Australian Government

Australian Institute of Health and Welfare

AIHW

Eye health measures for Aboriginal and Torres Strait Islander people 2023

in-brief

Eye health measures for Aboriginal and Torres Strait Islander people 2023

in-brief

The AIHW is an independent statutory Australian Government agency producing authoritative and accessible information and statistics to inform and support better policy and service delivery decisions, leading to better health and wellbeing for all Australians.

A complete list of the Institute's publications is available from the Institute's website www.aihw.gov.au.

ISBN 978-1-923085-16-40 (Online)

ISBN 978-1-923085-16-41 (Print)

DOI 10.25816/v439-1g09

Suggested citation

Australian Institute of Health and Welfare (2023) *Eye health measures for Aboriginal and Torres Strait Islander people 2022: in brief*, catalogue number IHW 283, AIHW, Australian Government.

Any enquiries about or comments on this publication should be directed to:
Australian Institute of Health and Welfare
GPO Box 570
Canberra ACT 2601
Tel: (02) 6244 1000
Email: info@aihw.gov.au

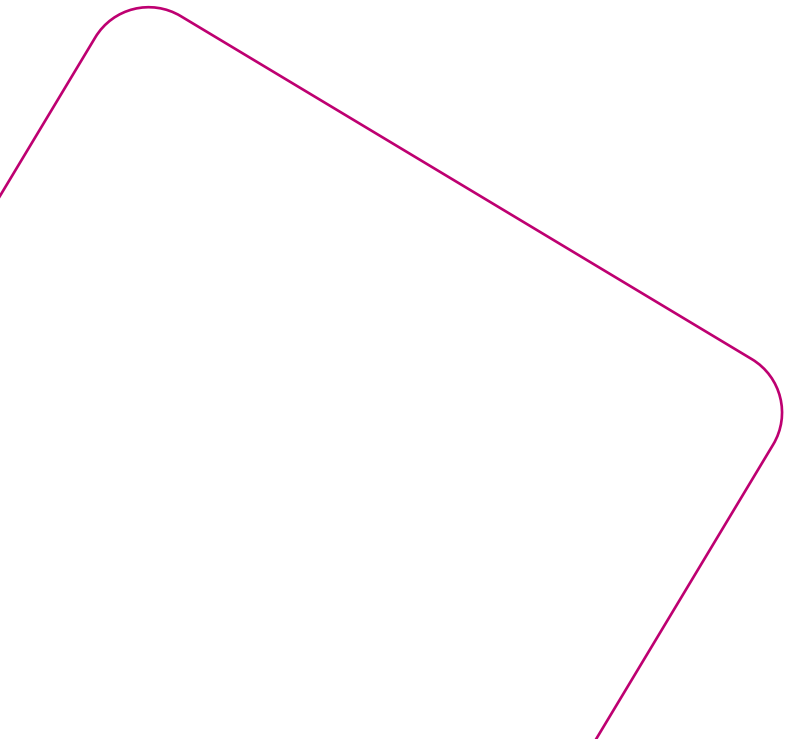
Published by the Australian Institute of Health and Welfare.

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.

Contents



Introduction

This in-brief summarises the findings from the *Eye health measures for Aboriginal and Torres Strait Islander people 2023* report and the accompanying web report.

These reports bring together the latest available data on the 22 eye health measures for Aboriginal and Torres Strait Islander (First Nations) people with ongoing data collections (see the following table, *'Eye health measures for Aboriginal and Torres Strait Islander people'*). The data for these measures provides information on:

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

During the reporting years, there have been notable improvements in the areas of:

- trachoma and trichiasis prevalence and screening in at-risk First Nations communities
- the percentage of community members treated in communities where active trachoma was identified
- annual health assessments for First Nations people and health assessments for First Nations people with an initial eye examination
- eye examinations by an eye health professional
- rates of screening for diabetic retinopathy
- hospitalisations for cataract surgery
- the number and full-time equivalent (FTE) rates of optometrists
- occasions of service provided under the Visiting Optometrists Scheme.

Waiting times for elective cataract surgery appear to have worsened as waiting times have increased.

The full report, web report and online tables are available at https://www.aihw.gov.au/reports/indigenous-australians/indigenous-eye-health-measures-2023.

Population rates

Three types of population rates are 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 First Nations people and non-Indigenous Australians, applied to a standard population to produce a summary rate.

Crude rates are used to show differences within a population, such as the First Nations population. These rates can be misleading, however, when comparing populations with different age structures, such as First Nations people and non-Indigenous Australians. It is important to take these differences into account, 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 rates provide information on 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.

Statistics presented in this release use the Australian Bureau of Statistics 2016 Census based projection of the Aboriginal and Torres Strait Islander population. Until the release of 2021 Census-based population estimates and projections in mid-2024, these 2016 statistics are the latest available official figures for the First Nations population.

Eye health measures for Aboriginal and Torres Strait Islander people

Measures
Prevalence
1.1 Prevalence of vision impairment and blindness
1.2 Main causes of vision impairment and blindness
1.3 Prevalence of trachoma and trichiasis
Diagnosis and screening services
2.1 Annual health assessments
2.2 Eye examinations undertaken by an eye care professional
2.3 Target population screened for diabetic retinopathy
2.4 Trachoma and trichiasis screening coverage
2.5 Undiagnosed eye conditions
2.6 Eye health problems managed by GPs (discontinued)
Treatment services
3.1 Hospitalisations for diseases of the eye
3.2 Hospitalisations for injuries to the eye
3.3 Hospitalisations for eye procedures
3.4 Cataract surgery rate
3.5 Cataract surgical coverage rate
3.6 Waiting times for elective cataract surgery
3.7 Target population treated for diabetic retinopathy
3.8 Trachoma and trichiasis treatment coverage
3.9 Treatment of refractive error
3.10 Spectacles dispensed under state schemes
Workforce and outreach services
4.1 Number and rate of optometrists
4.2 Number and rate of ophthalmologists
4.3 Number and rate of allied ophthalmic personnel
4.4 Occasions of eye health services provided under outreach and other programs

1

How do eye health problems affect First Nations people?

Eye diseases and vision problems are the most common long-term health conditions reported by First Nations people with around one-third reporting long-term eye conditions. First Nations children have a lower incidence of poor vision than non-Indigenous Australian children, but First Nations 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.

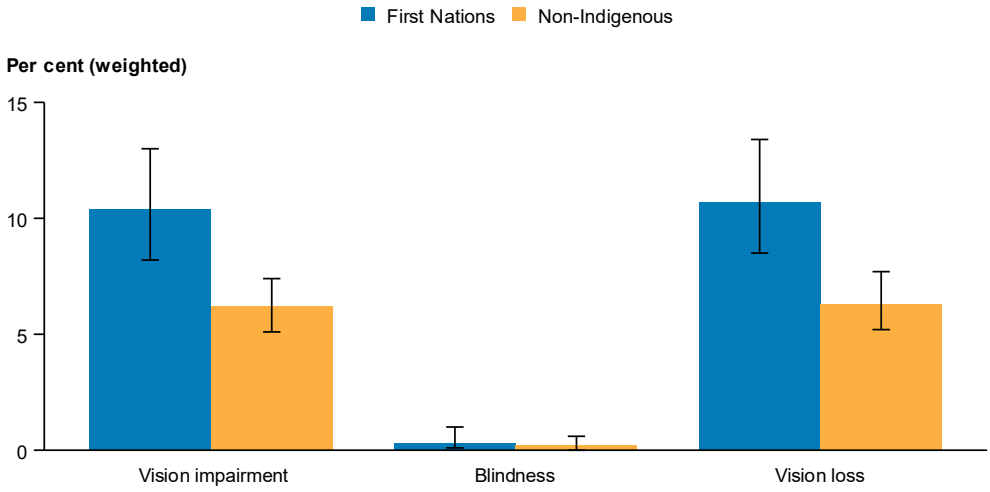
The 2016 National Eye Health Survey is the main source of data on the prevalence of eye health problems among First Nations people. The survey used eye examinations to assess vision loss and blindness. The key results from this survey are presented in this section.

How common is vision impairment and blindness?

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

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

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



Note: Data are weighted to account for sampling rate in each remoteness stratum.
Sources: Foreman et al. 2017; National Eye Health Survey data 2016; Taylor et al. 2010.

The 3 main causes of vision loss (vision impairment and blindness combined) for First Nations people aged 40 and over in 2016 were:

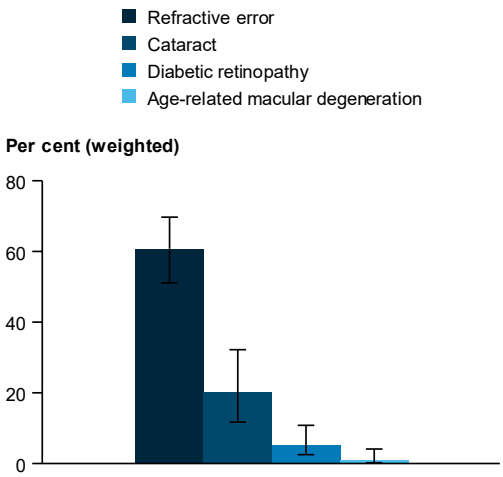
- refractive error (61%)
- cataract (20%)
- diabetic retinopathy (5.2%).

For non-Indigenous Australians, the main causes were:

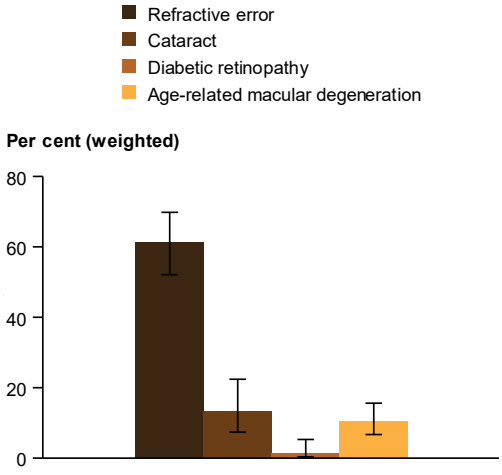
- refractive error (61%)
- cataract (13%)
- age-related macular degeneration (10%).

Main causes of vision loss, by Indigenous status, 2016

a) First Nations people, by main cause



b) Non-Indigenous Australians, by main cause



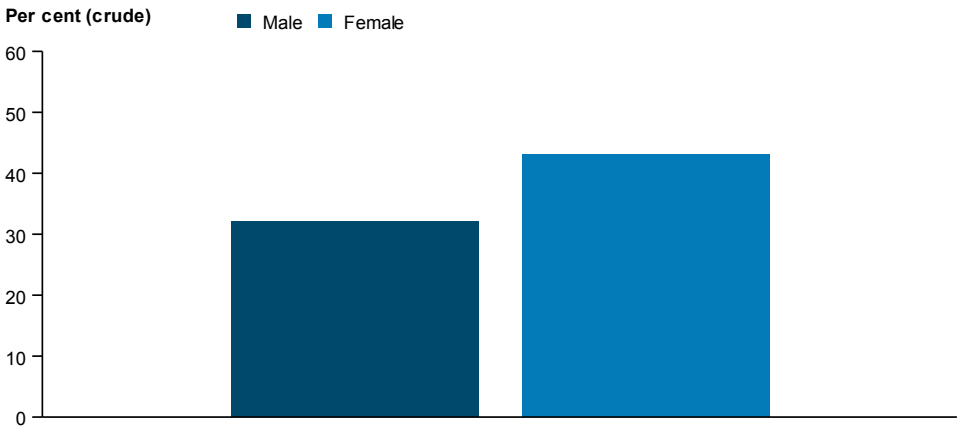
Note: Data are weighted to account for sampling rate in each remoteness stratum.

Sources: AIHW analysis of Foreman et al. 2017 data; National Eye Health Survey data 2016.

Self-reported eye or sight problems

In 2018–19, nearly 4 in 10 First Nations 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 First Nations females than First Nations males.

Proportion of First Nations people with self-reported eye/sight problems, by sex, 2018–19

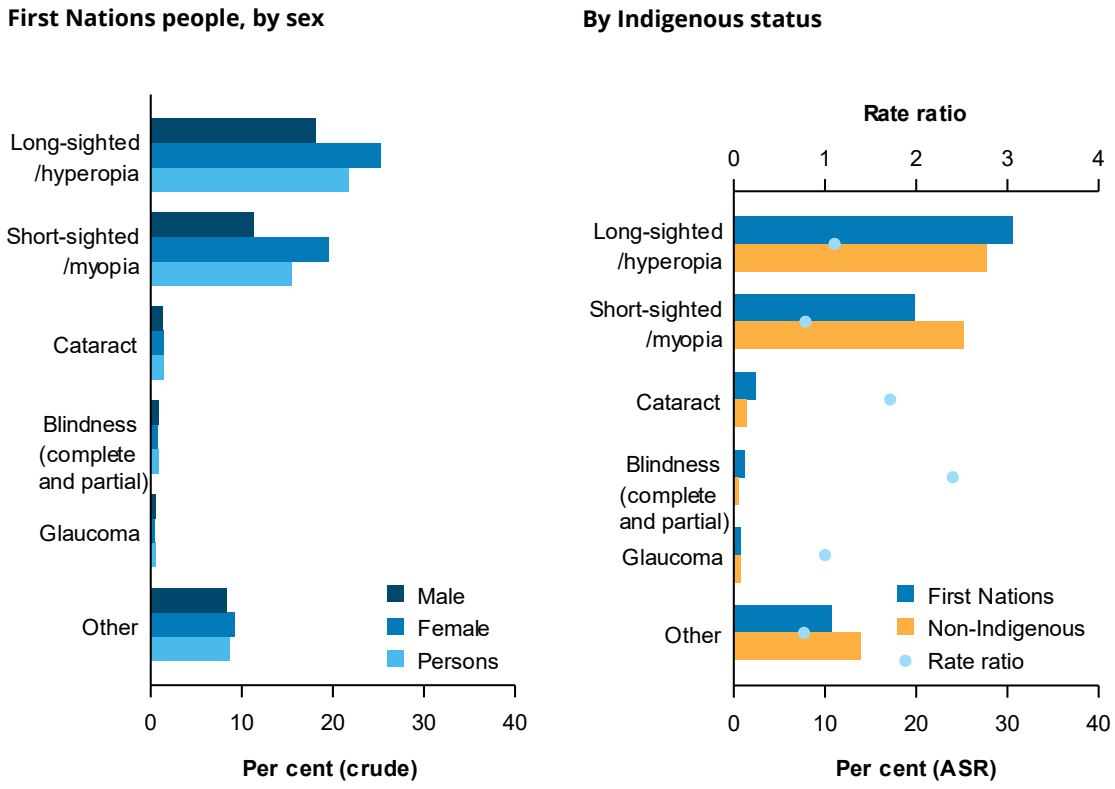


Source: AIHW analysis of ABS 2018–19 NATSIHS

The main causes of sight problems reported by First Nations people were long-sightedness (22%), short-sightedness (16%), and cataract (1.4%).

Adjusting for age, First Nations people were more likely than non-Indigenous Australians to report blindness (2.4 times 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

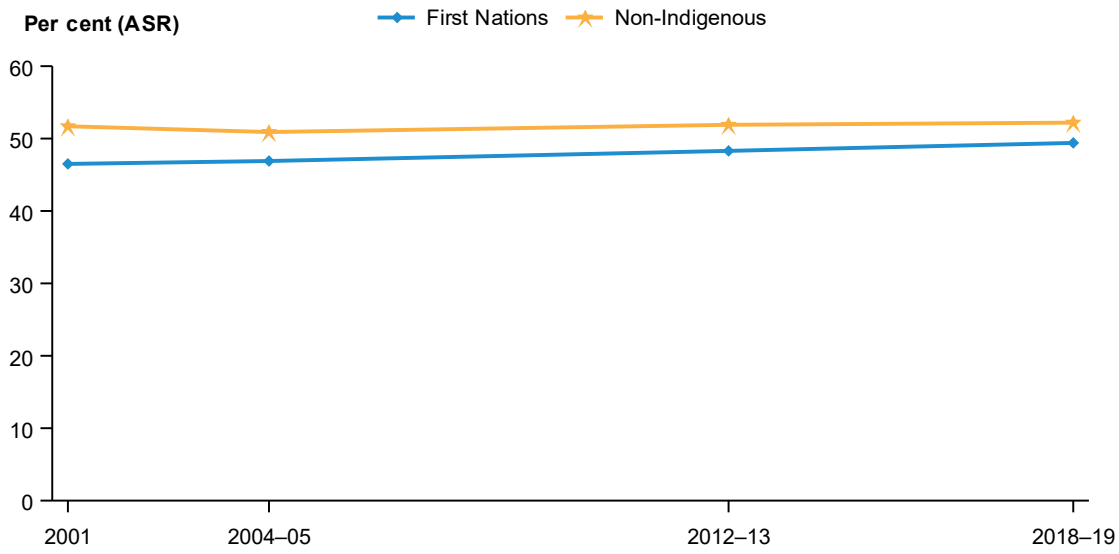


Note: The estimate for glaucoma for First Nations males, females and persons and the estimate for blindness for First Nations females have a relative standard error between 25% and 50% and should be used with caution. Multiple responses are allowed for these questions, so proportions may add to more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

Source: AIHW analysis of ABS 2018–19 NATSIHS and 2017-18 National Health Survey

Between 2001 and 2018–19, the age-standardised proportion of First Nations people who had an eye or sight problem increased from 47% to 49% while remaining stable for non-Indigenous Australians at around 52%.

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



ASR = age-standardised rate.

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, eye examinations provided by eye care specialists (optometrists and ophthalmologists), and on screening for diabetic retinopathy.

MBS items related to health assessments for First Nations people

Health assessments relate to MBS items 715 and 228 for health checks undertaken in the community, including health assessments provided via videoconference or teleconference (MBS items 92004, 92011, 92016, 92023).

Note that the MBS items 92016 and 92023 were removed from the MBS as of 1 July 2021.

Voluntary Indigenous Identifier (VII)

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 (ABS 2011, 2012). 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 (Department of Health and Ageing 2012).

Before the current edition of this report the scale-up factors were calculated by the DoHAC. For this report they have been calculated by the AIHW; however, the estimates obtained are consistent with those produced by the DoHAC. The VII scale-up factors were applied to estimate MBS service use for the following measure and sub-measures:

- Eye examinations undertaken by an eye care professional
- Eye examinations among those treated for diabetes
- Treated for diabetic retinopathy among those screened for diabetic retinopathy
- Treated for diabetic retinopathy among those tested for diabetes.

Health assessments for First Nations people

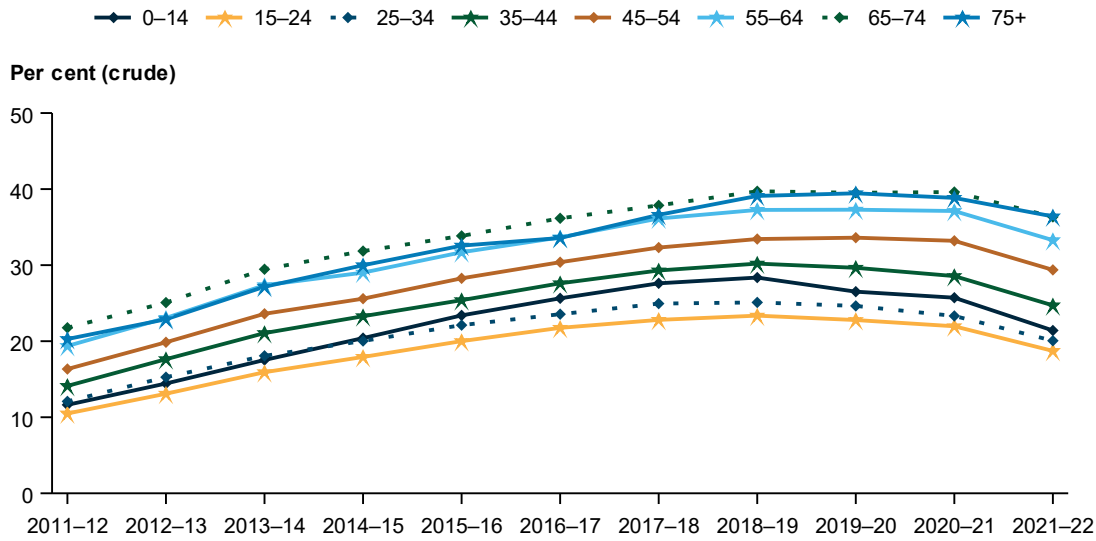
Eye health checks are a mandatory component of health assessments for First Nations people undertaken by general practitioners. While eye health checks are required as part of health assessments, they are not always conducted and specific data on the provision of eye health checks as part of health assessments are not available.

Just under one-quarter (24% or 208,620) of First Nations people had a health assessment in 2021–22. This included about 4,000 (about 2%) health assessments provided via videoconference or teleconference.

Between 2011–12 and 2021–22, the age-standardised proportion of First Nations people who had a health assessment (including a telehealth assessment) grew from 15% in 2011–12 to 30% in 2018–19, before falling slightly over the next 3 years to 25% in 2021–22.

The proportion of First Nations people who had a health assessment was highest in age groups 65 and over and lowest in the age group 15 to 24.

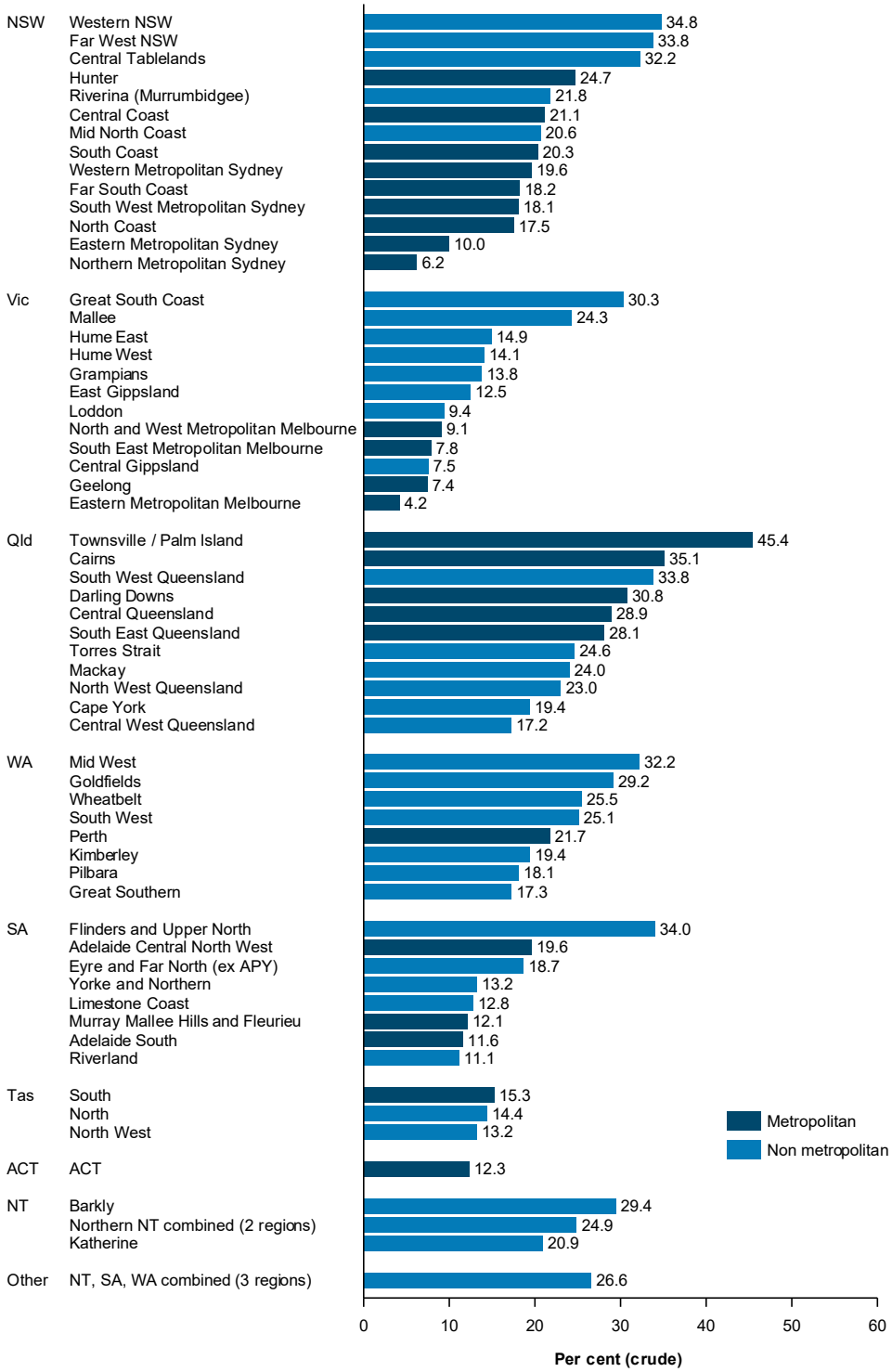
MBS health assessments, First Nations people, by age group, 2011–12 to 2021–22



Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

The proportion of the First Nations population who had a health assessment varied across Australia – in 2021–22, the Roadmap region with the highest proportion was Townsville/Palm Island (45%).

MBS health assessments, First Nations people, by Roadmap region, 2021–22



Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

Health assessments for First Nations people and initial eye examination by an optometrist

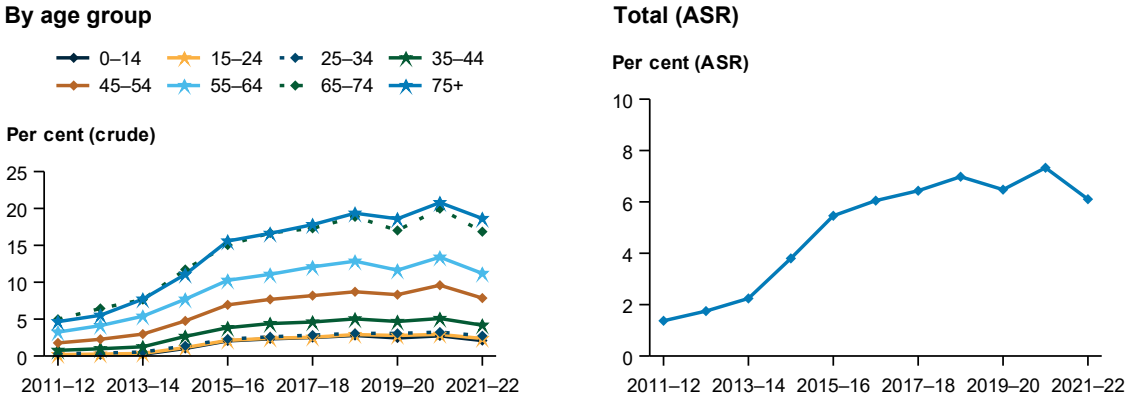
To provide a rough indication of eye health follow-up services, this sub-measure presents the number of First Nations people who have a health assessment and an initial eye examination in a 12-month period. The sub-measure includes cases where the initial eye examination arises out of the health assessment and also includes cases where it is independent of the health assessment.

Just under 1 in 20 (4.5% or 40,204) First Nations people had a health assessment and an initial eye examination by an optometrist in 2021–22.

Between 2011–12 and 2021–22, the age-standardised proportion of First Nations people who had a health assessment (including a telehealth assessment) and an initial eye examination by an optometrist increased from around 1% in 2011–12 to around 7% from 2018–19 to 2020–21, before declining slightly to 6.1% in 2021–22.

The proportion of First Nations people who had a health assessment and an initial eye examination by an optometrist was highest in age groups 75 and over. The Roadmap regions with the highest proportions of First Nations people who had a health assessment and an initial examination by an optometrist were *Western NSW* (7.4%) and *South West Queensland* (7.3%).

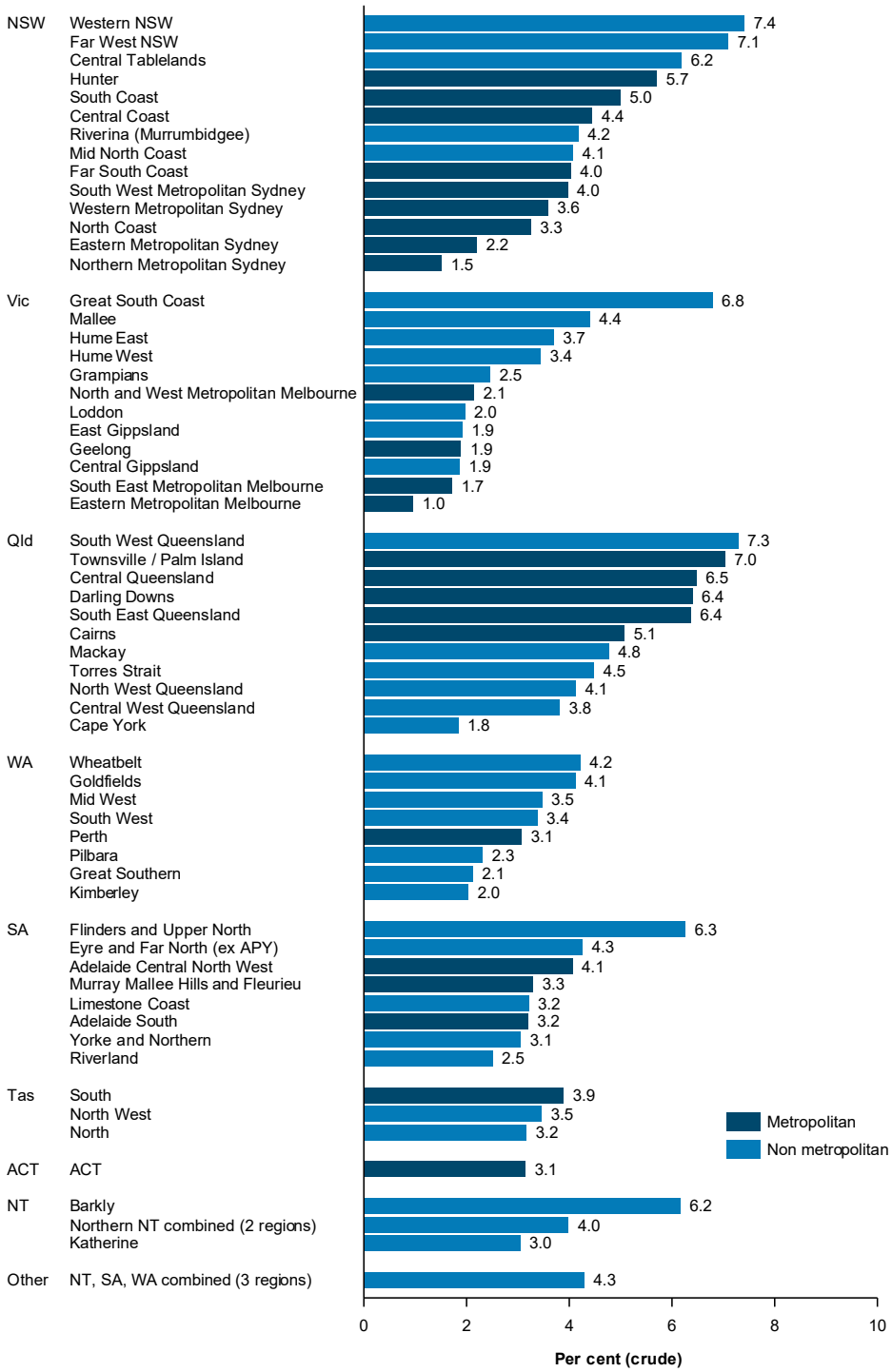
MBS health assessments and initial eye examinations, First Nations people, 2011–12 to 2021–22



ASR = age standardised rate.

Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

MBS health assessments with initial eye examination, First Nations people, by Roadmap region, 2021–22



Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

Eye examinations

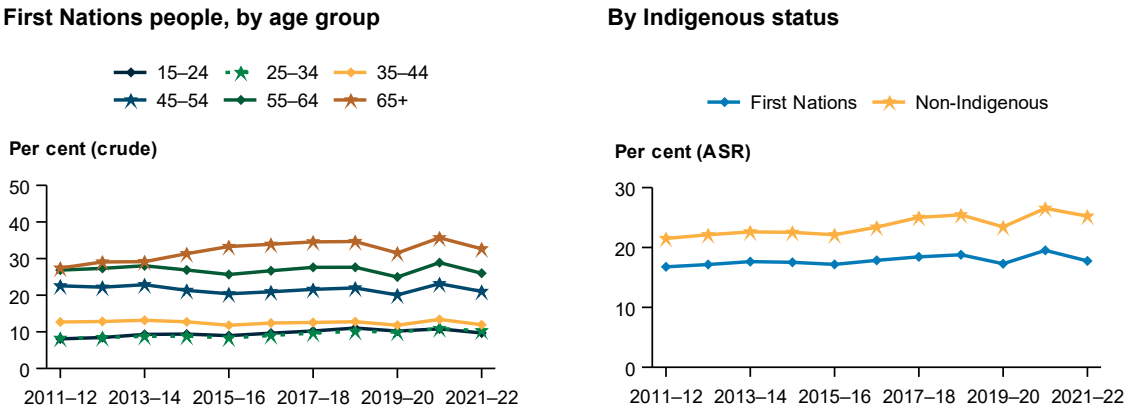
In 2021–22, around 114,100 (13%) First Nations people had an initial eye examination by an optometrist or ophthalmologist in the previous 12 months.

The proportion of First Nations people who had an initial eye examination increased with age from around 10% of those aged 15–24 to around 33% of those aged 65 and over.

In the period from 2011–12 to 2021–22, the age-standardised proportion of the First Nations population who had an eye examination increased from 17% to 18%.

Over the same period, the age-standardised proportion for non-Indigenous Australians increased from 22% to 25%, indicating a widening of the gap.

Eye examinations, by Indigenous status, 2011–12 to 2021–22



ASR = age standardised rate.

Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

Eye examinations among target population

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

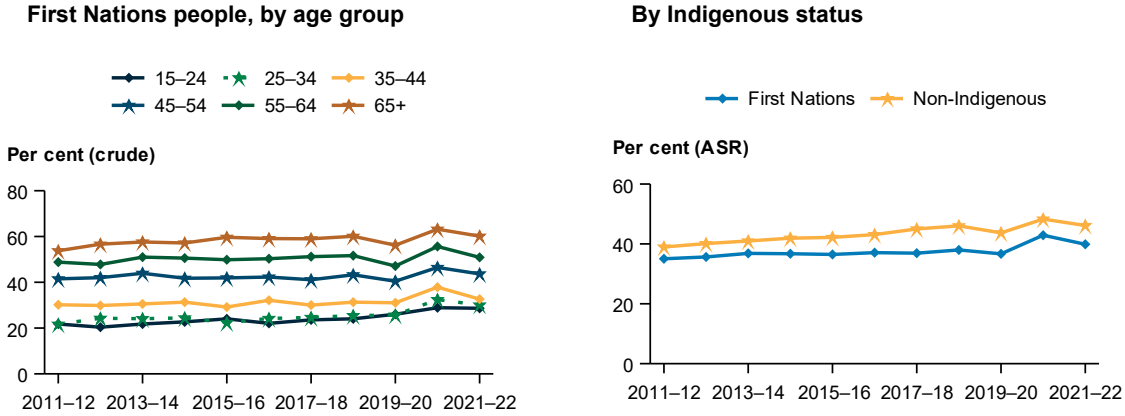
The rate of eye examinations among those tested for diabetes was analysed to determine if people with diabetes were accessing retinopathy screening. First Nations people who had a diabetes test may not have been found to have diabetes, however, so this proxy measure may be an underestimate.

In 2021–22, among those who had a diabetes test in the previous 2 years nearly 47% or around 13,600 First Nations people also had an eye examination.

The proportion of First Nations people who had a diabetes test who also had an eye examination increased with age–from over 29% of those aged 15–24 to over 60% of those aged 65 and over.

Between 2011–12 and 2021–22, the total age-standardised proportion of First Nations people tested for diabetes who had an eye examination increased from 35% to 40%; for non-Indigenous Australians it rose from 39% to 46%.

Population who had an eye examination among those tested for diabetes, 2011–12 to 2021–22



ASR = age standardised rate.

Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

Did you know?

In 2016, an 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. The prevalence of diabetic retinopathy is 77.3% in type 1 diabetes patients and 25.1% in type 2 diabetes patients (Shukla and 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
- tools to support countries in achieving the WHO's global eye health targets (including, recommended national eye care indicators and planning tools for budgeting and human resources).

Hospitalisations for diseases and injuries of the eye

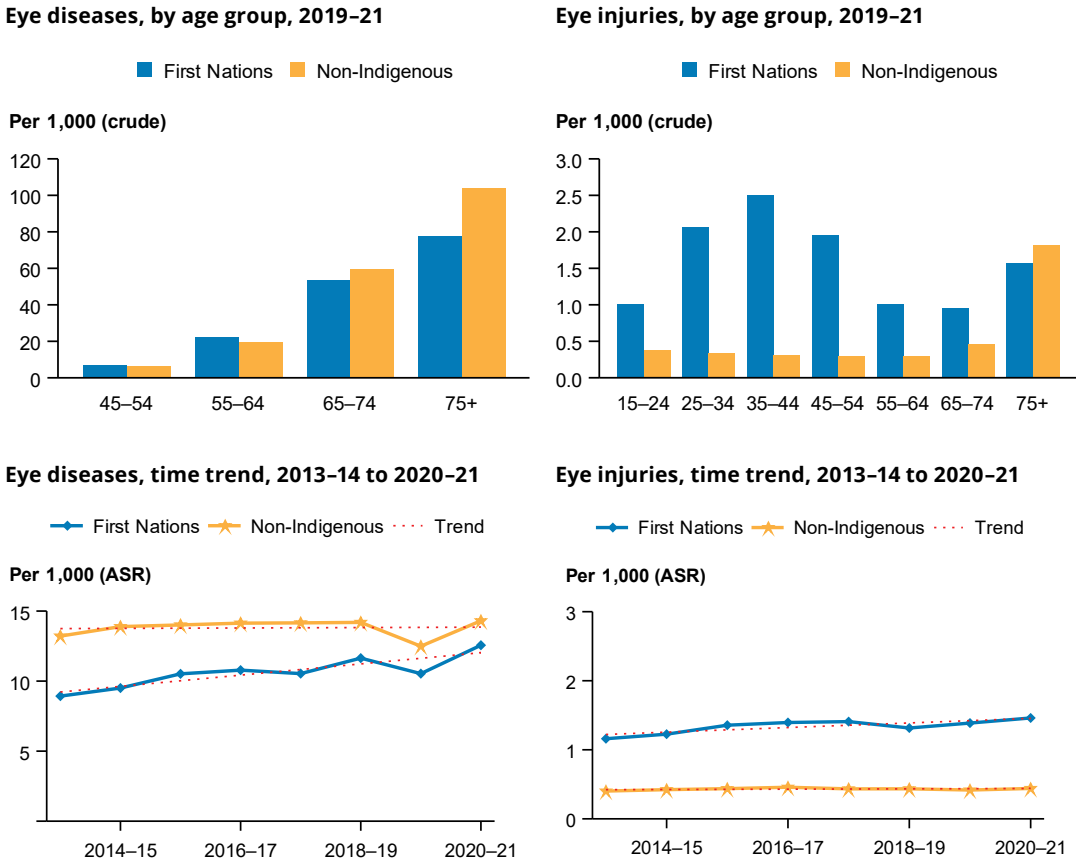
In the 2-year period 2019–21, there were around 11,000 (6.4 per 1,000 population) hospitalisations of First Nations people for eye diseases and 2,100 (1.2 per 1,000) for eye injuries.

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

Between 2013–14 and 2020–21, the age-standardised hospitalisation rate for diseases of the eye for First Nations people rose from 8.9 to 12.6 per 1,000, and from 13.2 to 14.3 for non-Indigenous Australians.

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

Hospitalisations for diseases of the eye and injuries to the eye



ASR = age standardised rate.

Source: AIHW analysis of National Hospital Morbidity Database.

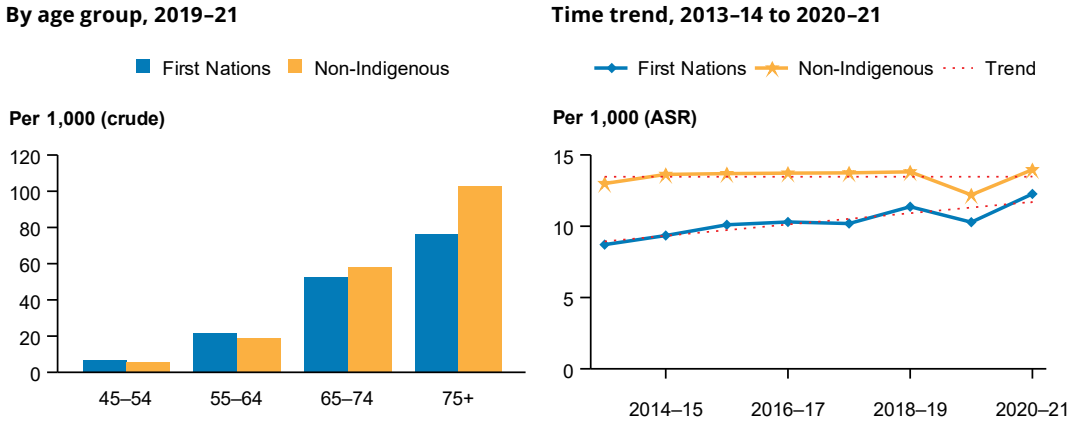
Hospitalisations for eye procedures

In the 2-year period 2019–21, there were 10,768 hospitalisations of First Nations people for eye procedures – a crude rate of 6.2 per 1,000 population.

The rate of hospitalisations for eye procedures for First Nations people and non-Indigenous Australians increased with age, peaking at age 75 and over.

Between 2013–14 and 2020–21, the age-standardised hospitalisation rate for eye procedures for First Nations people rose from 8.7 to 12.3 per 1,000, and from 13.0 to 14.0 for non-Indigenous Australians. The trend line shows there has been a slight rise in the age-standardised hospitalisation rate for First Nations people over this time.

Hospitalisations for eye procedures, by Indigenous status



ASR = age standardised rate.

Source: AIHW analysis of National Hospital Morbidity Database.

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 2019–21, there were around 6,700 hospitalisations for First Nations people for cataract surgery. The number of hospitalisations over the 2-year period was below the estimated number of First Nations people needing cataract surgery (over 15,000).

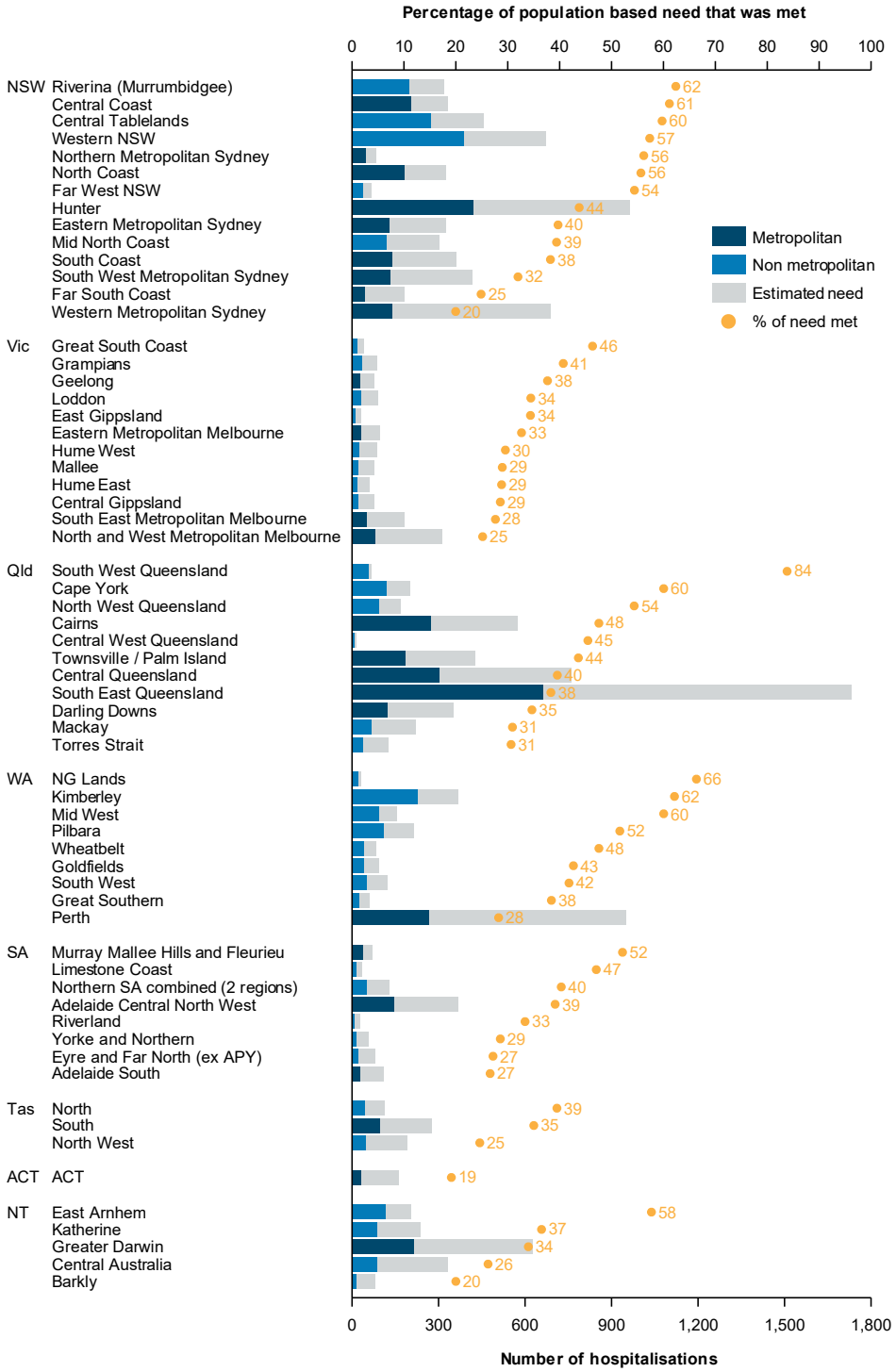
Hospitalisation rates for cataract surgery for First Nations people were higher in regional Roadmap regions than in metropolitan areas.

Did you know?

It is estimated that the Australian public hospital system provides around 29% of cataract surgeries for non-Indigenous Australians (ACSQHC 2017) and 80% of cataract surgeries for First Nations people (Randall et al. 2014). Hence, delays or interruptions to the public health service provision disproportionately affect First Nations people with cataracts.

A likely contributing factor to this is the lower proportion of Indigenous adults having private health insurance (estimated at 20% compared with 57% of all Australian adults living in non-remote areas in 2012–13) (AIHW 2015).

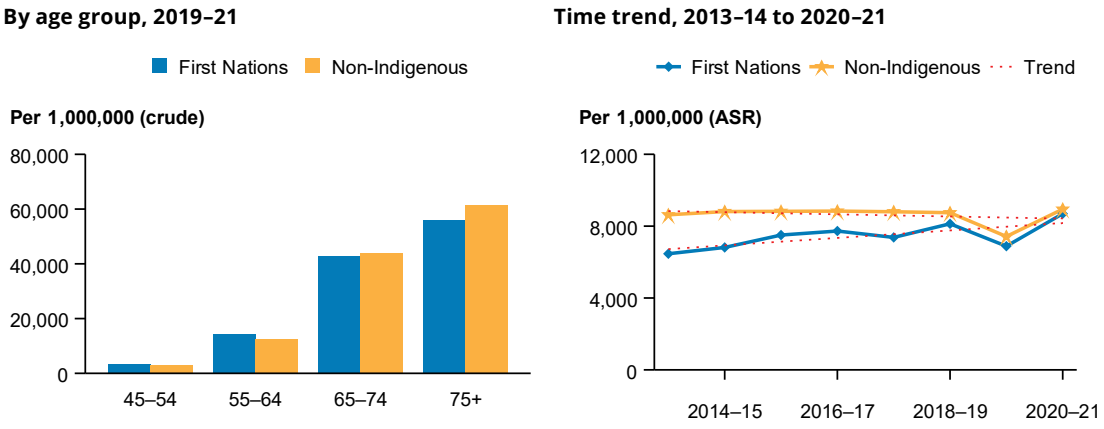
Hospitalisations and estimated need for cataract surgery, First Nations people, by Roadmap region, 2019–21



Source: AIHW analysis of National Hospital Morbidity Database and AIHW analysis of calculator for the delivery and coordination of eye care services (Indigenous Eye Health Unit).

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

Cataract surgery, by Indigenous status



ASR = age standardised rate.

Source: AIHW analysis of National Hospital Morbidity Database

Between 2013–14 and 2018–19, the hospitalisation rate for First Nations people for cataract surgery generally increased for all age groups over time, before declining for all age groups between 2018–19 and 2019–20 and then rising again in 2020–21.

The rate for non-Indigenous Australians remained relatively constant across all age groups over 45; it declined between 2018–19 and 2019–20 before increasing in 2020–21.

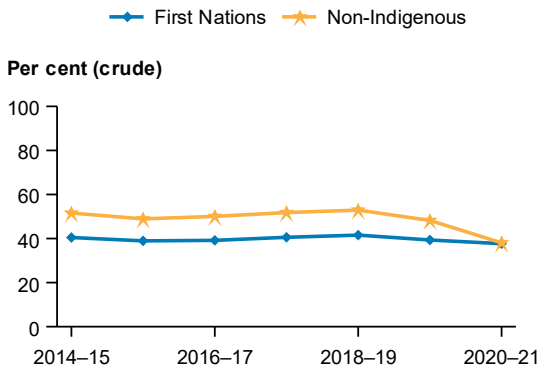
In 2020–21, First Nations people waited as long for cataract surgery (a median number of 167 days) as did non-Indigenous Australians (167 days).

The proportion of First Nations people who waited more than 365 days for cataract surgery (16%) was slightly higher than the proportion of non-Indigenous Australians who waited this long (14.6%).

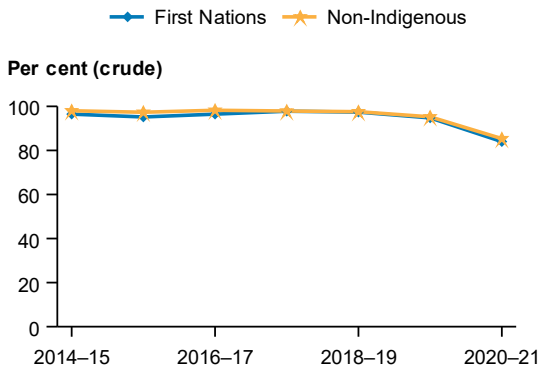
Between 2014–15 and 2020–21, the proportion of First Nations people who were treated within 90 days for elective cataract surgery remained relatively stable. The proportion of non-Indigenous Australians dropped over this period (from 52% to 38%). The proportion of First Nations people and non-Indigenous Australians treated within 365 days dropped over this period (from 97% to 84% and from 98% to 85%, respectively).

Waiting times for elective cataract surgery

Time trend, treated within 90 days, 2014–15 to 2020–21



Time trend, treated within 365 days, 2014–15 to 2020–21



Source: AIHW analysis of National Hospital Morbidity Database

Treatment for diabetic retinopathy

Treated for diabetic retinopathy among those screened for diabetic retinopathy

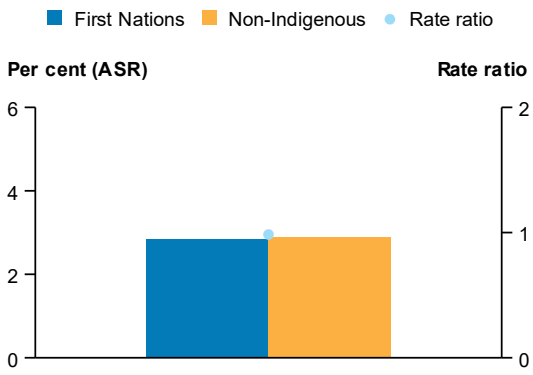
In 2021–22, 510 First Nations people who were screened for diabetic retinopathy underwent treatment (representing 3.8% of those screened for diabetic retinopathy).

The rate ratio of the age-standardised proportion of First Nations people and non-Indigenous Australians who were treated was 1.

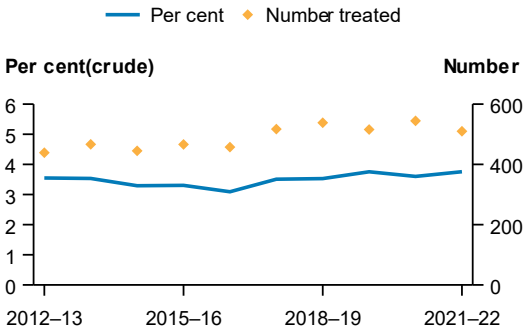
Between 2012–13 and 2021–22, the number of First Nations people who were screened for diabetic retinopathy and who underwent treatment increased from 439 in 2012–13 to 510 in 2021–22.

Population treated for diabetic retinopathy among those screened for diabetic retinopathy

By Indigenous status, 2021–22



First Nations people, 2012–13 to 2021–22



ASR = age standardised rate.

Source: AIHW analysis of Medical Benefits Schedule (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 optimising 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).

Treated for diabetic retinopathy among those tested for diabetes

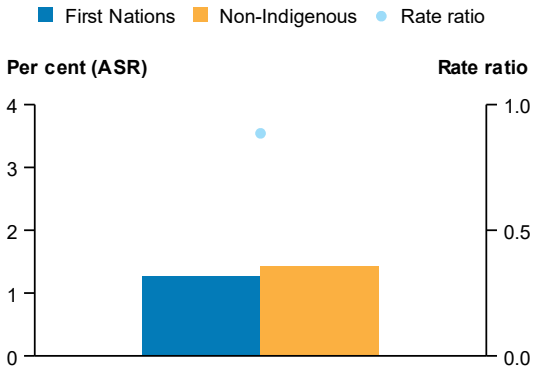
In 2021–22, 510 First Nations people who were tested for diabetes underwent treatment for diabetic retinopathy (representing 1.8% of those screened for diabetes).

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

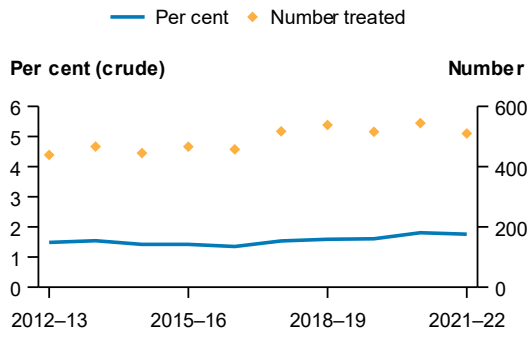
Between 2012–13 and 2021–22, the crude per cent of First Nations people who were screened for diabetes and who underwent treatment for diabetic retinopathy increased from 1.5 (439 from 29,551) in 2012–13 to 1.8 (510 from 29,015) in 2021–22.

Population treated for diabetic retinopathy among those screened for diabetes

By Indigenous status, 2021–22



First Nations people, 2012–13 to 2021–22



ASR = age standardised rate.

Source: AIHW analysis of Medical Benefits Schedule (MBS) data.

Subsidised spectacles

All states and territories have schemes that provide 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 First Nations people.

In 2021–22, the number of spectacles dispensed to First Nations people under state schemes was:

- 6,198 in New South Wales (21 per 1,000)
- 7,299 in Queensland (30 per 1,000)
- 2,496 in Victoria (39 per 1,000)
- 1,058 in South Australia (23 per 1,000)
- 496 in Tasmania (16 per 1,000).

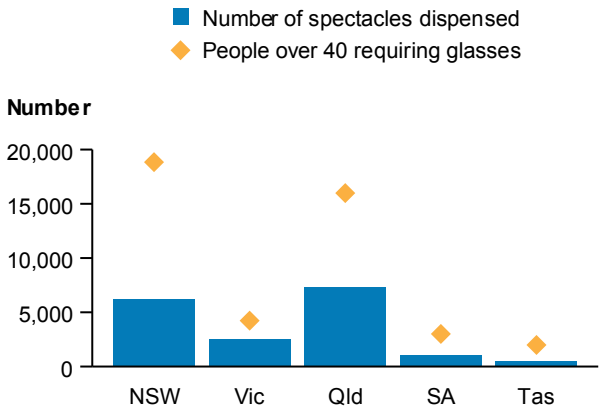
The number of spectacles dispensed in Victoria was closest to meeting the estimated number of First Nations people aged over 40 who needed them – with an estimated 59% having their needs met.

Did you know?

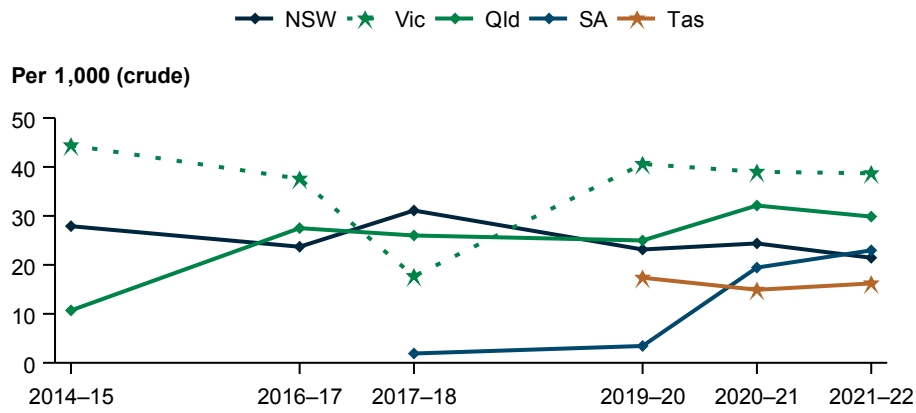
The provision of spectacles is a low-cost measure that can alleviate refractive error, the main cause of vision loss for First Nations people.

State spectacles schemes, First Nations people

Spectacles dispensed and estimated need by jurisdiction, 2021–22



Spectacles dispensed by jurisdiction, 2014–15 to 2021–22



Sources: AIHW analysis of New South Wales Department of Family and Community Services data (unpublished), Australian College of Optometry Victorian data (unpublished), Queensland Health data (unpublished), South Australia Department of Human Services (unpublished); Tasmanian Health Service data (unpublished); and calculator for the delivery and coordination of eye care services (Indigenous Eye Health Unit).

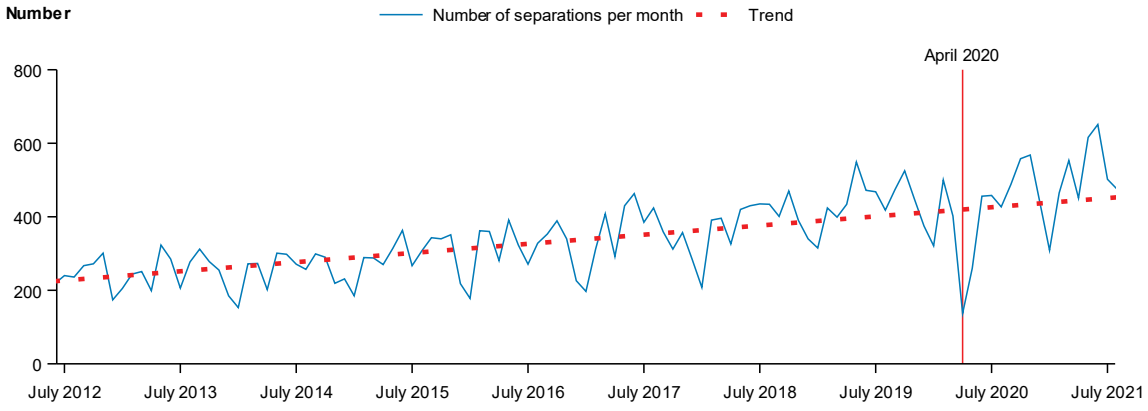
Impacts of COVID-19

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 restricted 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 annual health assessments for First Nations people fell across nearly all age groups. The uptake of telehealth increased. Telehealth accounted for more than 11,000 claims (4.7%) in 2020–21 compared with just under 9,000 claims (3.7%) in 2019–20. In 2021–22, claims for annual health assessments for First Nations people continued to fall; the age-standardised proportion of First Nations people who had a health assessment (including a telehealth assessment) fell 4 percentage points from 2020–21. The removal of 2 telehealth MBS items (92016, 92023) and the increase of COVID cases in early 2022 may have contributed to this fall.

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. An upward trend in hospitalisations in 2021 and evidence of a smaller dip in April than in 2020 suggest that hospitalisations have largely rebounded since the height of the pandemic.

Monthly number of First Nations hospital separations for eye procedures, July 2012 to July 2021



Source: AIHW analysis of National Hospital Morbidity Database.

4

Trachoma and trichiasis

Trachoma is an infectious disease of the eye that, left untreated, can result in scarring, in-turned eyelashes (trichiasis) and blindness. Active trachoma is highly infectious, easily spread and usually found in children. 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 First Nations communities in Western Australia, South Australia, and the Northern Territory.

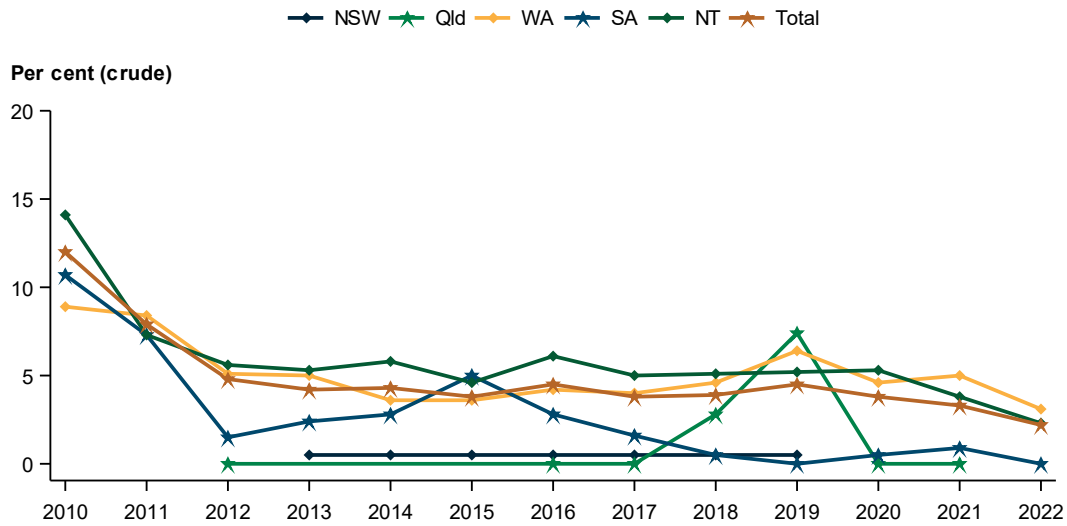
The Australian Government funds trachoma control, surveillance, and reporting. National data on trachoma comes from the Australian Trachoma Surveillance Reports from the Kirby Institute.

How common is trachoma?

In 2022, trachoma screening and/or treatment was undertaken among children aged 5–9 years in 76 at-risk communities across Western Australia, South Australia, and the Northern Territory.

Overall trachoma prevalence among children aged 5–9 years fell from 12% in 2010 to 2.2% in 2022.

Overall trachoma prevalence among First Nations children aged 5–9 years in at-risk communities, 2010 to 2022



Source: AIHW analysis of Australian Trachoma Surveillance report 2022 (Kirby Institute in press)

Trachoma screening and treatment

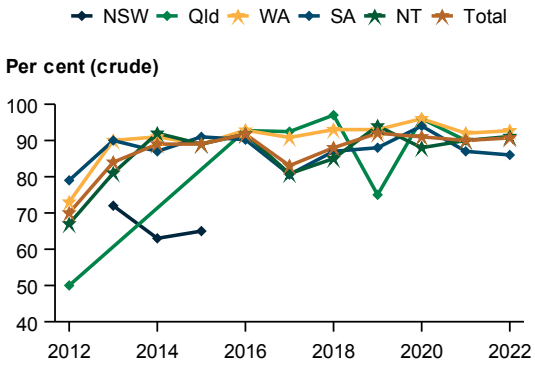
In 2022, 1,491 First Nations children aged 5–9 years were screened for trachoma in 76 communities. There was 91% screening coverage for this group, above the recommended 85% for trachoma control.

In 2022, in communities where active trachoma was identified, a total of 829 community members received treatment out of 874 who required treatment, a rate of 95%.

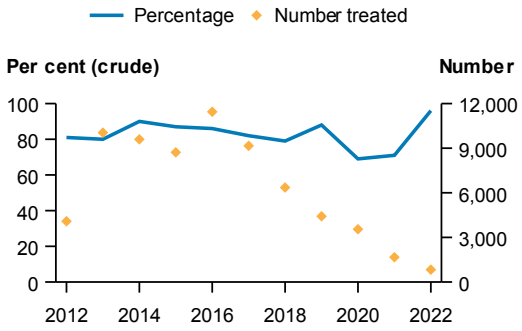
Trachoma screening and treatment have seen notable improvements. The proportion of children aged 5–9 years screened for trachoma in at-risk communities that required and received screening rose from 70% in 2012 to 91% in 2022. In communities where active trachoma was identified, the proportion of community members who received treatment rose from 81% in 2012 to 95% in 2022.

Trachoma screening and treatment in at-risk communities, 2012 to 2022

Trachoma screening coverage in at-risk communities, children aged 5–9 years



Community members treated in communities where active trachoma was identified



Source: AIHW analysis of Australian Trachoma Surveillance reports (Kirby Institute 2013, 2014, 2015, 2016, 2018, 2019a, 2019b, 2020, 2021, 2022, in press).

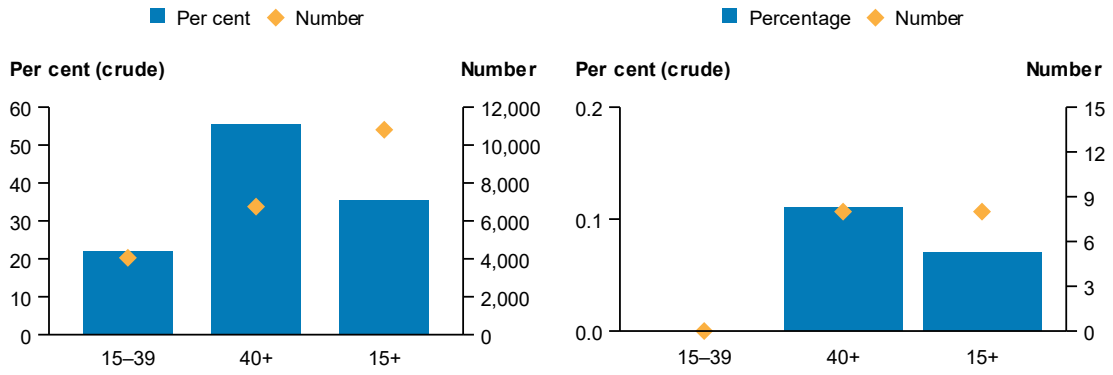
Trachoma-related trichiasis

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

In 2022, screening data was reported for 120 at-risk communities in 3 jurisdictions (Western Australia, South Australia, and the Northern Territory):

- Around 4,054 First Nations adults aged 15–39 years, and 6,752 First Nations adults aged 40 years and over were screened for trichiasis.
- 8 cases of trichiasis were identified, a prevalence rate of 0.07%.

Trichiasis screening and prevalence in at-risk communities, by age group, 2022

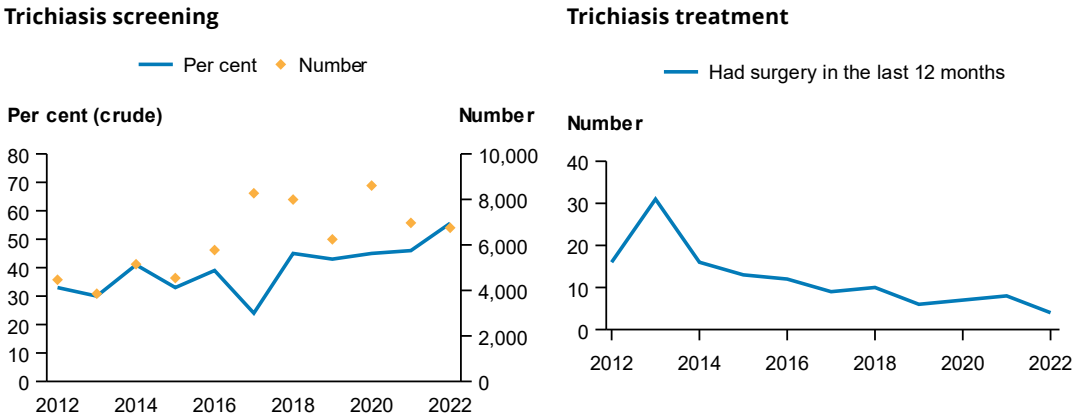


Source: AIHW analysis of Australian Trachoma Surveillance report 2022 (Kirby Institute in press)

In jurisdictions that undertook screening, the proportion of First Nations adults aged 40 years and over screened for trichiasis rose from 4,468 (33%) in 2012 to 6,752 (56%) in 2022, which is an improvement.

Between 2012 and 2022, in at-risk communities that required and received screening, the number of First Nations adults aged 40 years and over who had surgery for trichiasis in the preceding 12 months rose from 16 in 2012 to 31 in 2013. The number of surgeries has generally fallen over time since then, to 4 in 2022, which might indicate an improvement.

Trichiasis screening and treatment, aged 40 years and over, 2012 to 2022



Sources: Australian Trachoma Surveillance reports (Kirby Institute 2013, 2014, 2015, 2016, 2018, 2019a, 2019b, 2020, 2021, 2022, in press).

5

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

Optometrists and ophthalmologists play an important role in the eye health of First Nations people.

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 preventive 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)

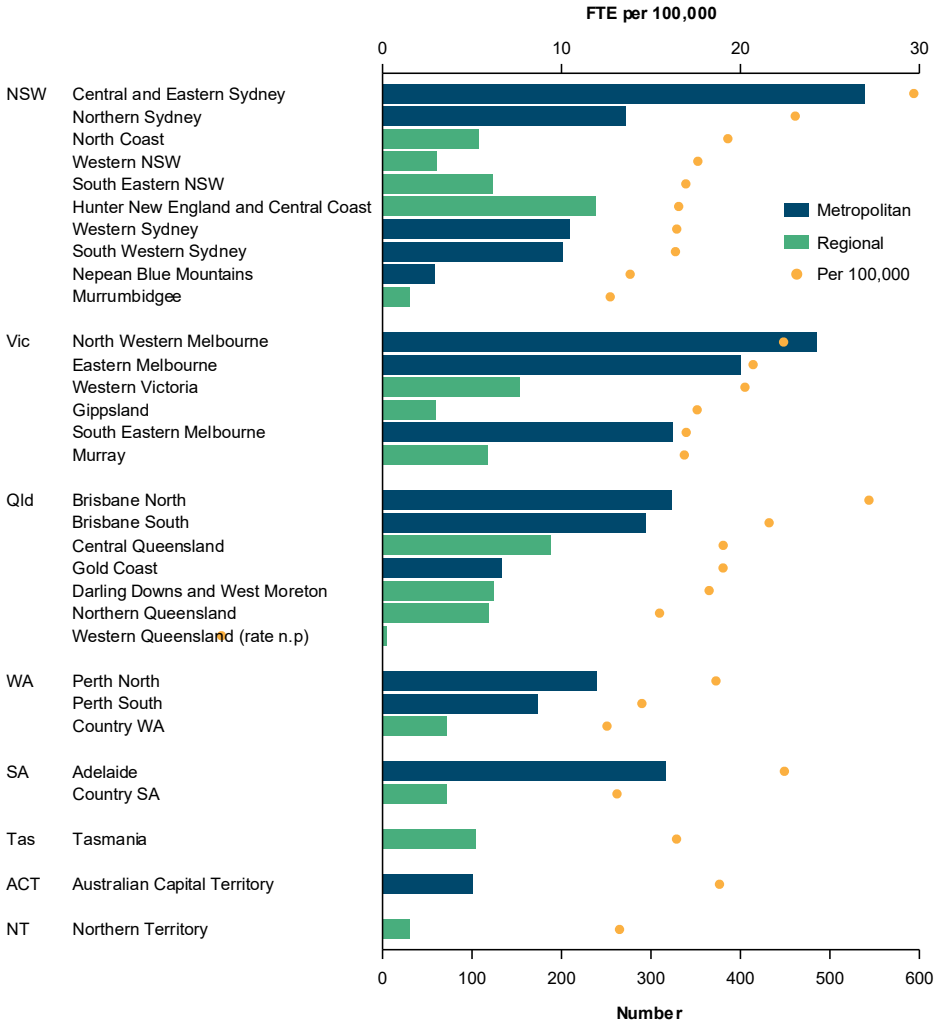
The FTE is a measure used to present data on the eye health workforce. This is calculated by dividing the total hours worked by employees in an occupation, by the standard hours worked.

Optometrists

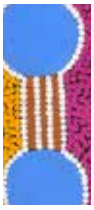
In 2021, around 5,690 optometrists were employed in Australia (19 FTE per 100,000), an increase of 1,467 since 2013 (4,219 optometrists in 2013).

The number and rate of optometrists were higher in metropolitan areas. The Central and Eastern Sydney primary health network had the highest rate of optometrists.

Optometrists, by PHN, 2021



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?

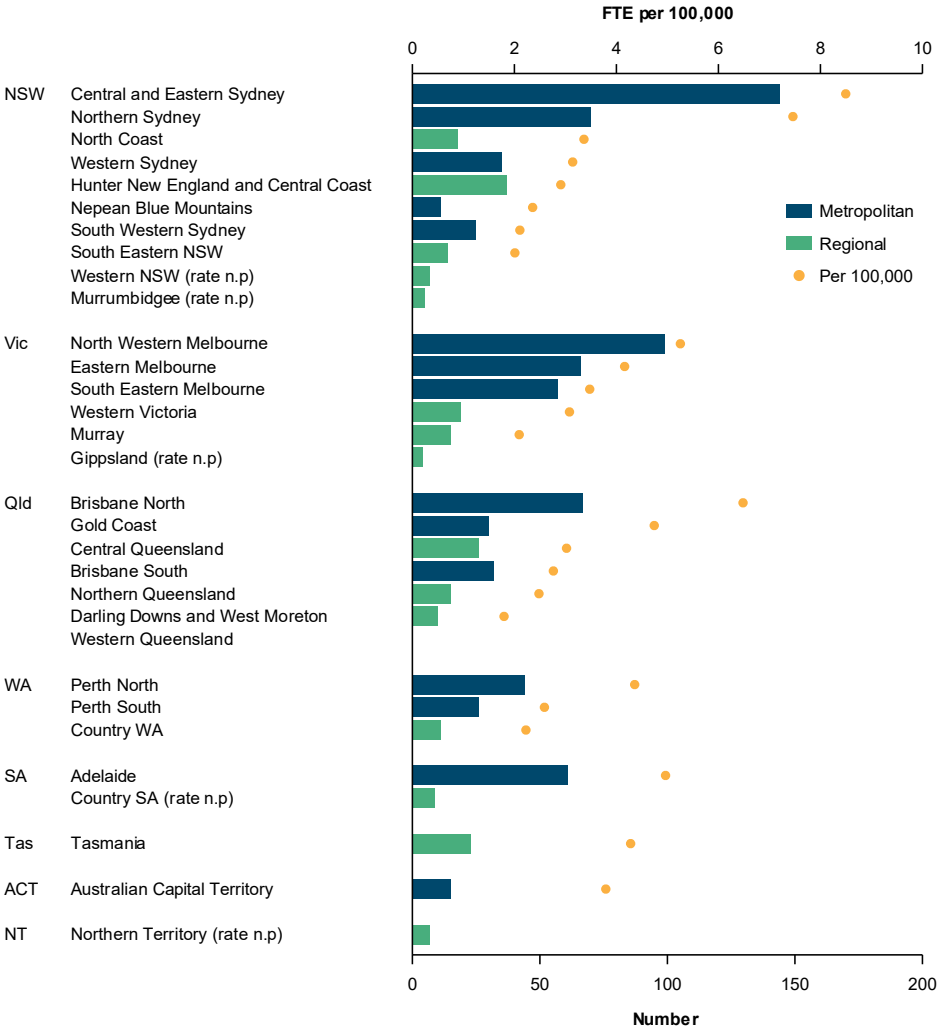
An optometrist is often the first port of call for any problems with eyes or vision. Being a primary health provider, they play a key role in providing accessible eye care to their communities.

Ophthalmologists

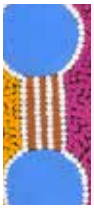
The ophthalmologist workforce is smaller than the optometrist workforce with 1,003 ophthalmologists employed in Australia (3.9 FTE per 100,000) in 2021.

Ophthalmologists were primarily located in metropolitan areas, with the highest rates in the Central and Eastern Sydney primary health network (144 and 8.5 FTE per 100,000).

Ophthalmologists, by PHN, 2021



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 through 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 deal with the uneven distribution of the health workforce and to improve access to eye health services across Australia.

Three programs provide specialist eye health services, primarily in regional and remote areas of Australia:

- the Visiting Optometrists Scheme (VOS)
- the Rural Health Outreach Fund (RHOF)
- the Medical Outreach Indigenous Chronic Disease Program (MOICDP).

The Eye and Ear Surgical Support Services program is also designed to expedite access to eye surgery for First Nations people who require it. In 2020–21 around 38,600 occasions of services for First Nations patients were provided by eye health professionals under combined outreach services (VOS, RHOF and MOICDP).

Services provided

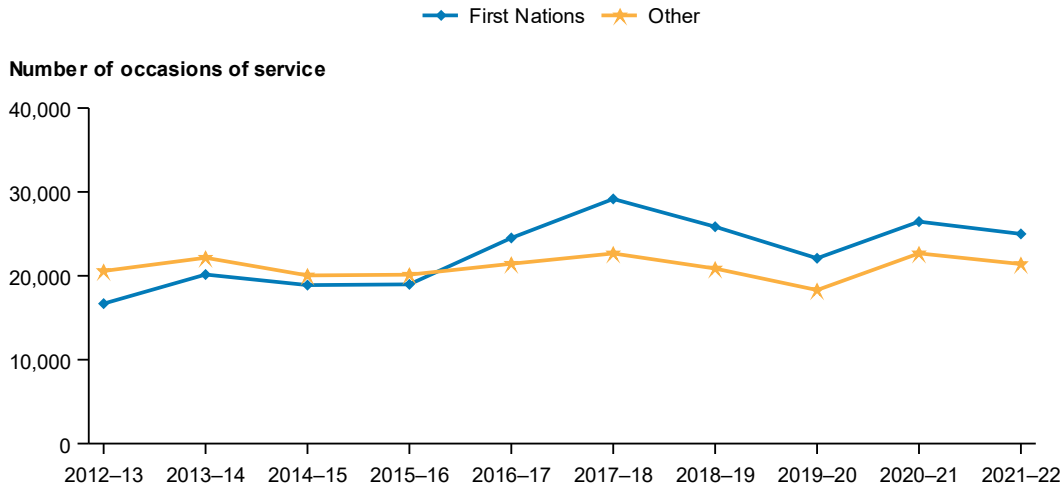
In 2021–22, the number of occasions of service for outreach programs delivered to First Nations patients was:

- 24,992 provided through the VOS
- 1,796 provided under the RHOF
- 7,663 provided under MOICDP
- As well, 580 First Nations patients were supported under the Eye and Ear Surgical Support Program.

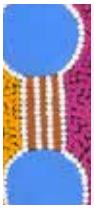
VOS occasions of service for First Nations patients increased nearly 4 fold between 2009–10 and 2021–22, rising from 6,975 to 24,992.

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

VOS occasions of service, by Indigenous status, 2012–13 to 2021–22



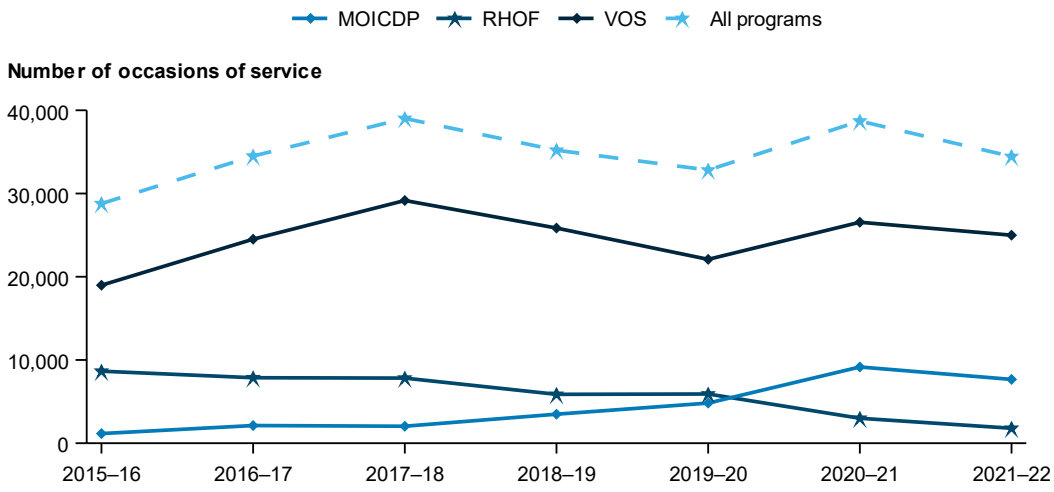
Source: AIHW analysis of Department of Health and Aged Care data (unpublished).



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 services, First Nations people, 2015–16 to 2021–22



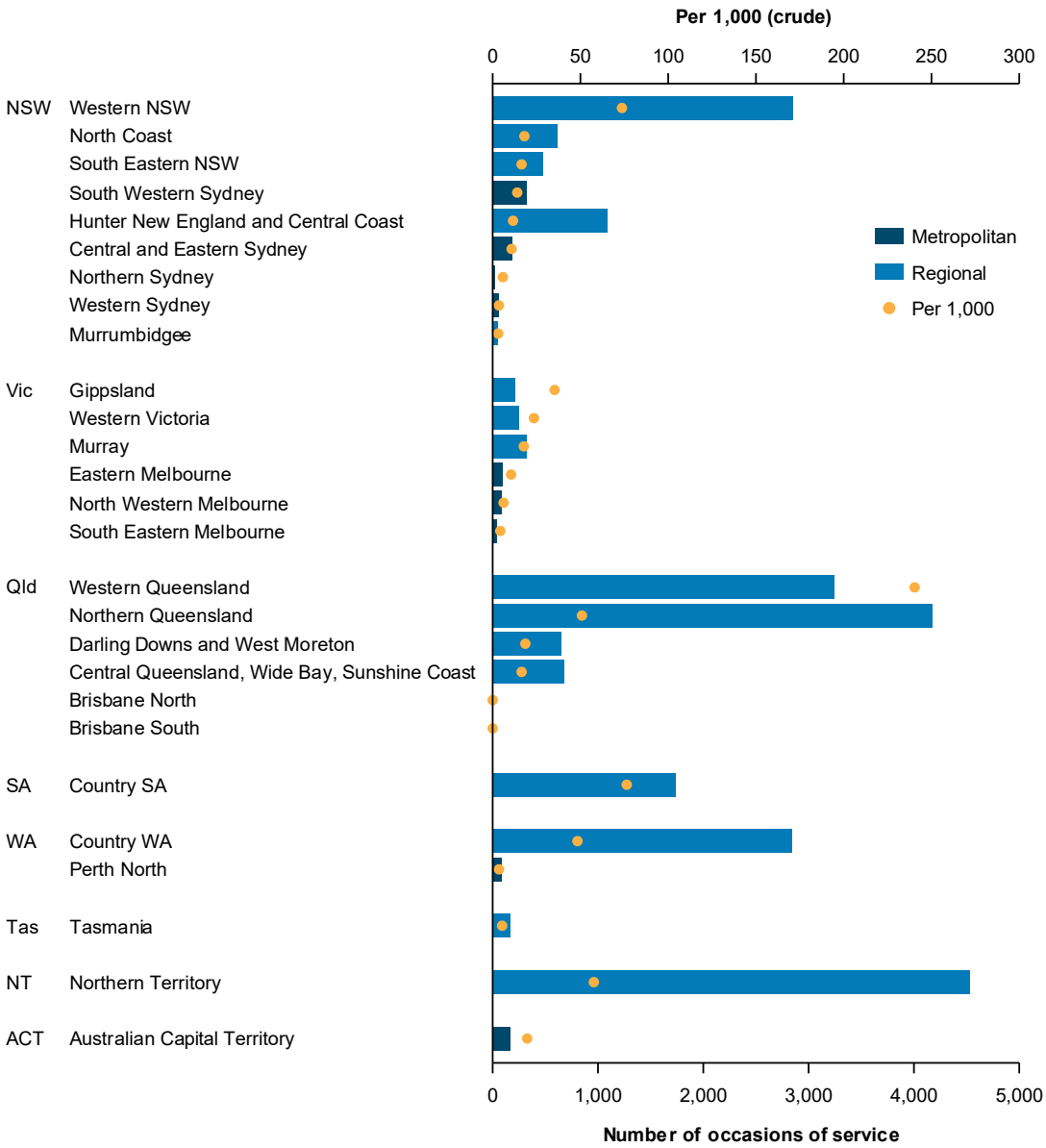
Source: AIHW analysis of Department of Health and Aged Care data (unpublished).

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 in Northern Queensland.

VOS occasions of service, First Nations people, by PHN, 2021–22



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

References

ABS (Australian Bureau of Statistics) (2011) Quality declaration: 3238.0 - Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians, 1991 to 2021, ABS, Australian Government, Canberra.

—— (2012) Census of Population and Housing - Counts of Aboriginal and Torres Strait Islander Australians, catalogue number 2075.0, ABS, Australian Government, Canberra.

ACSQHC (Australian Commission on Safety and Quality in Health Care) and AIHW (Australian Institute of Health and Welfare) (2017) The Second Australian Atlas of Healthcare Variation, ACSQHC, Sydney.

AIHW (Australian Institute of Health and Welfare) (2015) The health and welfare of Australia's Aboriginal and Torres Strait Islander peoples, catalogue number IHW 147, AIHW, Australian Government, Canberra.

Department of Health and Ageing 2012, Schedule to procure services in relation to analysis of the Medicare Voluntary Indigenous Identifier data set, Department of Health and Ageing, Canberra.

Foreman J, Keel S, Xie J, van Wijngaarden P, Crowston J, Taylor HR et al. (2016) National Eye Health Survey: full report 2016, Vision 2020 and East Melbourne: Centre for Eye Research Australia, Melbourne.

Foreman J, Xie J, Keel S, van Wijngaarden P, Sandhu SS, Ang GS et al. (2017) 'The prevalence and causes of vision loss in Indigenous and non-Indigenous Australians', Ophthalmology 124(12):1743-52.

Hamano T, Li X, Tanito M, Nabika T, Shiwaku K, Sundquist J & Sundquist K (2015) 'Neighborhood deprivation and risk of age-related eye diseases: a follow-up study in Sweden', Ophthalmic Epidemiology 22(5):308–320. doi: 10.3109/09286586.2015.1056537.

IEHU (Indigenous Eye Health Unit) Calculator for the delivery and coordination of eye care services. Melbourne: University of Melbourne. Accessed 18 March 2023, http://dr-grading.iehu.unimelb.edu.au/ecwc.

Kirby Institute (2013) Australian trachoma surveillance report 2012, Kirby Institute, University of NSW, Kensington, NSW.

—— (2014) Australian trachoma surveillance report 2013, Kirby Institute, University of NSW, Kensington, NSW.

——— (2015) Australian trachoma surveillance report 2014, Kirby Institute, University of NSW, Kensington, NSW.

——— (2016) Australian trachoma surveillance report 2015, Kirby Institute, University of NSW, Kensington, NSW.

——— (2018) Australian trachoma surveillance report 2016, Kirby Institute, University of NSW, Kensington, NSW.

——— (2019a) Australian trachoma surveillance report 2017, Kirby Institute, University of NSW, Kensington, NSW.

——— (2019b) Australian trachoma surveillance report 2018, Kirby Institute, University of NSW, Kensington, NSW.

——— (2020) Australian trachoma surveillance report 2019, Kirby Institute, University of NSW, Kensington, NSW.

——— (2021) Australian trachoma surveillance report 2020, Kirby Institute, University of NSW, Kensington, NSW.

——— (2022) Australian trachoma surveillance report 2021, Kirby Institute, University of NSW, Kensington, NSW.

——— (in press) Australian trachoma surveillance report 2022, Kirby Institute, University of NSW, Kensington, NSW.

Mansour SE, Browning DJ, Wong K, Flynn HW Jr and Bhavsar AR (2020). 'The Evolving Treatment of Diabetic Retinopathy', Clinical Ophthalmology. 4 March; 14:653-678. doi: 10.2147/OPTH.S236637. PMID: 32184554; PMCID: PMC7061411.

Services Australia (2023) Medicare Voluntary Indigenous Identifier, 19 June 2023, Services Australia, Australia Government, Canberra, accessed 12 October 2023. https://www.servicesaustralia.gov.au/medicare-voluntary-indigenous-identifier.

Shattock AJ, Gambhir M, Taylor HR, Cowling CS, Kaldor JM & Wilson DP (2015) 'Control of trachoma in Australia: a model based evaluation of current interventions', PLoS Neglected Tropical Diseases 9(4):e0003474. doi: 10.1371/journal.pntd.0003474.

Shukla UV and Tripathy K (2022) 'Diabetic retinopathy', in Treasure Island [internet book], National Library of Medicine, [updated 16 May 2023], accessed 20 June 2022. https://www.ncbi.nlm.nih.gov/books/NBK560805/

Taylor HR, Keeffe J, Fox S, Goujon N, Xie J, Still R, Burnett A, Marolia M, Shemesh T, Carrigan J & Stanford E (2009). National Indigenous Eye Health Survey—Minum Barreng (Tracking Eyes). Melbourne: University of Melbourne School of Population Health,

Indigenous Eye Health Unit in collaboration with the Centre for Eye Research Australia and the Vision CRC. Accessed 23 October 2016, <https://mspgh.unimelb.edu.au/__data/assets/pdf_file/0004/1984144/niehs_full_report.pdf>.

Taylor HR, Xie J, Fox S, Dunn RA, Arnold AL and Keette JE (2010) 'The prevalence and causes of vision loss in Indigenous Australians: the National Indigenous Eye Health survey', MJA 192(6):312–318.

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 2023 is a companion to this report.

aihw.gov.au

AIHW

Stronger evidence,
better decisions,
improved health and welfare