

Australian Trachoma Surveillance Report 2021

The Kirby Institute, UNSW Sydney

WHO Collaborating Centre in Neglected Tropical Diseases*

Prepared by the National Trachoma Surveillance and Reporting Unit at the Kirby Institute, UNSW Sydney on behalf of Australian organisations involved in trachoma control activities, under a funding agreement with the Australian Government

* Formerly the WHO Collaborating Centre in Trachoma (2018-2022).

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Contents

List of Tables	3
List of Figures	5
Preface	8
Acknowledgements	9
Technical terms and definitions	11
Abbreviations	13
Executive summary	14
Background	17
Methodology	19
Findings and interpretation	25
National results	28
Jurisdictional-specific results	42
Northern Territory results	42
Queensland results	60
South Australia results	65
Western Australia results	82
References	100
Appendix	
98	

List of Tables

Table 1.1	Trachoma control delivery in at-risk communities by jurisdiction, Australia 2021	35
Table 1.2	Trachoma screening coverage, trachoma prevalence and clean face prevalence in children aged 5-9 years by jurisdiction, Australia 2021	36
Table 1.3	Number and proportion of at-risk communities according to the level of trachoma prevalence in children aged 5-9 years, Australia 2007-2021	37
Table 1.4	Treatment strategies by jurisdiction, Australia 2021	38
Table 1.5	Trachoma treatment coverage, Australia 2021	39
Table 1.6	Trachoma-related trichiasis screening coverage, prevalence and treatment among Indigenous adults, Australia 2021	40
Table 1.7	Trachoma-related trichiasis surgery data collected from MBS Item 42588, Australia 2021	41
Table 2.1	Trachoma control delivery in at-risk communities by region, Northern Territory 2021	52
Table 2.2	Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Northern Territory 2021	53
Table 2.3	Number and proportion of at-risk communities according to the level of trachoma prevalence in children aged 5-9 years, Northern Territory 2007-2021	54
Table 2.4	Treatment strategies by region, Northern Territory 2021	55
Table 2.5	Trachoma treatment coverage by region, Northern Territory 2021	56
Table 2.6	Trichiasis screening coverage, prevalence, and treatment among Indigenous adults by region, Northern Territory 2021	57
Table 2.7	Health promotion activities by region, Northern Territory 2021	59
Table 3.1	Trachoma screening coverage, prevalence of clinical features consistent with trachomatous inflammation — follicular (TF) and clean face prevalence, Queensland 2021	62
Table 3.2	Trichiasis screening coverage, prevalence and treatment among Indigenous adults, Queensland 2021	63
Table 3.3	Health promotion activities Queensland 2021	64
Table 4.1	Trachoma control delivery in at-risk communities by region, South Australia 2021	73
Table 4.2	Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, South Australia 2021	74
Table 4.3	Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, South Australia 2007-2021	75

Table 4.4	Treatment strategies by region, South Australia 2021	77
Table 4.5	Trachoma treatment coverage by region, South Australia 2021	78
Table 4.6	Trichiasis screening coverage, prevalence, and treatment among Indigenous adults by region, South Australia 2021	80
Table 4.7	Health promotion activities by region, South Australia 2021	81
Table 5.1	Trachoma control delivery by region, Western Australia 2021	91
Table 5.2	Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Western Australia 2021	92
Table 5.3	Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, Western Australia 2007-2021	93
Table 5.4	Treatment strategies by region, Western Australia 2021	95
Table 5.5	Trachoma treatment coverage by region, Western Australia 2021	96
Table 5.6	Trichiasis screening coverage, prevalence, and treatment among Indigenous adults by region, Western Australia 2021	97
Table 5.7	Health promotion activities by region, Western Australia 2021	98
Table 5.8	Soap distribution by region, Western Australia 2021	99

List of Figures

Figure 1.1	Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Australia 2021	28
Figure 1.2	Number of communities designated at risk by jurisdiction, Australia 2007 – 2021	29
Figure 1.3	Number of at-risk communities according to trachoma control strategy implemented by jurisdiction, Australia 2021	29
Figure 1.4	Population screening coverage in children aged 5-9 years in communities that were screened for trachoma by jurisdiction, Australia 2021	30
Figure 1.5	Proportion of screened children aged 5-9 years who had a clean face by jurisdiction, Australia 2007-2021	30
Figure 1.6a	Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular (TF) among screened children aged 5-9 years by jurisdiction, Australia 2007-2021	31
Figure 1.6b	Estimated prevalence of trachoma among children aged 5-9 years by jurisdiction, Australia 2007-2021	31
Figure 1.6c	Overall prevalence of trachoma among children aged 5-9 years by jurisdiction, Australia 2007-2021	32
Figure 1.7	Number of at-risk communities according to the level of trachoma prevalence in children aged 5-9 years by jurisdiction, Australia 2021	32
Figure 1.8	Proportion of at-risk communities with zero prevalence of trachoma by jurisdiction, Australia 2007-2021	33
Figure 1.10	Number of doses of azithromycin administered for the treatment of trachoma by jurisdiction, Australia 2007-2021	34
Figure 2.1	Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Northern Territory 2021	46
Figure 2.2	Number of at-risk communities by region, Northern Territory 2007-2021	47
Figure 2.3	Number of at-risk communities by region and trachoma control strategy, Northern Territory 2021	47
Figure 2.4	Population screening coverage of children aged 5-9 years in communities that required screening for trachoma by region, Northern Territory 2021	48
Figure 2.5	Proportion of screened children aged 5-9 years who had a clean face by region, Northern Territory 2007- 2021	48

Figure 2.6a	Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular among children aged 5-9 years in communities that were screened by region, Northern Territory 2007-2021	49
Figure 2.6b	Estimated prevalence of trachoma among children aged 5-9 years in all at-risk communities by region, Northern Territory 2007-2021	49
Figure 2.6c	Overall prevalence of trachoma among children aged 5-9 years by region, Northern Territory 2007- 2021	50
Figure 2.7	Number of at-risk communities according to the level of trachoma prevalence in children aged 5-9 years by region, Northern Territory 2021	50
Figure 2.8	Number of doses of azithromycin administered for the treatment of trachoma by region, Northern Territory 2007- 2021	51
Figure 3.1	Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Queensland 2021	61
Figure 4.1	Trachoma prevalence in children aged 5-9 years in all at-risk communities by region, South Australia, 2021	68
Figure 4.3	Number of at-risk communities according to trachoma control strategy implemented by region, South Australia 2021	69
Figure 4.4	Population screening coverage of children aged 5-9 years in at-risk communities that required screening for trachoma by region, South Australia 2021	70
Figure 4.5	Proportion of screened children aged 5-9 years who had a clean face by region, South Australia 2007-2021	70
Figure 4.6a	Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular among children aged 5-9 years in at-risk communities by region, South Australia 2007-2021	71
Figure 4.6b	Estimated prevalence of trachoma among children aged 5-9 years in all at-risk communities by region, South Australia 2007-2021	71
Figure 4.6c	Overall prevalence of trachoma among children aged 5-9 years in all communities by region, South Australia 2007-2021	72
Figure 4.7	Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, South Australia 2021	72
Figure 4.8	Number of doses of azithromycin administered for the treatment of trachoma by region, South Australia 2007-2021	73
Figure 5.1	Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Western Australia 2021	85
Figure 5.2	Number of at-risk communities by region, Western Australia 2007-2021	86
Figure 5.3	Number of at-risk communities according to trachoma control strategy implemented by region, Western Australia 2021	86

- Figure 5.4 Population screening coverage in children aged 5-9 years in communities that required screening for trachoma by region, Western Australia 2021 87
- Figure 5.5 Proportion of screened children aged 5-9 years who had a clean face by region, Western Australia 2007-2021 87
- Figure 5.6a Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular among children aged 5-9 years in communities that were screened by region, Western Australia 2007-2021 88
- Figure 5.6b Estimated prevalence of trachoma among children aged 5-9 years in all at-risk communities by region, Western Australia 2007-2021 88
- Figure 5.6c Overall prevalence of trachoma among children aged 5-9 years in all communities by region, Western Australia 2007-2021 89
- Figure 5.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, Western Australia 2021 89
- Figure 5.8 Number of doses of azithromycin administered for the treatment of trachoma by region, Western Australia 2007-2021 90

Preface

This report was prepared by the National Trachoma Surveillance and Reporting Unit (NTSRU) in collaboration with the National Trachoma Surveillance and Control Reference Group (NTSCRG) and jurisdictional health departments funded to undertake trachoma control activities by the Australian Government Department of Health and Aged Care, which also funds the NTSRU.

Trachoma program data for 2021 were provided by the Northern Territory (NT), Queensland (QLD), South Australia (SA) and Western Australia (WA). Program activities, including data collection and analysis, were guided by the Communicable Diseases Network Australia (CDNA) *National guidelines for the public health management of trachoma in Australia*.¹

The report contains a short description of methods used by the jurisdictions to undertake trachoma surveillance and control and the methods of data analysis used by the NTSRU. The main findings of the report are presented as tables and figures, with supporting text.

The reports are available online at <https://kirby.unsw.edu.au/report-type/australian-trachoma-surveillance-reports>

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Technical terms and definitions

Definitions are from the Communicable Diseases Network Australia (CDNA) 2014 *National guidelines for the public health management of trachoma in Australia*.¹

At-risk communities

Communities classified by jurisdictions as being at higher risk of trachoma based on 1) no recent data, but historical evidence of endemicity; 2) data of trachoma prevalence of 5% or more in children aged 5-9 years in the last 5 years; or 3) data of less than 5% trachoma prevalence but with a recorded prevalence of trachoma of 5% or above in the past 5 years.

Clean face

Absence of nasal and ocular discharge on the face.

Community-wide treatment

The antibiotic treatment of all people in the community who weigh more than 3 kg living in houses with children under 15 years of age.

Contacts

Anyone who is living and sleeping in the same house as a child with trachoma. If the child lives or sleeps in multiple households, then all members of each household are regarded as contacts.

Endemic trachoma

Prevalence of trachoma of 5% or more in children aged 5-9 years or a prevalence of trichiasis of at least 0.1% in the adult population.*

Hyperendemic trachoma

Prevalence of trachoma of 20% or more in children aged 5-9 years.*

Prevalence of trachoma

The proportion of people found in a screening program to have trachoma.

Screening coverage

The proportion of Aboriginal and Torres Strait Islander children aged 5-9 years in a community who were screened for trachoma at the time of community screening.

Trachoma

The presence of chronic inflammation of the conjunctiva caused by infection with *Chlamydia trachomatis*; includes World Health Organization simplified grading: trachomatous inflammation - follicular (TF) and trachomatous inflammation - intense (TI).

* Please see methodology page 19 for how target age groups in Australia differ from WHO target age groups.

Trachomatous inflammation - follicular (TF)

The presence of 5 or more follicles in the central part of the upper tarsal conjunctiva, each at least 0.5 mm in diameter, as observed through a magnified loupe.

Trachomatous inflammation - intense (TI)

Pronounced inflammatory thickening of the upper tarsal conjunctiva that obscures more than half of the normal deep tarsal vessels.

Trachomatous trichiasis (TT)

Evidence of the recent removal of in-turned eyelashes or at least one eyelash rubbing on the eyeball.

Treatment coverage

The proportion of Aboriginal and Torres Strait Islander people in a community who weigh more than 3 kg and live in a house with one or more children aged below 15 years who were treated for trachoma during an episode of community-wide treatment.

Abbreviations

ABS	Australian Bureau of Statistics
APY	Anangu Pitjantjatjara Yankunytjatjara
ACCHS	Aboriginal Community Controlled Health Service
AHCSA	Aboriginal Health Council of South Australia
CDC	Centre for Disease Control, NT Department of Health
CDNA	Communicable Diseases Network Australia
EH&CDSSP	Eye Health and Chronic Disease Specialist Support Program
MBS	Medicare Benefits Schedule
NSW	New South Wales
NT	Northern Territory
NTSCRG	National Trachoma Surveillance and Control Reference Group
NTSRU	National Trachoma Surveillance and Reporting Unit
PCR	Polymerase chain reaction
QLD	Queensland
SA	South Australia
SAFE	Surgery, Antibiotics, Facial cleanliness, and Environment
WA	Western Australia
WACHS	WA Country Health Service
WHO	World Health Organization

Executive summary

Trachoma prevalence in children aged 5-9 years remained stable in 2021 in all jurisdictions except WA where there has been a slight decrease. There was a decrease in 2021 in the number of communities designated at risk for trachoma (92 in 2021 and 98 in 2020) and a significant decrease in the number of communities with hyperendemic trachoma (9 in 2021 compared to 16 in 2020, and a decrease in the number of communities with endemic trachoma (39 in 2021 compared to 53 in 2020). Of the regions at risk, 9 of 13 recorded non-endemic levels of trachoma, with 4 regions recording no trachoma. There was also a decrease in the proportion of communities with endemic levels of trachoma from 54% to 42%. While the proportion of children with clean faces increased in 2021, only 38% of regions (5/13) and 28% of communities screened (26/94) reached the goal of clean faces in 85% of children aged 5-9 years.

Endemic trachoma and suboptimal facial cleanliness can only be addressed by comprehensively implementing all aspects of the SAFE strategy, including health promotion, environmental health improvements and screening and treatment activities.

Summary of findings

Trachoma program coverage

- In 2021, jurisdictions designated 92 remote Indigenous communities as at risk of endemic trachoma, a decrease from 98 in 2020 (Table 1.1).
- The number of communities at risk of trachoma in Australia has steadily declined since 2009 (Figure 1.2).
- Of the 92 communities designated by jurisdictions to be at risk at the start of 2021, 86 (93%) were determined to require screening, antibiotic distribution or both according to the CDNA guidelines (Table 1.1).
- Six of the at-risk communities did not require screening or treatment as per Guidelines.
- Of the communities requiring screening, treatment or both as per CDNA Guidelines, 95% (82/86) received the designated services (Table 1.1).
- In the NT, a further 3 formerly at-risk communities in the Alice Springs Remote and Darwin Rural regions were screened in 2021.
- Also in the NT, 7 communities that required screening as per CDNA Guidelines could not receive the services due to a COVID-19 outbreak.

Screening coverage

- Jurisdictions undertook screening in 82 communities (Table 1.1).
- Screening was undertaken for 91% (79/86) of the communities determined to require screening in 2021 including an additional 3 communities that were formerly at risk of trachoma in the NT (Table 1.1).
- Within the screened communities, 1833 of an estimated 2042 resident children (90%) aged 5-9 years were screened (Table 1.2).
- Screening coverage of children aged 5-9 years in the screened communities was 90% for the NT and QLD, 87% for SA and 92% for WA (Table 1.2, Figure 1.4).

Facial cleanliness

- A total of 1938 children aged 5-9 years in screened communities were examined for clean faces (Table 1.2).
- The overall prevalence of clean faces in children aged 5-9 years was 75%, with 84% in the NT, 75% in QLD, 74% in SA and 57% in WA.
- The prevalence of clean faces decreased in 2021 in all jurisdictions except in the NT which reported the highest rate of facial cleanliness among the jurisdictions (Table 1.2, Figure 1.5).
- Clean face rates in children aged 5-9 years vary widely at the regional level ranging from 45% to 98% (Tables 2.2, 3.1, 4.2 and 5.2).

Trachoma prevalence

- Trachoma is defined by the NT, SA, and WA as the presence of TF. In QLD, children were examined for the presence of TF and swabs to detect the presence of *C. trachomatis* as well as for microscopy and bacterial culture were collected from any child with any upper tarsal follicles.
- Overall, trachoma prevalence in 5-9-year-olds decreased slightly, from 3.8% in 2020 to 3.3% in 2021 (Table 1.2, Figure 1.6c).
- The overall prevalence of trachoma in children aged 5-9 years was 3.8% in the NT, 0% in QLD, 0.9% in SA, and 5% in WA.
- The overall prevalence of trachoma in children aged 5-9 years within the regions ranged from 0% to 15.8% (Tables 2.2, 3.1, 4.2 & 5.2).
- Trachoma was reported among children aged 5-9 years in 63% (52/82) of the communities screened in 2021 (Table 1.3), a slight decrease from 2020 when trachoma was reported in 68% (65/96) of the communities screened.
- Trachoma was at endemic levels (prevalence at or above 5% in 5-9-year-olds) in 48% (39/82) of the communities screened in 2021 (Table 1.3), a decrease from 2020 when 55% (53/96) communities had endemic levels.
- Hyperendemic levels of trachoma (at or above 20%) were found in 11% (9/82) of at-risk communities screened in 2021 (Table 1.3), a decrease from 2020 when 17% (16/96) of screened communities reported hyperendemic levels.

Antibiotic distribution and coverage

- Antibiotic distribution took place in all 53 communities that required antibiotic treatment according to the CDNA guidelines (Table 1.4).
- Treatment coverage for cases detected in screening activities was 97% with 149/154 cases treated (Table 1.5).
- Coverage for community members requiring treatment under CDNA Guidelines was 71%, compared to 69% in 2020.
- Jurisdictional trachoma programs delivered a total of 1815 doses of azithromycin in 2021 (Table 1.5), a reduction compared to 2020 when 3752 doses were delivered.
- In 2021, 290 (12%) community members eligible for antibiotic treatment under CDNA Guidelines declined to receive treatment, compared to 299 (6%) in 2020.

Trachoma-related trichiasis

- Overall, 11 435 adults aged 15 years and over in an estimated population of 39 165 in 122 at-risk and previously at-risk communities were screened for trichiasis (Table 1.6).
- There were 13 cases of trichiasis detected in adults aged 15 years and older (Table 1.6).
- The prevalence of trichiasis in screened adults aged 15 years and older was 0.11% and in adults aged 40 years and older was 0.19% (Table 1.6) compared to 0.1% and 0.16% in 2020.
- Surgery for trachoma-related trichiasis in the past 12 months was reported by jurisdictional teams to have been undertaken for 9 adults in 2021 (Table 1.6).
- Surgery for trachoma-related trichiasis in the past 12 months reported under the Medical Benefits Scheme Item 42 588 was undertaken for 15 adults aged 15 years and over (Table 1.7). These cases may also be reported in the jurisdictional totals.

Health promotion and environmental health improvement activities

- Public health and environmental health teams conducted over 288 health promotion activities in at least 104 remote Indigenous communities, including school visits, soap distribution and bathroom assessments.

Background

Trachoma is a disease of the eye, caused by infection with the *Chlamydia trachomatis* bacteria, particularly its serovars A, B, Ba and C. It is the world's leading infectious cause of preventable blindness. Based on reporting by the World Health Organization (WHO) in March 2021, trachoma remains endemic in 43 countries in which approximately 1.9 million people have visual impairment due to trachoma, worsening the quality of life in those who are already disadvantaged. Transmission of ocular *C. trachomatis* occurs through close facial contact, hand-to-eye contact, via contamination of personal items such as towels, clothing, and bedding and possibly by flies. Trachoma generally occurs in dry, dusty environments and is strongly associated with poor living conditions and sanitation. Crowding in households, limited water supply for bathing and general hygiene, poor waste disposal systems and high numbers of flies have all been associated with trachoma prevalence. Children have more frequent and longer-lasting episodes of infection than adults and are believed to be the main community reservoirs of infection.²⁻⁴

Infection with *C. trachomatis* causes inflammation of the conjunctival tissue in the eye, leading to clinically recognisable trachoma. Diagnosis is by visual inspection and the detection of follicles (white spots) on the inner upper eyelid. Repeated infections with *C. trachomatis*, especially during childhood, may lead to scarring of the eyelid, causing it to contract and distort, leading to the eyelashes turning inwards, trichiasis, and scratching of the outer surface of the cornea. The resulting damage to the cornea by trichiasis is the main pathway by which trachoma leads to vision loss and blindness.**Error! Bookmark not defined.**⁵ Trichiasis scarring is irreversible but if early signs of in-turned eyelashes are found, surgery to the eyelid is usually effective in preventing further damage to the cornea.

WHO, through the Global Alliance for the Elimination of Trachoma by 2020 (GET 2020), advocates the SAFE strategy for trachoma control. The SAFE acronym highlights the key components of the strategy, which are Surgery for trichiasis, Antibiotic treatment regimens via the use of azithromycin at the individual, household or community levels, and the promotion of Facial cleanliness and Environmental improvements. The strategy is designed to be implemented within a community health framework to ensure consistency and continuity of approach in the required screening, control measures, data collection and reporting, as well as building community capacity.⁶⁻⁸

WHO has set new targets for the elimination of trachoma as a public health problem through the new initiative *Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030*.⁹ Under this initiative the requirements of elimination remain unchanged as (i) a prevalence of trachomatous trichiasis 'unknown to the health system' of less than 0.2% in children 15 years old or older in each formerly endemic district; (ii) a prevalence of trachomatous inflammation—follicular of less than 5% in children aged 1–9 years in each formerly endemic district; and (iii) written evidence that the health system can identify and manage incident cases of trachomatous trichiasis, using defined strategies, with evidence of appropriate financial resources to implement those strategies.⁹

WHO guidelines recommend that clinical trachoma is treated with a single dose of the antibiotic azithromycin. When prevalence exceeds 5% in children aged 1-9 years, guidelines recommend mass drug administration to the entire community on a regional or district

basis. Australian guidelines differ slightly from WHO's recommendations in that: Australia uses the trachoma prevalence of the 5–9-year age group as a basis for treatment strategy; treatment is provided at the household level, treating cases and close contacts, where trachoma prevalence is lower, and Australia defines community coverage based on the treatment of households with at least one child aged 15 years or under.^{10,11.}

Trachoma control in Australia

Australia is the only high-income country with endemic trachoma. It occurs primarily in remote and very remote Indigenous communities in the NT, SA and WA. In 2008, cases were also found in NSW and QLD, where trachoma was thought to have been eliminated. People with trichiasis are present in all jurisdictions.^{10,12} The National Trachoma Management Program was initiated in 2006. From 2009 until 2024-25, the Australian Government has committed \$72.4 million towards eliminating trachoma in Australia through the continuation, enhancement and development of trachoma control, health promotion and environmental improvement initiatives in jurisdictions with endemic trachoma. Since 2006 the Australian Government has funded the National Trachoma Surveillance and Reporting Unit to provide a national mechanism for monitoring and evaluating trachoma control.¹³

The surveillance and management of trachoma in 2021 in all jurisdictions were guided by the CDNA 2014 *National guidelines for the public health management of trachoma in Australia* (the Guidelines).**Error! Bookmark not defined.** The 2014 guidelines were an update to the 2006 version,¹⁴ with one of the main changes being the option not to screen all endemic communities every year, with jurisdictions allocating resources for antibiotic distribution and health promotion activities. The guidelines were developed in the context of the WHO SAFE strategy and make recommendations for control strategies, data collection, reporting and analysis.

Trachoma is defined by the NT, SA, and WA as the presence of trachomatous inflammation – follicular. In QLD, children are examined for the presence of trachomatous inflammation – follicular and swabs are taken for laboratory testing whenever any upper tarsal follicles are identified.

The National Trachoma Surveillance and Reporting Unit

NTSRU is responsible for data collection, analysis and reporting related to the ongoing evaluation of trachoma control strategies in Australia. The NTSRU has been managed by the Kirby Institute, UNSW Sydney since 2010,^{15,16,17,18,19,20,21,22,23,24,25} with the Centre for Eye Research Australia²⁶⁻²⁸ and the Centre for Molecular, Environmental, Genetic and Analytic Epidemiology at the University of Melbourne²⁹ responsible for earlier years. The NTSRU operates under a contract between UNSW Sydney and the Australian Government Department of Health and Aged Care.

Methodology

The primary source of the data presented in this report is programmatic reporting from Australian states and territories which undertook screening and antibiotic distribution for trachoma in 2021. These activities take place under the guidance of the 2014 CDNA Guidelines, which recommend specific treatment strategies depending on the prevalence of trachoma detected through screening. Error! Bookmark not defined.

In 2006, when the National Trachoma Management Program was initiated, each jurisdiction identified communities determined to be at risk of trachoma based on historical prevalence data and other sources of knowledge. Over time, additional communities have been classified as being at risk, while some others have been reclassified as no longer at risk. Trachoma control activities focus on communities designated at risk, while a small number of other communities designated as not at risk have been included in screening activities, generally when anecdotal information suggests the presence of trachoma, or where there is close geographic or cultural proximity to at-risk communities.

WHO simplified trachoma grading criteria ³⁰ are used to diagnose and classify individual cases of trachoma in all jurisdictions. Data collection forms for use at the community level, developed by the NTSRU, based on CDNA Guidelines, are completed, and forwarded by jurisdictional coordinators to the NTSRU for checking and analysis. Information provided to the NTSRU at the community level for each calendar year includes:

- Number of Indigenous children aged 1-14 years screened for clean faces and the number with clean faces, by age group
- Number of Indigenous children aged 1-14 years screened for trachoma and the number with trachoma, by age group
- Number of episodes of treatment for trachoma, household contacts and other community members, by age group
- Number of Indigenous adults screened for trichiasis, number with trichiasis, and the number who had surgery for trichiasis
- Community-level implementation of health promotion activities.

WHO elimination targets specify screening of children aged 1-9 years. However, the target group for screening activities in Australia since 2006 has been children aged 5-9 years. This narrower age group was chosen because of ready accessibility through schools, the feasibility of eye examination and a presumption that prevalence in 5-9-year-olds would be similar to the prevalence in 1-4-year-olds. Opportunistic rather than systematic screening in communities has also included children 1-4 (as well as those 10-14) years.

In 2018, in anticipation of the WHO dossier preparation, a concerted effort was made to achieve high screening coverage in the 1-4-year age group, to check the assumption that prevalence in this lower age group was similar to that in 5-9-year-olds. The results, summarised in Appendix 1, showed that there was no evidence of higher prevalence in the younger age group and this finding was generally consistent between jurisdictions. Furthermore, the finding of similar prevalence in the 2 age groups was observed both in communities that achieved high levels of screening in 1-4-year-olds, and those that did not. Based on these results, it was decided that screening in future could continue to focus on the 5-9-year age group.

Trachoma control programs in Australia in all jurisdictions except QLD undertook trachoma grader training to ensure rigorous and accurate trachoma grading. QLD engages an ophthalmologist experienced in trachoma assessment for its screening activities. Ongoing training of health staff in trachoma assessment is essential to ensure program integrity, and particularly important in communities where prevalence is decreasing, with fewer children affected, and a consequent increased likelihood of false-positive findings.

New South Wales

There were no communities designated at risk in NSW in 2021. Historical data provided derive from NSW Health, which focused on screening in potentially at-risk communities in north western and far western NSW, with the most recent screening conducted in 2014. No population-level trichiasis screening was conducted in NSW in 2021.

Northern Territory

From 2013, the NT has followed the screening and treatment schedule recommended in the 2014 CDNA Guidelines. Trachoma screening and management in the NT were a collaboration between the Department of Health (Centre for Disease Control and Primary Health Care [Outreach/Remote]); Department of Education (Remote Schools) and Aboriginal Community Controlled Health Services (ACCHS). Trachoma screening is generally a stand-alone activity of the trachoma team and program partners with support from local primary healthcare centres or community-controlled services. The NT uses school enrolment lists, electronic health records and local knowledge to determine the number of children aged 5-9 years present in the community at the time of screening. Following the screening, treatment is undertaken by the trachoma team and program partners with support from primary healthcare services.

In 2021, screening for trichiasis was undertaken opportunistically, primarily by clinic staff during adult health checks or optometrists and ophthalmologists based with regional eye health services.

South Australia

The Trachoma Elimination Program in SA is implemented by Eyre and Far North Local Health Network on behalf of the state government. The program is overseen by the South Australian Trachoma Elimination Strategy Committee, jointly chaired by the Aboriginal Health Council of South Australia (AHCSA) and Eyre and Far North Local Health Network. It has clinical and non-clinical members who are charged under the committee's terms of reference with identifying, developing, and overseeing strategies to improve trachoma control, including the quality-of-service delivery. Embedding screening and treatment practices in local health services for the sustainable elimination of trachoma has been a priority in SA.

A combination of opportunistic, community-wide, and routine screening was undertaken by individual Aboriginal community-controlled health organisations, as well as the state-wide AHCSA. The Eye Health and Chronic Disease Specialist Support Program coordinated by AHCSA provided opportunistic screening by visiting optometrists and ophthalmologists. AHCSA delivered community-wide screening in schools as well as routine screening through adult and child health checks.

Since 2014, trachoma control activities in the 9 communities of the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands have been reported as a single unit for the purpose of trachoma surveillance, due to the small populations of each community and the close linkages between them. These reporting changes need to be considered in the interpretation of time trends for SA reports.

Queensland

The Communicable Diseases Branch within the QLD Department of Health coordinates trachoma prevention and control activities across the state in collaboration with hospitals and Health Services. Trachoma screening involves an ophthalmologist, who conducts a more detailed ocular examination than required for the WHO simplified grading tool, including an assessment for the presence of Herbert's pits and corneal pannus. The examination also involves the collection of conjunctival swabs from children with any tarsal follicles for laboratory testing to detect the presence of *C. trachomatis* as well as for microscopy and bacterial culture.

In November 2019, cumulative data from the Torres Strait Islands were presented to the NTSCRG and it was agreed that these communities should no longer be designated at risk of trachoma.

In 2021, trachoma screening occurred in 2 communities in the north-western region.

Western Australia

Trachoma screening and management in WA are the responsibility of the WA Country Health Service (WACHS) Population Health Units in the Kimberley, Goldfields, Pilbara and Midwest health regions. The interagency State Trachoma Reference Group provides program oversight and has established a set of operational principles which guide the program and provide consistent practice across the 4 endemic regions. In WA, trachoma screening teams are required to complete the Remote Area Health Corps (RAHC) trachoma and trichiasis grading modules annually as well as have an expert trachoma grader present in each community when trachoma screening is undertaken.

In collaboration with local primary healthcare providers, the WACHS Population Health Units screen communities in each region within a 4 weeks in August and September. People identified with trachoma are treated at the time of screening together with their household contacts. In communities with a prevalence above 5%, treatment may be offered in the form of mass drug administration to the whole community in line with WHO guidelines or to a particular part of the community if there appears to be a clustering of cases. In 2021, each region determined the screening denominator based on the school register, which was updated by removing names of children known to be out of the community at the time of screening and adding names of children present. In conjunction with screening, an environmental assessment was carried out and, for some communities, supplemented by health promotion activities.

In 2011, WACHS combined programmatic data from 10 communities in the Goldfields region for the purposes of trachoma surveillance reporting because of their small populations and kinship links. From 2016, data from 4 communities in the Pilbara region have been similarly

reported as one. These reporting changes need to be considered in the interpretation of time trends for WA reports.

Trichiasis methodology

The WHO simplified trachoma grading criteria are used to diagnose and classify trichomatous trichiasis. Each jurisdictional program identified communities at risk of trichiasis based on trachoma prevalence data, both current and historical. Screening for trichiasis occurs at different times of the year and is integrated into other community and public health programs such as the annual influenza vaccination program. The priority target group for trichiasis screening activities in the 4 regions comprises Aboriginal and Torres Strait Islander adults aged 40 years and over. Regional population health units report on screening of children from 15 years of age, adults screened during the annual influenza vaccination program, the Aboriginal Medical Service (Adult Health Check MBS Item 715) and information from the Visiting Optometrist Service.

Regional specific procedures

Kimberley: trichiasis screening is conducted by the Public Health Team before the trachoma screening when in the community to provide education during trachoma screening, during the influenza vaccination campaign and by Visiting Optometry Services and health clinic staff in remote communities.

Clients are referred by the service provider to the ophthalmology clinics and regular optometrists. Trichiasis referrals to ophthalmology services are triaged by the optometrist service in liaison with the ophthalmologist who visits every 3 months. The visiting optometrist group manages the priority of recall, and specialist clerks use their individual recall systems.

For follow-up post-surgery, Lions Outback Vision ensures that the information from specialists in Perth is conveyed to the appropriate community clinic and adds this information to the optometric database for follow-up in communities.

Pilbara: screening is conducted by the Public Health Team at the time of trachoma screening, during the influenza vaccination campaign or by the primary health care provider during the Adult Health Check (MBS Item 715).

If required, referrals are made to the general practitioner (GP) or visiting specialists. The GP will also refer to a visiting specialist if required. The referring clinician is responsible for following up on the referral outcome.

Midwest: screening is conducted either by the Public Health Team earlier in the year or by the primary healthcare provider during the Adult Health Check (MBS Item 715). Referrals to the ophthalmologist are made through the patient's primary healthcare provider (Aboriginal Community Controlled Health Organisation [ACCHO] or private GP). The Public Health Unit does not have access to these referrals. If trichiasis is found during screening by a member of the Public Health Team, the patient is referred to an ophthalmology service within the region.

Goldfields: screening is conducted by the Public Health Team at the time of trachoma screening, during health promotion visits, during the influenza vaccination campaign or by the primary healthcare provider during the Adult Health Check (MBS Item 715).

If trichiasis is suspected during screening by a member of the Public Health Team, patients are referred to their local primary healthcare provider for a referral to an ophthalmology service (or through another preferred pathway such as a client's optometrist). All suspected cases found by primary healthcare services are referred to the ophthalmology service for review. Referrals to the ophthalmologist are made via the patient's primary healthcare provider (ACCHO, private GP or optometrist). The Public Health Unit does not have access to these referrals nor the outcome of the consultation.

Data analysis

In NT, SA and WA, trachoma is defined as the presence of trachomatous inflammation – follicular. In QLD, the diagnosis of trachoma is based upon several features: the clinical advice of an experienced ophthalmologist who performs a detailed examination beyond that required by the WHO simplified grading system and the collection of conjunctival swabs for PCR testing for *C. trachomatis* as well as for microscopy and bacterial culture, if any follicles are present on the upper tarsal conjunctiva.

A community is defined as a geographic location where people reside and there is at least one school. Community screening coverage is the number of communities screened for trachoma as a proportion of those classified as at risk. Individual screening coverage is the proportion of resident children in the target age group who were screened.

Data on resident population numbers in each community were derived by each jurisdiction using enrolment lists from schools and health clinics supplemented by local advice on movement into and out of communities. This method has been used since 2012. For 2007 to 2011 estimates were based on projections from the 2006 Australian census using the Australian Bureau of Statistics (ABS) standard estimates of annual population increase (1.6%, 1.8% and 2.1% in the NT, WA, and SA, respectively). The prevalence of trachoma was calculated using the number of children screened as the denominator and the number found to have trachoma as the numerator.

Trachoma data were analysed in the age groups 1-4, 5-9 and 10-14 years. Comparisons over time were limited to the age group 5-9 years. Data from 2006 were excluded from the assessment of time trends as collection methods in this first year of the control program differed substantially from those subsequently adopted.

Calculations for trachoma prevalence

Three methods were used to calculate trachoma prevalence. The *observed prevalence* of trachoma was calculated using only the data from screening activities undertaken during the reporting year. Since the implementation of the 2014 Guidelines, annual screening has not been required for at-risk communities. Therefore, for communities not screened in 2021 an *estimated prevalence* of trachoma was calculated by carrying forward the most recent prevalence data, following a method endorsed by the NTSCRG. This method is likely to result in an over-estimate of current prevalence, particularly for communities receiving community-wide treatment with antibiotics. Finally, the *overall prevalence* of trachoma was calculated by combining prevalence from at-risk communities screened during 2021, the most recent prevalence carried forward from at-risk communities that did not screen in 2021 and the most recent prevalence carried forward from communities previously classified as at risk but judged by jurisdictions to have eliminated trachoma and therefore

removed from the at-risk register. Community-specific data for communities subsequently amalgamated for reporting purposes were used (or carried forward) until the year of amalgamation.

Findings and interpretation

Trachoma remains a public health issue in several of Australia's remote and very remote communities. Of the 13 regions identified as being at risk when Australia's national response to trachoma began in 2006, 4 were still classified as having endemic trachoma in 2021.

While community treatment using azithromycin to affected communities has been effective in reducing high trachoma prevalence, this strategy alone has not been sufficient to reach elimination targets in all regions. Continued strengthening of health promotion and environmental improvements including reducing crowding in households and ongoing maintenance of water and sanitation hardware must become the mainstay of control. Such changes require a multi-sectoral effort, involving communities and agencies beyond the public health units and teams that have been assigned responsibility for trachoma control activities. In 2021 the Australian Government extended the target date for the elimination of trachoma as a public health goal to align with WHO's newly endorsed framework, entitled 'Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030'.⁹ The extension of the elimination target date is intended to provide sufficient time to enhance control efforts and meet WHO's elimination criteria. At the same time, strategies must be in place to ensure sustainable control of trachoma and its health consequences in Indigenous communities in Australia.

The impact of COVID-19

In 2020, the COVID-19 pandemic caused immediate and cascading disruptions to Australian trachoma control programs. In March 2020 the Commonwealth health minister determined under the Biosecurity Act ³¹to prevent transmission to vulnerable Aboriginal and Torres Strait Islander populations, which restricted non-essential travel to and from remote Indigenous communities. This approach in turn led to the suspension of trachoma screening and treatment, targeted health promotion activities and collaborative programs involving public health, environmental health and housing agencies. Trachoma program personnel were diverted to the COVID-19 public health response. During this time targeted COVID-19 health promotion resources were widely circulated in Indigenous languages in remote communities.^{32,33,34} These resources used diverse communication platforms to promote infection control practices that were also relevant to the control of trachoma. The determination was lifted in July 2020 and trachoma control activities resumed. In 2021 disruptions to trachoma screening, treatment and health promotion continued due to both the diversion of resources to COVID-19 vaccination and control activities and COVID-19 outbreaks in communities which resulted in community-wide shut-downs and restrictions on non-essential travel. The COVID-19 pandemic also highlighted the ongoing lack of adequate housing in Indigenous communities, through the inability of many community members to effectively isolate when they themselves or other household members had COVID-19.³⁵

Screening coverage

In 2021, 92% (79/86) of at-risk communities were screened for trachoma, a decrease from 2020 when 98% (96/98) were screened. The proportion of communities screened is not in itself an indicator of the quality or success of the program. Under the CDNA Guidelines, jurisdictions can choose to reduce the frequency of annual screening and dedicate resources

on control activities, including antibiotic distribution, in high prevalence communities.¹ At the other end of the spectrum, communities with low levels of trachoma do not require annual screening.

On the other hand, the proportion of children aged 5-9 years assessed for trachoma in screened communities is an important performance measure, with the CDNA Guidelines targeting coverage of at least 85%. The overall coverage in screened communities decreased marginally to 90% in 2021 from the previous year's 91%.

Facial cleanliness

The normalisation of facial cleanliness and general hygiene has been the goal of much health promotion work in communities. The proportion of screened children aged 5-9 years who had clean faces decreased from 78% in 2020 to 75% in 2021. Decreases were reported in QLD, WA and SA, but not in NT where there was a slight increase with the overall highest prevalence of facial cleanliness (84%).

Overall, since the beginning of the program in 2007, there has been considerable variance between the prevalence of facial cleanliness in regions, highlighting the complexity of promoting behavioural change, and suggesting the importance of other barriers to program success, including access to safe and functional washing facilities, prompt repair and planned maintenance of housing hardware and overcrowding in homes.

Trachoma prevalence

Across NT, QLD, SA and WA, the overall prevalence of trachoma among children 5-9 years in 2021 was 3.3%, a slight decrease from 3.8% in 2020. Within jurisdictions, the prevalence of trachoma in children aged 5-9 years in at-risk communities ranged from 0 to 15.8% across 13 regions.

The proportion of communities with a prevalence above 5% fell between 2020 and 2021, from 55% (53/96) in 2020 to 48% (39/82), as did the proportion of communities with hyperendemic trachoma (over 20% prevalence) which fell from 22% (24/96) to 11% (9/82).

The overall trachoma prevalence has plateaued since 2012. It appears likely that further reductions in prevalence will depend on prioritisation of housing and environmental health to enable communities to control trachoma as well as a range of other infectious diseases that particularly affect children, and lead to long-term disability, including rheumatic fever and middle ear infections.

Antibiotic distribution and coverage

Antibiotic treatment was indicated under CDNA Guidelines¹ for 2336 people in 2021 and was provided to 71%, with 290, or 12% declining the offer of treatment, compared to 6% (299/5133) declining treatment in 2020. This statistical finding is corroborated by reports from public health professionals delivering trachoma control measures of treatment fatigue in communities. While the implications of reduced uptake of antibiotics for trachoma control are not well understood, they serve to further highlight the need for housing and environmental improvements combined with health promotion programs as crucial elements of the program.

Trachoma-related trichiasis

Overall, 11 435 adults aged 15 years and older were reported to have been screened for trichiasis in 2021, compared to 14 485 in 2020. Among those screened in 2021 aged 15 years or older, 13 (0.11%) were found to have trichiasis, and 9 underwent trichiasis surgery as reported by jurisdictional teams. Data collected using the Medicare Item number 42588 identified 15 occasions of trichiasis-related surgery nationally.

Health promotion and environmental health activities

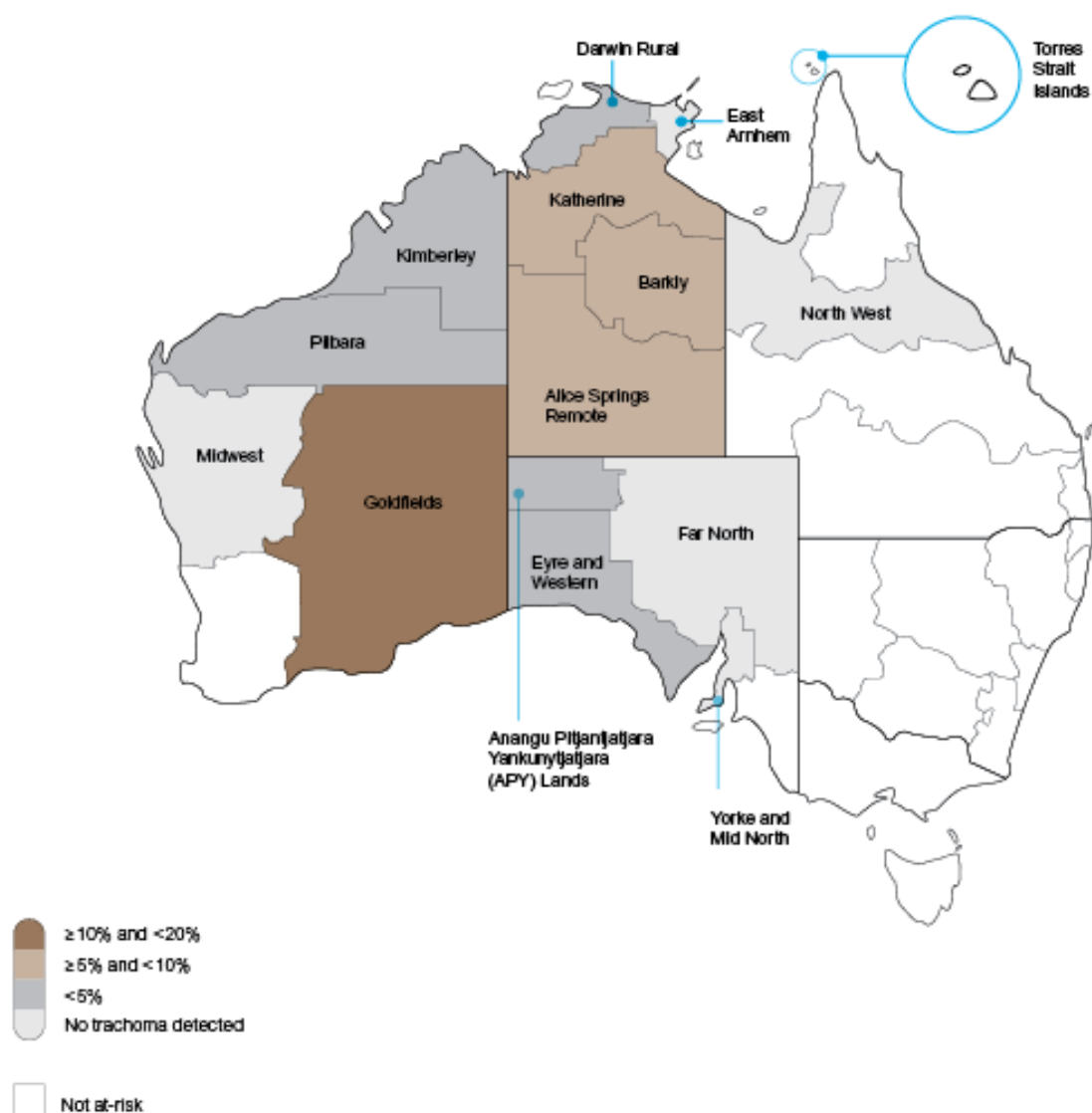
Despite program disruptions due to the COVID-19 pandemic, jurisdictions have continued to support and report health promotion activities that focus on improving infection control practices, particularly facial cleanliness and related measures in children. Targeted health promotion messaging to prevent the spread of COVID-19 also complemented trachoma control messages.

There continues to be a lack of systematic reporting of environmental health and housing conditions, interventions and improvements at the community, regional and national levels. The NTSCRG recognises that jurisdictional trachoma programs are not able to adequately monitor, let alone substantially influence, the uptake of environmental improvements in affected communities. Progress requires a heightened effort across relevant disease areas as well as sectors and government agencies beyond health.

1. National results

Figures and Tables

Figure 1.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Australia 2021*



*Most recent estimates carried forward in communities that did not screen in 2021

Figure 1.2 Number of communities designated at risk by jurisdiction, Australia 2007 – 2021

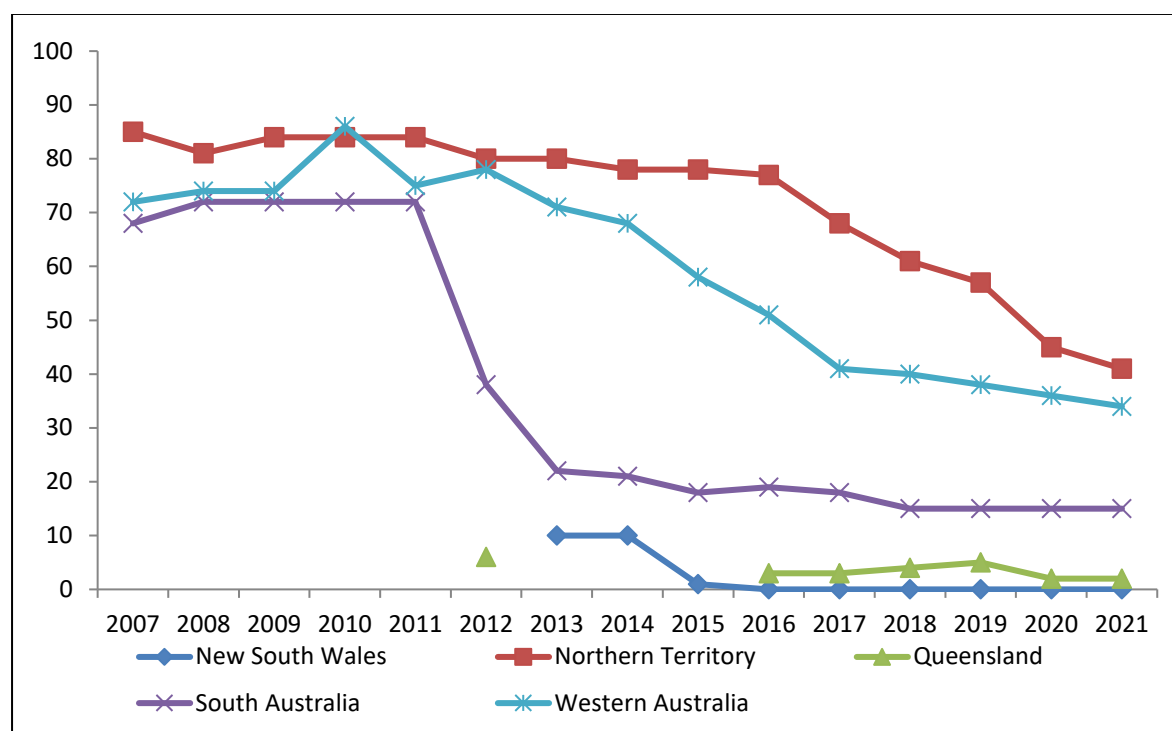


Figure 1.3 Number of at-risk communities according to trachoma control strategy implemented by jurisdiction, Australia 2021

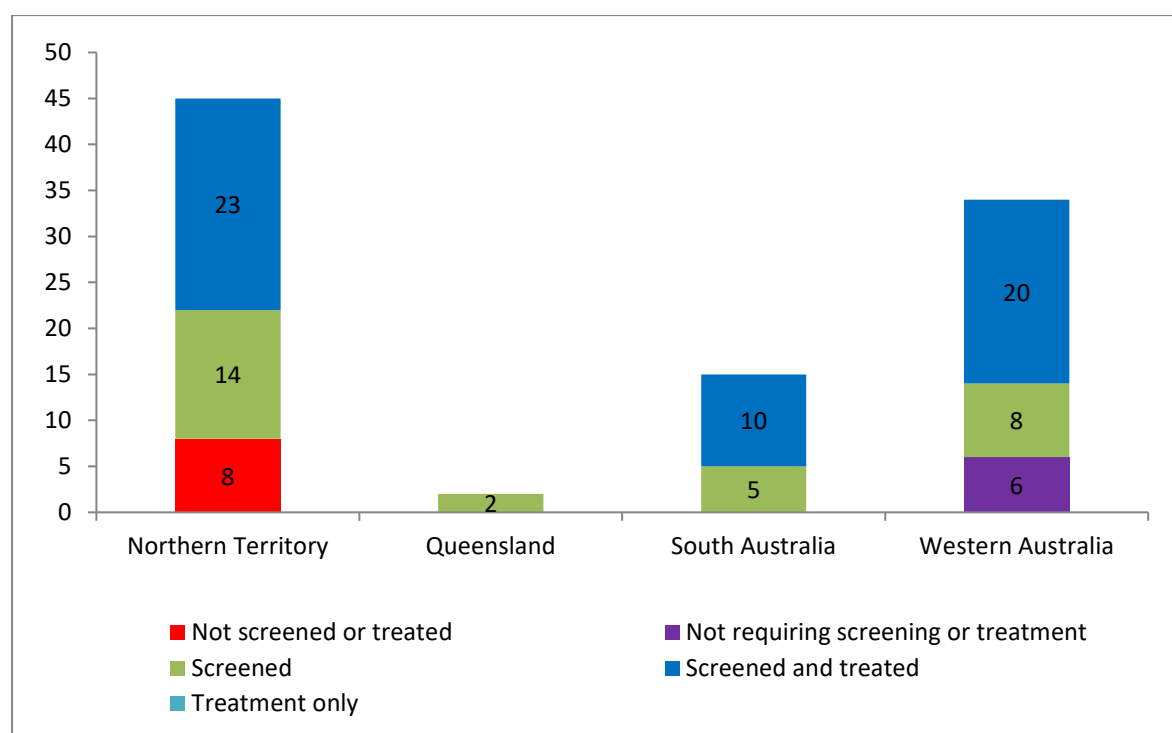


Figure 1.4 Population screening coverage in children aged 5-9 years in communities that were screened for trachoma by jurisdiction, Australia 2021



Figure 1.5 Proportion of screened children aged 5-9 years who had a clean face by jurisdiction, Australia 2007-2021

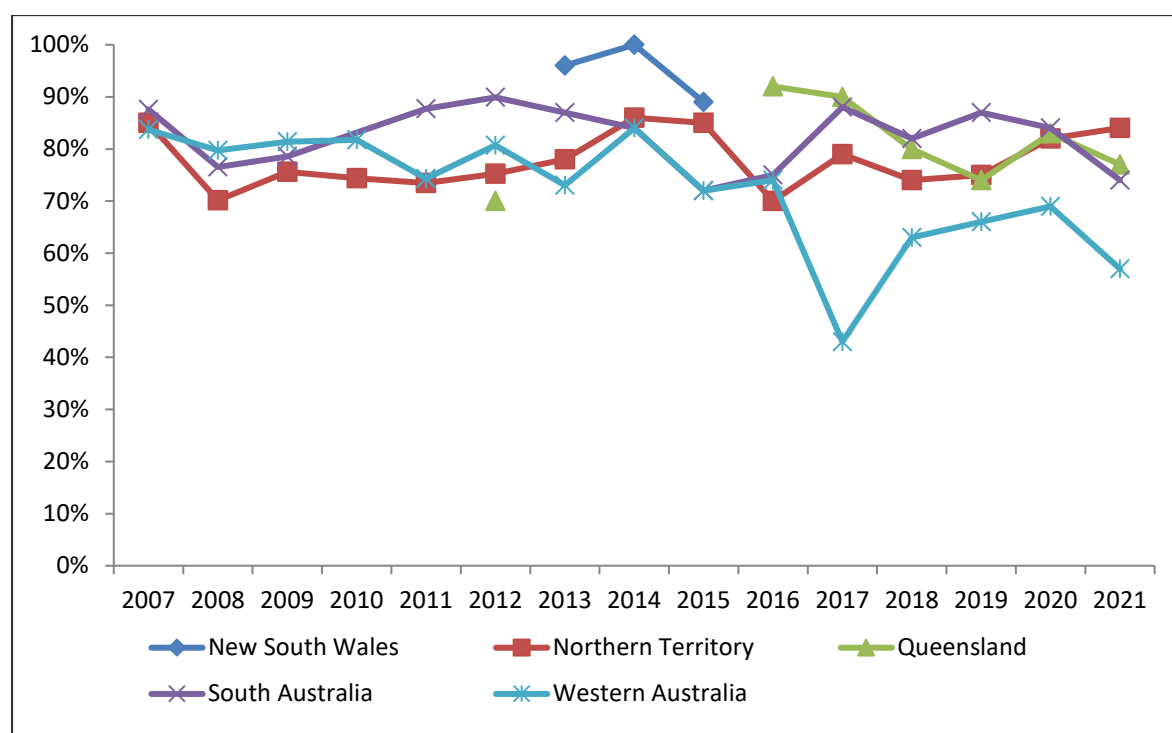


Figure 1.6a Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular (TF) among screened children aged 5-9 years by jurisdiction, Australia 2007-2021

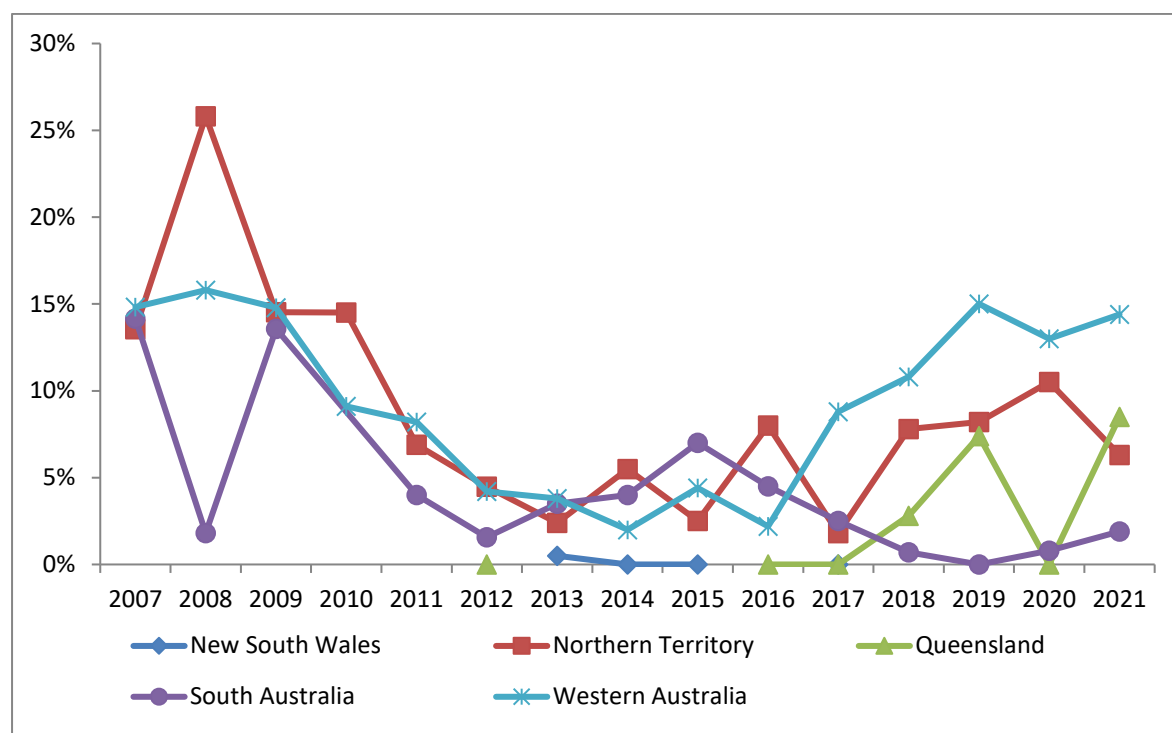
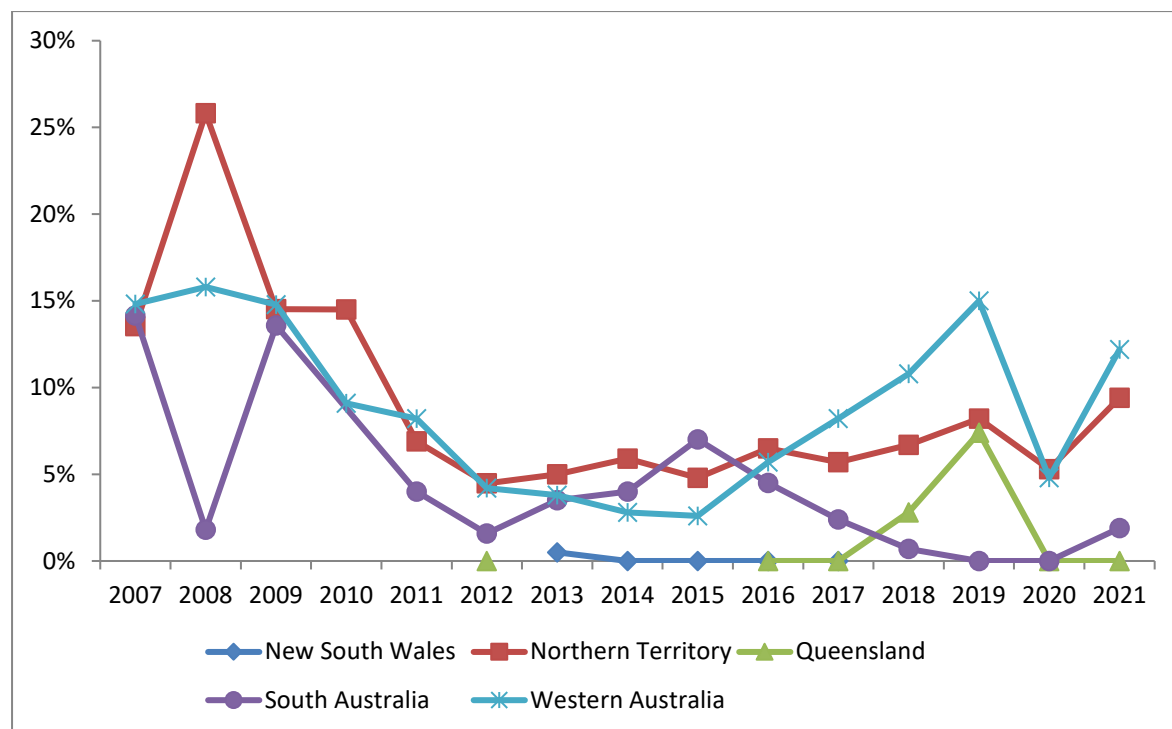
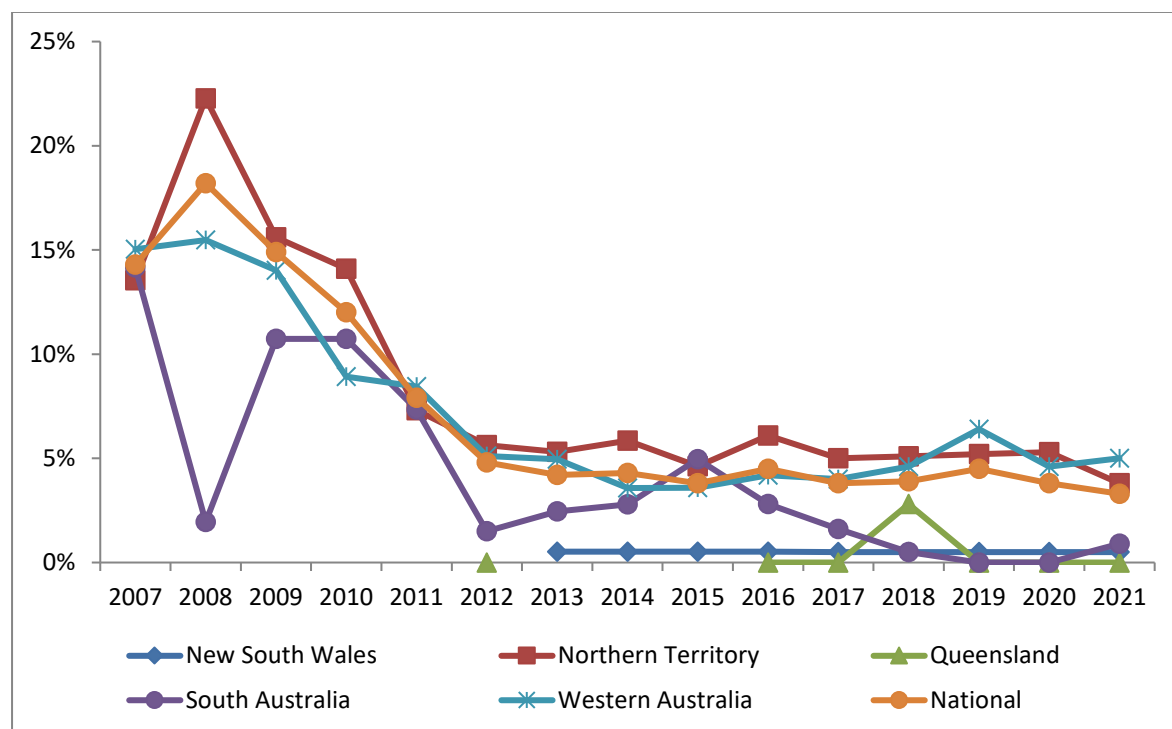


Figure 1.6b Estimated prevalence of trachoma among children aged 5-9 years by jurisdiction, Australia* 2007-2021



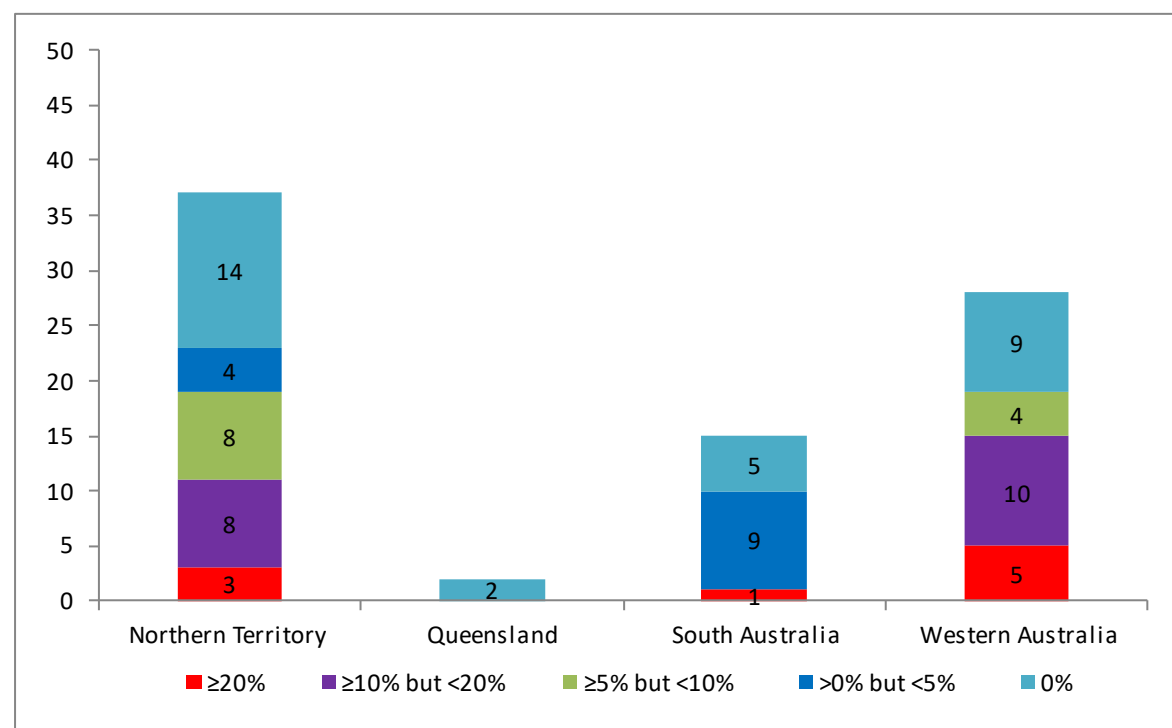
* Most recent estimates carried forward in at-risk communities that did not screen in 2021

Figure 1.6a Overall prevalence of trachoma among children aged 5-9 years by jurisdiction, Australia* 2007-2021



* Most recent estimates carried forward in all communities that were considered at risk at some time since 2007

Figure 1.7 Number of at-risk communities* according to the level of trachoma prevalence in children aged 5-9 years by jurisdiction, Australia 2021



* Including at-risk communities that did and did not screen in 2021

Figure 1.8 Proportion of at-risk communities with zero prevalence of trachoma by jurisdiction, Australia 2007-2021

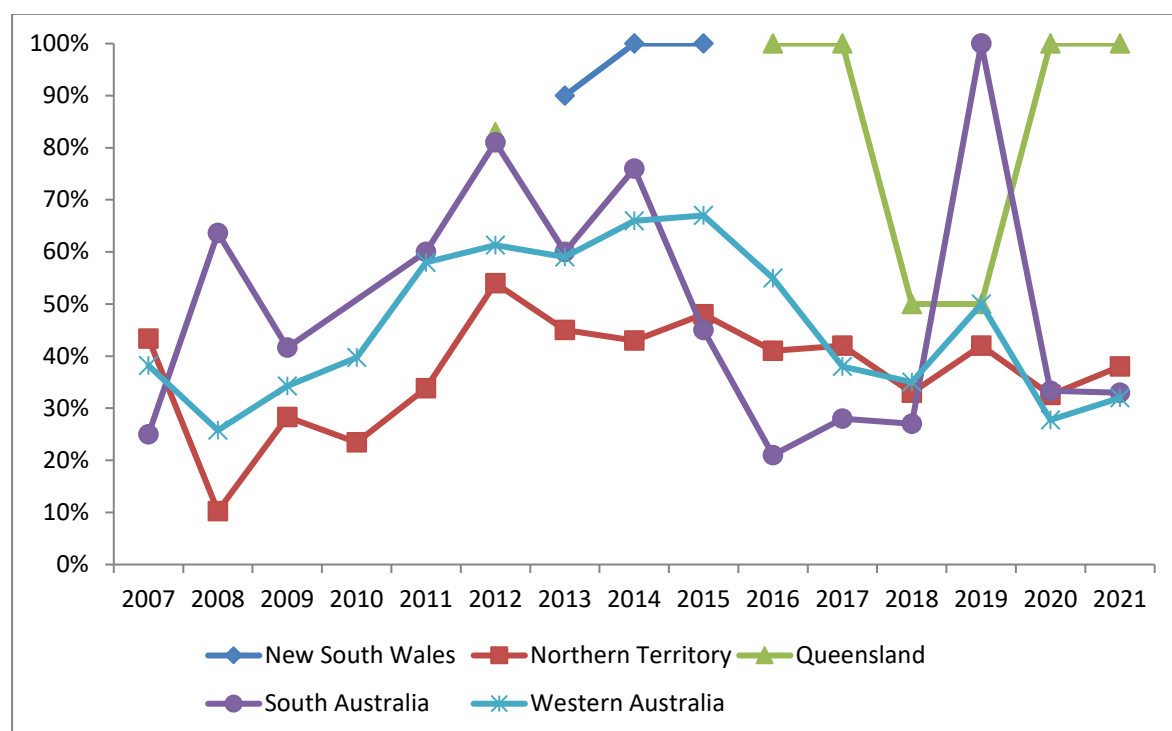


Figure 1.9 Proportion of at-risk communities with endemic (> 5%) levels of trachoma by jurisdiction, Australia 2007-2021

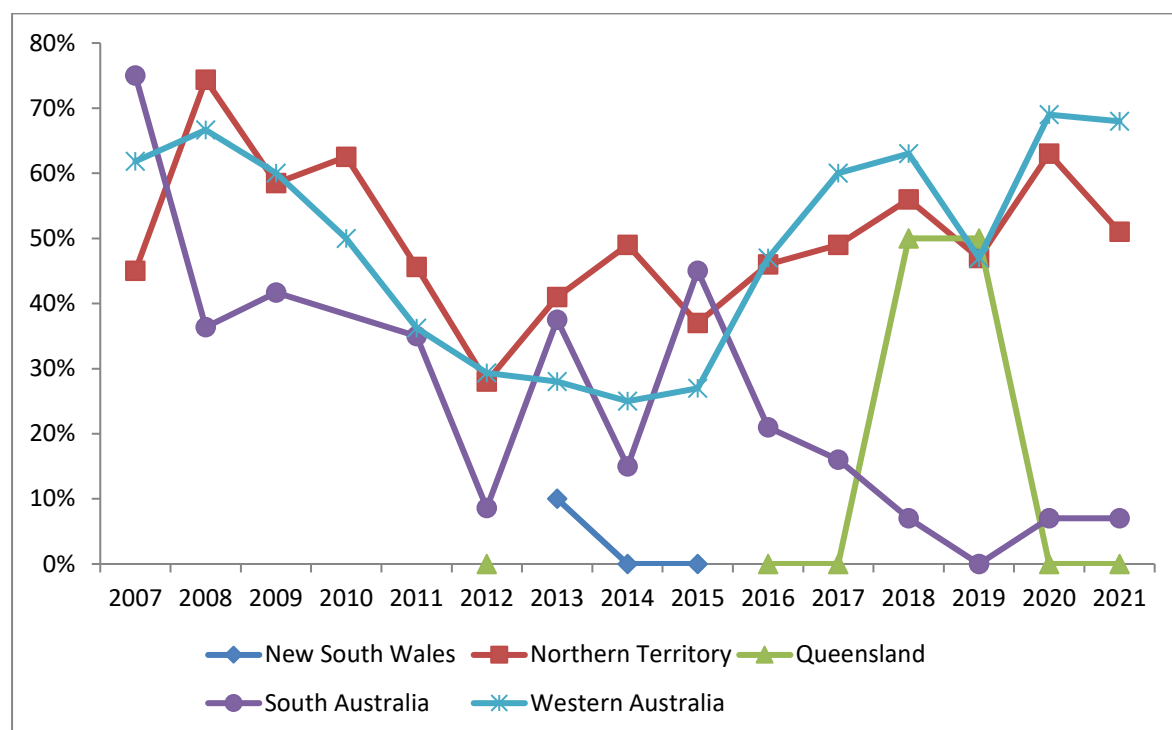


Figure 1.10 Number of doses of azithromycin administered for the treatment of trachoma by jurisdiction, Australia 2007-2021

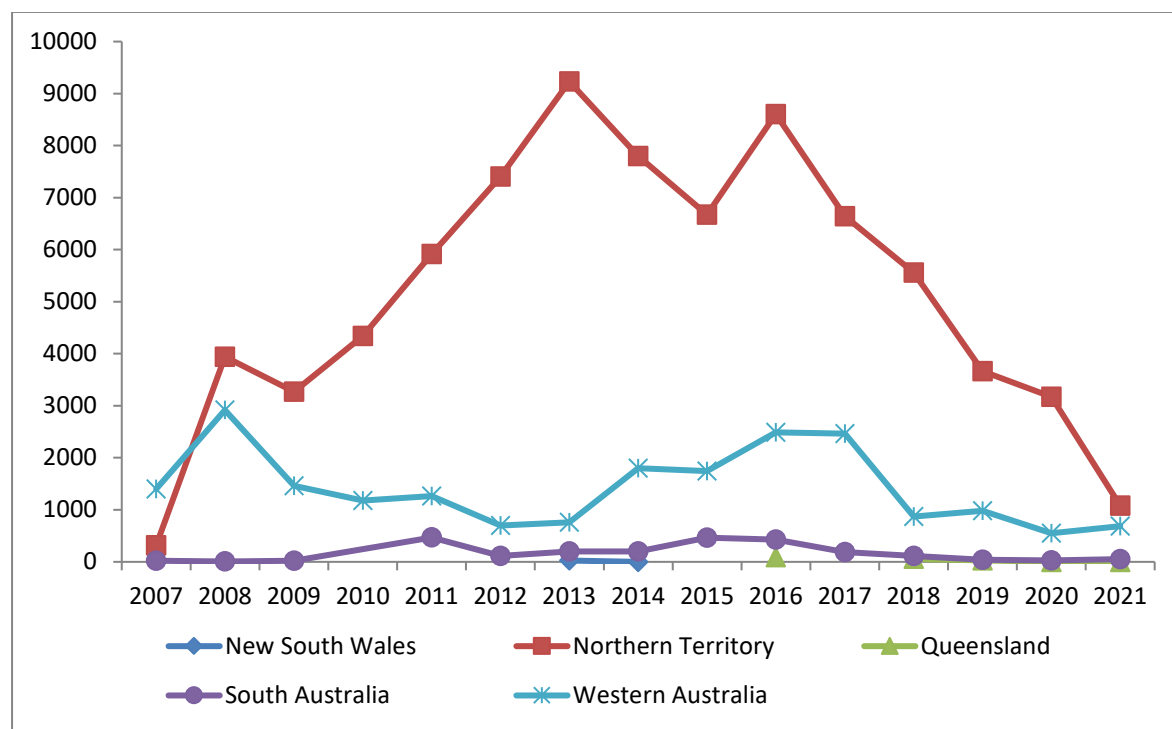


Table 1.1 Trachoma control delivery in at-risk* communities by jurisdiction, Australia 2021

Communities	Northern Territory	Queensland	South Australia	Western Australia	Total
At risk * (A)	41	2	15	34	92
Requiring screening for trachoma (B)	41	2	15	28	86
Screened for trachoma [†] (C)	37	2	15	28	82
Requiring treatment without screening (D) ‡	0	0	0	0	0
Received treatment without screening (E) ‡	0	0	0	0	0
Screened and/or treated for trachoma (F = C+E)	37	2	15	28	82
Requiring neither screening nor treatment for trachoma (G=A-B-D)	0	0	0	6	6

* As defined by each jurisdiction

† The NT screened 3 an additional 3 previously at-risk communities in 2021

‡ As per CDNA Guidelines

Table 1.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children aged 5-9 years by jurisdiction, Australia 2021

	Northern Territory	Queensland*	South Australia	Western Australia	Total
Number of communities screened	37	2	15	28	82
Children examined for clean face	922	122	372	522	1938
Children with clean face	778	91	277	300	1446
Clean face prevalence (%)	84	75	74	57	75
Estimated number† of Indigenous children in communities‡	979	131	426	506	2042
Children screened for trachoma	880	118	371	464	1833
Trachoma screening coverage (%)	90	90	87	92	90
Children with clinical findings consistent with TF*	55	11	7	67	140
Observed prevalence of clinical findings consistent with TF (%) §	6.3	9.3	1.9	14.4	7.6
Estimated prevalence of trachoma (%) §	9.4	0.0	1.9	12.3	7.2
Overall prevalence of trachoma (%) §	3.8	0.0	0.9	5.0	3.3

* The QLD data in this table refer to children with upper eyelid follicles consistent with the definition of trachomatous inflammation — follicular (TF). Children found to have this condition are further tested for the presence of *Chlamydia trachomatis* via ocular swab specimens. The findings of this test are presented in the QLD section.

† Jurisdictional estimate

‡ Communities that were screened for trachoma in 2021

§ Methods of calculating prevalence rates on page 22

Table 1.3 Number and proportion* of at-risk communities according to the level of trachoma prevalence in children aged 5-9 years, Australia 2007-2021

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
Communities at risk †	229		233		232		244		203		196		183		177		157		150		130		120		115		98		92	
Communities not screened ‡	106		102		116		89		51		9		20		0		8		8		1		8		4		2		13	
Number of communities §	123		121		116		152		152		187		163		177		149		142		129		112		111		96		82	
≥20%	3 2	26 %	5 4	45 %	2 6	22 %	4 4	29 %	2 1	14 %	15	8%	1 4	9%	1 7	10 %	1 6	11 %	1 5	11 %	1 7	13 %	1 3	12 %	2 4	22 %	1 6	17 %	9	11 %
≥10% but <20%	2 2	18 %	1 4	12 %	1 3	11 %	2 3	15 %	2 0	13 %	13	7%	2 0	12 %	3 6	20 %	2 7	18 %	2 9	20 %	3 0	23 %	3 4	30 %	1 3	12 %	2 7	28 %	1 8	22 %
≥5% but <10%	1 1	9%	1 4	12 %	1 2	10 %	1 5	10 %	2 0	13 %	20	11 %	2 1	13 %	1 2	7%	1 6	11 %	1 2	8%	1 3	10 %	1 6	14 %	8	7%	1 0	10 %	1 2	15 %
>0% but <5%	7	6%	1 2	10 %	2 4	21 %	1 6	11 %	1 9	13 %	24	13 %	1 7	10 %	1 3	7%	1 6	11 %	2 1	15 %	1 9	15 %	1 5	13 %	8	7%	1 2	13 %	1 3	16 %
0%	5 1	41 %	2 7	22 %	4 1	35 %	5 4	36 %	7 2	47 %	11 5	61 %	9 1	56 %	9 9	56 %	7 4	50 %	6 5	46 %	5 0	39 %	3 4	30 %	5 8	52 %	3 1	32 %	3 0	37 %

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per Guidelines

§ Screened or receiving ongoing annual treatment as per CDNA Guidelines

Table 1.4 Treatment strategies by jurisdiction, Australia 2021

Communities	Northern Territory	Queensland	South Australia	Western Australia	Total
Required treatment for trachoma	23	0	10	20	53
Treated for trachoma	23	0	10	20	53
Screened and treated	23	0	10	20	53
Received treatment only	0	0	0	0	0
Received 6-monthly treatment	0	0	0	0	0
Did not require treatment	14	2	5	14	35
Treated trachoma and households	17	0	10	19	46
Community-wide treatment	6	0	0	1	7
Not treated according to CDNA Guidelines	0	0	0	0	0

CDNA: Communicable Diseases Network Australia

Table 1.5 Trachoma treatment coverage, Australia 2021

	Northern Territory				Queensland					South Australia					Western Australia					Total					
	23				0					10					20					53					
Age group (years)	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for trachoma	1	55	3	3	59	0	0	0	0	0	0	7	1	8	8	6	67	14	0	87	7	129	18		154
Received treatment for trachoma	1	55	3	3	59	0	0	0	0	0	0	7	1	8	8	6	62	14	0	82	7	124	18		149
Received treatment for trachoma (%)	100	100	100	100	100	N/A	N/A	N/A		N/A	N/A	100	100	#DIV/0!	100	100	93	100	#DIV/0!	94	100	96	100		97
Estimated community members* requiring treatment	160	191	187	896	1434	0	0	0	0	0	4	7	8	31	50	99	86	106	556	847	263	284	301	1483	2331
Number of community members* who received treatment	108	141	145	628	1022	0	0	0	0	0	3	5	7	27	42	66	58	82	396	602	177	204	234	1051	1666
Estimated community members who received treatment (%)	68	74	78	70	71	N/A	N/A	N/A	N/A	N/A	75	71	88	87	84	67	67	77	71	71	67	72	78	71	71
Number of community members that declined treatment	39	21	26	169	255	0	0	0	0	0	0	0	0	0	0	2	5	4	24	35	41	26	30	193	290
Total number of doses of azithromycin delivered	109	196	148	628	1081	0	0	0	0	0	3	12	8	27	50	72	120	96	396	684	184	328	252	1051	1815
Estimated overall treatment coverage (%)	68	80	78	70	72	N/A	N/A	N/A	N/A	N/A	75	86	89	87	86	69	78	80	71	73	68	79	79	71	73

* Estimated as per CDNA Guidelines

Table 1.6 Trachoma-related trichiasis screening coverage, prevalence and treatment among Indigenous adults, Australia 2021

	Northern Territory		Queensland		South Australia		Western Australia		Total		
Number of communities screened for trichiasis	69		2		15		36		122		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in the region*	15544	9510	519	280	3175	2311	4880	2946	24118	15047	39165
Number of adults examined †	3865	3748	6	18	482	531	114	2671	4467	6968	11435
Number of adults with trichiasis	0	8	0	0	0	1	0	4	0	13	13
Proportion of adults with trichiasis (%)	0.00	0.21	0.00	0.00	0.00	0.2	0.00	0.15	0.00	0.2	0.11
Surgery in past 12 months‡	1	3	0	0	0	1	0	4	1	8	9

* Population estimate limited to trachoma endemic regions and does not consider changing endemic regions over time and transiency between regions

† Number of adults examined was limited to the numbers reported. This number may not account for all adults who may be examined in routine adult health checks, and may also include multiple screening

‡ Surgery cases may include cases identified in previous years

Table 1.7 Trachoma-related trichiasis surgery data collected from MBS Item 42588, Australia 2021

	New South Wales		Northern Territory		Queensland		South Australia		Tasmania		Western Australia		Total		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Surgery in the past 12 months	0	4	No data	No data	0	8	0	1	0	2	No data	No data	0	15	15

Jurisdictional-specific results

2. Northern Territory results

Trachoma program coverage

- In 2021, the NT identified 41 communities across 5 regions as being at risk of trachoma (Table 2.1, Figure 2.2).
- Of these at-risk communities, all 41 communities required screening or treatment for trachoma according to the current Guidelines (Table 2.1, Figure 2.3).
- Of the communities that required screening and treatment, (33/41) received the required service (Table 2.1).
- A further 4 communities not considered at risk of trachoma were screened for trachoma in 2021.
- A COVID-19 outbreak in the Katherine region led to 7 communities that required screening not receiving these services. These communities were scheduled to be screened in 2022.

Screening coverage

- In 2021 the NT identified 41 communities in the 5 regions requiring screening for trachoma with 33 of those screened (Table 2.1).
- A further 4 communities not considered at-risk of trachoma were screened for trachoma in 2021.
- The proportion of children aged 5-9 years screened in the 37 communities that received service was 90%, ranging from 84% in the Barkly region to 97% in the Darwin Rural region (Table 2.2, Figure 2.4).

Facial cleanliness

- Clean face prevalence was assessed in all communities that were screened in 2021.
- The overall prevalence of clean faces among children aged 5-9 years in the communities assessed was 84%, ranging from 83% in the Alice Springs Remote region to 88% in the Darwin Rural region (Table 2.2, Figure 2.5).

Trachoma prevalence

- The observed prevalence of trachoma in those aged 5-9 years in 37 communities that were screened in 2021 was 6.3% (55/880). Prevalence ranged from 5.6% in the Alice Springs Remote region to 7.5% in the Barkly region (Table 2.2, Figure 2.6a).
- The overall prevalence of trachoma in those aged 5-9 years was 3.8%, ranging from 0.6% in the Darwin Rural region to 7.5% in the Barkly region (Table 2.2, Figure 2.6c).
- No trachoma was reported in 38% (14/37) of the screened at-risk communities (Table 2.3).
- Endemic levels of trachoma ($\geq 5\%$) were reported in 51% (19/37) of the screened at-risk communities (Table 2.3).
- Hyperendemic levels of trachoma ($\geq 20\%$) were reported in 8% (3/37) of the at-risk communities (Table 2.3).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 23 communities (Table 2.4).
- Treatment was delivered to trachoma cases and household contacts in 17 communities, and community-wide in 6 communities as per CDNA Guidelines (Table 2.4).
- Total treatment coverage for those with trachoma and community members, and community-wide treatment in all regions requiring treatment was 72% with 1081 doses of azithromycin delivered (Table 2.5, Figure 2.8).

- In 2021 the NT recorded 255 people who declined treatment with 71 in the Alice Springs Remote region, 138 in the Barkly region and 46 in the Darwin Rural region. (Table 2.5).

Trichiasis

- Reporting for trichiasis screening was available for 69 communities (Table 2.6).
- Overall, 7613 adults aged 15 years and older were reported to be screened (Table 2.6).
- The prevalence of trichiasis in adults aged 15 years and over was 0.11%, and 0.21% in adults aged 40 years and over (Table 2.6).
- Surgery for trichiasis was reported to be undertaken for 4 adults aged 15 years or over (Table 2.6).

Health promotion and environmental health

2021 was a productive year for trachoma health promotion activities in the Northern Territory despite multiple lockdowns in 2020 due to COVID-19. The NT Trachoma Program is very grateful for the assistance of its partners over 2021 in providing health promotion and environmental health activities in the effort to eliminate trachoma. In collaboration with its partners, the NT Trachoma Program delivered 213 trachoma-related programs to 59 communities.

Health promotion

The trachoma mascot, Milpa the Goanna, and the Clean Face, Strong Eyes program continued to be promoted throughout remote Aboriginal communities in 2021. Milpa and his message were widely recognised and reinforced through a range of methods, including one-on-one education, presentation to groups and interactive group activities using videos and songs. In addition, other resources such as posters, cards and stickers featuring Milpa and his message were widely used in health promotion and community engagement activities. The trachoma nurses and education team promoted the activities in various settings (councils, schools, local healthcare services, stores and art centres) to reach a broad range of individuals and groups in communities, including school children, teachers, caregivers, healthcare workers and community members. At-risk communities were visited by the trachoma team approximately 2-4 times during the year, for trachoma screening and treatment activities, local authority meetings and community engagement events.

The hygiene messages of Milpa Six Steps became even more important with the public health advice being given to limit the spread of COVID-19. The resource materials of *Trachoma Six Steps* in 2021 were adapted to the current public health situation and a new feature of cough and sneeze etiquette was included in the templates. Trachoma nurses effectively incorporated the strategies for COVID-19 prevention in trachoma-related health promotion and activities targeting specific individuals and groups in remote Aboriginal communities from Barkly and Central Australia. These health promotion activities were delivered by the trachoma clinical staff alongside Indigenous Eye Health (IEH) and Life Education NT.

Social marketing and communications

Life Education NT assisted the Indigenous Eye Health (IEH) team to launch Milpa's Trachoma App at Yipirinya School. The launch was extremely successful with several local stakeholders supporting the initiative; it was subsequently introduced to schools in Central and Barkly region throughout the year.

Milpa's Six Steps to Stop Germs app was developed by IEH in 2021 with the aim of making the already developed 6-step resources more interactive for and appealing to school children and educators.

In support of the NT Department of Education's Eye and Ear health program currently in schools across the NT, IEH also held a Milpa's six step poster competition for NT schools in partnership with the NT Department of Education. The organisers received several entries.

Distribution of soap, sanitiser and other hygiene-related items

Thirty-two boxes containing 200 soaps each have been shipped to 26 NT government clinics in communities along with educational resources. The soaps along with health education on ways to prevent disease will be distributed to people presenting to the clinic with a hygiene-related infectious disease.

Sporting and community events

Trachoma-related health promotion was conducted in partnership with IEH and Life Education NT. NT Trachoma and IEH attended the Yipirinya Middle School and Acacia Hill School Health Expo in Alice Springs to promote health and wellbeing. IEH also accompanied the Trachoma team in 6 of the screening and treatment trips to the Central Desert and McDonnell region, providing health promotion activities to communities. Life Education NT and the Trachoma program ran interactive group sessions, using the characters Healthy Harold and Milpa, to promote hygiene and healthy living during the Barkly sports carnival

Environmental Health

Water trailers and low-cost wash stations

Recognising the need for enhanced hand hygiene under the COVID-19 response, a collaboration was established in 2020 between the regional councils (MacDonnell and Barkly), the NT Department of Health, Rotary, and the Alice Springs Correctional Centre, the National Indigenous Advancement Agency, and Community Development Program providers. The aim was to rapidly provide 35 communities in Central Australia and Barkly with wash and hygiene infrastructure and consistent hand hygiene and general hygiene messaging. The project aimed to provide water trailer wash stations, low-cost temporary wash stations and soap-hygiene education. During 2021, nearly 60 wash stations of 2 sizes (15x200 L and 46x20 L) were delivered to 26 communities to enable hand and face washing. The distribution was based on community demand. Ten wash stations were delivered to 8 Utopia homelands through Urapuntja Aboriginal Corporation to enable hand and face washing. A hand wash station was also delivered to Hamilton Downs Youth camp to encourage hand washing for youth attending the camp. A hand wash station was delivered to CatholicCare Community Development Program to train communities in welding to build their own wash stations.

E-Space Project

This project used an all-of-community approach and infrastructure provision to prevent childhood hygiene-related infections, combining standardised hygiene messaging with the installation of health hardware such as wash stations in 5-6 settings across the community. The main partners were NT Environmental health, MacDonnell Regional Council and Rotary EndTrachoma 2020. The program is to be rolled out in 3 communities southeast of Alice Springs. So far, 6 infrastructure installations have been completed in Titjikala. Initial community discussions are completed in Finke for Phase 2 of the project.

Coordination

NT Trachoma Group has a Central Australian focus and is run by the Central Australia Health Service trachoma team. It meets monthly and brings together all the main organisations working in trachoma to share updates and work collaboratively to coordinate remote trips and share resources.

Health Hardware and Hygiene Network is NT wide, Top End based and coordinated by the NT government. It aims to provide leadership in promoting safe hygiene behaviours and functioning health hardware in remote communities, engage Aboriginal people in developing a hygiene strategy, facilitate communication and collaboration, and advocate for long-term investment in a skilled community-based Aboriginal environmental health workforce. Members are various groups within the NT Department of Health (Environmental Health, System Strategic Policy and Planning, Primary Health Care, Trachoma Program, Rheumatic Heart Disease Control Program and Hearing Health); the Aboriginal Medical Services

Association Northern Territory (AMSANT); Department of Housing and Community Development; the Families as First Teachers group in the Department of Education; Fred Hollows Foundation; the University of Melbourne's IEH and the One Disease organisation.

Central Australia Environmental Working Group is based in Central Australia and Barkly, with coordination provided by IEH. The group aims to support environmental improvements in remote communities to eliminate trachoma. Members are the NT Government Departments of Health, Education, Housing, and Infrastructure, AMSANT and its local affiliate members and regional councils.

NT Department of Education, IEH and Central Australia – Clean Faces, Strong Eyes group meets monthly. The NT Department of Education provided additional soap and hand sanitiser to schools and increased the frequency of cleaning in schools due to COVID-19. This group coordinates efforts across schools in terms of links to curriculum, hygiene routines in schools and Families as First Teachers programs and supports the screening and treatment visits to schools.

Figures and Tables – Northern Territory

Figure 2.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Northern Territory 2021

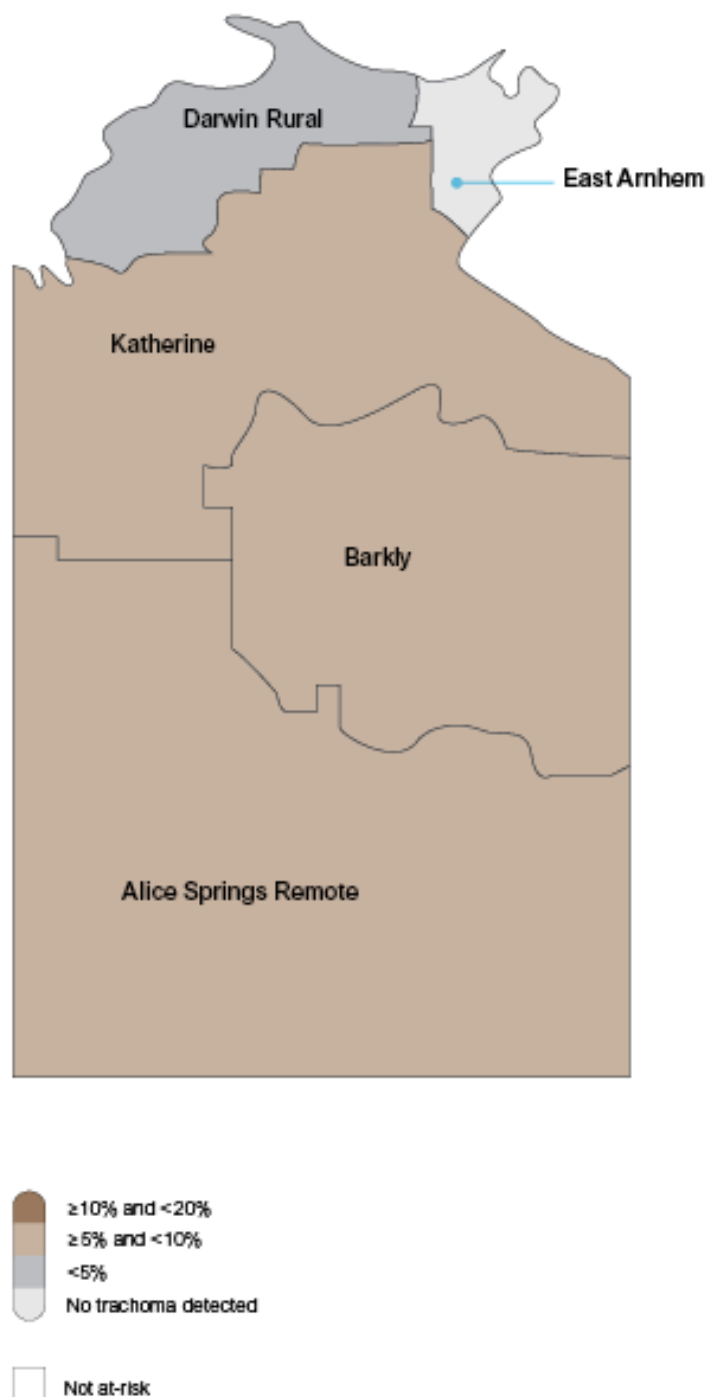


Figure 2.2 Number of at-risk communities by region, Northern Territory 2007-2021

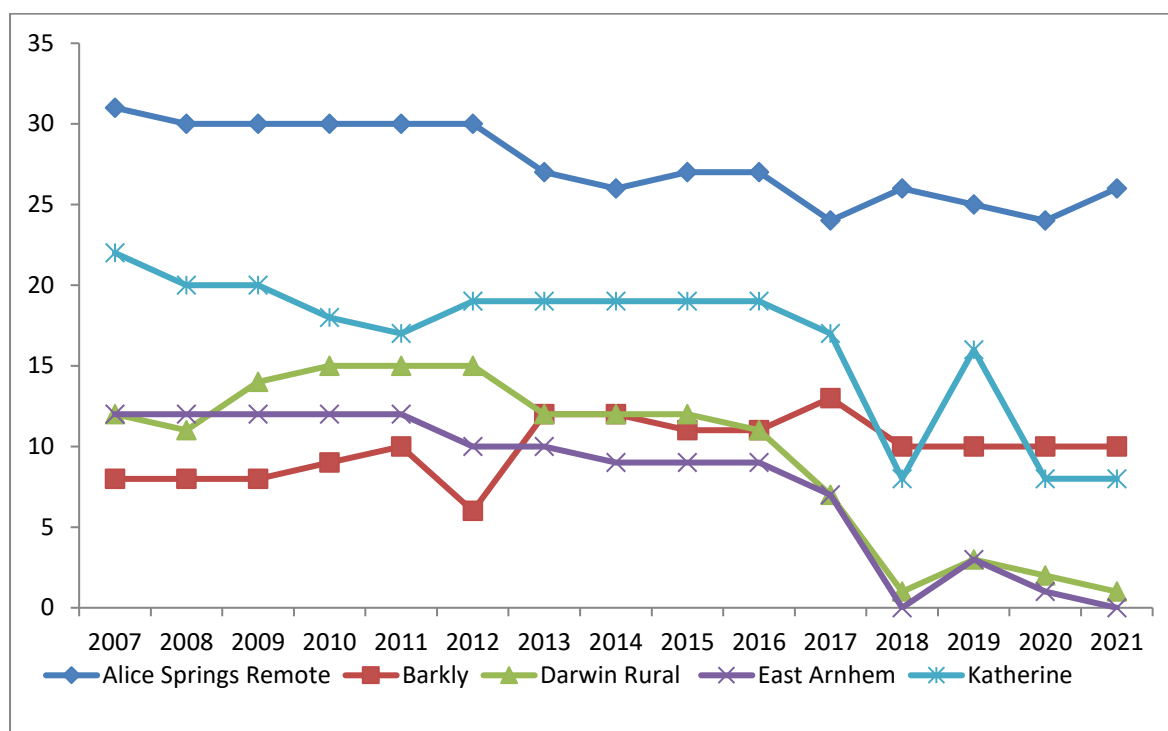


Figure 2.3 Number of at-risk communities by region and trachoma control strategy, Northern Territory 2021

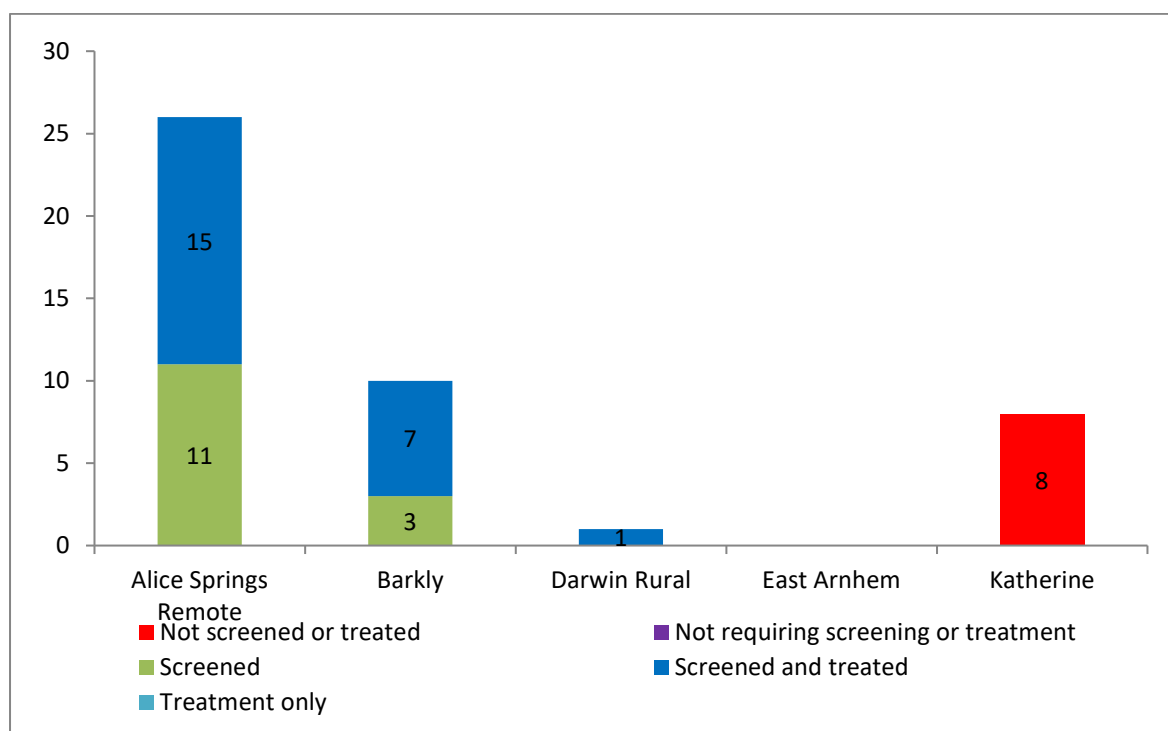
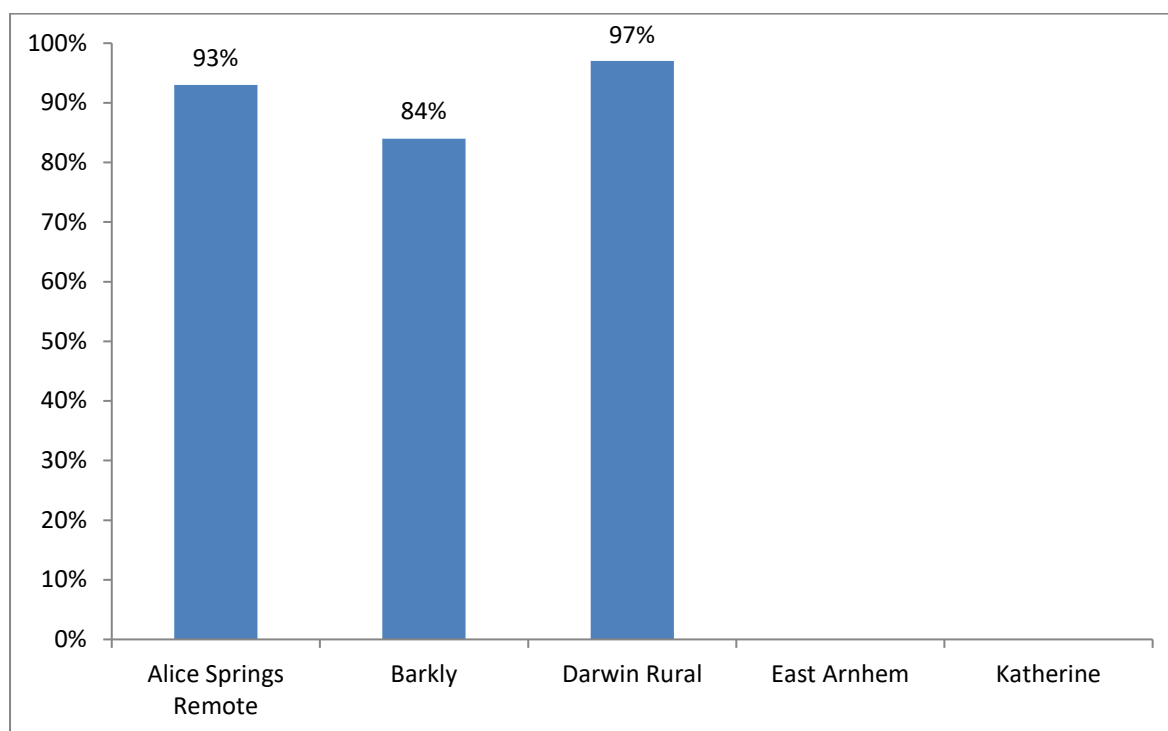


Figure 2.4 Population screening coverage of children aged 5-9 years in communities* that required screening for trachoma by region, Northern Territory 2021



* No communities were screened in the East Arnhem and Katherine regions in 2021

Figure 2.5 Proportion of screened children aged 5-9 years who had a clean face by region, Northern Territory 2007- 2021

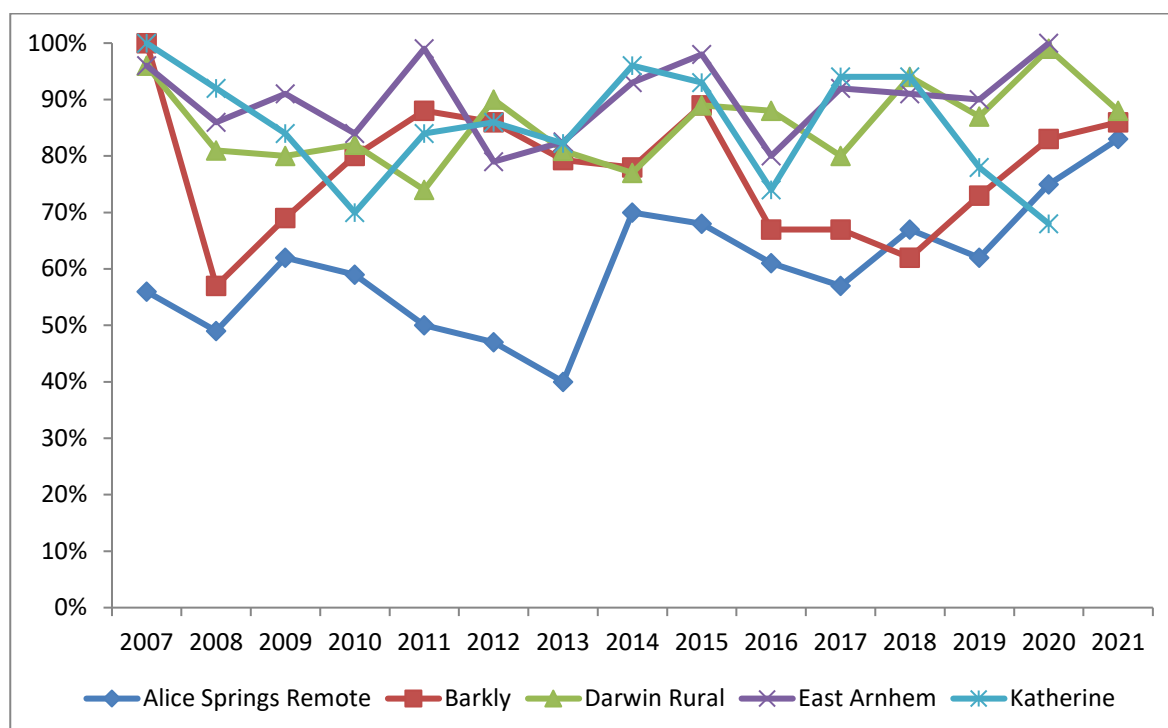


Figure 2.6a Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular among children aged 5-9 years in communities that were screened by region, Northern Territory 2007-2021

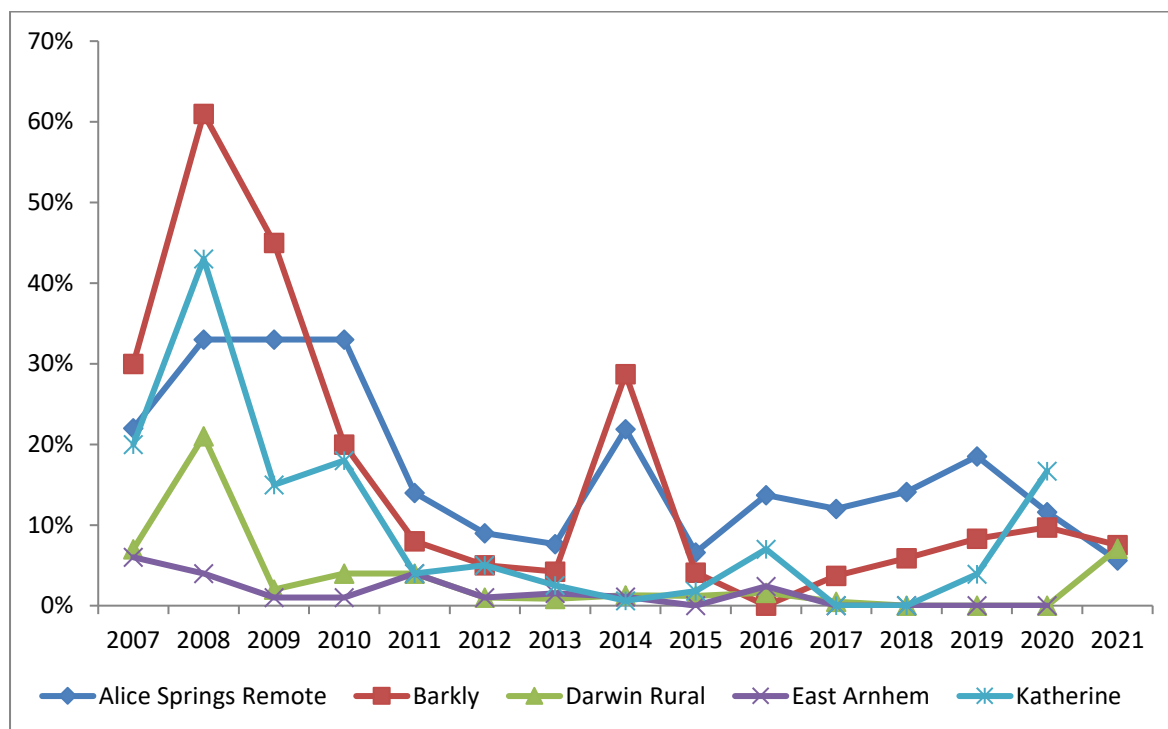
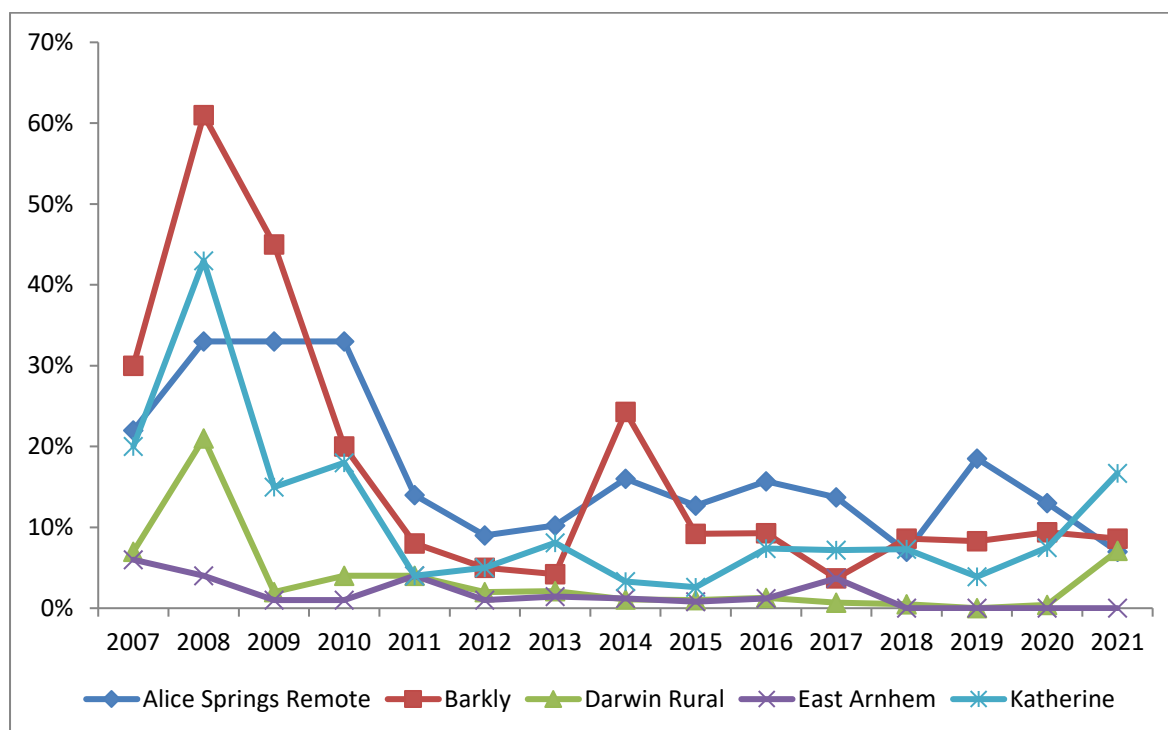
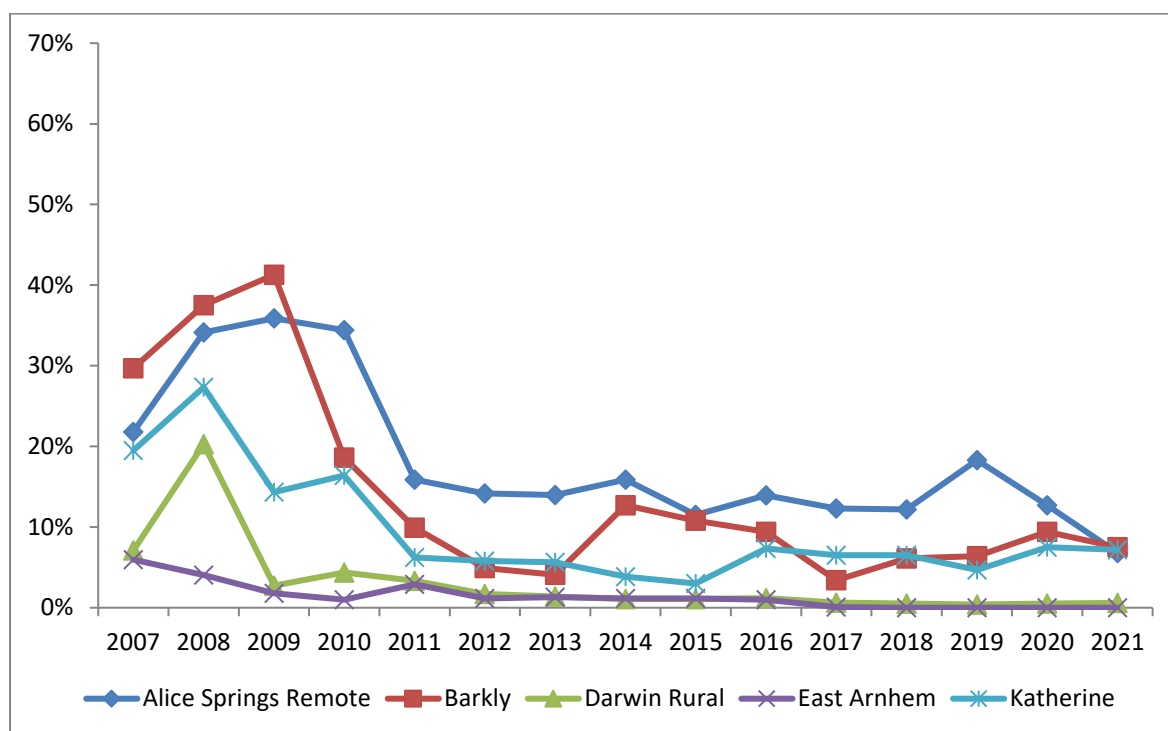


Figure 2.6b Estimated prevalence of trachoma among children aged 5-9 years in all at-risk communities* by region, Northern Territory 2007-2021



* Most recent estimates carried forward in at-risk communities that did not screen in 2021

Figure 2.6c Overall prevalence of trachoma* among children aged 5-9 years by region, Northern Territory 2007- 2021



* Calculated carrying forward most recent data in all communities considered at risk of trachoma at some time since 2007

Figure 2.7 Number of at-risk communities* according to the level of trachoma prevalence in children aged 5-9 years by region, Northern Territory 2021

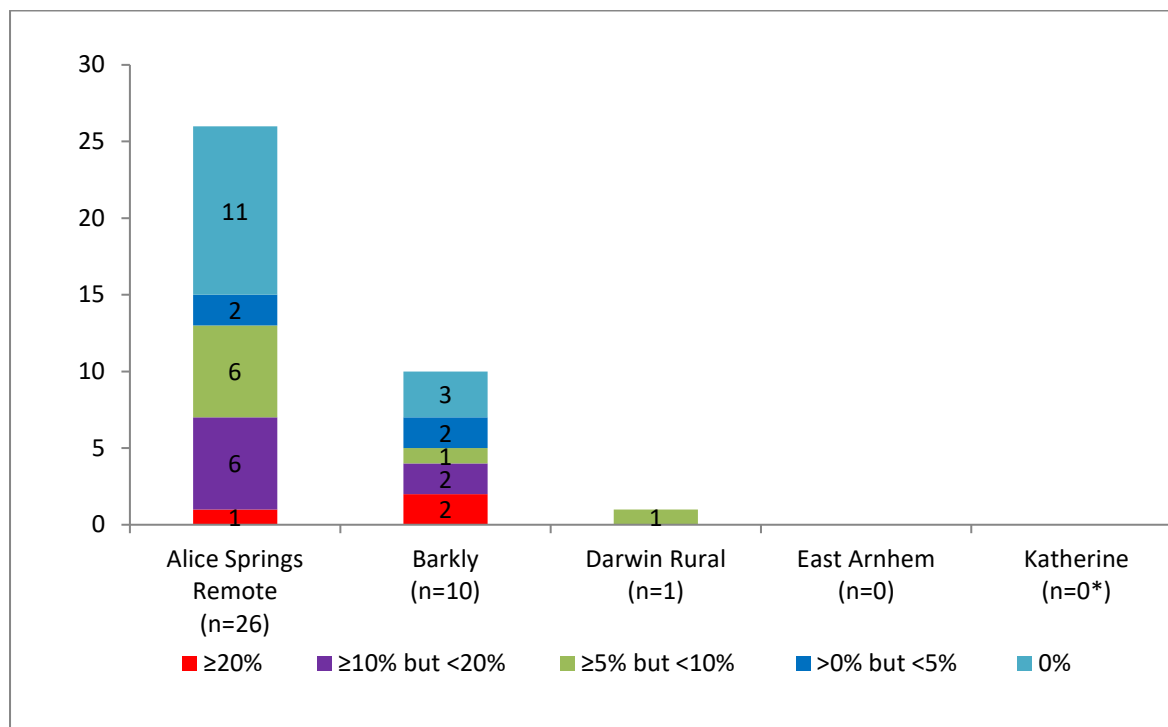


Figure 2.8 Number of doses of azithromycin administered for the treatment of trachoma by region, Northern Territory 2007- 2021

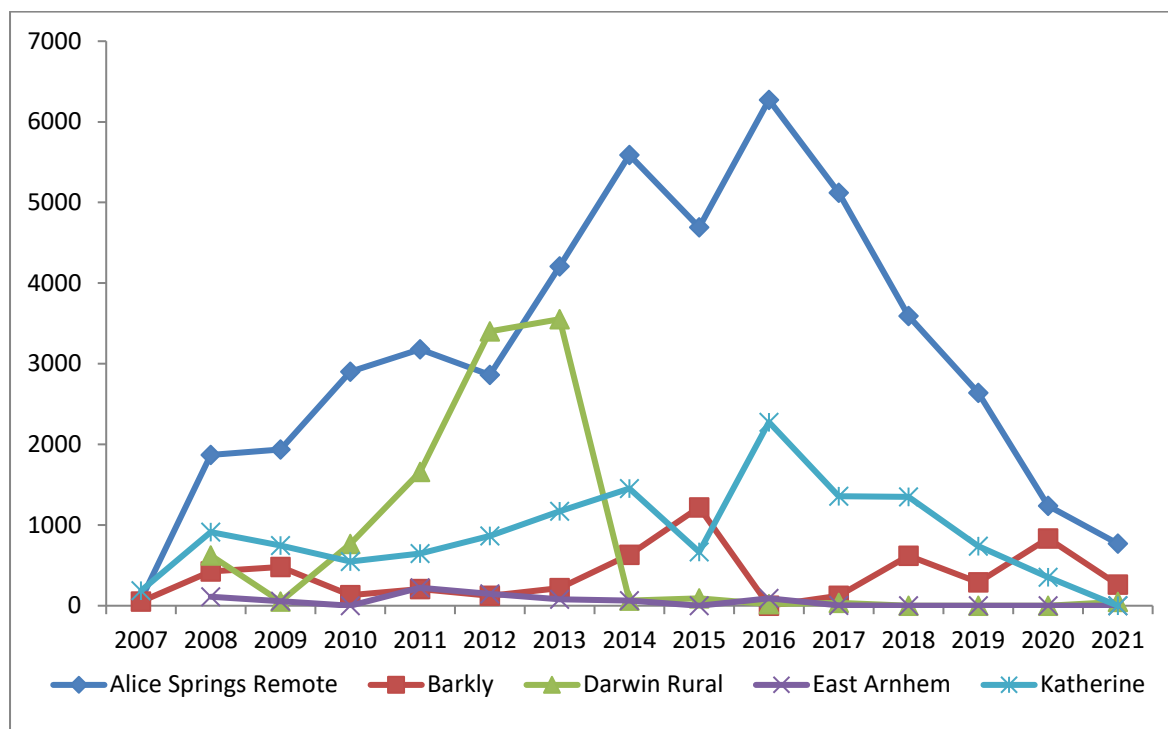


Table 2.1 Trachoma control delivery in at-risk* communities by region, Northern Territory 2021

Communities	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
At-risk * (A)	24	10	0	0	7	41
Requiring screening for trachoma (B)	24	10	0	N/A	7	41
Screened for trachoma (C)	26	10	1	N/A	0	37
Requiring treatment without screening † (D)	0	0	0	N/A	0	0
Received treatment without screening † (E)	0	0	0	N/A	0	0
Screened and/or treated for trachoma (F = C+E)	26	10	1	N/A	0	37
Requiring neither screening nor treatment for trachoma (G=A-B-D)	0	0	0	N/A	0	0

* As defined by each jurisdiction

† As per CDNA Guidelines

Table 2.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Northern Territory 2021

	Alice Springs Remote				Barkly*				Darwin Rural				East Arnhem				Katherine*				Total			
Number of communities screened	26				10				1				0				0				37			
Age group (years)	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14
Children examined for clean face	6	601	22	629	2	296	15	313	0	25	8	33	0	0	0	0	0	0	0	0	8	922	45	975
Children with clean face	3	501	19	523	0	255	14	269	0	22	6	28	0	0	0	0	0	0	0	0	3	778	39	820
Clean face prevalence (%)	50	83	86	83	0	86	93	86	N/A	88	75	85	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	38	84	87	84
Estimated number* of Aboriginal children in communities†	593	618	722	1933	178	332	202	712	36	29	51	116	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	807	979	975	2761
Children screened for trachoma	3	572	12	587	1	280	15	296	0	28	8	36	0	0	0	0	0	0	0	0	4	880	35	919
Trachoma screening coverage (%)	1	93	2	30	1	84	7	42	0	97	16	31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	90	4	33
Children with clinical findings consistent with TF ⁺	0	32	2	34	1	21	1	23	0	2	0	2	0	0	0	0	0	0	0	0	1	55	3	59
Observed prevalence of clinical findings consistent with TF ⁺ (%)	0.0	5.6	16.7	5.8	100.0	7.5	6.7	7.8	N/A	7.1	0.0	5.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	25.0	6.3	8.6	6.4
Estimated prevalence of active trachoma‡ (%)		7				8.6				7.1				0				16.7			9.4			
Overall prevalence of active trachoma‡ (%)		6.8				7.5				0.6				0				7.2			3.8			

TF: trachomatous inflammation - follicular

* Jurisdiction provides estimates for children aged 5-9 years only; number of children in communities aged 0-4 and 10-14 years are based on convenience sampling

† In communities that were screened for trachoma in 2021

‡ Methods of calculating prevalence rates on page 23

Table 2.3 Number and proportion of at-risk communities according to the level of trachoma prevalence* in children aged 5-9 years, Northern Territory 2007-2021

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
Communities at-risk †	89		87		86		86		86		82		80		78		78		77		68		61		57		45		41	
Communities not screened ‡	25		25		33		21		19		4		12		0		8		8		1		8		2		3		7	
Number of communities §	60		43		53		64		65		76		68		78		70		69		67		53		55		43		37	
≥20%	1 2	20 %	2 5	58 %	1 9	36 %	2 7	42 %	9	14 %	5	7%	5	7%	1 4	18 %	1 1	16 %	1 1	16 %	1 0	15 %	7	13 %	1 2	22 %	8	19 %	3	8%
≥10% but <20%	8	13 %	6	14 %	8	15 %	4	6%	9	14 %	9	12 %	1 4	21 %	1 4	18 %	1 1	16 %	1 3	19 %	1 2	18 %	2 1	40 %	1 0	18 %	1 3	30 %	8	22 %
≥5% but <10%	4	7%	4	9%	3	6%	9	14 %	1 1	17 %	9	12 %	9	13 %	1 0	13 %	7	10 %	8	12 %	9	13 %	7	13 %	4	7%	6	14 %	8	22 %
>0% but <5%	7	12 %	4	9%	9	17 %	9	14 %	1 4	22 %	1 3	17 %	9	13 %	6	8%	1 0	14 %	9	13 %	8	12 %	4	8%	6	11 %	2	5%	4	11 %
0%	2 9	48 %	4	9%	1 4	26 %	1 5	23 %	2 2	34 %	4 0	53 %	3 1	46 %	3 4	44 %	3 1	44 %	2 8	41 %	2 8	42 %	1 4	26 %	2 3	42 %	1 4	33 %	1 4	38 %

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per CDNA Guidelines

§ Screened or receiving ongoing annual treatment as per CDNA Guidelines

Table 2.4 Treatment strategies by region, Northern Territory 2021

	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Required treatment for trachoma	15	7	1	N/A	N/A	23
Treated for trachoma	15	7	1	N/A	N/A	23
Screened and treated	15	7	1	N/A	N/A	23
Received treatment only	0	0	0	N/A	N/A	0
Received 6-monthly treatment	0	0	0	N/A	N/A	0
Did not require treatment	11	3	0	N/A	N/A	14
Treated trachoma and households	11	5	1	N/A	N/A	17
Community-wide treatment	4	2	0	N/A	N/A	6
Not treated according to CDNA Guidelines	0	0	0	N/A	N/A	0

CDNA: Communicable Diseases Network Australia

Table 2.5 Trachoma treatment coverage by region, * Northern Territory 2021

	Alice Springs Remote					Barkly					Darwin Rural					East Arnhem					Katherine					Total				
Age group (years)	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for active trachoma	0	32	2		34	1	21	1		23	0	2	0		2	0	0	0		0	0	0	0		0	1	55	3		59
Received treatment for active trachoma	0	32	2		34	1	21	1		23	0	2	0		2	0	0	0		0	0	0	0		0	1	55	3		59
Received treatment for active trachoma (%)	N/A	100	100		100	100	100	100		100	N/A	100	N/A		100	N/A	N/A	N/A		N/A	N/A	N/A	N/A		N/A	100	100	100		100
Estimated community members* requiring treatment	100	127	134	625	986	58	61	44	237	400	2	3	9	34	48	0	0	0	0	0	0	0	0	0	0	160	191	187	896	1434
Number of community members* who received treatment	74	103	105	454	736	32	35	32	141	240	2	3	8	33	46	0	0	0	0	0	0	0	0	0	0	108	141	145	628	1022
Estimated community members who received treatment (%)	74	81	78	73	75	55	57	73	59	60	100	100	89	97	96	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	74	78	70	71
Number of community members that refused treatment	12	5	8	46	71	25	13	10	90	138	2	3	8	33	46	0	0	0	0	0	0	0	0	0	0	39	21	26	169	255
Total number of doses of azithromycin delivered	74	135	107	454	770	33	56	33	141	263	2	5	8	33	48	0	0	0	0	0	0	0	0	0	0	109	196	148	628	1081

Estimated overall treatment coverage (%)	74	85	79	73	75	56	68	73	59	62	100	100	89	97	96	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	68	80	78	70	72
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* Includes household contacts and community members requiring and receiving mass drug administration (MDA)

Table 2.6 Trichiasis screening coverage, prevalence, and treatment among Indigenous adults by region, Northern Territory 2021

	Alice Springs Remote		Barkly		Darwin Rural		East Arnhem		Katherine		Total		
Number of communities screened for trichiasis	26		6		15		10		12		69		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in the region*	3091	2012	1225	765	5225	3094	4128	2496	1875	1143	15544	9510	25054
Number of adults examined [†]	822	830	194	192	1736	1589	884	630	229	507	3865	3748	7613
Number of adults with confirmed trichiasis	0	3	0	0	0	0	0	5	0	0	0	8	8
Proportion of adults with trichiasis (%)	0.00	0.36	0.00	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.21	0.11
Surgery in past 12 months [‡]	1	3	0	0	0	0	0	0	0	0	1	3	4

* Population estimate limited to trachoma endemic regions and does not consider changing endemic regions over time and transiency between regions

† Number of adults examined was limited to the numbers reported. This number may not account for all adults who may be examined in routine adult health checks, and may also include multiple screening

‡ Surgery cases may include cases identified in previous years

Table 2.7 Health promotion activities by region, Northern Territory 2021

	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Number of communities that reported health promotion activities	22	10	1	0	16	49
Total number of programs reported	99	36	2	0	24	161
Methods of health promotion						
One-on-one discussion	78	25	2		4	109
Presentation to group	73	23	1		10	107
Interactive group session	61	21	2		23	107
Social marketing	5				1	6
Print material/mass media	66	13	1		1	81
Sporting/community events	9	3			10	22
Other			1			1
Target audience						
Health professionals/staff	31	5	1		3	40
Children	47	25	1		21	94
Youth	18	8			20	46
Teachers/childcare/preschool staff	32	14	1		1	48
Caregivers/parents	23	8			14	45
Community members	22	9			13	44
Community educators/health promoters	15	3			1	19
Interagency members	10	3			1	14
Frequency of health promotion activities						
Once	92	33	2		24	151
Occasional *	7	3				10
Regular†						
Ongoing/routine						

* 2-4 times per year

† 5-12 times per year

3. Queensland results

Trachoma program coverage

- In 2021 QLD undertook screening for trachoma in 2 communities in North West QLD identified as being potentially at risk of trachoma (Table 3.1).

Screening coverage

- Population screening coverage of children aged 5-9 years was 90% (Table 3.1).

Facial cleanliness

- The prevalence of clean faces among children aged 5-9 years was 75% (Table 3.1).

Presence of upper eyelid follicles meeting the definition for trachomatous inflammation — follicular (TF)

- The observed prevalence of clinical signs consistent with TF in children aged 5-9 years in the 2 communities that were screened in 2021 was 9% (Table 3.1).
- In North West QLD 11 children aged 5-9 years met the WHO simplified grading system for TF. All were PCR negative for *C. trachomatis*. 1/11 children had evidence of corneal pannus; no child was found to have Herbert's pits.

Treatment delivery and coverage

- Trachoma treatment strategies were applied in one community in North West QLD in 2021 with the treatment of one case only.

Trichiasis

- Trachomatous trichiasis screening was undertaken in 2 communities in 2021 with 24 adults screened for trichiasis (Table 3.2)
- No trachomatous trichiasis was detected in QLD in 2021.

Health promotion

- Health promotion activities occurred in 2 communities in North West QLD (Table 3.3).
- A total of 7 health promotion activities were reported (Table 3.3).

Figures and Tables – Queensland

Figure 3.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Queensland 2021



Table 3.1 Trachoma screening coverage, prevalence of clinical features consistent with trachomatous inflammation — follicular (TF) and clean face prevalence, Queensland 2021

	North West Queensland			
Number of communities screened	2			
Age group (years)	0-4	5-9	10-14	0-14
Children examined for clean face	31	12	57	210
Children with clean face	16	91	55	162
Clean face prevalence (%)	52	75	96	77
Estimated number* of Aboriginal children in communities [†]	80	131	108	319
Children screened for trachoma	2	118	57	177
Trachoma screening coverage (%)	31	90	53	63
Children with clinical findings consistent with TF [‡]	2	17	2	17
Observed prevalence of clinical findings consistent with TF [‡] (%)	16.0	9.3	3.5	8.5
Estimated prevalence of active trachoma [‡] (%)	0.0	0.0	0.0	0.0
Overall prevalence of active trachoma [‡] (%)	0.0	0.0	0.0	0.0

* As defined by each jurisdiction

[†] Communities that were screened for trachoma in 2021

[‡] Methods of calculating the different prevalence rates on page 23

Table 3.2 Trichiasis screening coverage, prevalence and treatment among Indigenous adults, Queensland 2021

	North West Queensland		
Number of communities screened for trichiasis	2		
Age group (years)	15-39	40+	15+
Estimated population in the region [*]	519	280	799
Adults examined [†]	6	18	24
With trichiasis	0	0	0
With trichiasis (%)	0.0	0.0	0.0
Surgery in past 12 months ^{‡§}	0	0	0

* No population numbers were available for these age groups in one of the communities in North West Queensland, therefore Census 2016 data was used as an approximate denominator for these age groups

† Population estimate is limited to trachoma endemic regions and does not consider changing endemic regions over time and transiency between regions

‡ Number of adults examined was limited to the numbers reported. This number may not account for all adults who may be examined in routine adult health checks, and may also include multiple screening

§ Surgery cases may include cases identified in previous years

Table 3.3 Health promotion activities Queensland 2021

Queensland	
Number of communities that reported health promotion activities	2
Total number of programs reported	7
Method of health promotion activities	
One-on-one discussion	4
Presentation to group	4
Interactive group session	
Social marketing	
Print material/mass media	4
Sporting/community events	
Other	2
Target audience	
Health professional/staff	4
Children	1
Youth	
Teachers/childcare/preschool staff	6
Caregivers/parents	2
Community members	5
Community educators/health promoters	4
Interagency members	4
Frequency of health promotion activities	
Once	7
2-4 times per year	
5-12 times per year	
Ongoing/routine	

4. South Australia results

Trachoma program coverage

- In 2021 SA identified 15 communities in 3 regions as being at risk of trachoma (Table 4.1, Figure 4.2).
- Due to no evidence of trachoma since 2013, Yorke and Mid North region are no longer considered at risk of trachoma.
- All at-risk communities that required screening were screened for trachoma (Table 4.1).

Screening coverage

- Trachoma screening coverage of children aged 5-9 years in the 15 at-risk communities screened was 87%, ranging from 85% in the APY Lands, 90% in the Far North to 94% in the Eyre and Western region and (Table 4.2, Figure 4.4).

Facial cleanliness

- Clean face prevalence was assessed in all communities that were screened.
- The overall prevalence of clean faces among children aged 5-9 years in the screened communities was 74%, ranging from 63% in the APY Lands, 85% in the Eyre and Western region and 98% in the Far North region (Table 4.2, Figure 4.5).

Trachoma prevalence

- The observed prevalence of trachoma in children aged 5-9 years screened was 1.9%.
- The overall prevalence of trachoma in children aged 5-9 years screened was 0.9%.
- No trachoma was reported in the 5-9-year age group in 33% (5/15) of the at-risk communities (Table 4.3, Figure 4.7).
- Endemic levels of trachoma ($\geq 5\%$) were reported in 7% (1/15) of the at-risk communities (Table 4.3, Figure 4.7).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in the APY Lands and Eyre and Western region with cases and household contacts treated (Table 4.4).
- Total treatment coverage for trachoma cases and community members requiring treatment was 86% with 50 doses of azithromycin delivered (Table 4.5, Figure 4.8).

Trichiasis

- Screening for trichiasis was undertaken in 15 communities (Table 4.6).
- Overall, 1013 adults aged 15 years and over were screened (Table 4.6).
- The prevalence of trichiasis in adults aged 15 years and over was 0.1%, and 0.2% in adults aged 40 years with one case of trichiasis detected (Table 4.6).

Health promotion and environmental health activities

Eyre and Far North Local Health Network on behalf of the SA Government is working in collaboration with a range of government, state-wide and non-government organisations to continue the implementation and delivery of environmental health improvement measures and educational health programs, with the aim to

improve health literacy and create health-supportive environments in rural and remote Aboriginal communities in SA.

The SA Department of Education and Child Development continues enhancing the implementation of consistent hygiene practices and improving washing facilities at schools in rural remote Aboriginal communities. Furthermore, The Aboriginal Community Control Health Organisations (ACCHOs), Aboriginal Health Council SA (AHCSA), and Aboriginal Community Care (ACC) are developing trachoma action plans in conjunction with Aboriginal communities to deliver community-based health promotion and environmental programs.

SA has developed the State Public Health Plan 2019-24 which sets the agenda for public health planning and action across South Australia and provides a framework for local government public health planning to address public health challenges. The State Public Health Plan's vision is a healthy, liveable, and connected community for all South Australians. The vision builds on 4 strategic priorities:

- Build stronger communities and healthier environments
- Protect against public and environmental health risks and respond to climate change
- Prevent chronic disease, communicable disease and injury.
- Strengthen the systems that support public health and wellbeing.

Eyre and Far North Local Health Network in conjunction with its key partners continues with the implementation of the Environmental Health Improvements Activities Model Plan, which aims to implement sustainable environmental health improvement measures, improve the health literacy, influence the behaviours that are contributing to the persistence of trachoma and other infectious diseases, as well as promote remediation measures in the regions.

The following Health Promotion Activities and Environmental Health Improvement Measures were delivered during 2021:

- Eyre and Far North Local Health Network continues funding the Aboriginal Community Control Health Organisations and AHCSA to implement WHO's SAFE strategy (S: surgery; A: antibiotics; F: facial cleanliness and E: environmental improvement measures) across SA.
- Facial cleanliness and environmental health improvement measures are now central in the trachoma action plan for the next 4 years.
- SA Government continues funding the Aboriginal Community Controlled Health Organisations to deliver the Aboriginal Environmental Health Worker (AEHW) program. In communities with limited capacity to recruit AEHWs, SA Health coordinates environmental health activities directly.
- SA Department for Health and Wellbeing (Public Health) continues to deliver environmental health activities across regional SA such as human waste and wastewater control, health risk assessments and remediation measures.
- Aboriginal Community Care continues with the implementation of the Kuru Malpa Program in the APY Lands communities to increase community engagement, eye health awareness and promote health-enhancing behaviours within households.

Eyre and Far North Local Health Network and Aboriginal Community Care have established partnerships with important organisations such as the Department of Education, Housing, Nganampa Health, Regional Anangu Services Aboriginal Corporation and Art Centres to continue with the delivery of the Malpa program and environmental health improvement activities across the APY Lands communities.

- Aboriginal Community Advisory Groups were established on the APY Lands by Aboriginal Community Care to provide formal eye health training to community members and to develop local strategies.

- Hand-washing facilities were again set up in various locations on the APY Lands and in the yards of houses. Water trailers providing hand and face-washing facilities were positioned at various gatherings such as at funerals.
- All Nganampa Health clinics continue to have mirrors at various heights in the waiting areas and bathrooms for children to see their faces when they are washing their hands and faces.
- Most schools have implemented a face-washing routine on a regular basis across some Aboriginal communities in SA.
- Households with children diagnosed with trachoma or any other infectious disease received health promotion and education activities and were offered to SA Housing for assessment of their housing conditions.
- A communication strategy is being implemented using television, radio and social media platforms to provide a trachoma awareness campaign promoting eye health and healthy living practices across rural SA.

Figures and Tables – South Australia

Figure 4.1 Trachoma prevalence in children aged 5-9 years in all at-risk communities by region, South Australia, 2021



Figure 4.2 Number of at-risk communities by region, South Australia 2007-2021

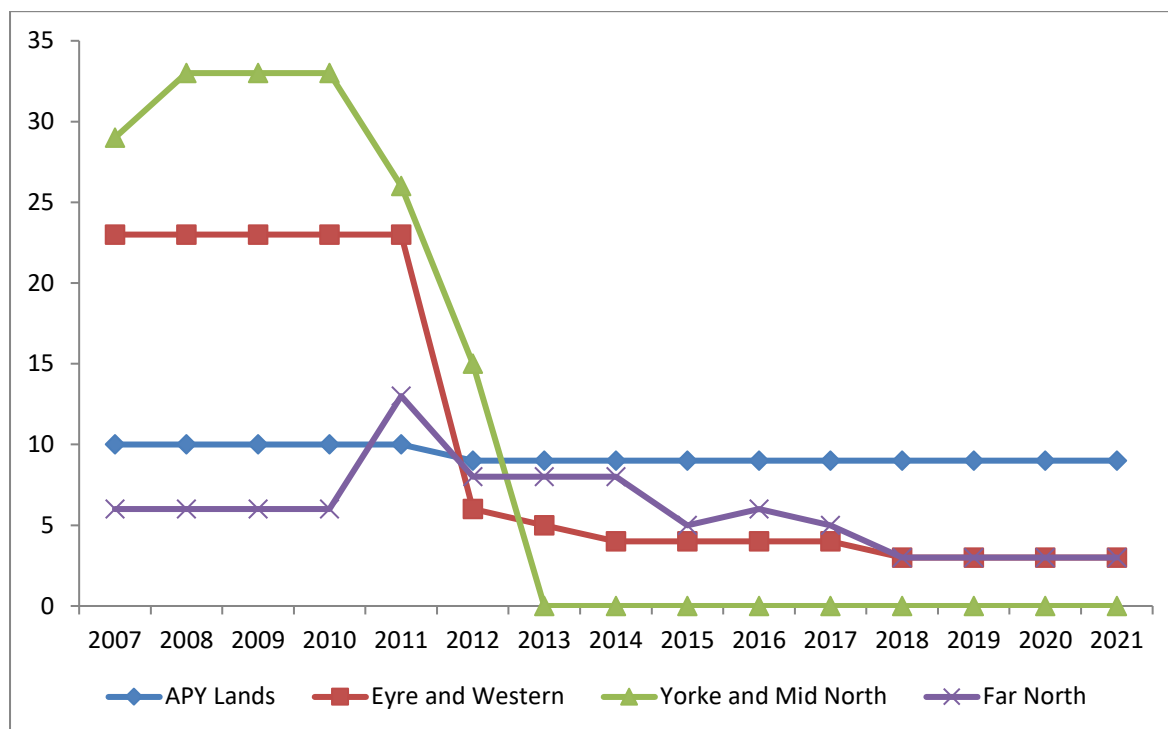


Figure 4.3 Number of at-risk communities according to trachoma control strategy implemented by region, South Australia 2021

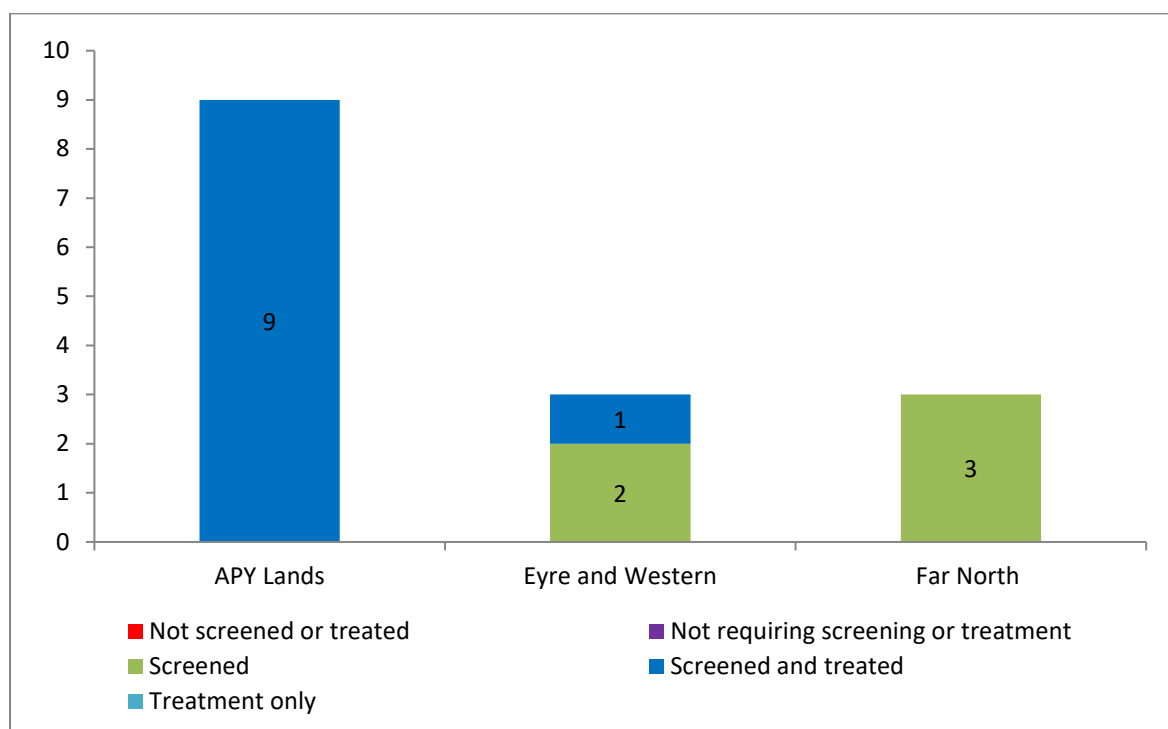


Figure 4.4 Population screening coverage of children aged 5-9 years in at-risk communities that required screening for trachoma by region, South Australia 2021

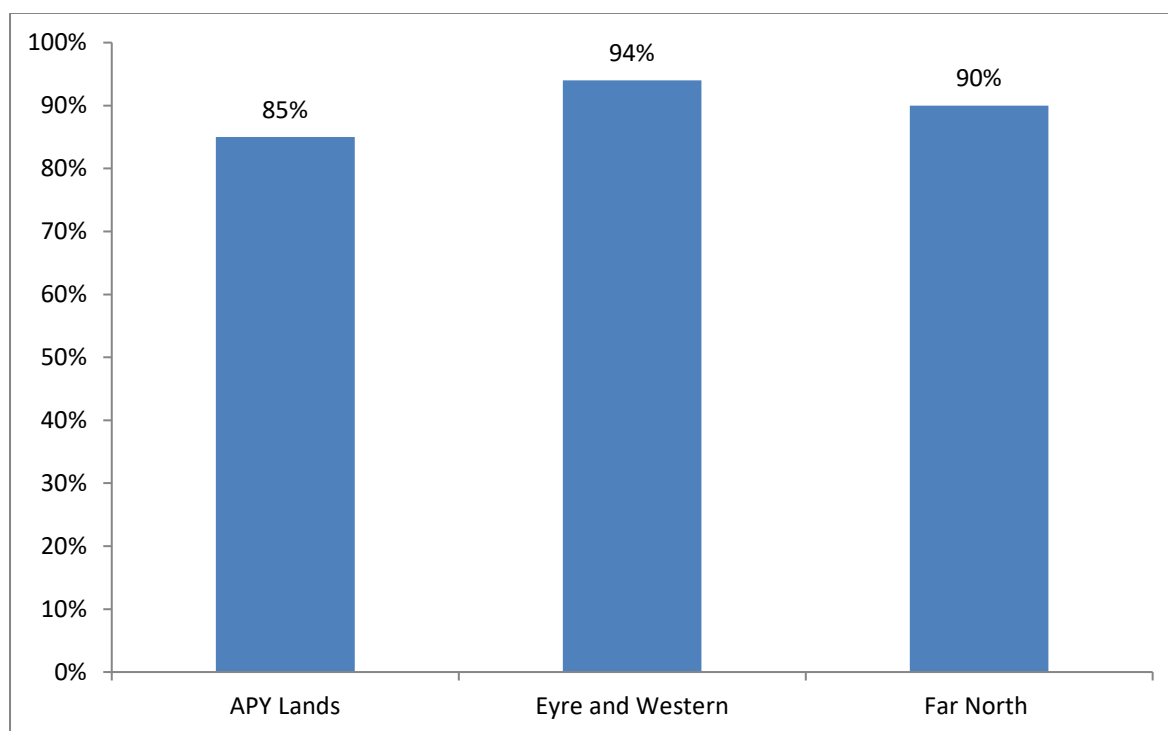


Figure 4.5 Proportion of screened children aged 5-9 years who had a clean face by region, South Australia 2007-2021

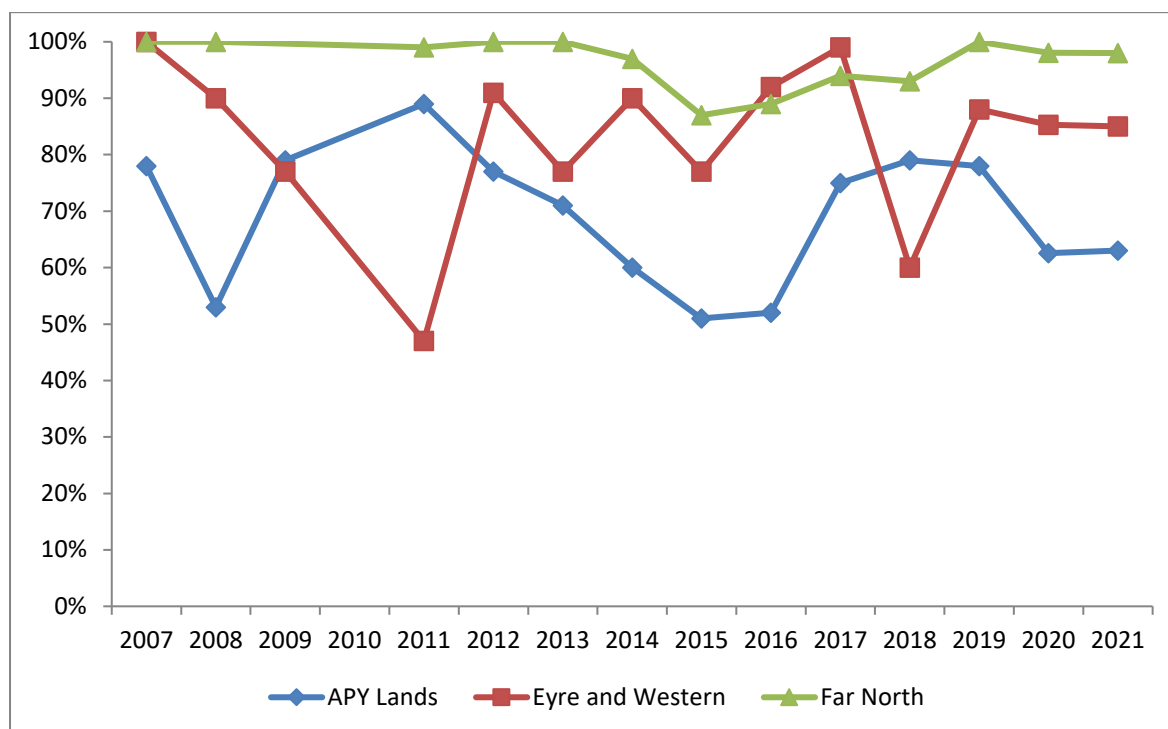


Figure 4.6a Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular among children aged 5-9 years in at-risk communities by region, South Australia 2007-2021

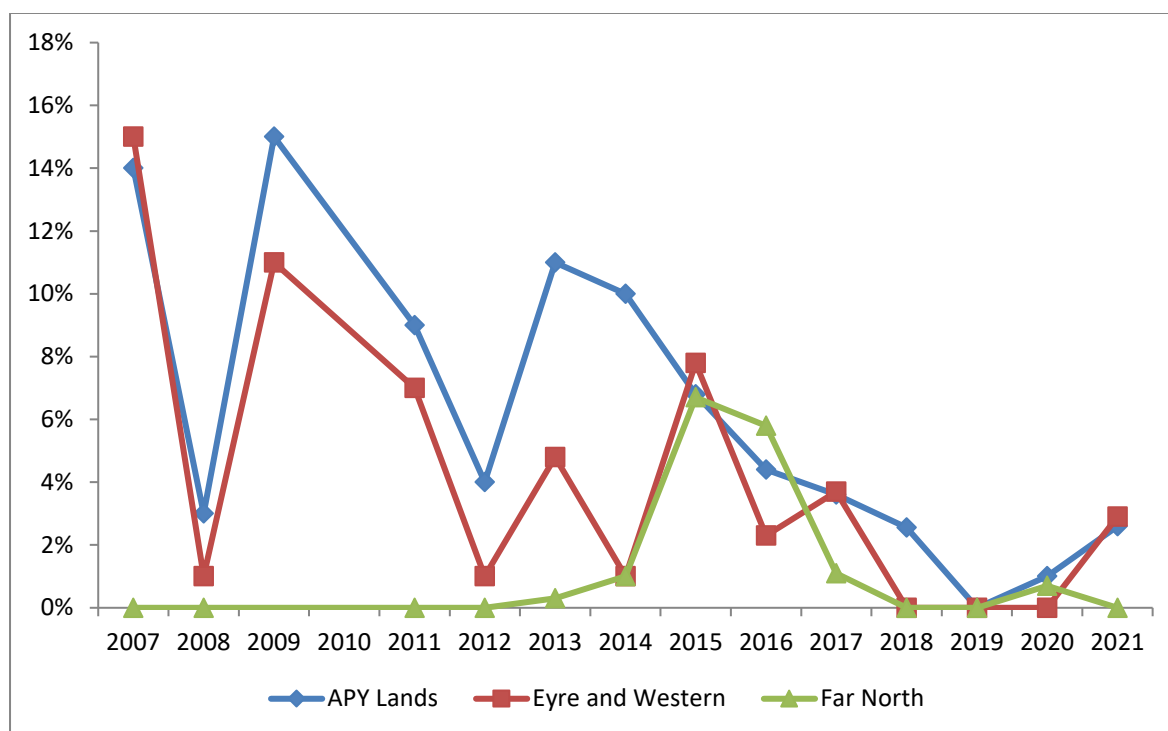
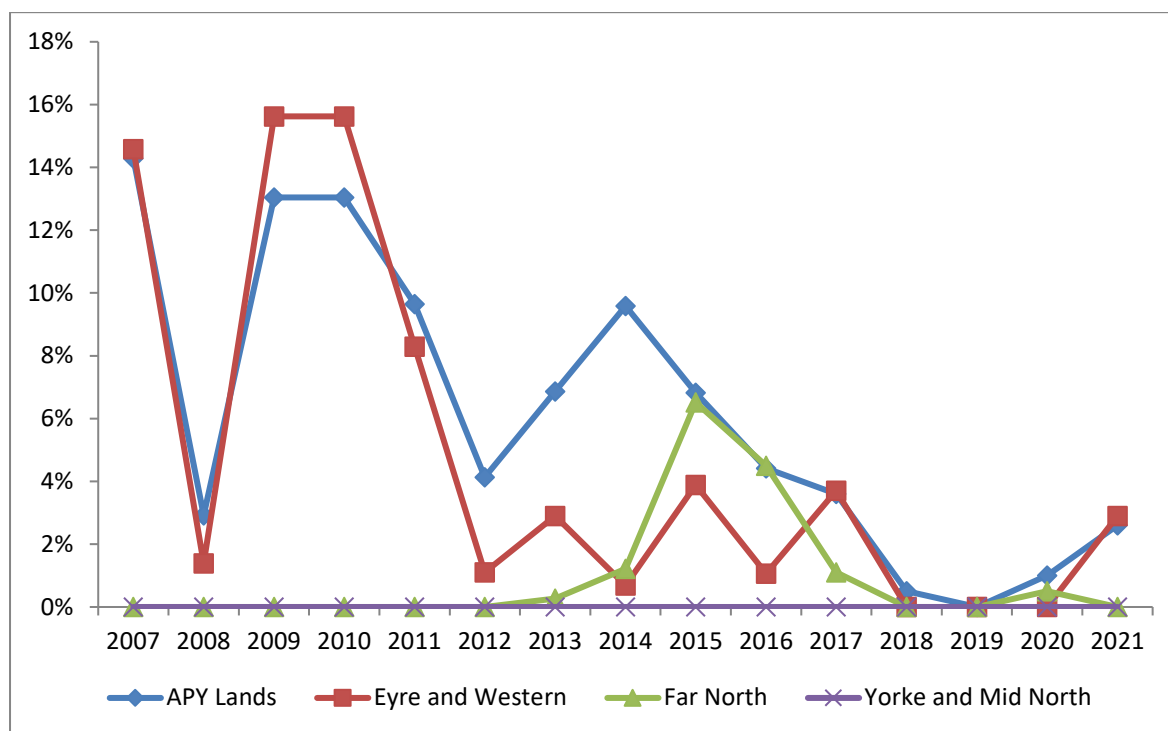
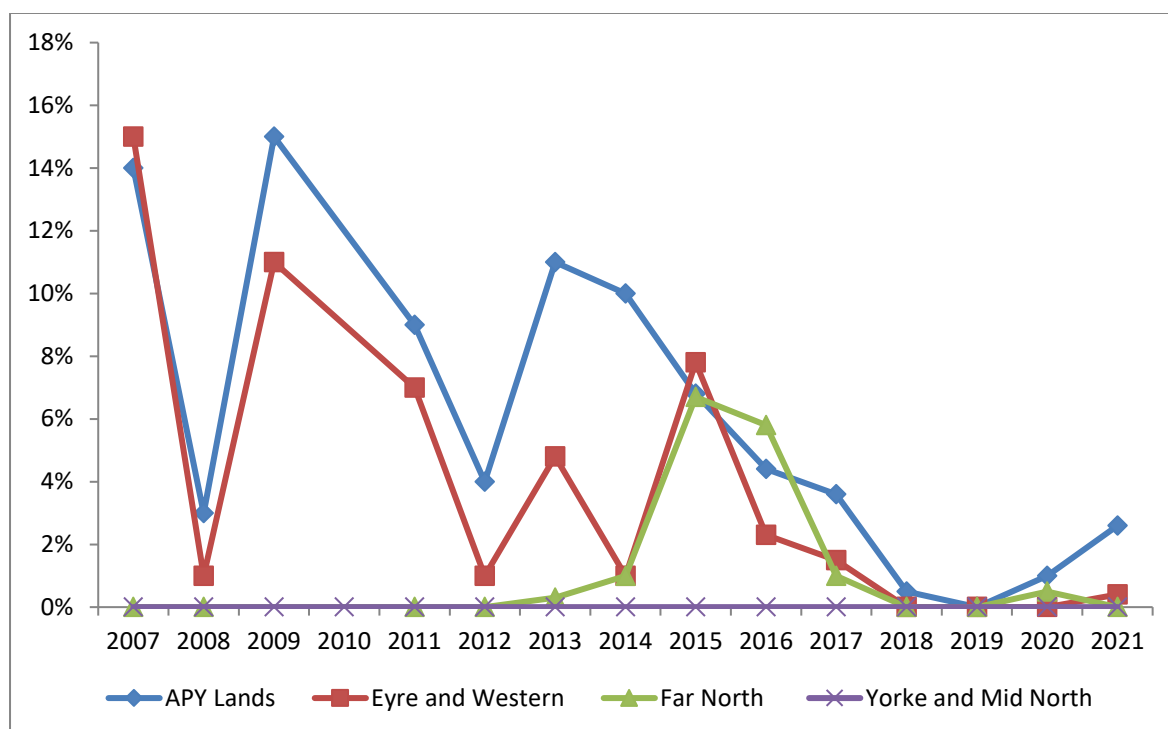


Figure 4.6b Estimated prevalence of trachoma among children aged 5-9 years in all at-risk communities* by region, South Australia 2007-2021



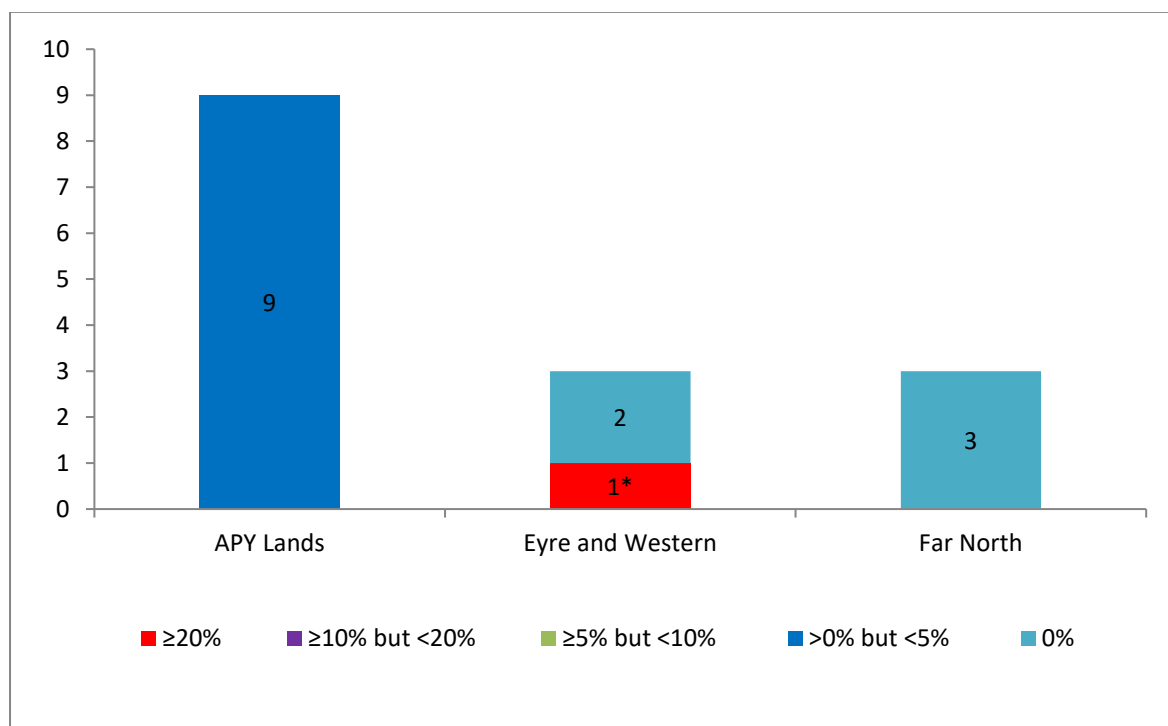
* Most recent estimates carried forward in at-risk communities that did not screen in 2021

Figure 4.6c Overall prevalence of trachoma among children aged 5-9 years in all communities* by region, South Australia 2007-2021



* Calculated carrying forward most recent data in all communities considered at risk of trachoma at some time since 2007

Figure 4.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, South Australia 2021



* In community with less than 20 children

Figure 4.8 Number of doses of azithromycin administered for the treatment of trachoma by region, South Australia 2007-2021

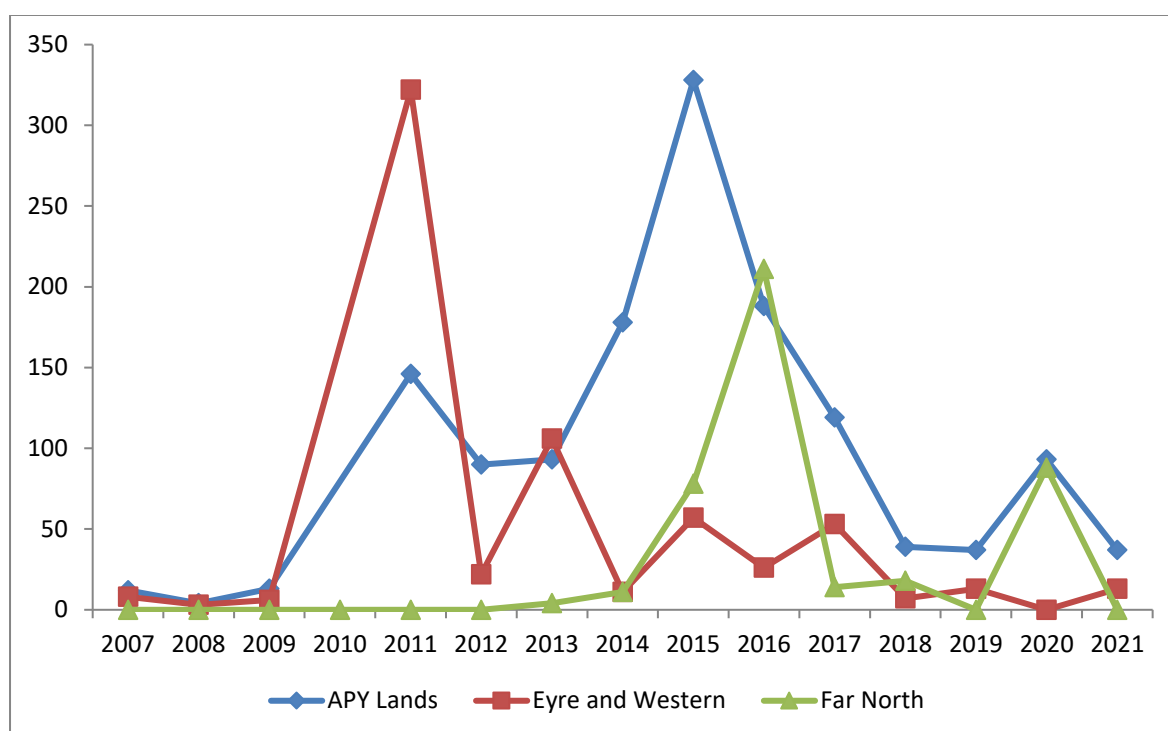


Table 4.1 Trachoma control delivery in at-risk* communities by region, South Australia 2021

Number of communities	APY Lands	Eyre and Western	Far North	Total
At risk * (A)	9	3	3	15
Requiring screening for trachoma (B)	9	3	3	15
Screened for trachoma (C)	9	3	3	15
Requiring treatment without screening † (D)	0	0	0	0
Received treatment without screening † (E)	0	0	0	0
Screened and/or treated for trachoma (F = C+E)	9	3	3	15
Requiring neither screening nor treatment for trachoma (G=A-B-D)	0	0	0	0

* As defined by each jurisdiction

† As per CDNA Guidelines

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 4.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, South Australia 2021

	APY Lands				Eyre and Western				Far North				Total			
Number of communities screened	9				3				3				15			
Age group (years)	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14	0-4	5-9	10-14	0-14
Children examined for clean face	64	235	145	444	12	34	28	74	10	103	92	205	86	372	265	723
Children with clean face	36	147	144	327	11	29	27	67	10	101	92	203	57	277	263	597
Clean face prevalence (%)	56	63	99	74	92	85	96	91	100	98	100	99	66	74	99	83
Estimated number* of Indigenous children in communities†	234	277	227	738	32	36	54	122	18	113	103	234	284	426	384	1094
Children screened for trachoma	64	235	151	450	11	34	25	70	8	102	92	202	83	371	268	722
Trachoma screening coverage (%)	27	85	67	61	34	94	46	57	44	90	89	86	29	87	70	66
Children with clinical findings consistent with TF†	0	6	0	6	0	1	1	2	0	0	0	0	0	7	1	8
Observed prevalence of clinical findings consistent with TF ‡ (%)	0.0	2.6	0.0	1.3	0.0	2.9	4.0	2.9	0.0	0.0	0.0	0.0	0.0	1.9	0.4	1.1
Estimated prevalence of trachoma‡ (%)		2.6				2.9			0				1.9			
Overall prevalence of trachoma‡ (%)		2.6				0.4			0.0				0.9			

* ABS estimate

† Communities that were screened for trachoma in 2021

‡ Methods of calculating the different prevalence rates on page 23

APY: Anangu Pitjantjatjara Yankunytjatjara

TF: trachomatous inflammation - follicular

Table 4.3 Number and proportion* of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, South Australia 2007-2021

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
Communities at-risk †	68		72		72		72		46		38		22		21		19		19		18		15		15		15		15	
Communities not screened ‡	60		61		60		60		27		2		6		0		0		0		0		0		0		0		0	
Number of communities §	8		11		12		11		19		36		16		21		19		19		18		15		15		15		15	
≥20%	2	25%	0	0%	3	25%	3	27%	2	11%	1	3%	2	13%	1	5%	2	11%	1	5%	1	5%	1	7%	0	0%	0	0%	1	7%
≥10% but <20%	2	25%	1	9%	2	17%	1	9%	3	16%	1	3%	3	19%	9	43%	3	16%	1	5%	1	6%	0	0%	0	0%	1	7%	0	0%
≥5% but <10%	2	25%	2	18%	1	8%	0	0%	2	11%	1	3%	1	6%	0	0%	9	47%	2	11%	3	17%	0	0%	0	0%	0	0%	0	0%
>0% but <5%	0	0%	1	9%	1	8%	0	0%	1	5%	4	11%	0	0%	1	5%	1	5%	11	58%	10	56%	10	66%	0	0%	9	60%	9	60%
0%	2	25%	7	64%	5	42%	7	64%	11	58%	29	81%	10	63%	10	48%	4	21%	4	21%	3	17%	4	27%	15	100%	5	33%	5	33%

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per CDNA Guidelines

§ Screened or receiving ongoing annual treatment as per Guidelines

Table 4.4 Treatment strategies by region, South Australia 2021

	APY Lands	Eyre and Western	Far North	Total
Required treatment for trachoma	9	1	0	10
Treated for trachoma*	9	1	0	10
Screened and treated	9	1	0	10
Received treatment only	0	0	0	0
Received 6-monthly treatment	0	0	0	0
Did not require treatment	0	2	3	5
Treated trachoma and households	9	1	0	10
Community-wide treatment	0	0	0	0
Not treated according to CDNA Guidelines*	0	0	0	0

* In 2021 APY Lands aggregated 9 communities into one community for presentation of data; details of the specific number of communities requiring treatment or treated were not supplied

CDNA: Communicable Diseases Network Australia

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 4.5 Trachoma treatment coverage by region, South Australia 2021

	APY Lands					Eyre and Western					Far North					Total				
Age group (years)	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for trachoma	0	6	0		6	0	1	1		2	0	0	0		0	0	7	1		8
Received treatment for trachoma	0	6	0		6	0	1	1		2	0	0	0		0	0	7	1		8
Received treatment for trachoma (%)	N/A	100	N/A		100	N/A	100	100		100	N/A	N/A	N/A		N/A	N/A	100	100		100
Estimated community members* requiring treatment	4	4	5	21	34	0	3	3	10	16	0	0	0	0	0	4	7	8	31	50
Number of community members* who received treatment	3	4	5	19	31	0	1	2	8	11	0	0	0	0	0	3	5	7	27	42
Estimated community members who received treatment (%)	75	100	100	90	91	N/A	33	67	80	69	N/A	N/A	N/A	N/A	N/A	75	71	88	87	84
Number of community	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

members who declined treatment																				
Total number of doses of azithromycin delivered	3	10	5	19	37	0	2	3	8	13	0	0	0	0	0	3	12	8	27	50
Estimated overall treatment coverage (%)	75	100	100	90	93	N/A	50	75	80	72	N/A	N/A	N/A	N/A	N/A	75	86	89	87	86

* Includes household contacts and community members requiring and receiving mass drug administration (MDA)

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 4.6 Trichiasis screening coverage, prevalence, and treatment among Indigenous adults by region, South Australia 2021

	APY Lands		Eyre and Western		Far North		Total		
Number of communities screened for trichiasis	9		3		3		15		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in region*	1059	608	771	572	1345	1131	3175	2311	5486
Number of adults examined†	431	405	40	79	11	47	482	531	1013
Number of adults with trichiasis	0	1	0	0	0	0	0	1	1
Proportion of adults with trichiasis (%)	0.0	0.2	N/A	0.0	0.0	0.0	0.0	0.2	0.1
Surgery in past 12 months‡	0	0	0	0	0	1	0	1	1

* Population estimate limited to trachoma endemic regions and does not consider changing endemic regions over time and transiency between regions

† Number of adults examined limited to numbers reported. This number may not account for all adults who may be examined in routine adult health checks, and may also include multiple screening

‡ Surgery cases may include cases identified in previous years

Table 4.7 Health promotion activities by region, South Australia 2021

	APY Lands	Eyre and Western	Far North	Total
Number of communities that reported health promotion activities	9	3	3	15
Total number of programs reported	6	4	4	14
Methods of health promotion				
One-on-one discussion	4	5	4	13
Presentation to group	3	3	4	10
Interactive group session	2	2	4	8
Social marketing		4	4	8
Print material/mass media	5	5	4	14
Sporting/community events	2	4		6
Other	2	2	2	6
Target audience				
Health professionals/staff	1	3	3	7
Children		5	4	13
Youth	3	5	4	12
Teachers/children/preschool staff		2	4	9
Caregivers/parents	2	5	4	11
Community members	1	5	4	10
Community educators/health promoters	3	1		4
Interagency members		2	4	7
Frequency of health promotion activities				
Once	1			1
Occasional *	1	3	4	8
Regular†	2			2
Ongoing/routine	2	1		3

* 2-4 times per year

† 5-12 times per year

APY: Anangu Pitjantjatjara Yankunytjatjara

5. Western Australia results

Trachoma program coverage

- In 2021 WA identified 34 communities in 4 regions as being at risk of trachoma (Table 5.1, Figure 5.2).
- Of these at-risk communities 28 communities required and received screening (Table 5.1, Figure 5.3).

Screening coverage

- The proportion of children aged 5-9 years screened in the 28 communities screened was 92%, ranging from 79% in the Midwest region to 96% in the Goldfield region (Table 5.2, Figure 5.4).

Facial cleanliness

- Clean face prevalence was assessed in all communities that were screened.
- The overall prevalence of clean faces among children aged 5-9 years was 57%, ranging from 45% in the Goldfield region to 73% in the Midwest region (Table 5.2, Figure 5.5).

Trachoma prevalence

- The observed prevalence of trachoma in children aged 5-9 years in 28 communities that screened in 2021 was 14.4% (67/464). Prevalence ranged from 0% in the Midwest region to 30% in the Goldfields region (Table 5.2, Figure 5.6a).
- The overall prevalence of trachoma in children aged 5-9 years was 5% ranging from 0% in the Midwest region to 15.8% in the Goldfields region (Table 5.2, Figure 5.6c).
- No trachoma was reported in 32% (9/28) of the screened at-risk communities (Table 5.3, Figure 5.7).
- Endemic levels of trachoma ($\geq 5\%$) were reported in 68% (19/28) of the screened at-risk communities (Table 5.3, Figure 5.7).
- Hyperendemic levels of trachoma ($\geq 20\%$) were reported in 18% (5/28) of the screened at-risk communities (Table 5.3, Figure 5.7).

Treatment delivery and coverage

- Trachoma treatment strategies were required in 20 communities (Table 5.4).
- Treatment was delivered for trachoma cases and household contacts in 19 communities, and community wide in one community as per the CDNA Guidelines (Table 5.4).
- Total treatment coverage for trachoma cases and community members, and community-wide treatment in all region's requiring treatment was 71% with 684 doses of azithromycin delivered (Table 5.5, Figure 5.8).

Trichiasis

- Data for trichiasis screening were provided from 3 distinct sources: public health units undertook opportunistic screening of adults in at-risk communities; the MBS Item 715 adult health checks; and visiting optometrist services (VOS).
- Overall, 2785 adults aged 15 years and older were reported to be screened (Table 5.6).
- The prevalence of trichiasis in adults aged 15 years and over was 0.1%, and 0.1% in adults aged 40 years and over (Table 5.6).
- Surgery for trichiasis was reported to be undertaken for 4 adults in 2021 (Table 5.6).

Health promotion

All Western Australia trachoma at-risk communities have had health hygiene promotion and activities actively promoted via varying methods through the Squeaky Clean Kids (SCK) program during 2021. SCK continues to be a collaborative effort coordinated by WACHS Central Office including the Public Health Units in the Goldfields, Midwest, Pilbara and Kimberley regions, WA Environmental Health Directorate, Soap Aid Ltd, Aboriginal Health Council of WA (AHCWA), Public Health Advocacy Institute and the Melbourne University Indigenous Eye Health (IEH). SCK focuses on the F and E elements of the WHO SAFE strategy.

The SCK program aims to reduce trachoma by overcoming barriers to good hygiene in remote communities such as the cost of soap by providing it free to households and community facilities to promote good health hygiene practices. Free soap is available to all Aboriginal communities that are at risk of trachoma or at risk of trachoma resurgence.

As an embedded program, WACHS Population Health teams continue to deliver hygiene messaging to at risk communities. They also provide support, tools and training for health, education and environmental health services within the Pilbara, Goldfields, Kimberley and Midwest regions to encourage these services to also promote positive hygiene messaging and practice in relevant communities.

WACHS contract additional child and school health services to increase access and improve health outcomes for rural and remote populations. Historically the contract did not reflect health hygiene in the reporting framework. Contract variations have been completed to include school health reporting outcomes framework for sites within the 4 trachoma endemic regions including deliverables related to health hygiene programs. This formalised reporting is to commence in 2022 and will provide a broader view of embedded hygiene messaging across regions.

In 2021, school and community-based education sessions were undertaken in 45 communities designated at risk of trachoma or trachoma resurgence. Regional teams used a variety of resources in the education sessions including the IEH stickers, posters, school and community flip charts, soap, hygiene packs, hand and face washing techniques. Numerous other resources and pre and post screening posters. Over 13 000 bars of soap and 400 hygiene packs were used across the regions at different events. Collaboration with other environmental health-related disease programs continued and included events for Rheumatic Heart Disease, skin-related health and Ear Health. The Kimberley region's [Men's Health on Country camp](#) included discussion on hygiene related to illness with all participants provided hygiene packs that align with the Six Steps to Stopping Germs campaign.

The WA Environmental Health Directorate supports additional trachoma control services and activities within the 4 trachoma endemic regions in collaboration with Public Health Advocacy Institute led Environmental Health Trachoma Program. Through this partnership a variety of health promotion activities and education are provided. Specific new initiatives in 2021 include:

Facilitation of 2-day workshops across WA that targeted Aboriginal Environmental Health professionals and other allied, public health and housing staff. The workshop content was developed as a foundation with additional more detailed training on diseases and instilling confidence to have conversations planned for 2022. The workshops have been convened in 5 regional centres (59 participants). The workshops addressed 3 key themes:

- Linking disease risk factors to house environments
- Models of whole house assessments including environmental health clinical referrals (the whole of house assessment tool was introduced)
- Tools to facilitate conversations with tenants relating to hygiene
- Development of the Environmental Health Referral Program [video](#)

- Development of the Aboriginal Environmental Health referral [video](#) to encourage tenants to work with AEH workers.

Environmental improvements

In 2021, the environmental health workforce undertook 1430 home and safe bathroom assessments, an increase of 15.8% (n= 1235) from 2020. The assessments occurred in 34 communities across the trachoma endemic regions. Referrals were submitted to housing agencies as required for housing maintenance that was outside of the scope of practice for the environmental health practitioners to provide, and advice was provided to community members on remediation measures. A total of 463 Environmental Health Practitioner visits were recorded from 1 January to 31 December 2021.

Public Health Units collaborate with the Environmental Health Directorate and their local contracted service providers on initiatives to support communities with environmental health improvements. Community-wide housing assessments to inspect the operation of health hardware were trialled in several trachoma at-risk communities with both health and housing (non-health) agency participation – often with tradespeople in attendance. These intensive health hardware assessments were well received by community residents and the participating housing agency: many faults identified were remediated on the same day by the on-site tradesperson or referred for follow up.

Other services included support to maintain rubbish tips and landfills, pest control activities, dog health management, house clean-ups, assistance with community-wide clean-up projects and review and updating of 4 Community Environmental Health Action Plans in consultation with community members.

Figures and Tables – Western Australia

Figure 5.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Western Australia 2021



Figure 5.2 Number of at-risk communities by region, Western Australia 2007-2021

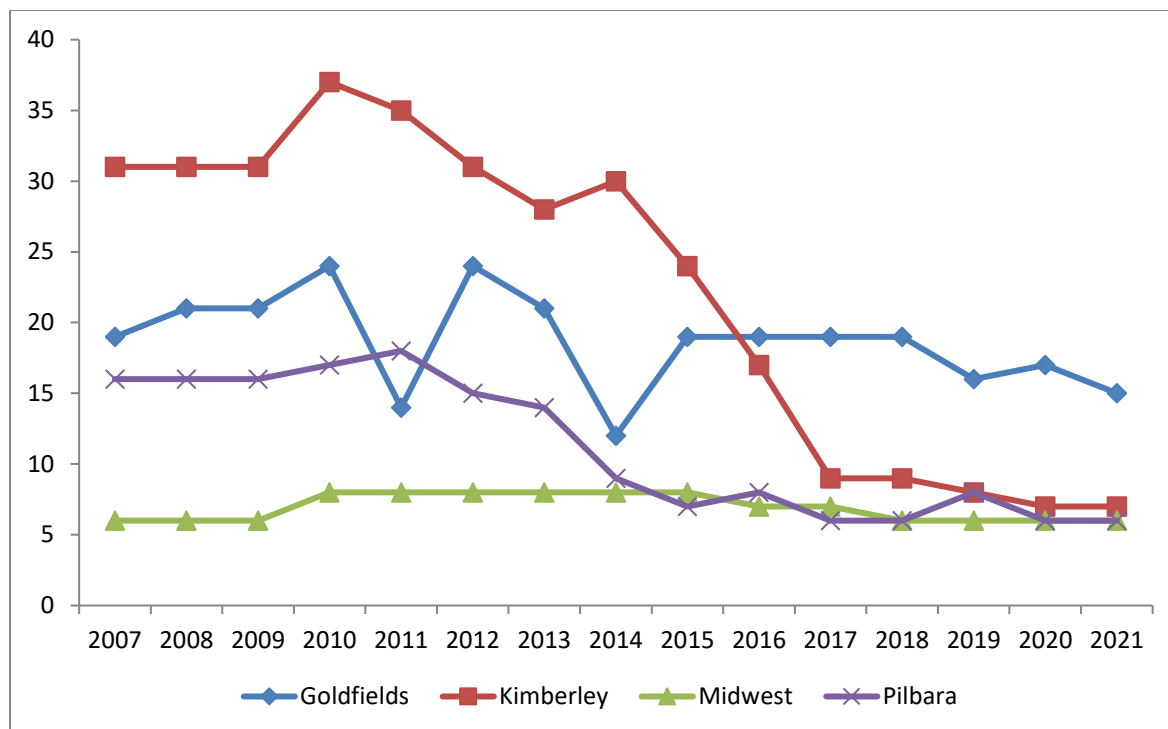


Figure 5.3 Number of at-risk communities according to trachoma control strategy implemented by region, Western Australia

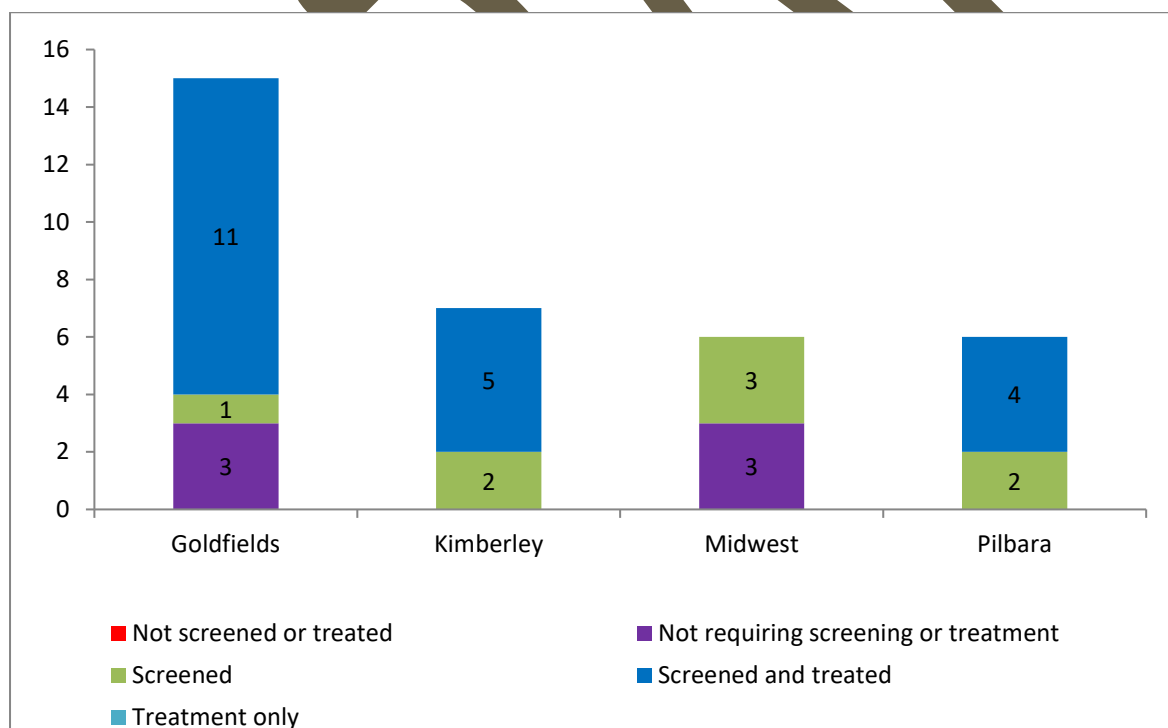


Figure 5.4 Population screening coverage in children aged 5-9 years in communities that required screening for trachoma by region, Western Australia 2021

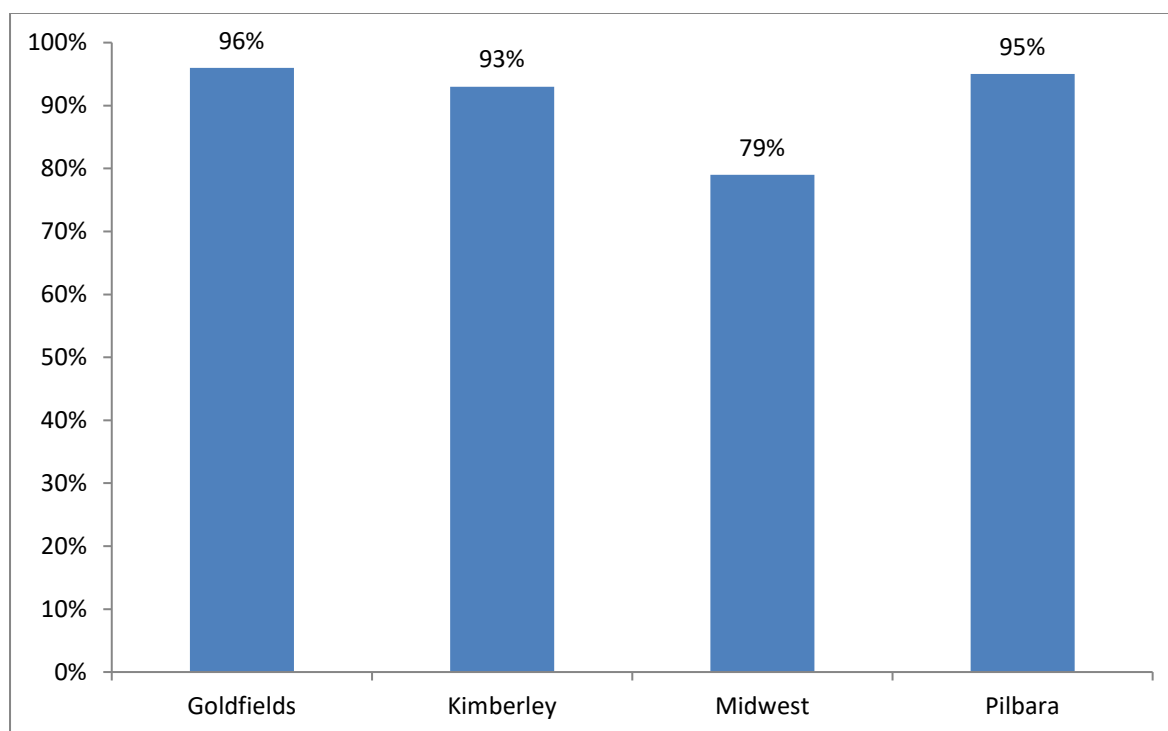


Figure 5.5 Proportion of children aged 5-9 years who have a clean face by region, Western Australia 2007-2021

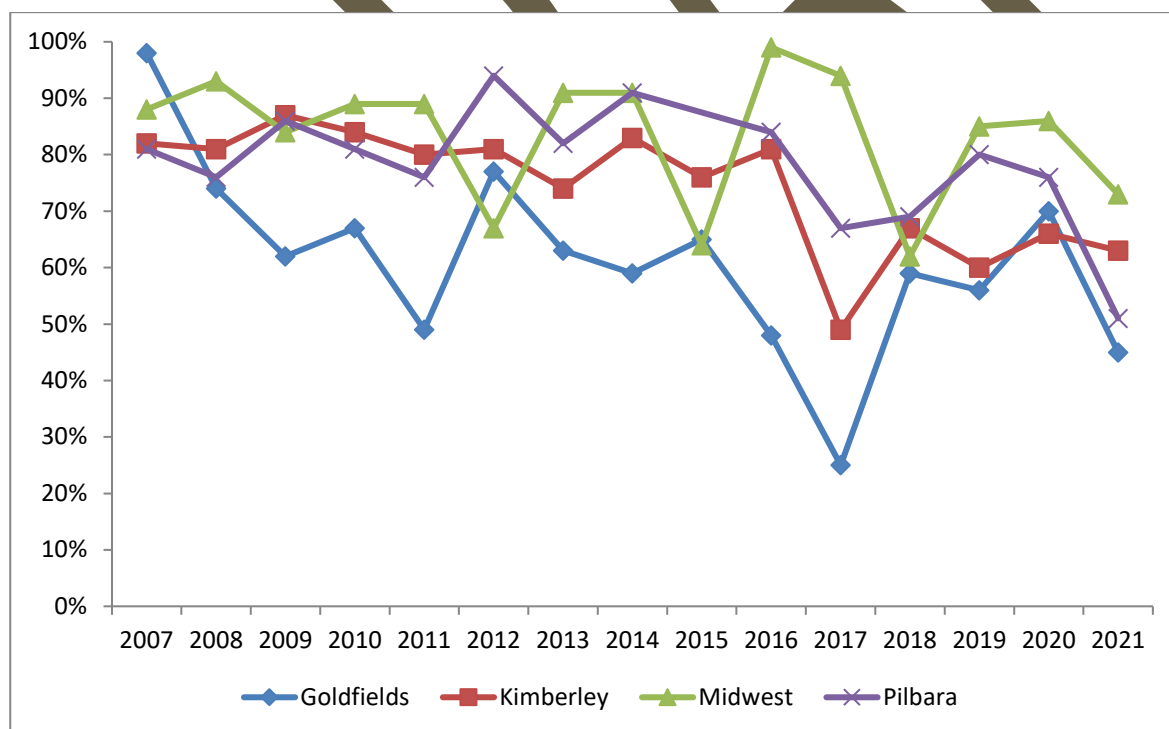


Figure 5.6a Observed prevalence of clinical findings consistent with trachomatous inflammation - follicular among children aged 5-9 years in communities that were screened by region, Western Australia 2007-2021

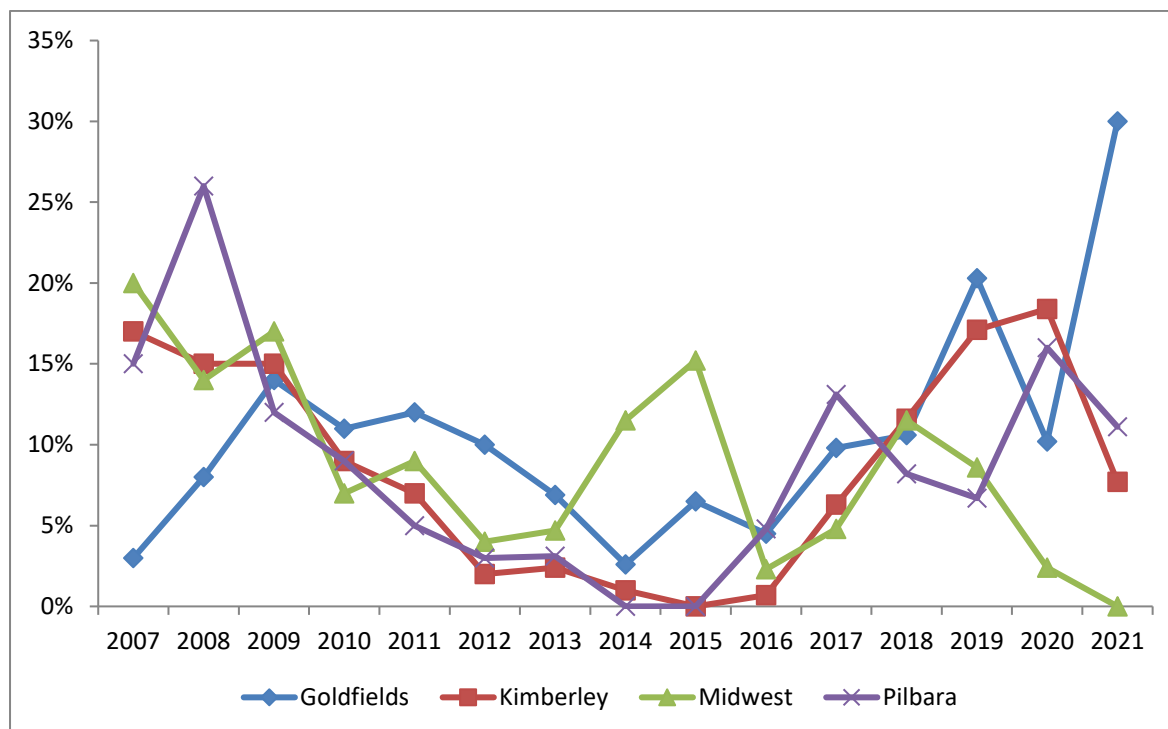
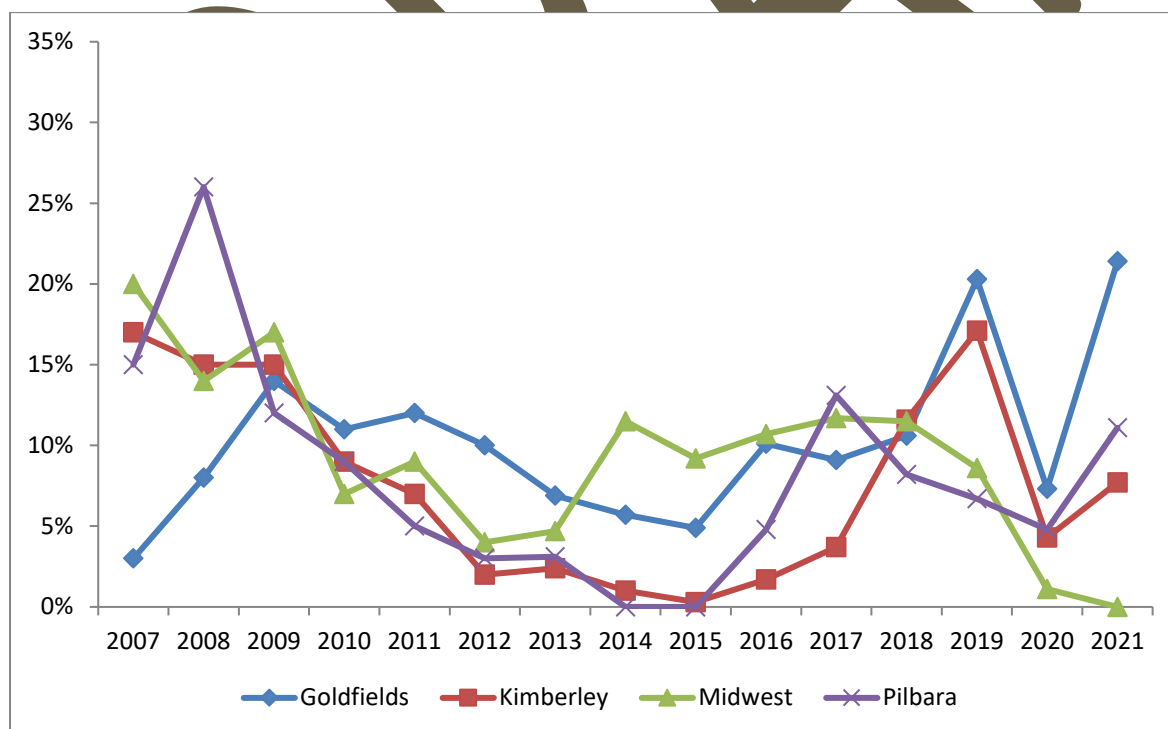
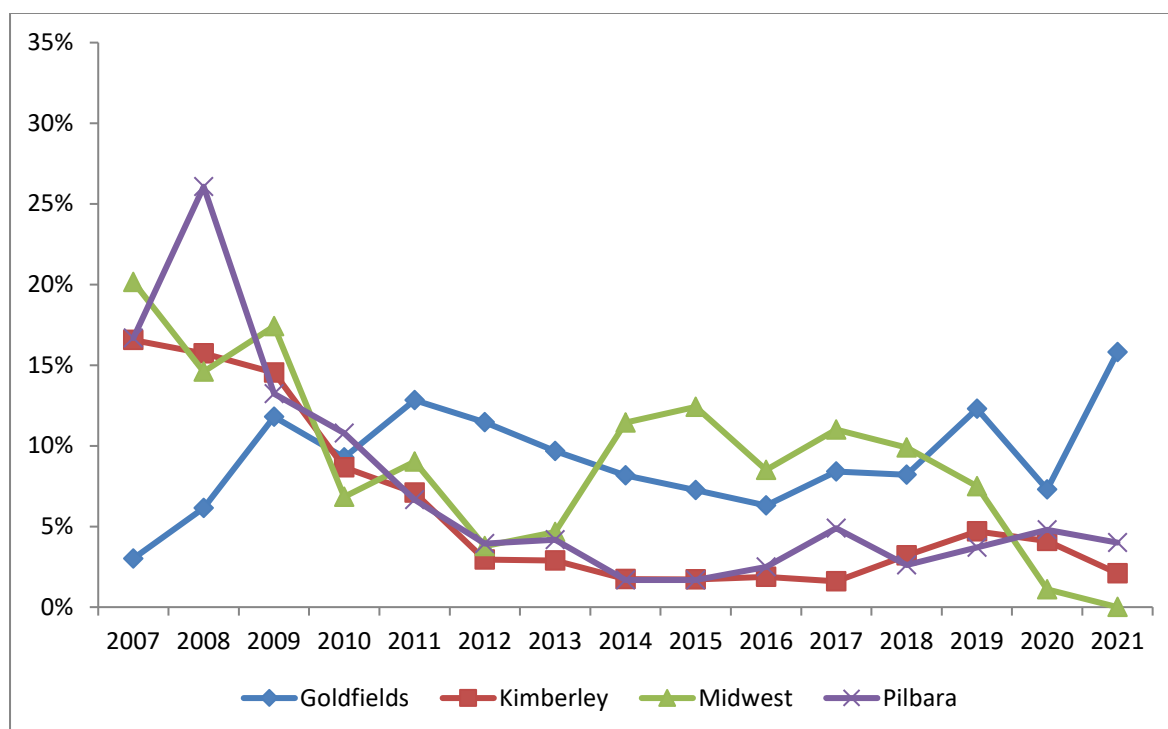


Figure 5.6b Estimated prevalence of trachoma among children aged 5 years in all at-risk communities by region, Western Australia 2007-2021



* Most recent estimates carried forward in at-risk communities that did not screen in 2016

Figure 5.6c Overall prevalence of trachoma among children aged 5-9 years in all communities* by region, Western Australia 2007-2021



* Calculated carrying forward most recent data in all communities considered at risk of trachoma at some time since 2007

Figure 5.7 Number of at risk communities* according to trachoma prevalence in children aged 5-9 years by region, Western Australia 2007-2021

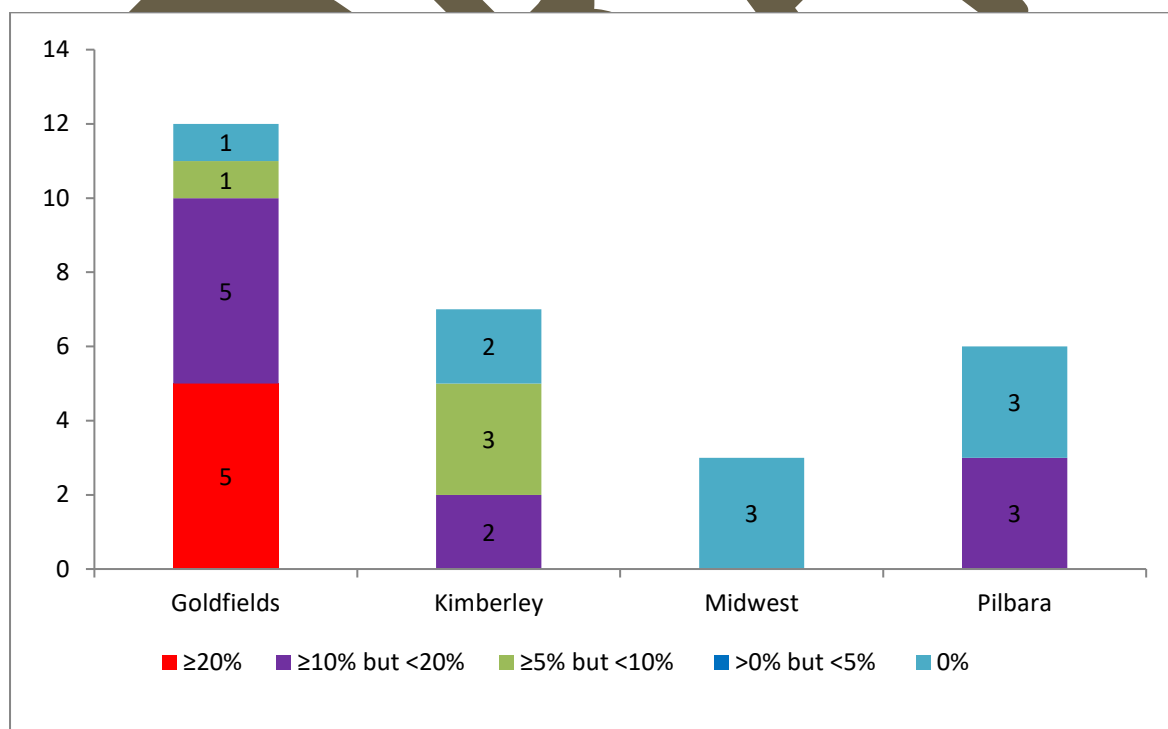
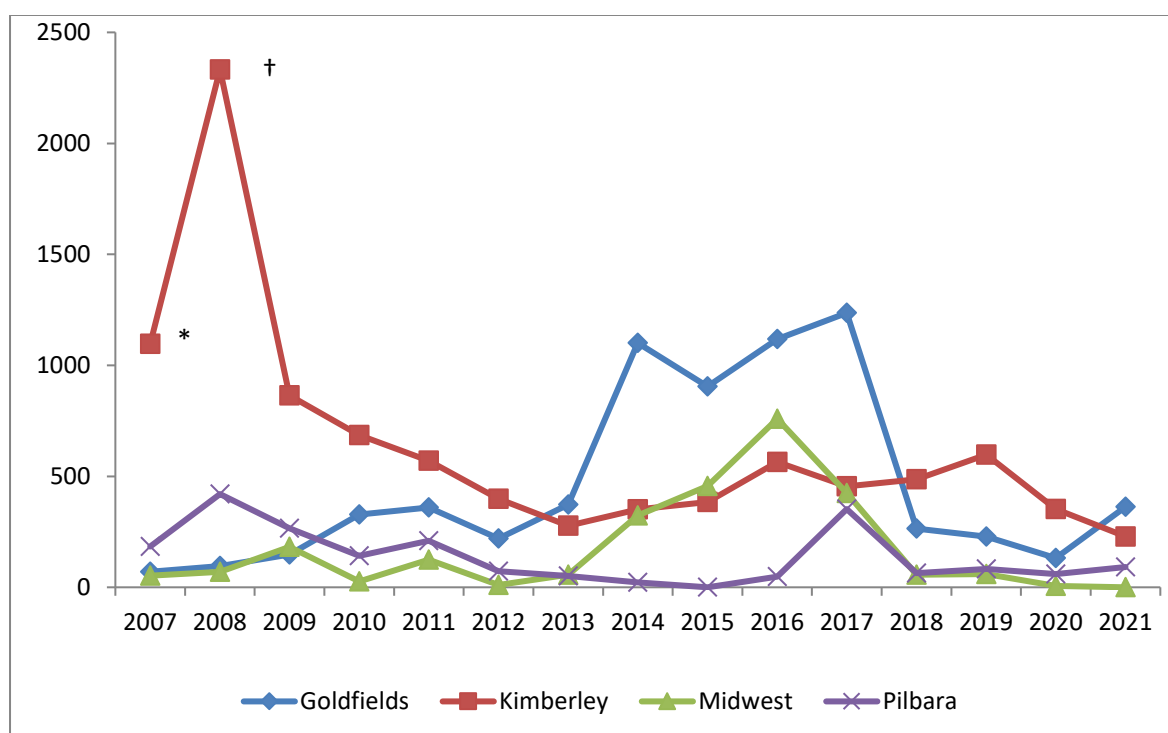


Figure 5.8 Number of doses of azithromycin administered for the treatment of trachoma by region, Western Australia 2007-2021



* Treatments administered in the Kimberley in 2007 are likely to have been under-reported, as treatment data were not requested from several communities

† In the Kimberley in 2008, 17 communities were reported to have received community-based treatment, compared with only 7 in 2009

Table 5.1 Trachoma control delivery by region, Western Australia 2021

Number of communities	Goldfields	Kimberley	Midwest	Pilbara	Total
At risk (A)	15	7	6	6	34
Requiring screening for trachoma (B)	12	7	3	6	28
Screened for trachoma (C)	12	7	3	6	28
Requiring treatment without screening (D)	0	0	0	0	0
Received treatment without screening (E)	0	0	0	0	0
Screened and/or treated for trachoma (F = C+E)	12	7	3	6	28
Requiring neither screening nor treatment for trachoma (G=A-B-D)	3	0	3	0	6

*Communities treated without screening in 2021 as per CDNA Guidelines

Table 5.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Western Australia 2021

	Goldfields				Kimberley				Midwest				Pilbara				Total			
Number of communities screened	12				7				3				6				28			
Age group (years)	1-4	5-9	10-14	1-14	1-4	5-9	10-14	0-14	1-4	5-9	10-14	0-14	1-4	5-9	10-14	0-14	1-4	5-9	10-14	0-14
Children examined for clean face	12	164	34	210	47	208	50	305	85	5	102	65	25	94	75	522	114	711		
Children with clean face	4	74	23	101	1	131	37	169	7	62	5	74	2	33	25	60	14	300	90	404
Clean face prevalence (%)	33	45	68	48	63	74	55	55	8	73	5	73	50	51	70	64	19	57	79	57
Estimated number* of Aboriginal children in communities†	2	166	0	168	0	167	0	167	18	107	24	149	24	66	45	135	44	506	69	619
Children screened for trachoma	13	160	207	207	15	156	156	156	12	5	5	102	4	63	25	92	29	464	64	557
Trachoma screening coverage (%)		96		123		93		93	67	79	21	68	17	95	56	68	66	92	93	97
Children with clinical findings consistent with TF†	6	48	12	66	0	12	0	0	0	0	0	0	0	7	2	9	6	67	14	87
Observed prevalence of trachoma ‡ (%)	46.2	30.0	35.3	31.9	#####	7.7	#####	7.7	0.0	0.0	0.0	0.0	0.0	11.1	8.0	9.8	20.7	14.4	21.9	11.4
Estimated prevalence of trachoma‡ (%)		21.4				7.7			0.0				11.1				12.3			

Overall prevalence of trachoma‡ (%)	15.8	2.1	0.0	4.0	5.0
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TF: trachomatous inflammation - follicular

* Jurisdiction provided estimates for children aged 5-9 years only; number of children aged 0-4 and 10-14 years have not been provided in all communities

† In communities that were screened for trachoma in 2021

‡ Methods of calculating the different prevalence rates on page 23

Table 5.3 Number and proportion of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years, Western Australia 2007-2021

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021	
Communities at-risk †	72		74		74		86		75		71		71		59		49		51		41		40		38		36		34	
Communities not screened ‡	17		7		5		8		7		3		2		0		0		0		0		0		0		0		6	
Number of communities §	55		67		69		78		68		65		65		49		49		51		41		40		36		36		28	
≥20%	1 8	33%	29	43%	22	32%	14	18%	10	15%	9	12%	7	10%	2	3%	3	6%	3	6%	6	15%	5	13%	11	31%	8	22%	5	18%
≥10% but <20%	1 2	22%	7	10%	3	8%	18	23%	8	12%	3	4%	3	4%	4	8%	2	4%	15	29%	17	41%	12	30%	3	8%	13	36%	10	36%
≥5% but <10%	5	9%	8	12%	8	12%	7	9%	7	10%	10	13%	10	14%	2	3%	0	0%	2	4%	1	2%	8	20%	3	8%	4	11%	4	14%
>0% but <5%	0	0%	7	10%	14	20%	7	9%	4	6%	7	11%	8	12%	6	10%	5	11%	1	2%	1	2%	1	3%	1	3%	1	3%	0	0%
0%	2 0	36%	16	24%	22	32%	32	41%	39	57%	46	61%	41	59%	45	76%	39	79%	30	59%	16	39%	14	35%	18	50%	10	28%	9	32%

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per CDNA Guidelines

§ Screened or receiving ongoing annual treatment as per CDNA Guidelines

DRAFT

Table 5.4 Treatment strategies by region, Western Australia 2021

	Goldfields	Kimberley	Midwest	Pilbara	Total
Required treatment for trachoma	11	5	0	4	20
Treated for trachoma	11	5	0	4	20
Screened and treated	11	5	0	4	20
Received treatment only	0	0	0	0	0
Received 6-monthly treatment	0	0	0	0	0
Did not require treatment	4	2	6	2	14
Treated trachoma cases and households	11	0	0	3	19
Community-wide treatment	0	0	0	1	1
Not treated according to CDNA Guidelines	0	0	0	0	0

CDNA: Communicable Diseases Network Australia

Table 5.5 Trachoma treatment coverage by region, Western Australia 2021

	Goldfields					Kimberley					Midwest					Pilbara					Total				
Age group (years)	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for trachoma	6	48	12		66	0	12	0		12	0	0	0		0	0	7	2		9	6	67	14		87
Received treatment for trachoma	6	43	12		61	0	12	0		12	0	0	0		0	0	7	2		9	6	62	14		82
Received treatment for trachoma (%)	100	90	100		92	N/A	100	N/A		100	N/A	N/A	N/A		N/A	N/A	100	100		100	100	93	100		94
Estimated community members* requiring treatment	42	18	42	227	329	47	58	50	2	117	0	0	0	0	0	10	10	14	57	91	99	86	106	556	847
Number of community members* who received treatment	39	18	39	206	302	17	32	29	139	217	0	0	0	0	0	10	8	14	51	83	66	58	82	396	602
Estimated community members who received treatment (%)	93	100	93	91	92	36		58		51	N/A	N/A			N/A		80	100	89	91	67	67	77	71	71
Number of community members who declined treatment	1	2	2	4	9	1	3	2	20	26	0	0	0	0	0	0	0	0	0	0	2	5	4	24	35
Total number of doses of azithromycin delivered	45	61	51	206	363	17	44	29	139	225	0	0	0	0	0	10	15	16	51	92	72	120	96	396	684
Estimated overall treatment coverage (%)	94	92	94	91	92	36	63	58	51	52	N/A	N/A	N/A	N/A	N/A	100	88	100	89	92	69	78	80	71	73

* Includes household contacts and community members requiring/receiving mass drug administration

Table 5.6 Trichiasis screening coverage, prevalence, and treatment* among Indigenous adults by region, Western Australia 2021

	Goldfields		Kimberley		Midwest		Pilbara		Total		
Number of communities screened for trichiasis	17		7		6		6		36		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in region†	1059	608	771	572	1345	1131	3175	2311	5486	1059	608
Number of adults examined	28	205	79	1860	0	159	7	447	114	2671	2785
Number of adults with trichiasis	0	1	0	2	0	0	0	1	0	4	4
Proportion of adults with trichiasis (%)	N/A	0.5	N/A	0.1	N/A	0.0	N/A	0.2	0.0	0.1	0.1
Surgery in past 12 months‡	0	0	0	3	0	0	0	1	0	4	4

* Data include opportunistic screening during trachoma screening, treatment and flu vaccination activities, MBS Item 715 data and optometrist services data

†Population estimate limited to trachoma endemic regions and does not consider changing endemic regions over time and transiency between regions

‡ Surgery cases may include cases identified in previous years

Table 5.7 Health promotion activities by region, Western Australia 2021

	Goldfields	Kimberley	Midwest	Pilbara	Total
Number of communities that reported health promotion activities	9	9	8	12	38
Total number of programs reported	44	20	15	27	106
Methods of health promotion					
One-on-one discussion	22	13	10	1	46
Presentation to group	30	6			36
Interactive group session	13		5	17	35
Social marketing					0
Print material/mass media	1	4		16	21
Sporting/community events	3				3
Other		13	15	10	38
Target audience					
Health professionals/staff	7				7
Children	23	7	7	25	62
Youth					
Teachers/childcare/preschool staff	6				6
Caregivers/parents	14		7		21
Community members	26	16	1		43
Community educators/health promoters			8		8
Interagency members					
Frequency of health promotion activities					
Once	44	20	15	27	106
Occasional *					
Regular†					
Ongoing/routine					

* 2-4 times per year

† 5-12 times per year

Table 5.8 Soap distribution by region, Western Australia 2021

Region	Milpa Bar Soap
Kimberley	63 360
Pilbara	11 520
Midwest	23 040
Goldfields	46 080
Total	144 000

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