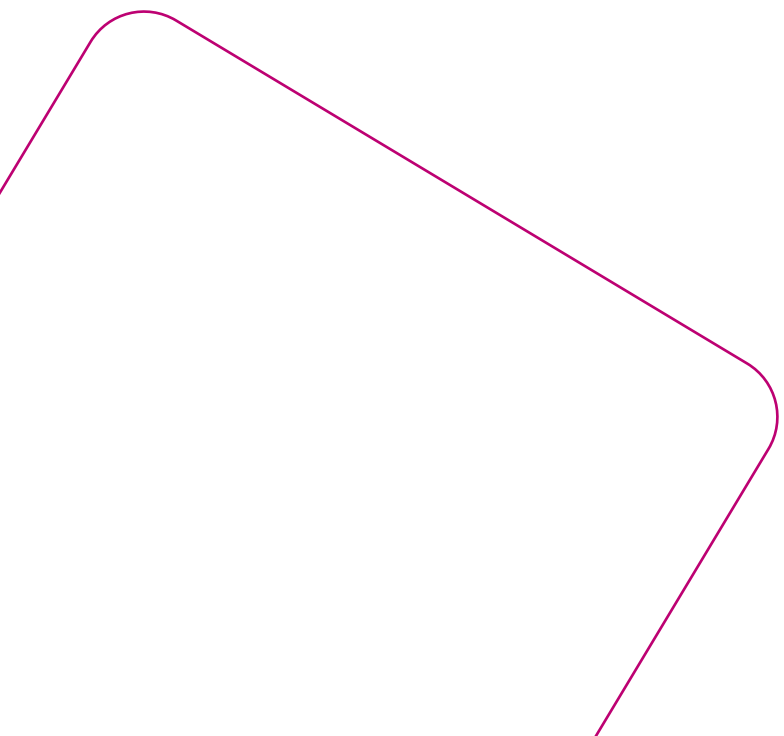

Introduction

This in-brief summarises the findings from the annual Indigenous eye health measures report, *Indigenous eye health measures 2021* and accompanying web report.

These reports bring together the latest data on the 23 Indigenous eye health measures (see table on page 2). They include information on:

- the prevalence and causes of vision loss and blindness
- detection and screening of problems
- eye health treatment services
- the eye health workforce and outreach and other programs.

The full report, web report and online tables are available at www.aihw.gov.au/reports/indigenous-australians/indigenous-eye-health-measures-2021/summary

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 making comparisons between 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 for comparisons between populations with different age structures. These provide information about the measures of interest for different age groups, but are difficult to summarise. 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.

The Indigenous eye health measures

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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. Aboriginal and Torres Strait Islander children have a lower incidence of poor vision than non-Indigenous Australian children, but Aboriginal and Torres Strait Islander people over the age of 40 have 3 times the rate of vision loss of non-Indigenous Australians.

Most vision loss is potentially preventable 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.

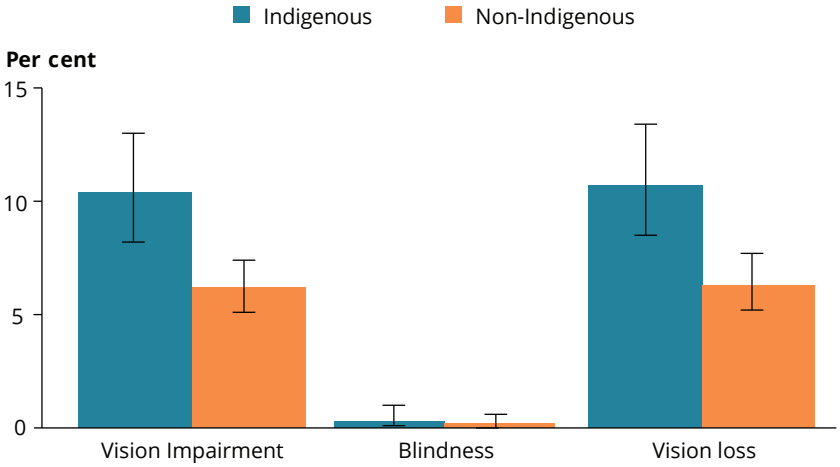
The 2016 National Eye Health Survey is the main source of data on the prevalence of eye health problems among Indigenous Australians. The survey also used eye examinations to assess vision loss and blindness. The key results from this survey are presented in this section.

How common is vision impairment and blindness?

In 2016, an estimated 1 in 10 (10%) 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.

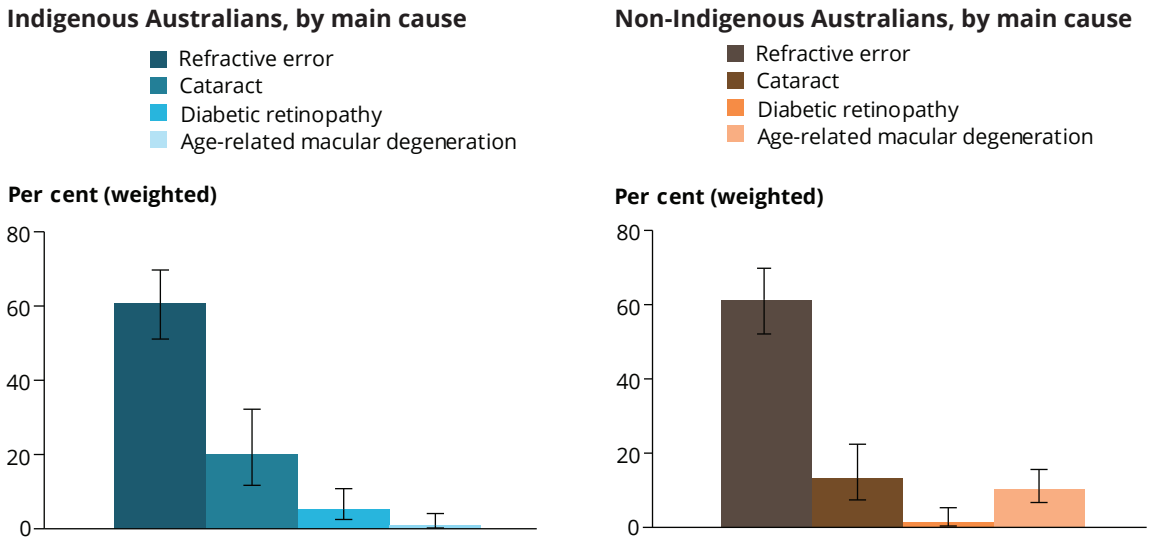
Rates of vision impairment and blindness, by Indigenous status, 2016



Sources: NEHS data 2016; Taylor et al. 2010; Foreman et al. 2017.

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

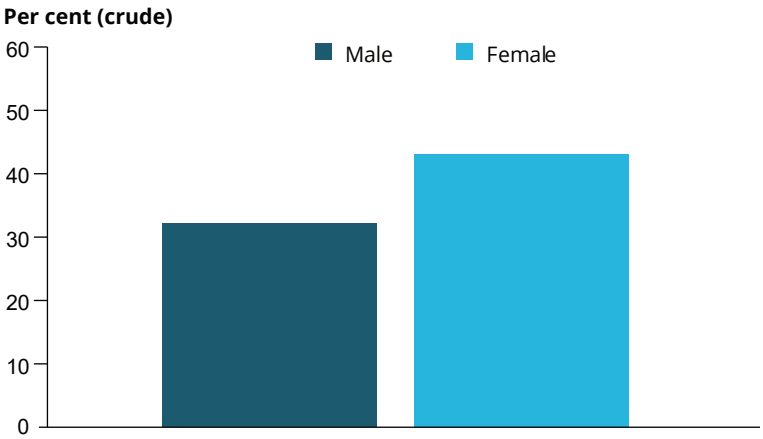


Sources: NEHS data 2016; AIHW analysis of Foreman et al. 2017 data.

Self-reported eye or sight problems

In 2018–19, nearly 4 in 10 Aboriginal and Torres Strait Islander 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.

Proportion of Indigenous Australians with self-reported eye/sight problems, by sex, 2018–19

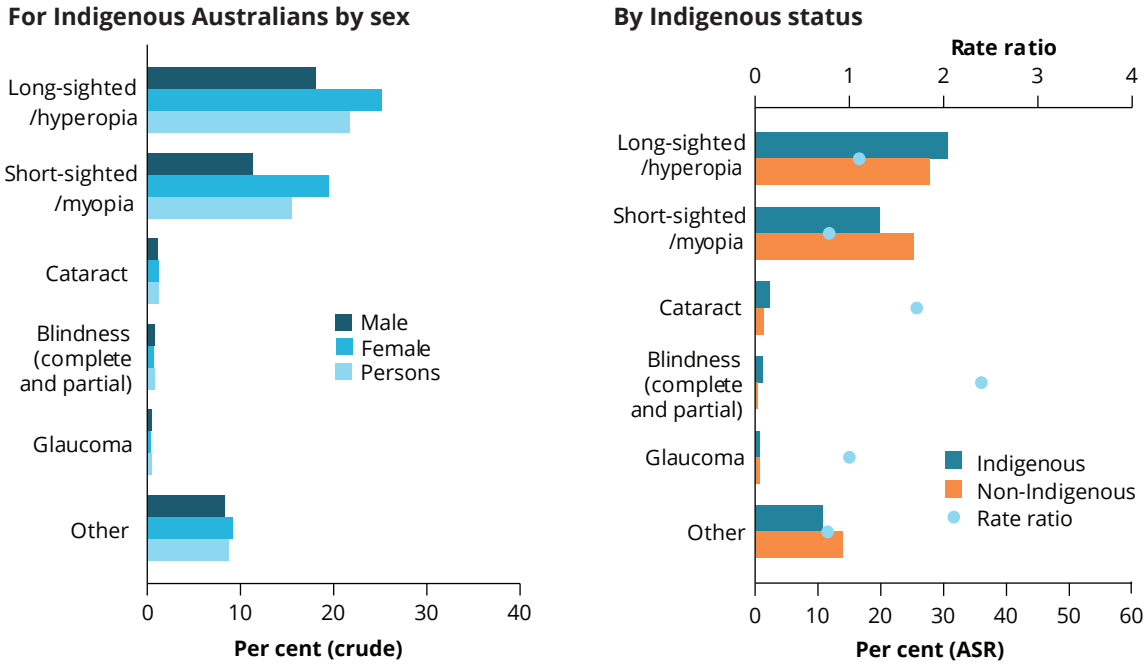


Source: AIHW analysis of ABS 2018–19 NATSIHS.

The main causes of sight problems reported by Aboriginal and Torres Strait Islander Australians were long-sightedness (31%), short-sightedness (20%), and cataract (2.4%).

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

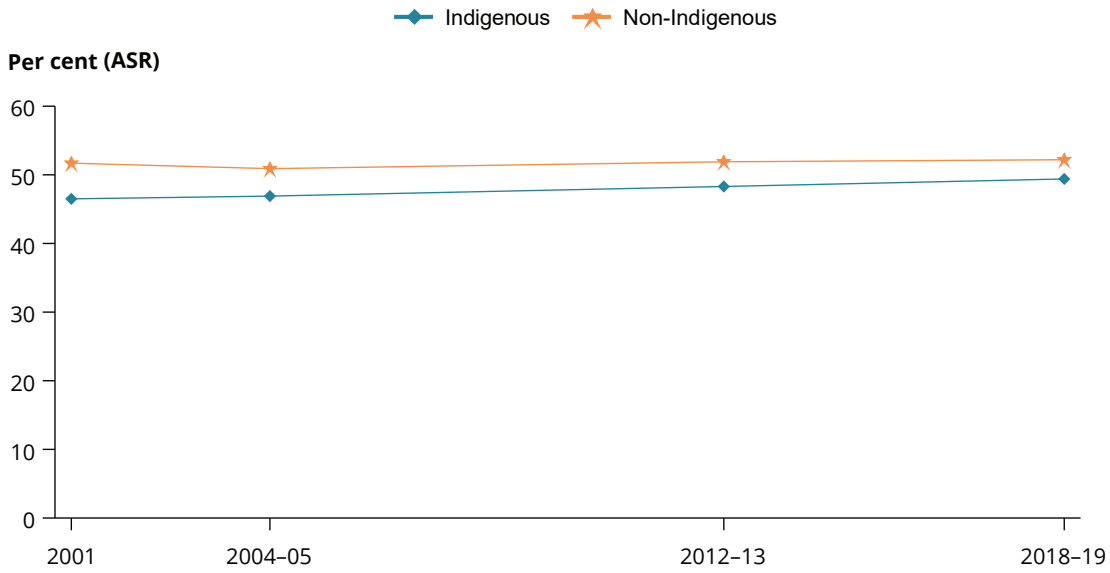


Note: The estimate for Glaucoma for Indigenous males, females and persons and the estimate for blindness for Indigenous females have a relative standard error between 25% and 50% and should be used with caution. Multiple responses are allowed for this questions, so proportions may add to more than 100%.

Source: 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 increased from 47% to 49% in 2018–19, whereas for non-Indigenous Australians it remained stable at around 52% across this period.

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



Source: AIHW analysis of ABS 2018–19 NATSIHS.

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; and screening for diabetic retinopathy.

In response to the COVID-19 pandemic, in addition to MBS items 715 and 228, telehealth items for Indigenous-specific health assessments have been made available since March 2020. These are provided via videoconference or teleconference (MBS items 92004, 92011, 92016, 92023).

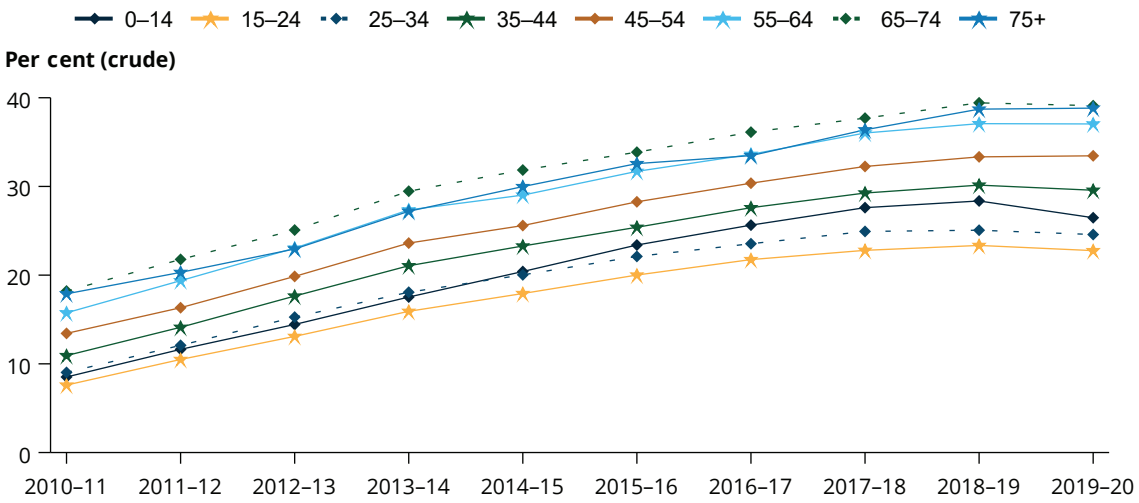
Health assessments

Eye health checks are a mandatory component of Indigenous health assessments undertaken by GPs.

Just over one quarter (28% or 238,700) Indigenous Australians had an Indigenous-specific health assessment in 2019–20. This included over 9,300 (about 4%) 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 increased from 11% in 2010–11 to over 30% in 2018–19 and slightly decreased in 2019–20.

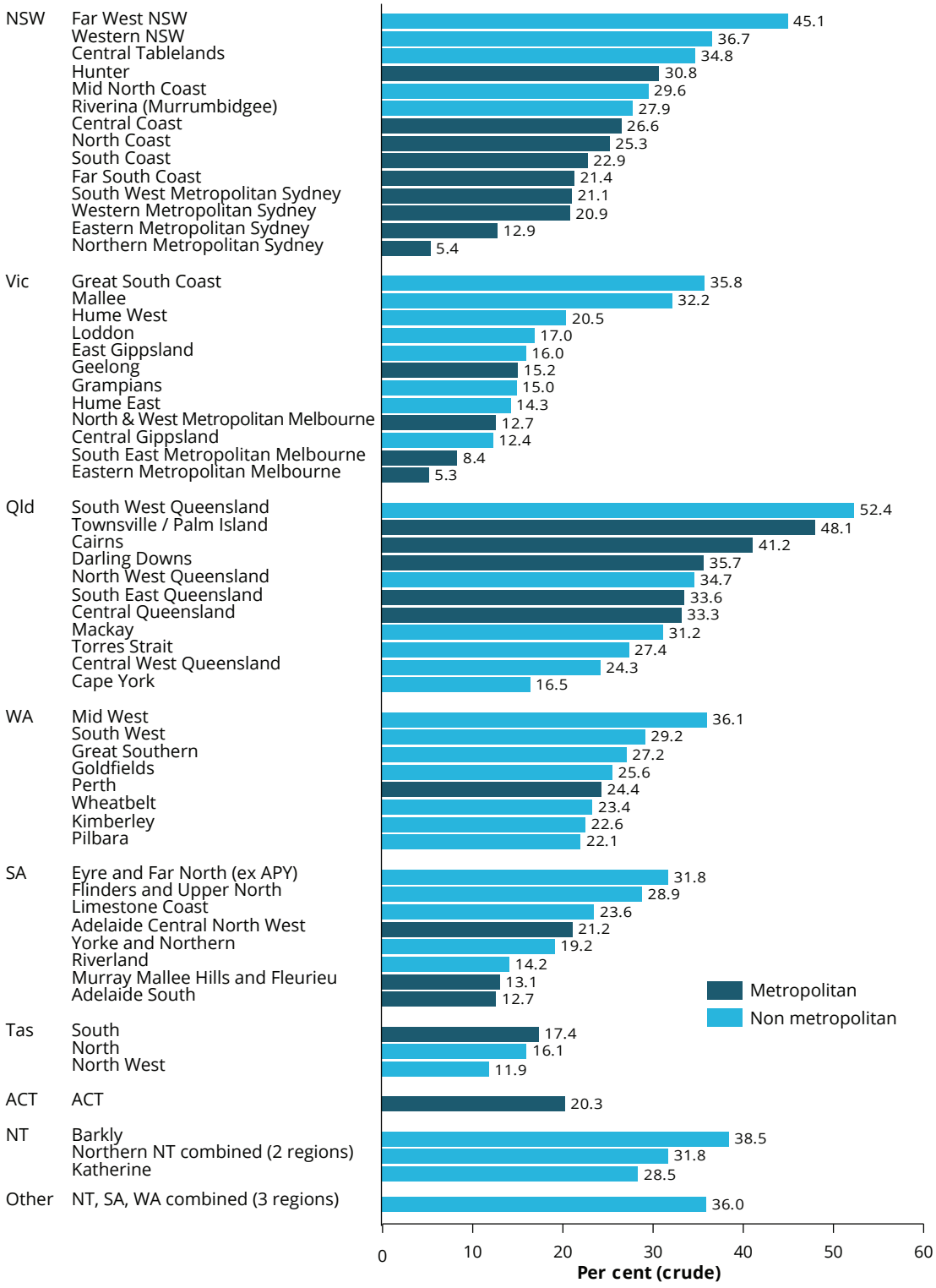
Trends in the proportion of Indigenous Australians receiving health assessments, by age group, 2010–11 to 2019–20



Source: AIHW analysis of MBS data.

The proportion of the Indigenous population who had a health assessment varied across Australia, and ranged from 52.4% in *South West Queensland* to over 5.3% in *Eastern Metropolitan Melbourne* Roadmap regions.

Rates of Indigenous health assessments, by Roadmap region, 2019–20



Source: AIHW analysis of MBS data.

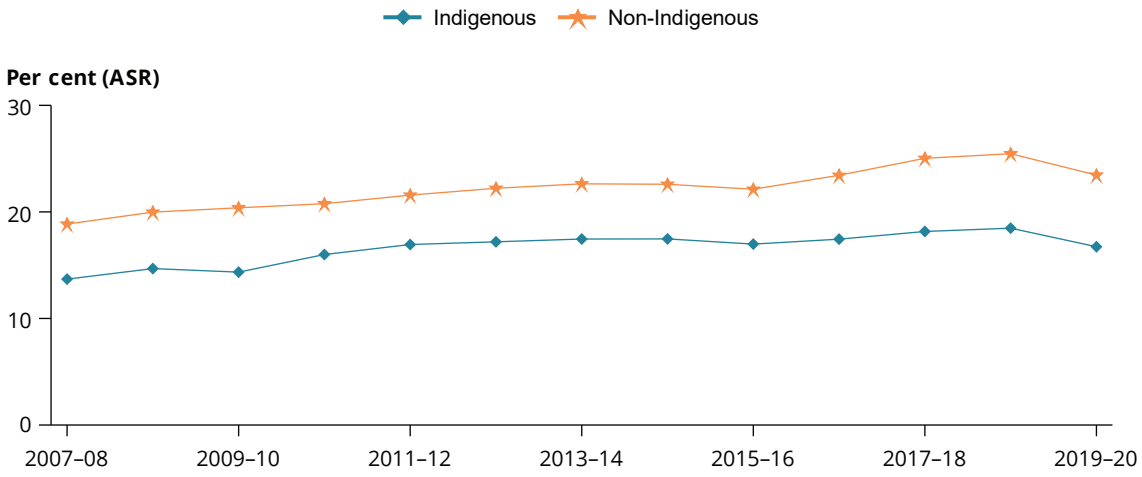
Eye examinations

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 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.

Trends in eye examinations, by Indigenous status, 2007–08 to 2019–20



Source: AIHW analysis of MBS data.

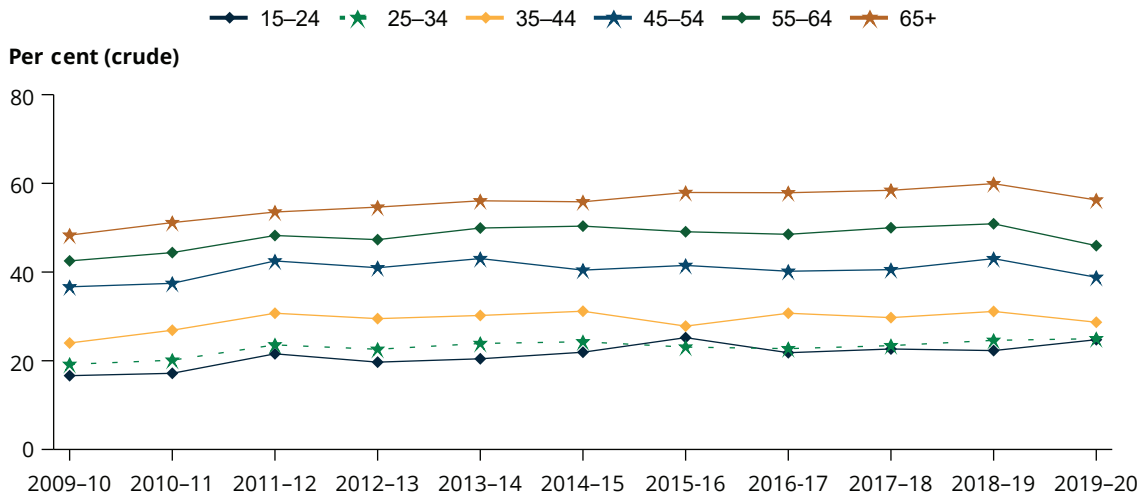
Eye screening for people with diabetes

Current guidelines recommend an annual eye examination for Indigenous Australians with diabetes.

In 2019–20, about 13,400 Indigenous Australians were screened for diabetic eye health—or 42% of those who had a diabetes test within the previous 2 years.

The proportion of Indigenous Australians who had a diabetes test who were screened increased with age, rising from over 20% of 15–24 year olds to over 55% of those aged 65 and over.

Proportion of Indigenous Australians who had a diabetes test who had an eye examination, by age group, 2009–10 to 2019–20



Source: AIHW analysis of MBS data.

Did you know?

Most people who have had diabetes for 20 years or more have diabetic retinopathy to some extent (Liu & Feener 2013). Diabetic retinopathy is caused by damage to blood vessels. Treatment and close control of blood sugar levels can help mitigate symptoms, but in severe cases surgery is necessary.

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 contact lenses and glasses.

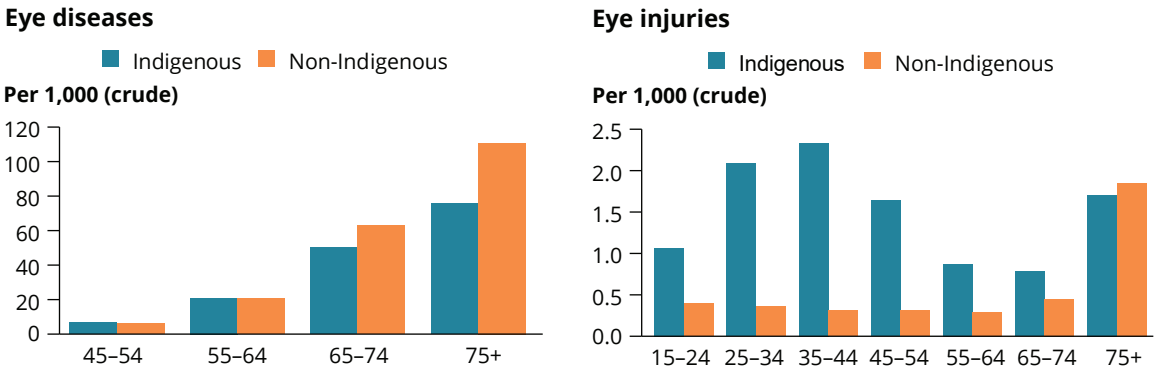
This section includes data on hospitalisations for eye diseases and injuries, and for cataract surgery and the treatment of diabetic retinopathy. Information on subsidised glasses comes from state or territory government data.

Hospitalisations for diseases and injuries of the eye

In the 2-year period 2017–19, there were around 9,700 (5.8 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, 2017–19



Source: AIHW analysis of NHMD.

Between 2011–12 and 2018–19, the age-standardised hospitalisation rate for diseases of the eye for Indigenous Australians increased from 8.3 to 12.2 per 1,000, while the rate for non-Indigenous Australians increased from 13.2 to 14.8 per 1,000.

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

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

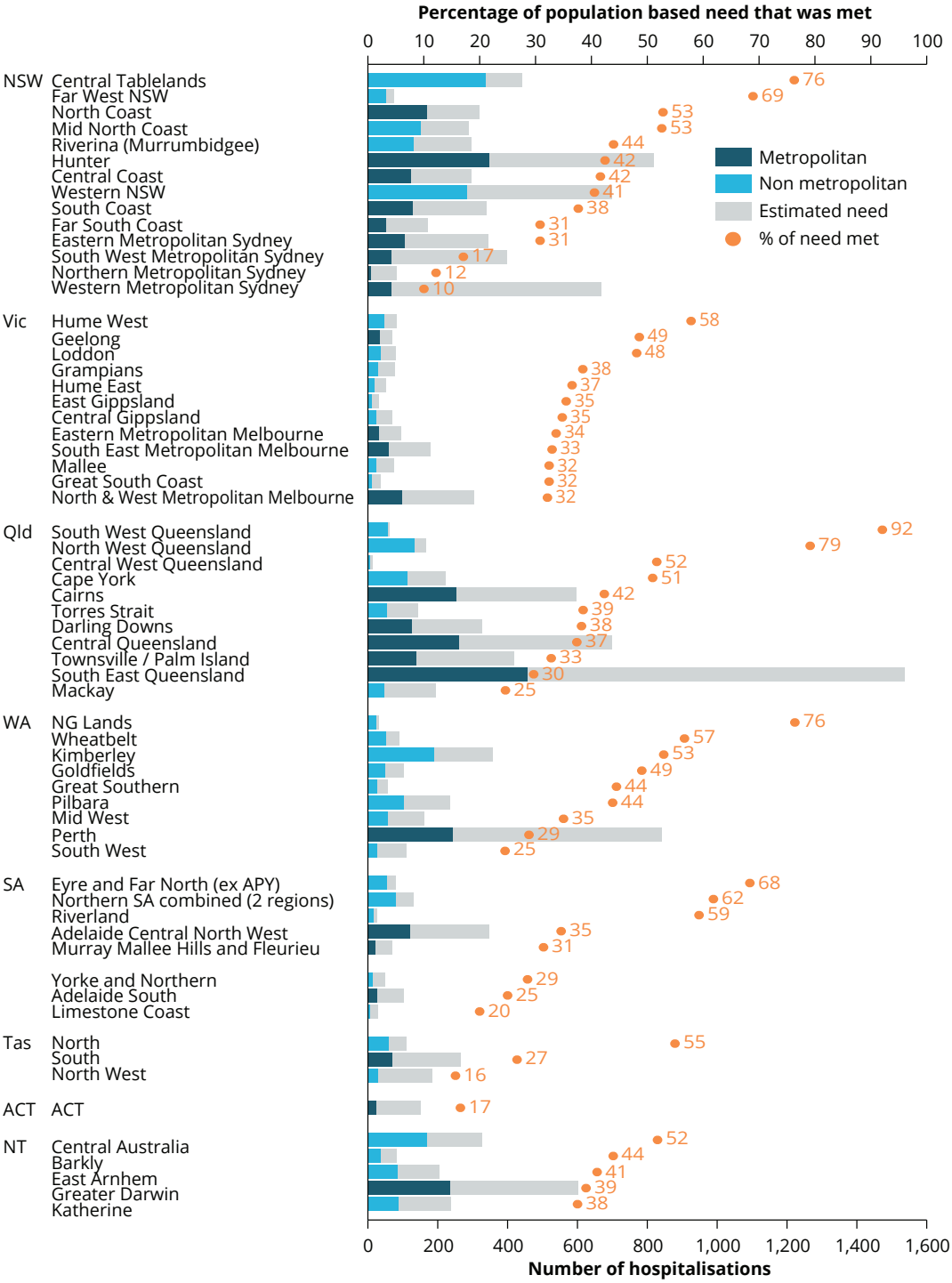
In 2017–19, there were around 6,100 hospitalisations for Indigenous Australians for cataract surgery. The number of hospitalisations over the 2-year period was below the estimated annual number of Indigenous people needing cataract surgery (over 14,000).

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

Did you know?

The Royal Australian and New Zealand College of Ophthalmologists released a report in 2013 that identified several barriers to Indigenous access to cataract surgery, and provided some suggested solutions. For further details, see Boudville et al. 2013.

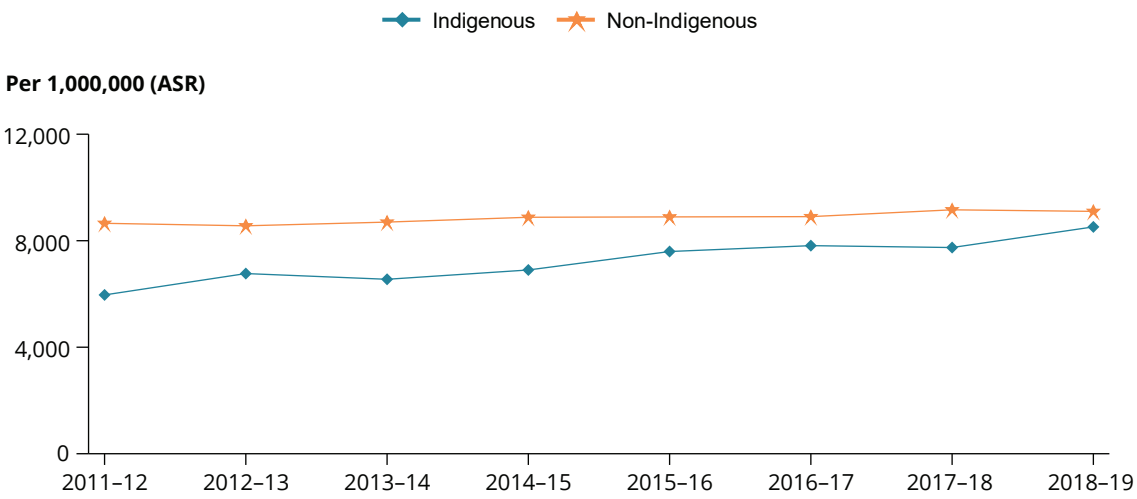
Number of hospitalisations and estimated population-based need for cataract surgery for Indigenous Australians, by Roadmap region, 2017–19



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

Age-standardised cataract surgery rates for Indigenous Australians rose over the last 10 years at a faster rate than for non-Indigenous Australians, so there was a narrowing of the gap in rates.

Trends in cataract surgery rates, by Indigenous status, 2011–12 to 2018–19



Source: AIHW analysis of NHMD.

Between 2011–12 and 2018–19, the hospitalisation rate for Indigenous Australians for cataract surgery remained relatively constant for those aged 45 to 64, but increased for those aged 65 to 74 and 75 and over.

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

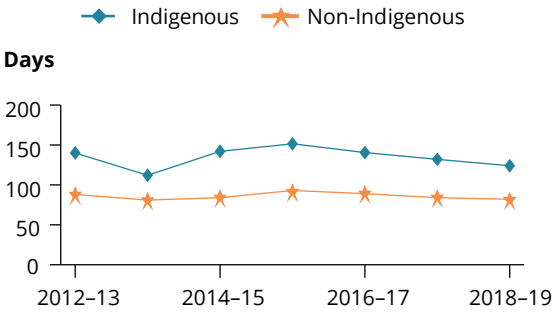
In 2018–19, Indigenous Australians waited longer for cataract surgery (a median number of 124 days) than non-Indigenous Australians (82 days).

The proportion of Indigenous Australians who waited more than 365 days for cataract surgery (2.6%) was slightly higher than the proportion of non-Indigenous Australians who waited this long (2.4%).

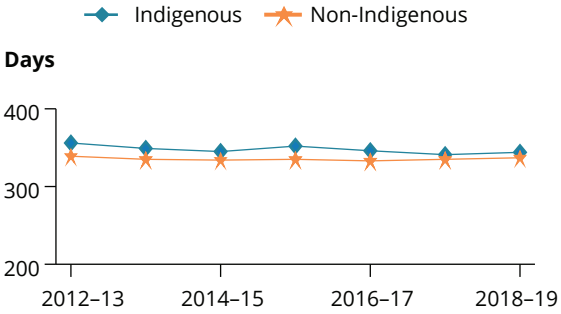
Between 2012–13 and 2018–19, the proportion of both Indigenous and non-Indigenous Australians who were treated within 90 days for elective cataract surgery remained relatively stable. The proportion of Indigenous and non-Indigenous Australians treated within 365 days was also relatively stable over this period.

Waiting times for elective cataract surgery

Time trend, days waited at the 50th percentile, 2012–13 to 2018–19



Time trend, days waited at the 90th percentile, 2012–13 to 2018–19



Source: AIHW analysis of NHMD.

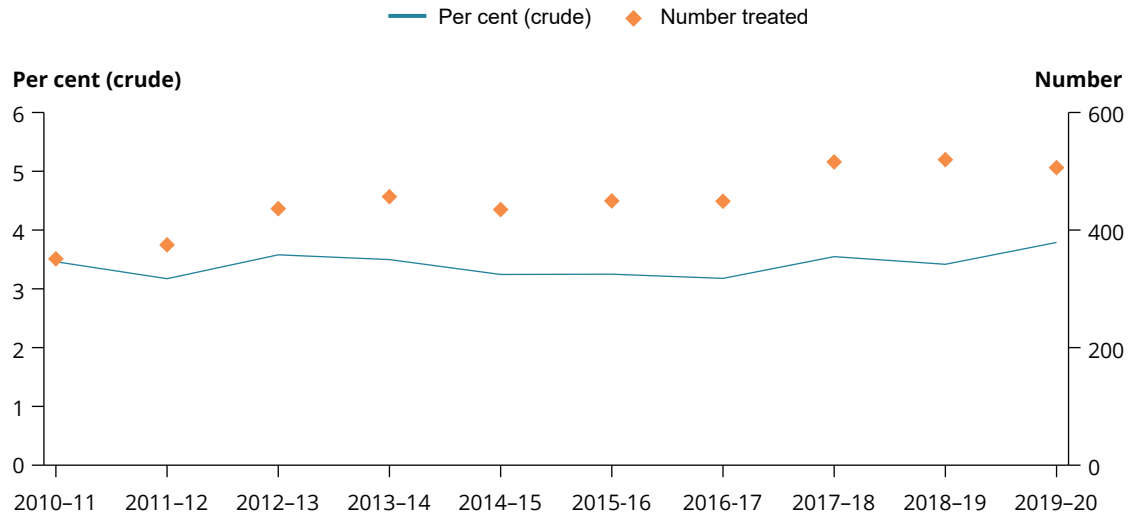
Treatment for diabetic retinopathy

In 2019–20, there were 506 Indigenous Australians, screened for diabetic retinopathy, who 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.

Trends in population treated for diabetic retinopathy as a proportion of those screened for diabetic retinopathy for 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.

Subsidised spectacles

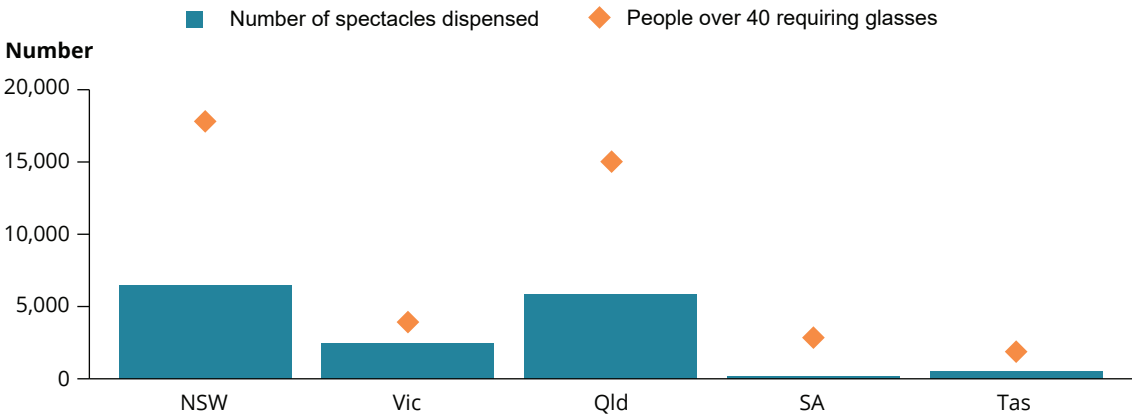
All states and territories have schemes that provide eye care and visual aids, including glasses, to eligible people at low or no cost. Only 5 states, however, could provide data on the number of spectacles dispensed to Indigenous Australians.

In 2019–20, the number of spectacles dispensed to Indigenous Australians under state schemes was:

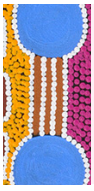
- 6,443 in New South Wales (23 per 1,000)
- 5,832 in Queensland (25 per 1,000)
- 2,490 in Victoria (41 per 1,000)
- 153 in South Australia (3 per 1,000)
- 518 in Tasmania (17 per 1,000).

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 63% having their needs met.

Number of spectacles dispensed to Indigenous Australians and estimated need, by jurisdiction, 2019–20



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.

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 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.

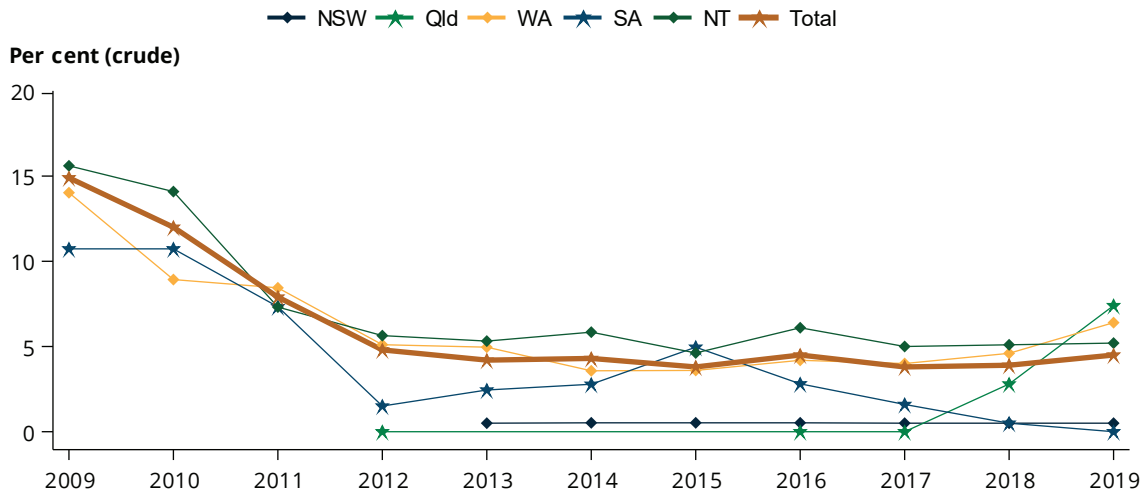
The Australian Government funds trachoma control, surveillance and reporting. National data on trachoma comes from the Australian Trachoma Surveillance Reports from the Kirby Institute.

How common is trachoma?

In 2019, trachoma screening and treatment was undertaken among children aged 5–9 in 111 at-risk communities across Queensland, Western Australia, South Australia and the Northern Territory.

Overall trachoma prevalence among 5–9 year olds fell from 15% in 2009 to 4.5% in 2019.

Trends in overall trachoma prevalence among Indigenous 5–9 year olds in at-risk communities, 2009 to 2019



Source: AIHW analysis of Australian Trachoma Surveillance report 2019 (Kirby Institute 2019)

Trachoma screening and treatment

In 2019, 3,154 Indigenous children aged 5–9 were screened for trachoma in 111 communities. There was 92% screening coverage for this group, above the recommended 85% for trachoma control.

Nearly all (98%, or 111/113) of the communities that required screening and/or treatment received the required services. All children found to have active trachoma received treatment.

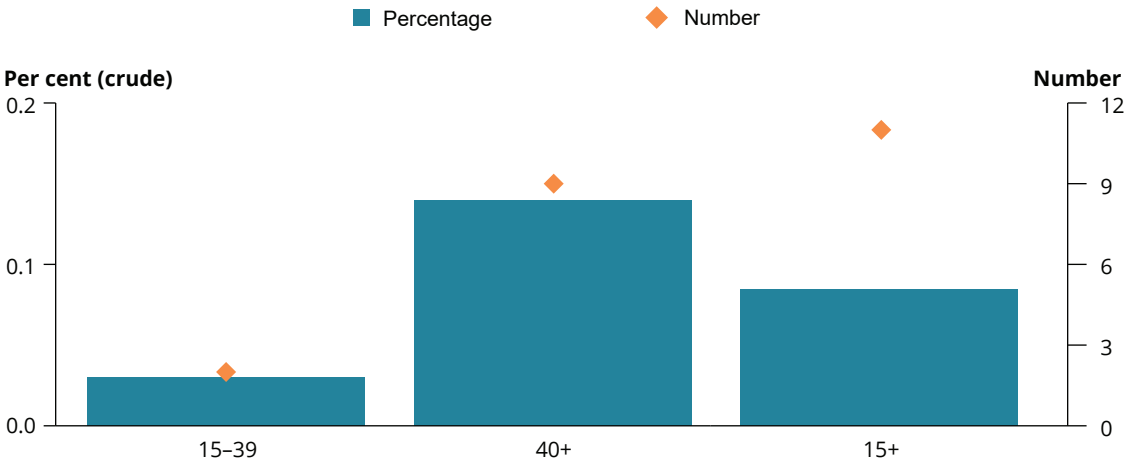
Trachoma-related trichiasis

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

In 2019, screening data were reported for 127 at-risk communities in 4 jurisdictions (Queensland, Western Australia, South Australia and the Northern Territory):

- Just under 7,000 Indigenous adults aged 15–39, and over 6,000 Indigenous adults aged 40 and over, were screened for trichiasis.
- 11 cases of trichiasis were identified—2 among those aged 15–39 and 9 among those aged 40 and over.

Prevalence of trichiasis in at-risk Indigenous communities, by age group, 2019



Source: AIHW analysis of Australian Trachoma Surveillance report 2019 (Kirby Institute 2019).

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 rate (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

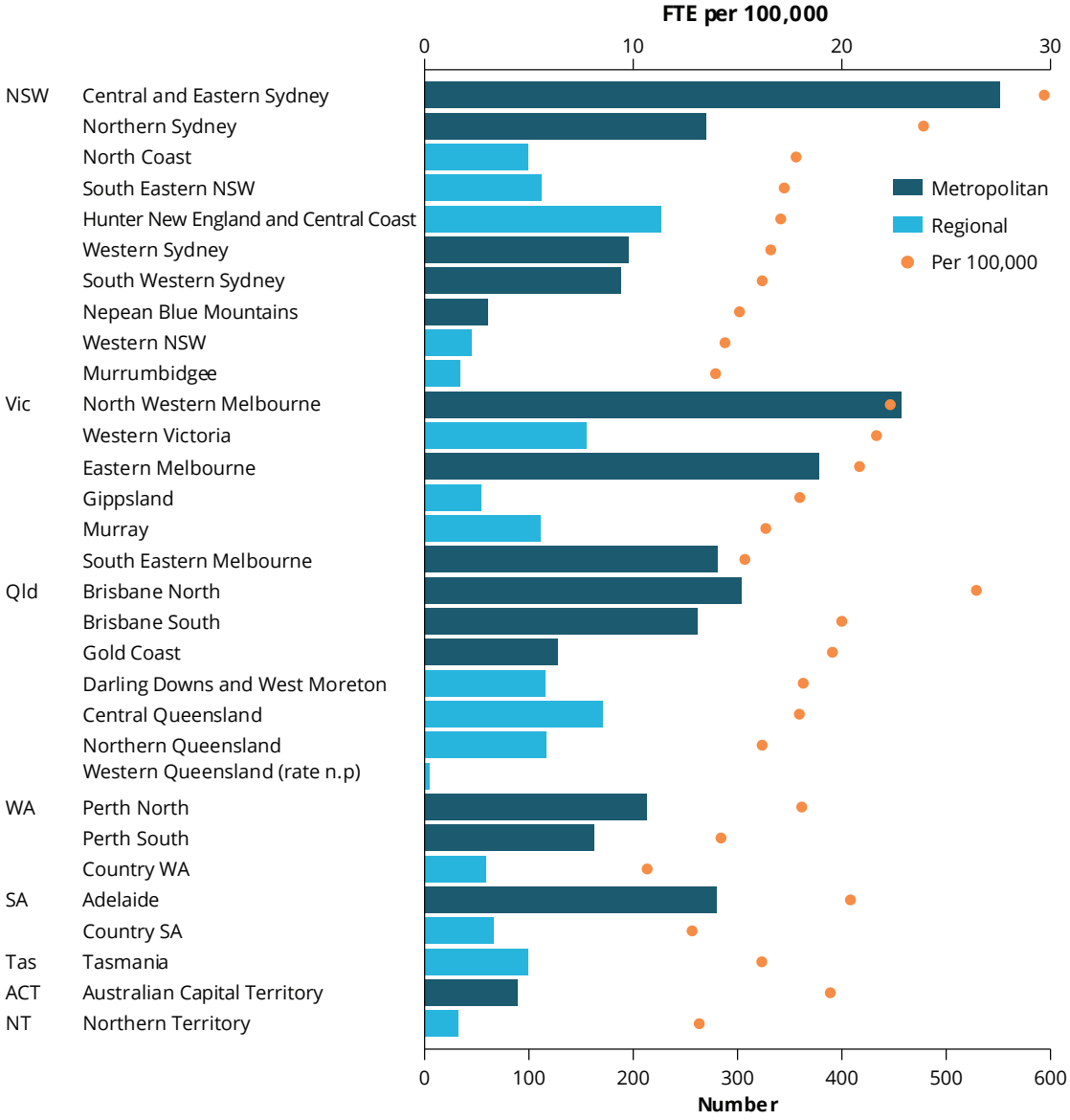
In 2019, around 5,330 optometrists were employed in Australia (19 FTE per 100,000), an increase of 1,296 since 2011.

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.

Did you know?

In 2019 there were only 32 registered optometrists in the Northern Territory and fewer than 10 ophthalmologists.

Number and rate of optometrists, by PHN, 2019



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

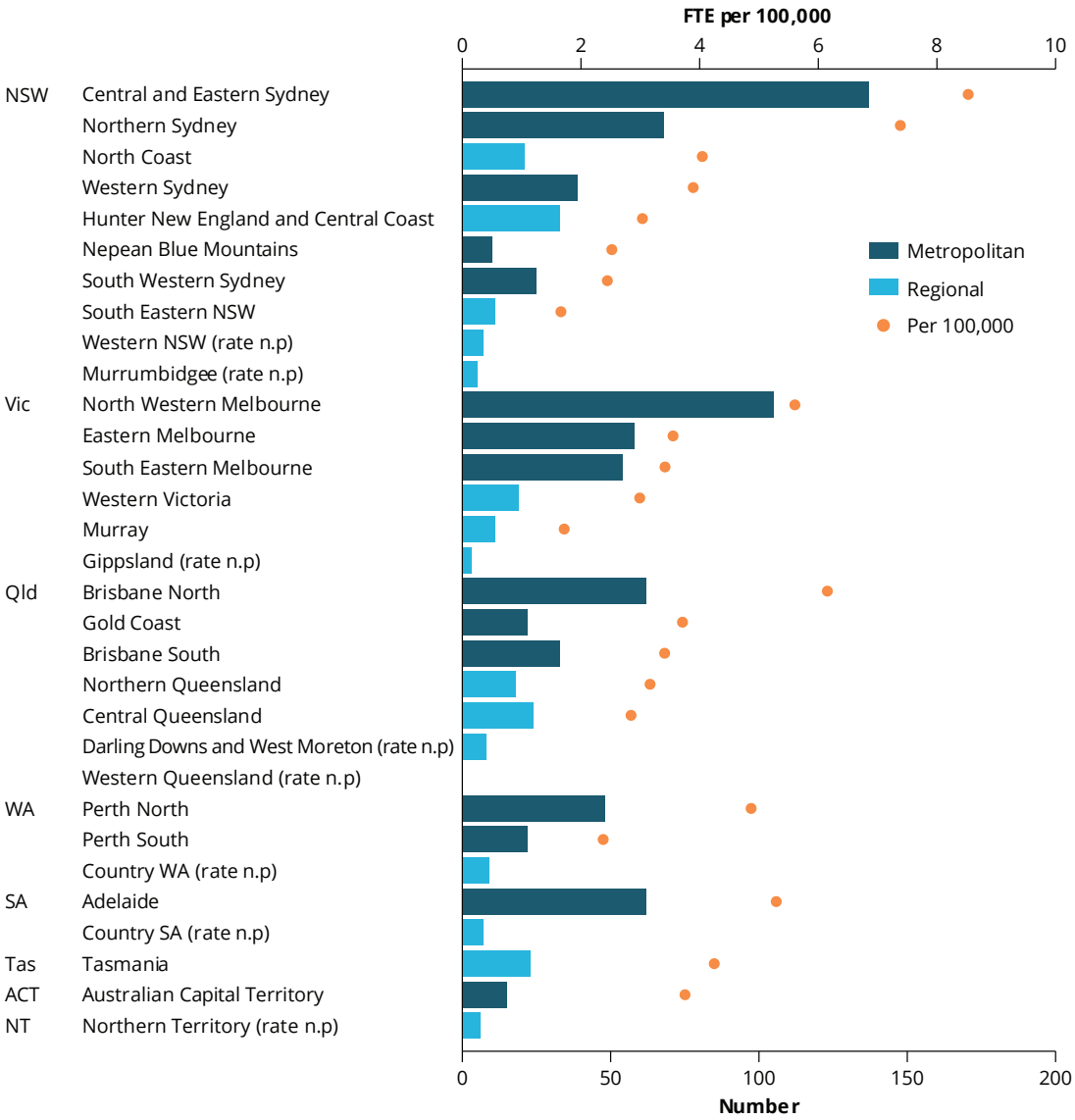
Source: AIHW analysis of National Health Workforce Dataset.

Ophthalmologists

The ophthalmologist workforce is smaller than the optometrist workforce with 965 ophthalmologists employed in Australia (4.0 FTE per 100,000) in 2019.

Ophthalmologists were primarily located in metropolitan areas, with the highest rates in the Central and Eastern Sydney PHN (137 and 8.5 per 100,000).

Number and rate of ophthalmologists, by PHN, 2019



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.

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.

Services provided

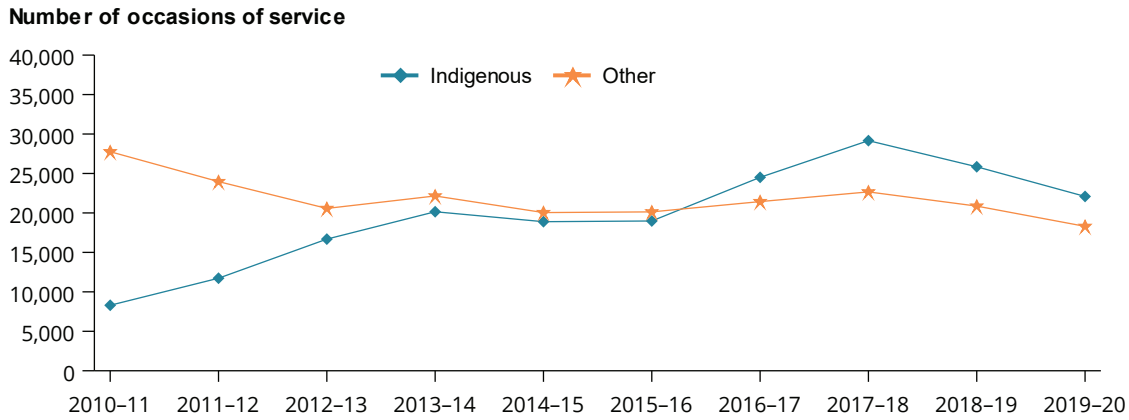
In 2019–20, the number of occasions of service for outreach programs delivered to Indigenous patients was:

- 22,089 provided through the Visiting Optometrist Scheme (VOS)
- 5,910 provided under the Rural Health Outreach Fund (RHOF)
- 4,819 provided under the Medical Outreach Indigenous Chronic Disease Program (MOICDP).

VOS occasions of service for Indigenous patients nearly tripled between 2010–11 and 2019–20, rising from 8,298 to 22,089.

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

Trends in VOS occasions of services, by Indigenous status, 2010–11 to 2019–20

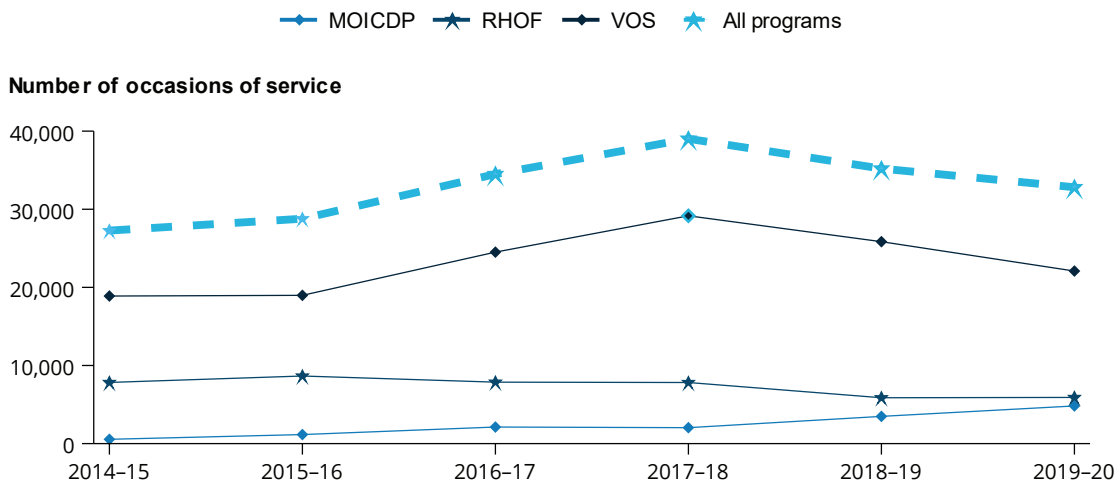


Source: AIHW analysis of Department of Health data (unpublished).

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.

Trends in outreach programs occasions of services, 2014–15 to 2019–20



Source: AIHW analysis of Department of Health data (unpublished).

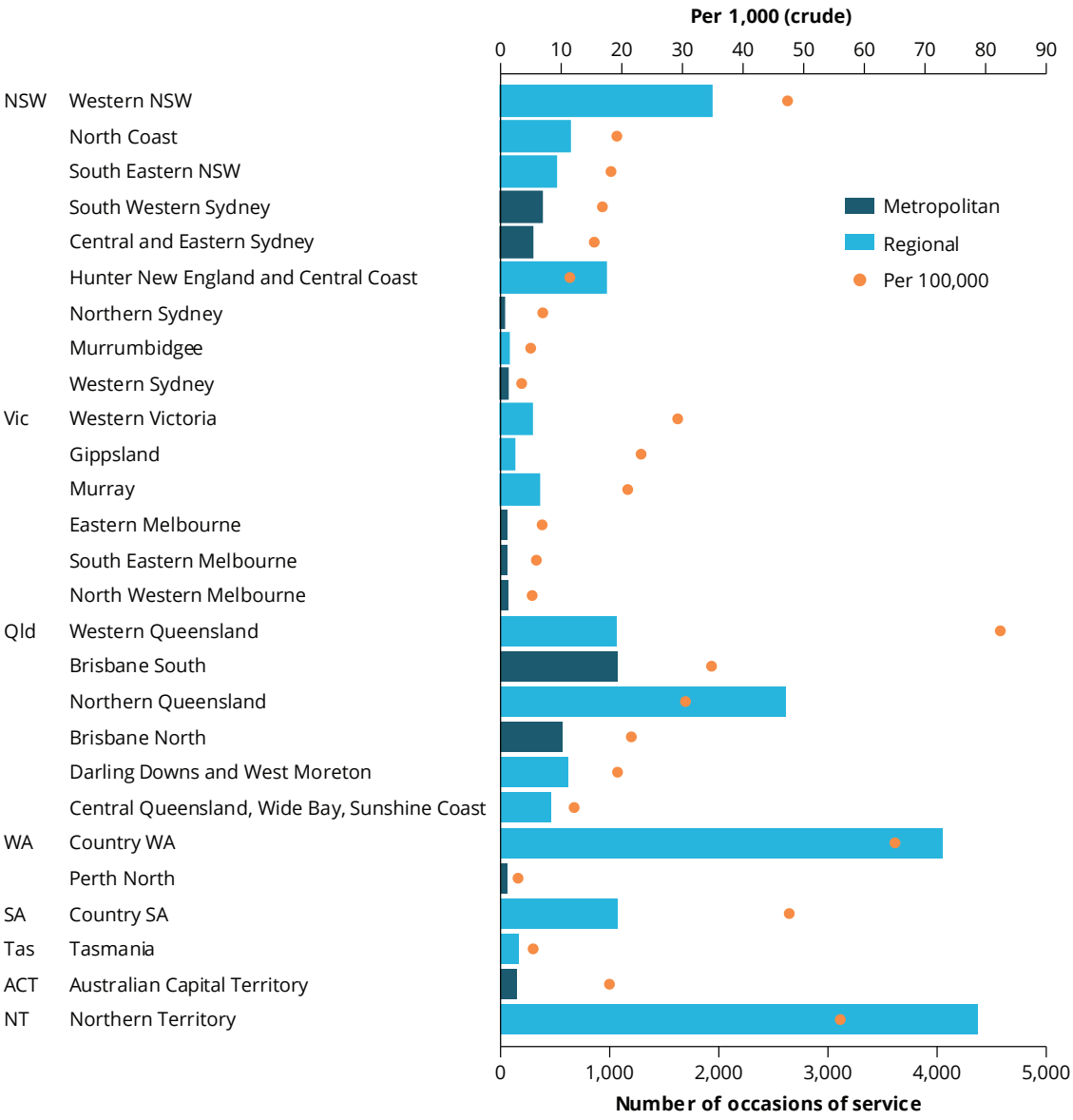
In 2019–20, a total of 664 occasions of service for Indigenous patients were provided by eye health professionals under the Eye and Ear Surgical Support Services (EESS) program.

Where are outreach services provided?

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

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

VOS occasions of service, by PHN, 2019–20



Source: AIHW analysis of Department of Health data (unpublished).

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This in-brief provides an overview of the latest Indigenous eye health data. Eye diseases and vision problems are the most common long-term health conditions reported by Aboriginal and Torres Strait Islander Australians. Prevalence of trachoma among Indigenous children aged 5–9 has plateaued at 4.5% in 2019.

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