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Australian Trachoma Surveillance Report 2015

The Kirby Institute, UNSW Australia June 2016

Welcome to the tenth Annual Surveillance Report on trachoma control in Australia. Like its predecessors, this report has been compiled to document the activities and progress of health departments and other organisations working towards the elimination of blinding trachoma in Australia. Information in the report has been obtained under procedures developed and overseen by a national reference group that brings together a range of stakeholders, including program managers and technical experts. With four years remaining before the 2020 target date set by the World Health Organization (WHO) for global elimination of trachoma, Australia has made excellent progress in many communities that previously had endemic trachoma; however there remain areas of ongoing infection, demonstrating the need for sustained efforts. Sydney was the location for the WHO's annual Summit for the Global Elimination of Trachoma by 2020 (GET2020) in April 2016. The Summit provided an opportunity for Australian stakeholders to learn from trachoma program leaders internationally and focus Australia's attention on what Australia needs to do to eliminate trachoma by 2020.

Prepared by the National Trachoma Surveillance and Reporting Unit The Kirby Institute, UNSW Australia
On behalf of Australian organisations involved in trachoma control activities, under a funding agreement with the Australian Commonwealth Government.

Contents

List of Tables 3
List of Figures 4
Acknowledgements 6
Technical terms and definitions 7
Abbreviations 8
Executive summary 9
Background 11
Methodology 12
Results 16
National results 2015 16
Northern Territory results 26
South Australia results 40
Western Australia results 50
New South Wales Results 64
Discussion 67
Reference List 70
Appendix 1:
World Health Organization trachoma grading card 71
Appendix 2:
Trachoma surveillance summary forms 73
Appendix 3:
De-identified community trachoma prevalence trends by regions, Australia, 2007 – 2015 77

List of Tables

Table 1.1 Trachoma control delivery, Australia 2015 22
Table 1.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence, Australia 2015 23
Table 1.3 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, Australia 2007 – 2015 23
Table 1.4 Treatment strategies by jurisdiction, Australia 2015 24
Table 1.5 Trachoma treatment coverage, Australia 2015 25
Table 1.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults, Australia 2015 25
Table 2.1 Trachoma control delivery by region, Northern Territory 2015 34
Table 2.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Northern Territory 2015 34
Table 2.3 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, Northern Territory 2007 – 2015 35
Table 2.4 Treatment strategies by region, Northern Territory 2015 35
Table 2.5 Trachoma treatment coverage by region, Northern Territory 2015 36
Table 2.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults by region, Northern Territory 2015 36
Table 2.7 Health promotion activities by region, Northern Territory 2015 37
Table 3.1 Trachoma control delivery by region, South Australia 2015 46
Table 3.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, South Australia 2015 47
Table 3.3 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, South Australia 2007 – 2015 47
Table 3.4 Treatment strategies by region, South Australia 2015 48
Table 3.5 Trachoma treatment coverage by region, South Australia 2015 48
Table 3.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults by region, South Australia 2015 49
Table 3.7 Health promotion activities by region, South Australia 2015 49
Table 4.1 Trachoma control delivery by region, Western Australia 2015 58
Table 4.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Western Australia 2015 59
Table 4.3 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, Western Australia 2007 – 2015 59
Table 4.4 Treatment strategies by region, Western Australia 2015 60
Table 4.5 Trachoma treatment coverage by region, Western Australia 2015 60
Table 4.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults by region, Western Australia 2015 61
Table 4.7 Health promotion activities by region, Western Australia 2015 62
Table 5.1 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children aged 5-9 years, Western New South Wales 2015 66
Table 5.2 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, New South Wales 2013 – 2015 66

List of Figures

Figure 1.1 Trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Australia 2015 16

Figure 1.2 Number of at-risk communities by jurisdiction, Australia 2007 – 2015 17

Figure 1.3 Number of at-risk communities according to trachoma control strategy implemented by jurisdiction, Australia 2015 17

Figure 1.4 Population screening coverage in children aged 5-9 years in communities that were screened for trachoma by jurisdiction, Australia 2015 18

Figure 1.5 Proportion of screened children aged 5-9 years who had a clean face by jurisdiction, Australia 2007 – 2015 18

Figure 1.6 a. Active trachoma prevalence among children aged 5-9 years in communities that were screened by jurisdiction, Australia 2007 – 2015 19

Figure 1.6 b. Active trachoma prevalence among children aged 5-9 years by jurisdiction, Australia 2007 – 2015 19

Figure 1.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by jurisdiction, Australia 2015 20

Figure 1.8 Proportion of communities with zero prevalence of trachoma by jurisdiction, 2007 – 2015 20

Figure 1.9 Proportion of communities with endemic (>5%) levels of trachoma by jurisdiction, 2007 – 2015 21

Figure 1.10 Number of communities according to number of years of trachoma prevalence under 5% by jurisdiction, Australia 2015 21

Figure 1.11 Number of doses of azithromycin administered for the treatment of trachoma by jurisdiction, Australia 2007 – 2015 22

Figure 2.1 Number of at-risk communities screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years in the Northern Territory, 2015 28

Figure 2.2 Number of communities at risk by region, Northern Territory 2007 – 2015 29

Figure 2.3 Number of at-risk communities according to trachoma control strategy implemented by region, Northern Territory 2015 29

Figure 2.4 Population screening coverage of children aged 5-9 years in communities that required screening for trachoma by region, Northern Territory 2015 30

Figure 2.5 Proportion of screened children aged 5-9 years who had a clean face by region, Northern Territory 2007 – 2015 30

Figure 2.6 a. Trachoma prevalence among children aged 5-9 years in communities that were screened by region, Northern Territory 2007 – 2015 31

Figure 2.6 b. Trachoma prevalence among children aged 5-9 years in all at-risk communities by region, Northern Territory 2007 – 2015 31

Figure 2.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, Northern Territory 2015 32

Figure 2.8 Communities according to number of years of trachoma prevalence under 5% by region,Northern Territory 2015 32

Figure 2.9 Number of doses of azithromycin administered for the treatment of trachoma by region, Northern Territory 2007 – 2015 33

Figure 3.1 Number of at-risk communities, screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years, South Australia 2015 41

Figure 3.2 Number of communities at risk by region, South Australia 2007 – 2015 42

Figure 3.3 Number of at-risk communities according to trachoma control strategy implemented by region, South Australia 2015 42

Figure 3.4 Population screening coverage of children aged 5-9 years in at-risk communities that required screening for trachoma by region, South Australia 2015 43

Figure 3.5 Proportion of screened children* aged 5-9 years who had a clean face by region, South Australia 2007 – 2015 43

Figure 3.6 Trachoma prevalence among children aged 5-9 years in at-risk communities by region, South Australia 2007 – 2015 44
Figure 3.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, South Australia 2015 44
Figure 3.8 At-risk communities according to number of years of trachoma prevalence under 5% by region, South Australia 2015 45
Figure 3.9 Number of doses of azithromycin administered for the treatment of trachoma by region, South Australia 2007 – 2015 45
Figure 4.1 Number of at-risk communities screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years, Western Australia 2015 52
Figure 4.2 Number of communities at risk by region, Western Australia 2007 – 2015 53
Figure 4.3 Number of at-risk communities according to trachoma control strategy implemented by region, Western Australia 2015 53
Figure 4.4 Population screening coverage in children aged 5-9 years in communities that required screening for trachoma by region, Western Australia 2015 54
Figure 4.5 Proportion of screened children aged 5-9 years who had a clean face by region, Western Australia 2007 – 2015 54
Figure 4.6 a. Trachoma prevalence among children aged 5-9 years in communities that were screened by region, Western Australia 2007 – 2015 55
Figure 4.6 b. Trachoma prevalence among children aged 5-9 years in all at-risk communities by region, Western Australia 2007 – 2015 55
Figure 4.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, Western Australia 2015 56
Figure 4.8 At-risk communities according to number of years* of trachoma prevalence under 5% by region, Western Australia 2015 56
Figure 4.9 Number of doses of azithromycin administered for the treatment of trachoma by region, Western Australia 2007 – 2015 57
Figure 5.1 Number of at-risk communities screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years, New South Wales 2015 65
Figure A.1 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in North Alice Springs Remote region, Northern Territory, 2007 – 2015 77
Figure A.2 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in South Alice Springs Remote region, Northern Territory, 2007 – 2015 77
Figure A.3 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in Barkly region, Northern Territory, 2007 – 2015 78
Figure A.4 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in Darwin Rural region, Northern Territory, 2007 – 2015 78
Figure A.5 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in East Arnhem region, Northern Territory, 2007 – 2015 79
Figure A.6 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in Katherine region, Northern Territory, 2007 – 2015 79
Figure A.7 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in APY Lands region, South Australia, 2007 – 2015 80
Figure A.8 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community in Eyre and Western region, South Australia, 2007 – 2015 80

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New South Wales

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Technical terms and definitions

Definitions are based on the Communicable Diseases Network Australia's 2014 *CDNA Guidelines for the public health management of trachoma in Australia*.[1]

Active 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).

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 active trachoma prevalence ≥ 5% in children aged 5-9 years in the last 5 years; or 3) data < 5% active trachoma prevalence but with a recorded prevalence of active trachoma ≥ 5% 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 > 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 active trachoma of 5% or more in children aged 1-9 years or a prevalence of trichiasis of at least 0.1% in the adult population.

Hyperendemic trachoma:
Prevalence of active trachoma of 20% or more in children aged 1-9 years.

Prevalence of active trachoma:
Proportion of people found in a screening program to have active trachoma.

Screening coverage:
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.

Trachomatous inflammation - follicular (TF):
Presence of five or more follicles in the central part of the upper tarsal conjunctiva, each at least 0.5 mm in diameter, as observed through a 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:
Proportion of Aboriginal and Torres Strait Islander people in a community who weigh > 3 kg and live in a house with one or more children aged below 15 years and who were treated for trachoma during each 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
NTSRU	National Trachoma Surveillance and Reporting Unit
PCR	Polymerase Chain Reaction
SA	South Australia
SAFE	Surgery, Antibiotics, Facial cleanliness and Environment
TSCRG	Trachoma Surveillance and Control Reference Group
WA	Western Australia
WACHS	WA Country Health Service
WHO	World Health Organization

Executive summary

Trachoma screening and management data for 2015 were provided to the National Trachoma Surveillance and Reporting Unit by the jurisdictions of Northern Territory (NT), South Australia (SA), Western Australia (WA), and New South Wales (NSW). Data were analysed by region in the NT (five regions), SA (three regions), and WA (four regions), and NSW (one region). Jurisdictional authorities designated 139 remote Aboriginal communities as being at risk of endemic trachoma in 2015. In 2015 all jurisdictions were guided by the revised 2014 Communicable Disease Network Australia (CDNA) *National guidelines for the public health management of trachoma in Australia*.[1] Increased efforts by the jurisdictions and continued guidance by the Trachoma Surveillance and Control Reference Group (TSCRG) has ensured substantial gains in trachoma control in Australia. The number of communities at risk of endemic levels of trachoma continues to decrease, with 96 communities removed from the at-risk list since 2008. This trend is set to continue with 69% of at-risk communities recording less than endemic levels of trachoma (a prevalence of under 5% over time), compared to 32% of screened communities in 2008. The number of communities recording hyperendemic levels (greater than 20%) of trachoma has also decreased notably from 54 communities in 2008 to 16 in 2015.

Trachoma program coverage

- Jurisdictions identified 139 communities as being at risk of trachoma (Table 1.1).
- Of at-risk communities, 67% (94/139) required screening and/or treatment for trachoma according to current guidelines, with 20% (19/94) requiring treatment but not screening (Table 1.1).
- Of the 94 communities that required screening and/or treatment, 91% (86/94) received the required screening and/or treatment (Table 1.1).
- The remaining 45 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see methodology).

Screening coverage

- Jurisdictions identified 75 communities in the three states and one territory requiring screening for trachoma with 67 screened for trachoma (Table 1.1, Table 1.2).
- Within these communities, 3,173 (89%) of an estimated 3,561 resident children aged 5-9 years were screened (Table 1.2).
- Coverage of children aged 5-9 years in screened at-risk communities was 89% for the NT and WA, 91% for SA and 65% for NSW (Table 1.2, Figure 1.4).

Clean face prevalence

- A total of 3,755 children aged 5-9 years in at-risk communities were examined for clean faces (Table 1.2).
- The overall prevalence of clean faces in children aged 5-9 years was 81%, with 85% in the NT and 72% in SA and WA and 89% in NSW (Table 1.2, Figure 1.5).

Trachoma prevalence

- Active trachoma prevalence in children aged 5-9 years in communities that screened in 2015 was 3.7% with 2.5% in the NT, 7% in SA, 4.4% in WA and 0% in NSW (Table 1.2).
- Active trachoma prevalence in children aged 5-9 years using most recent data carried forward in all at-risk communities was 4.6%, with 4.8% in the NT, 7% in SA, 2.6% in WA and 0% in NSW, based on 118 cases of active trachoma overall, with 50 in the NT, 51 in SA and 17 in WA (Table 1.2).
- There has been a small increase in the prevalence of trachoma in children aged 5-9 years in SA in 2015 from 2014, and a slight decrease in the NT and WA (Figure 1.6b).
- No trachoma was reported or detected in children aged between 5 and 9 years in 75 of 131 (57%) at-risk communities. This included communities that, according to guidelines, were and were not required to screen for trachoma in 2015 (Figure 1.7).
- Endemic levels of trachoma (> 5%) were reported in 40 (30%) at-risk communities screened in 2015. This included communities that according to guidelines, were and were not required to screen for trachoma in 2015 (Figure 1.7).
- Hyperendemic levels of trachoma (>20%) were detected in 16 (12%) at-risk communities. This included communities that, according to guidelines, were and were not required to screen for trachoma in 2015 (Figure 1.7).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 51 communities, 100% of those requiring treatment (Table 1.4).
- Five communities in the NT did not treat according to CDNA guidelines due to staffing restraints, road conditions and cultural ceremonies (Table 1.4).
- Treatment was delivered to active cases and households in 25 communities, and to the whole of community in 26 communities according to the guidelines (Table 1.4).
- Of all cases detected that required treatment, 99% (161/162) received treatment (Table 1.5).
- Total treatment coverage for case and contact treatment, and community wide treatment in all jurisdictions was 87% (8720/10002), with 85% (6612/7815) in the NT, 97% (388/398) in SA, and 96% (1720/1789) in WA (Table 1.5). This data does not include data from the communities that were required to be screened or treated and did not receive screening or treatment.
- A total of 8,881 doses of azithromycin were delivered for trachoma treatment (Table 1.5).

Trichiasis

- Overall 8,356 adults aged 15 years and over were screened for trichiasis (Table 1.6).
- It is acknowledged that the data provided may not include trichiasis screening undertaken as part of the Adult Health Check MBS Item 715 in WA and SA. The NTSRU will be working with the Department of Health to obtain these figures for future reports.
- The prevalence of trichiasis in adults aged 15 years and over was 0.5% and 0.9% in adults aged 40 years and over (Table 1.6).
- Surgery for trichiasis was reported to be undertaken for 14 adults in 2015 (Table 1.6).

Health promotion activities

- Health promotion activities were reported to have occurred in 94 communities, including at-risk and not at-risk communities.

Background

Trachoma, an eye infection caused by the bacteria Chlamydia trachomatis serotypes A, B, Ba and C., continues to be the world's leading cause of infectious, preventable blindness and the fifth leading cause of blindness. Endemic to more than 50 countries globally, it is estimated more than 21 million people are infected with active trachoma. Transmission of the disease occurs through close facial contact, hand-to-eye contact, via fomites (towels, clothing and bedding) or by flies. Trachoma generally occurs in dry, dusty environments and is linked to poor living conditions and personal hygiene behaviours. Overcrowding of households, limited water supply for bathing and general hygiene, poor waste disposal systems and high numbers of flies have all been associated with trachoma. Children commonly have the highest prevalence of trachoma and are believed to be the main reservoirs of infection, because the infection in children has a longer duration than in adults. [2,3,4]

Infection with the relevant *C. trachomatis* serotype causes inflammation of the conjunctiva. Diagnosis of trachoma is by visual inspection, and the detection of follicles (white spots) and papillae (red spots) on the inner upper eyelid. Repeated infections with *C. trachomatis*, especially during childhood, may lead to scarring with contraction and distortion of the eyelid, which may in turn cause the eyelashes to rub against the cornea; this condition is known as trichiasis which leads to gradual vision loss and blindness. [1,6,7] Scarring of the cornea due to trichiasis is irreversible. However, if early signs of in-turned eyelashes are found, then surgery is usually effective in preventing further damage to the cornea.

The Alliance for the Global Elimination of Blinding Trachoma by 2020 (GET 2020) initiative, supported by the World Health Organization (WHO), advocates for the implementation of the SAFE strategy, with its key components of Surgery (to correct trichiasis), Antibiotic treatment, Facial cleanliness and Environmental improvements. This strategy is ideally implemented through a primary care model within a community framework, ensuring consistency and continuity in screening, control measures, data collection and reporting, as well as the building of community capacity. [8,9,10]

WHO guidelines recommend that trachoma is treated by a single dose of the antibiotic azithromycin repeated on an annual basis according to trachoma prevalence. Best public health practice involves treatment of all members of the household in which a person with trachoma resides, whether or not they have evidence of trachoma. In endemic communities, it is recommended that treatment is also extended to all members of the community over 3 kg in weight who live in a household with a child under 15 years of age. [5,11]

Trachoma control in Australia

Australia is the only high-income country where trachoma is still endemic. It occurs primarily in remote and very remote Aboriginal communities in the Northern Territory (NT), South Australia (SA) and Western Australia (WA). In 2008, cases were also found in New South Wales (NSW) and Queensland (Qld), states where trachoma was believed to have been eliminated. However, cases of trachomatous scarring are believed to be present in all jurisdictions and sub-jurisdictional regions of Australia. [5,12] In 2009, the Australian Government invested in the *Closing the Gap - Improving Eye and Ear Health Services for Indigenous Australians* measure which included committing $16 million over a four-year period towards eliminating trachoma in Australia. In 2013, the Australian Government committed a further $16.5 million to continue, improve and expand trachoma control initiatives in jurisdictions with known endemic levels of trachoma. Funding was also provided to jurisdictions with a previous history of trachoma for screening activities to ascertain if control programs were also required. These funds were also committed to establishing a strong framework for monitoring and evaluation.[13]

The surveillance and management of trachoma in 2015 in all jurisdictions was guided by the CDNA 2014 *National guidelines for the public health management of trachoma in Australia*.[1] Compared to the 2006 Guidelines [14], one of the main changes was the option of not screening all endemic communities every year, enabling jurisdictions to use resources for antibiotic distribution and health promotion activities. The guidelines were developed in the context of the WHO SAFE strategy and make recommendations for improving data collection, collation and reporting systems in relation to trachoma control in Australia.

The National Trachoma Surveillance and Reporting Unit

The National Trachoma Surveillance and Reporting Unit (NTSRU) is responsible for data collation, analysis and reporting related to the ongoing evaluation of trachoma control strategies in Australia. From late 2010, the NTSRU has been managed by The Kirby Institute, UNSW Australia.[15-17] For previous reports from 2006 to 2008, the NTSRU was managed by The Centre for Eye Research Australia[18-20] and the 2009 report was managed by the Centre for Molecular, Environmental, Genetic and Analytic Epidemiology, the University of Melbourne.[21]

The NTSRU operates under contract with the Australian Government Department of Health.

Methodology

Each jurisdiction undertook screening and treatment for trachoma under the guidance of the 2014 CDNA *National guidelines for the public health management of trachoma in Australia* that recommend specific treatment strategies depending on the prevalence of trachoma detected through screening.[1]

In 2006, when the National Trachoma Management Program was initiated, each jurisdiction identified at-risk communities from historical prevalence data and other knowledge. Over time, additional communities have been reclassified as being at-risk or removed from the at-risk category. Screening for trachoma focuses on the at-risk communities, but a small number of other communities designated as not at risk have also been screened, generally if there is anecdotal information suggesting the presence of active trachoma, or close proximity or close family ties to endemic communities.

The WHO trachoma grading criteria (Appendix 1) were used to diagnose and classify individual cases of trachoma in all jurisdictions. Data collection forms for data collection at the community level were developed by the NTSRU, based on the CDNA guidelines (Appendix 2). Completed forms were forwarded from the jurisdictional coordinators to the NTSRU for checking and analysis. Information provided to the NTSRU at the community level for each calendar year included:

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

The focus group in all regions is Aboriginal children aged 5-9 years as required by jurisdictional Project Agreements. Data may also be collected and reported on the 1-4 and 10-14 year age groups, however due to low coverage in these age groups trachoma prevalence results may not be representative of the actual prevalence in regions.

Northern Territory

From 2013 the NT followed the screening and treatment schedule recommended in the 2014 CDNA *National guidelines for the public health management of trachoma in Australia*. Trachoma screening and management in the NT was undertaken through 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 was often incorporated into the Healthy School-Age Kids program annual check and was conducted by the trachoma team and program partners supported by either local primary health-care centres or community controlled services. However a large proportion of screening is undertaken as a stand-alone exercise by the trachoma team and program partners. The NT uses school enrolment lists, electronic health records and local knowledge to best determine the number of children aged 5-9 years present in the community at the time of screening. Following screening, treatment was undertaken by the trachoma team and program partners with support from primary health-care services.

In 2015, screening for trichiasis was undertaken primarily by clinic staff during adult health checks, or by optometrists or ophthalmologists from the Regional Eye Health Service based in Alice Springs, utilising a convenience sampling methodology.

South Australia

In South Australia, Country Health SA works collaboratively with Aboriginal Community Controlled Organisations, community health services and the Aboriginal Health Council of South Australia (AHCSA) to ensure that trachoma screening and treatment is undertaken in all at-risk communities. An interagency State Trachoma Reference Group provides guidance to the project. Country Health SA enters into contracts with services for the provision of both trachoma and trichiasis screening and treatment services. In 2014 and 2015 Anangu Pitjantjatjara Yankunytjatjara (APY) Lands aggregated all nine previously distinct communities into one single community for the purpose of trachoma surveillance because of the small populations of each community and kinship links resulting in frequent mobility between these communities. This definition alters trends presented in reports from 2013 to 2015. Additional trichiasis screening activities were undertaken by the Eye Health and Chronic Disease Specialist Support Program (EH&CDSSP), coordinated by the

Aboriginal Health Council of South Australia. This program provides regular visits to SA remote Aboriginal communities by optometrists and ophthalmologists. Trichiasis screening was undertaken opportunistically for adults by the contracted trachoma screening service providers, the EH&CDSSP team and also routinely as part of the Adult Annual Health Checks. In 2015 there was extra focus on the promotion of the clean faces health message in the at-risk communities. With the support from the University of Melbourne Indigenous Eye Health Unit the Imparja television characters Yamba and Milpa undertook a successful Health Promotion road show visiting five schools on the APY Lands emphasising the importance of clean faces. The Country Health SA Trachoma Control team engaged in ongoing conversations with stakeholders with regard to the delivery of healthy housing. It is believed that overcrowding and inadequate maintenance of hardware in housing remains a concern in some communities.

Western Australia

Trachoma screening and management in WA is the responsibility of the WA Country Health Service (WACHS) Population Health Units in the Kimberley, Goldfields, Pilbara and Midwest health regions. An interagency State Trachoma Reference Group has been established to provide program oversight. The WA State Trachoma Reference Group has established a set of principles which guide the program and provide consistent practice across the four endemic regions.

In collaboration with the local primary health care providers, the Population Health Units screened communities in each region within a two-week period, in August and September. People identified with active trachoma were treated at the time of screening. In 2015 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 the screen and by adding names of children who were present in the community at the time of the screen.

In WA, trichiasis screening was undertaken opportunistically in conjunction with adult influenza vaccinations. Screening of the target population also occurs with the Visiting Optometrist Scheme (VOS) in the Kimberley region. The Goldfields region also undertook additional trichiasis screening during the trachoma screening period, where in some communities, trichiasis screening is offered to all people over the age of 40 years. In addition, screening likely occurs as part of the adult health checks provided through the Medicare Benefits Scheme (MBS). The total volume of screening is not able to be determined at this time as the level of data is not available through the MBS information system.

In 2011, 2014 and 2015, WA Health aggregated 10 previously distinct communities into one single community for the purpose of trachoma surveillance because of the small populations of each community and kinship links resulting in frequent mobility between these communities. This definition alters trends presented in reports from 2010 – 2015.

New South Wales

In 2014, NSW Health expanded the trachoma screening project to include a further nine potentially at-risk communities in north western and far western NSW. Repeat screening was also undertaken in the affected community that was identified in 2013. Screening was conducted by the Bathurst Population Health Unit with support from NSW Ministry of Health. No trichiasis screening was undertaken in NSW.

Queensland

In 2012, Queensland Health was funded to undertake a baseline screening of remote communities to establish whether trachoma was a public health concern in Queensland. Findings from this exercise were reported in the 2012 annual report. In one community in the Torres Strait, follicles were observed in eight children. Polymerase Chain Reaction (PCR) swabs were taken from the eight children and household contacts. Results from the PCR test were all negative for *C. trachomatis*. Azithromycin was administered to the eight children and household contacts before the results of the PCR test were available. Planning for future screening in this community and a limited number of neighbouring communities in the Torres Strait is underway.

Data analysis

For the purpose of this report, a community is defined as a specific location where people reside and where there is at least one school. Community coverage is defined as the number of at-risk communities screened for trachoma as a proportion of those that were identified as possibly having trachoma. Individual screening coverage is the proportion of children in the target age group in a region that were actually screened.

In 2015, population data for trachoma screening coverage were provided by each jurisdiction by utilising population lists from schools, health clinics and local advice. The population for communities in years 2007 to 2011 was derived from projected data from the 2006 Australian census using Australian Bureau of Statistics (ABS) standard estimates of population increase (1.6%, 1.8% and 2.1% in the NT, WA and SA, respectively). Population estimates based on ABS census data do not account for population movements within communities, regions and jurisdictions. Therefore, since 2012, the population denominator has been estimated by the jurisdictions. Prevalence of active trachoma was calculated using the number of children screened as the denominator.

Trachoma data were analysed in the age groups 1-4, 5-9 and 10-14 years. Comparisons over time were limited to the group aged 5-9 years, which is the target age group for the trachoma screening programs in all regions. Data from 2006 were excluded from assessment of time trends as collection methods in this first year differed from those subsequently adopted.

Calculations for trachoma prevalence

In 2015 all jurisdictions undertook trachoma control activities according to the revised 2014 CDNA *National guidelines for the public health management of trachoma in Australia*.[1] Under these guidelines not all at-risk communities were required to undertake screening for trachoma in 2015. For reporting purposes, the NTSRU has carried the most recent prevalence data forward in those communities that did not screen in the 2015 calendar year as a direct program decision, providing what is believed to be an over-estimate of the upper-bound on average levels of trachoma. This principle applies to all tables and figures relating to trachoma prevalence data except where otherwise specified as only including data from 2015. This method of projecting data was approved by the Trachoma Surveillance and Control Reference Group on 26 November 2013.

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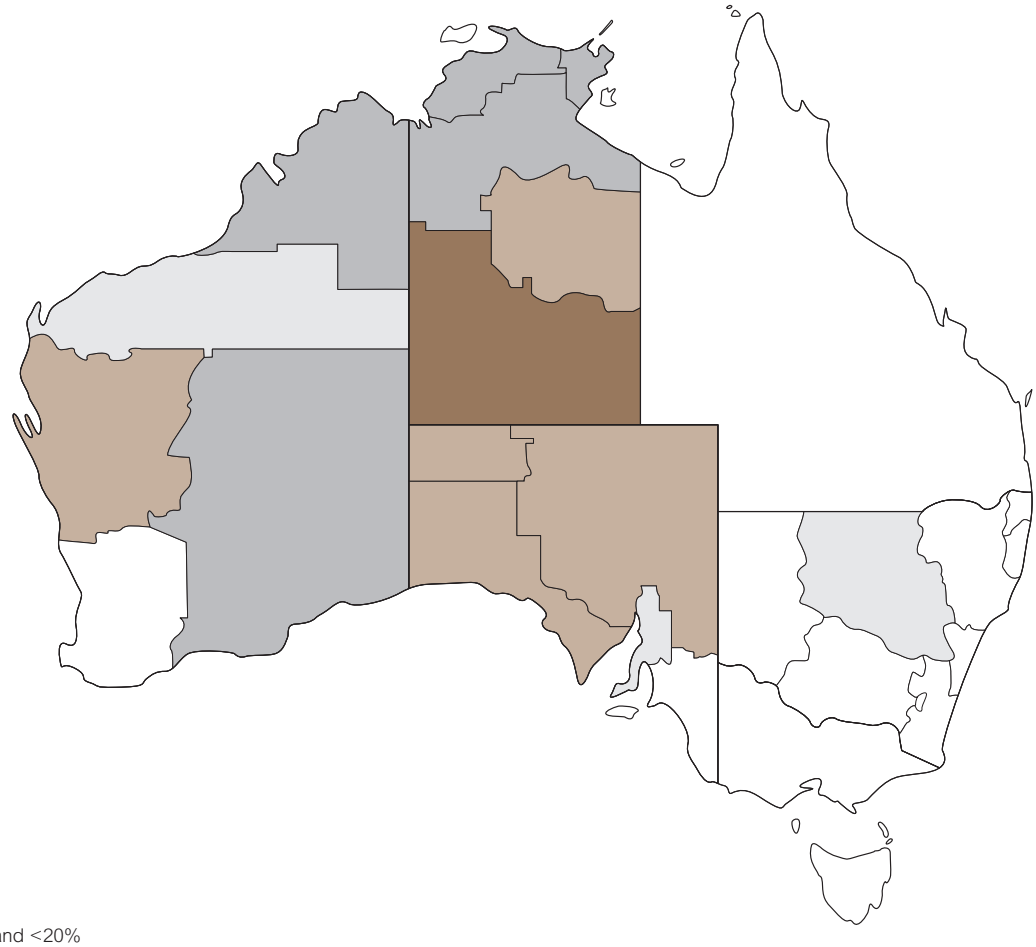
National results 2015

Figure 1.1 Trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Australia 2015*

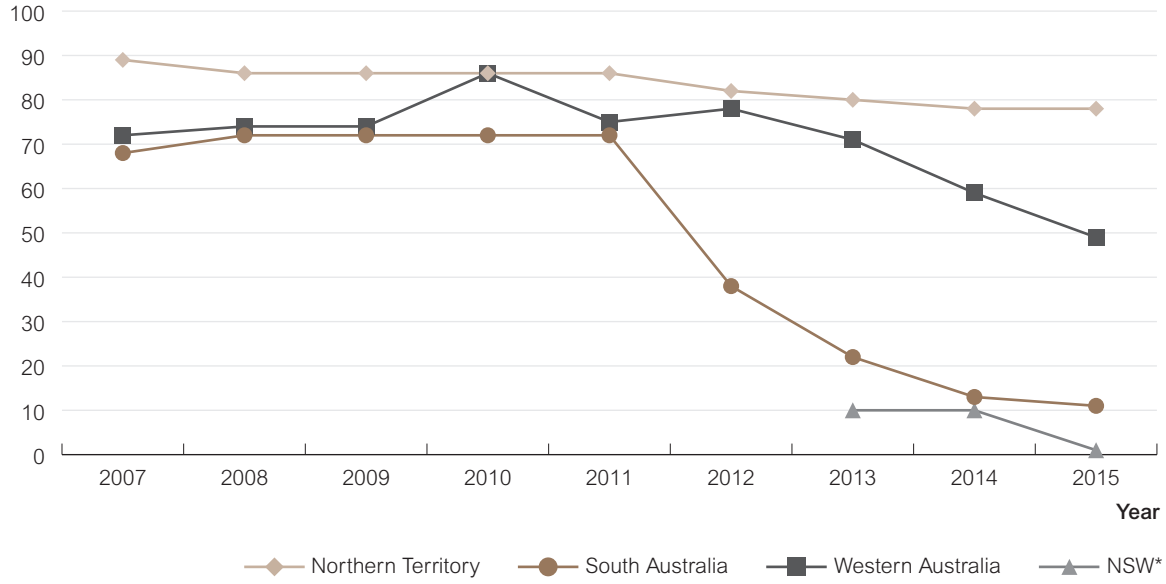


≥10% and <20%
≥5% and <10%
<5%
No trachoma detected

No data/Not screened/Not at-risk

* Most recent estimates carried forward in communities that did not screen in 2015.

Figure 1.2 Number of at-risk communities by jurisdiction, Australia 2007 – 2015



* In 2013 & 2014 NSW communities have been designated as "potentially at-risk" for the purposes of a mapping exercise
† Since 2014 10 communities in WA and 9 in SA have been amalgamated into one community reporting purposes

Figure 1.3 Number of at-risk communities according to trachoma control strategy implemented by jurisdiction, Australia 2015

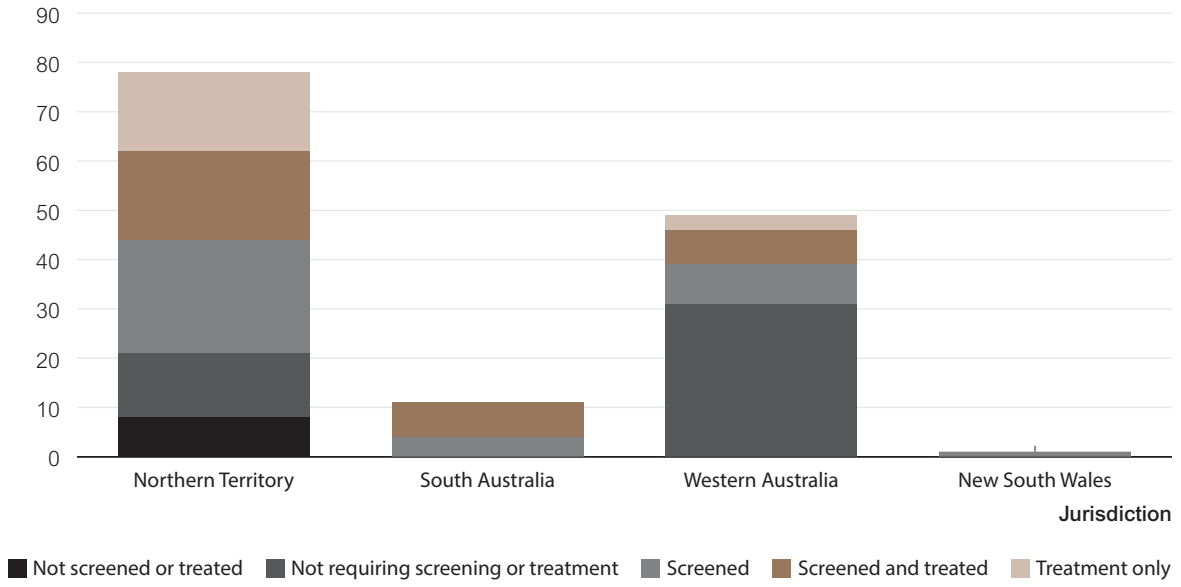


Figure 1.4 Population screening coverage in children aged 5-9 years in communities that were screened for trachoma by jurisdiction, Australia 2015

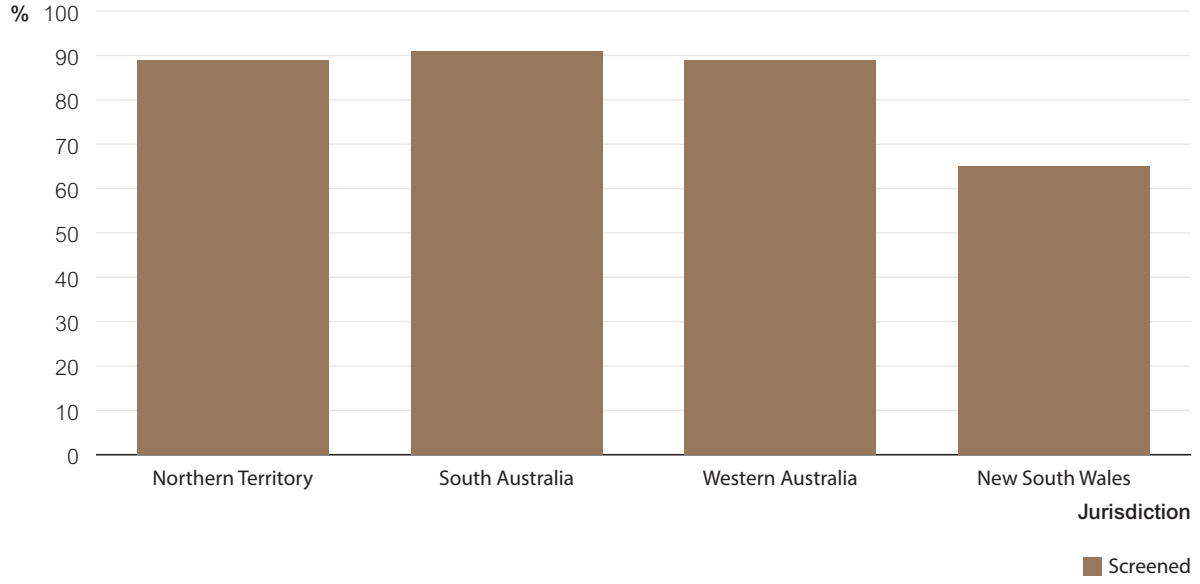


Figure 1.5 Proportion of screened children aged 5-9 years who had a clean face by jurisdiction, Australia 2007 – 2015

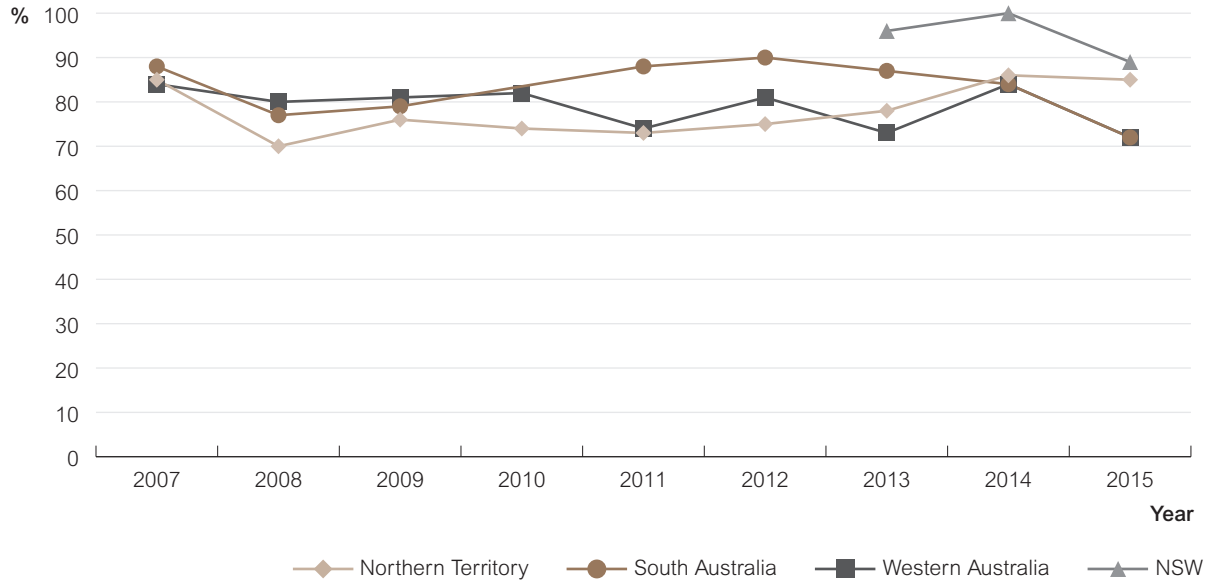
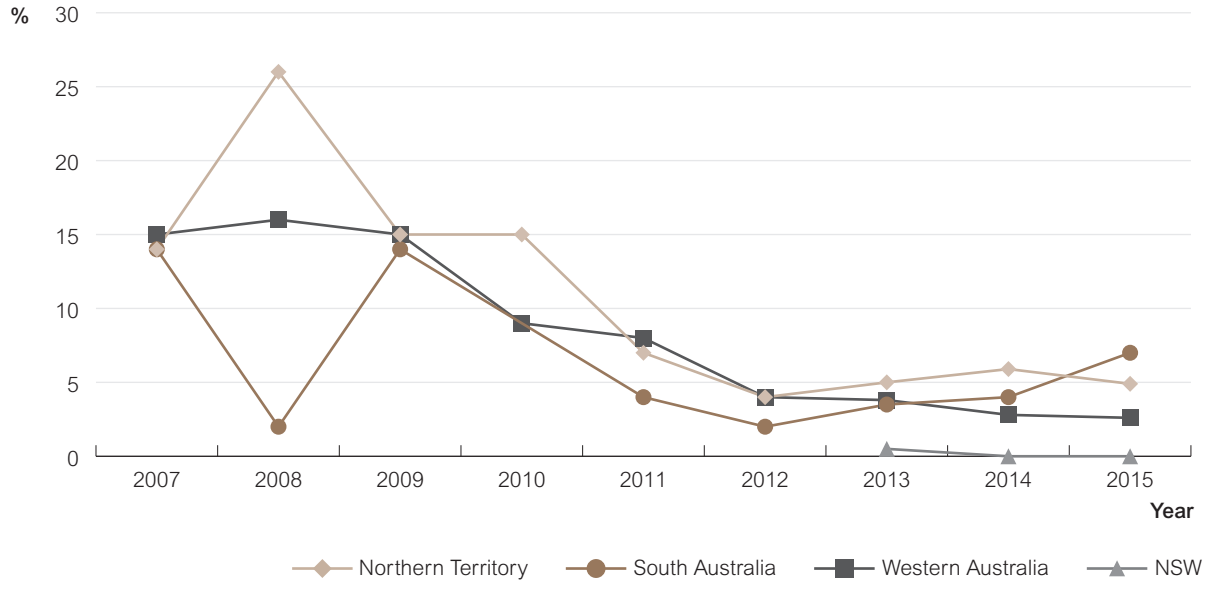


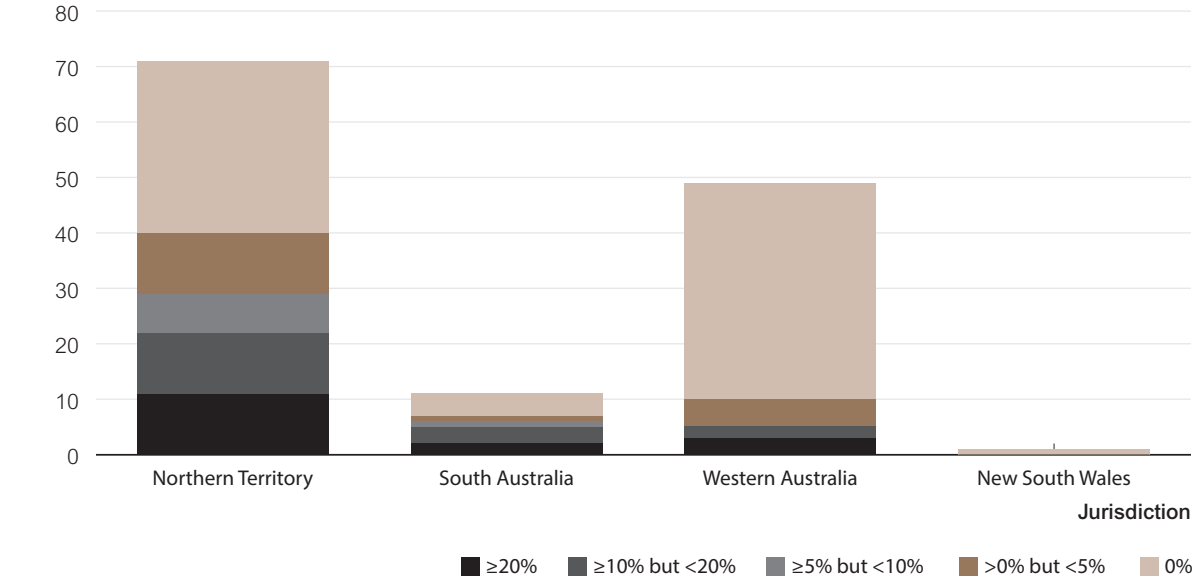
Figure 1.6a. Active trachoma prevalence among children aged 5-9 years in communities that were screened by jurisdiction, Australia 2007 – 2015

Figure 1.6b. Active trachoma prevalence among children aged 5-9 years by jurisdiction, Australia* 2007 – 2015



* Most recent estimates carried forward in communities that did not screen in 2015.

Figure 1.7 Number of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years by jurisdiction, Australia 2015



* Including communities that screened in 2015 and those that were not required to screen in 2015, in accordance with guideline instructions.

Figure 1.8 Proportion of communities with zero prevalence of trachoma by jurisdiction, 2007 – 2015

Figure 1.9 Proportion of communities with endemic (>5%) levels of trachoma by jurisdiction, 2007 – 2015

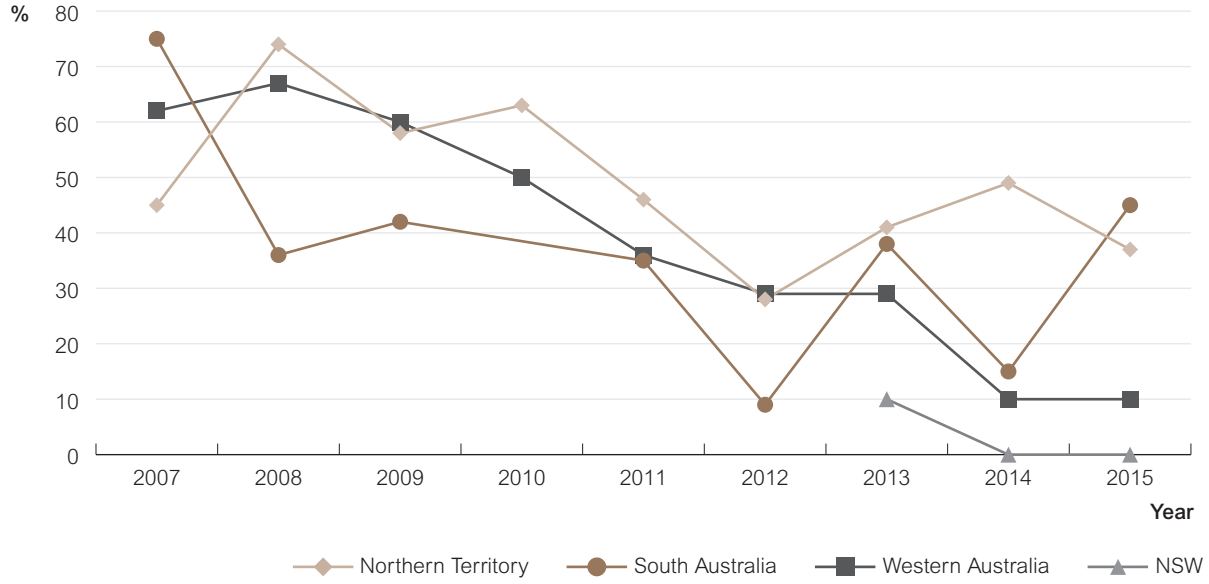
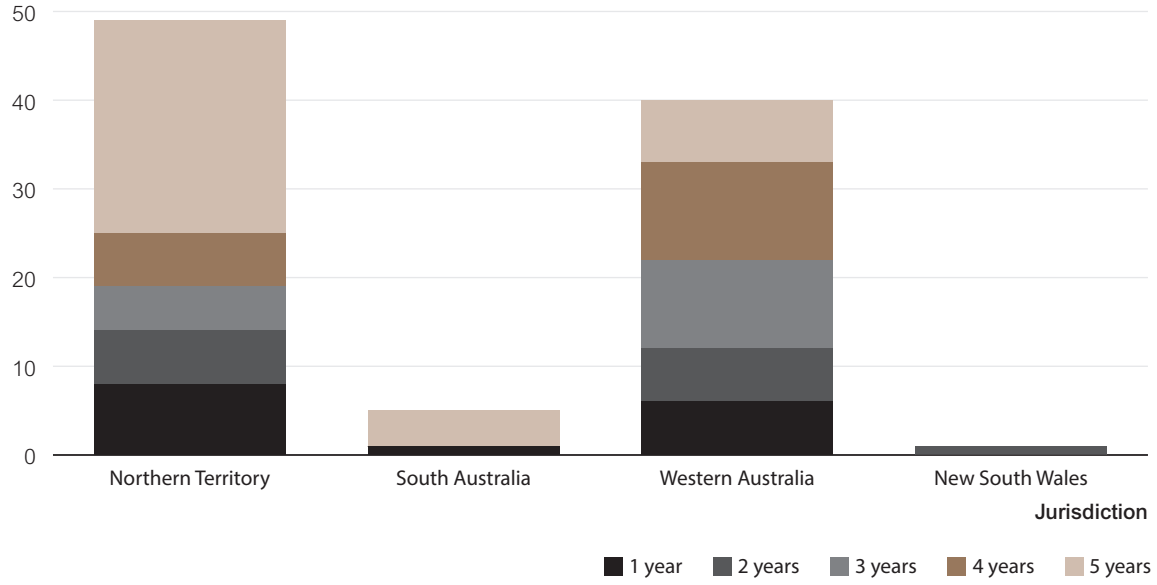


Figure 1.10 Number of communities according to number of years of trachoma prevalence under 5%* by jurisdiction,† Australia 2015



* 5 years with a prevalence below 5% classifies a community as not at risk of trachoma
† Most recent estimates carried forward in communities that did not screen in 2015.

Figure 1.11 Number of doses of azithromycin administered for the treatment of trachoma by jurisdiction, Australia 2007 – 2015

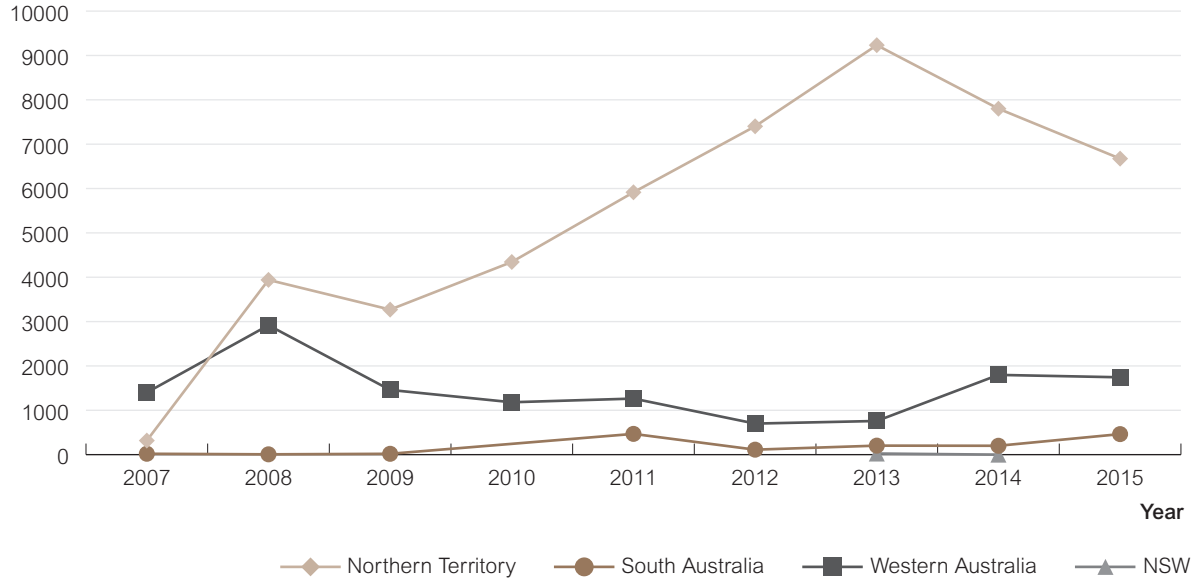


Table 1.1 Trachoma control delivery, Australia 2015

Number of communities	Northern Territory	South Australia	Western Australia	NSW	Total
At risk (A)	78	11	49	1	139
Requiring screening for trachoma (B)	48	11	15	1	75
Screened for trachoma (C)	40	11	15	1	67
Requiring treatment only (D)	16	0	3	0	19
Treated* (E)	16	0	3	0	19
Screened and/or treated for trachoma (F = C+E)	56	11	18	1	86
Requiring neither screening or treatment for trachoma (G=A-B-D)	14	0	31	0	45

* Communities treated without screening in 2015 as per revised guideline instructions

Table 1.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence, Australia 2015

	Northern Territory	South Australia	Western Australia	NSW	Total
Number of communities screened	**40**	**11**	**15**	**1**	**67**
Age group (years)	***5-9***	***5-9***	***5-9***	***5-9***	***5-9***
Children examined for clean face	2,612	729	387	27	3,755
Children with clean face	2,218	528	277	24	3,047
Clean face prevalence (%)	85	72	72	89	81
Estimated number* of Aboriginal children in communities†	2,285	803	433	40	3,561
Children screened for trachoma	2,031	729	387	26	3,173
Trachoma screening coverage (%)	89	91	89	65	89
Children with active trachoma	50	51	17	0	118
Active trachoma prevalence (%)	2.5	7.0	4.4	0.0	3.7
Active trachoma prevalence using most recent data carried forward (%)‡	4.8	7.0	2.6	0.0	4.6

* Jurisdictional estimate
† In communities that were screened for trachoma
‡ Most recent data carried forward from 30 communities in the NT and 34 communities in WA

Table 1.3 Number and proportion* of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, Australia 2007 – 2015

	2007		2008		2009		2010		2011		2012		2013		2014‖		2015	
Communities at-risk†	229		233		232		244		203		196		183		160		139	
Communities not screened‡	102		107		116		89		53		9		20		0		8	
Number of communities§	123		121		116		152		152		187		163		160		131	
≥20%	32	26%	54	45%	26	22%	44	29%	21	14%	15	8%	14	9%	17	11%	16	12%
≥10% but <20%	22	18%	14	12%	13	11%	23	15%	20	13%	13	7%	20	12%	19	12%	16	12%
≥5% but <10%	11	9%	14	12%	12	10%	15	10%	20	13%	20	11%	21	13%	12	8%	8	6%
>0% but <5%	7	6%	12	10%	24	21%	16	11%	19	13%	24	13%	17	10%	13	8%	16	12%
0%	51	41%	27	22%	41	35%	54	36%	72	47%	115	61%	91	56%	99	62%	75	57%

* Based on current year or most recent year
† As defined annually by each jurisdictions
‡ Or treated as per guideline instructions
§ Screened or receiving ongoing annual treatment
‖ Since 2014 10 communities in WA and 9 in SA have been amalgamated into one community reporting purposes

Table 1.4 Treatment strategies by jurisdiction, Australia 2015

Number of communities	Northern Territory	South Australia	Western Australia	Total
Required treatment for trachoma	34	7	10	51
Treated for trachoma	34	7	10	51
Screened and treated	18	7	7	32
Received treatment only	16	0	3	19
Received six-monthly treatment	4	0	1	5
Did not require treatment	41	4	31	76
Treated active cases and households	13	7	5	25
Treated the whole of community	21	0	5	26
Not treated according to CDNA guidelines	5*	0	0	5

* Details in NT section

Table 1.5 Trachoma treatment coverage, Australia 2015

	Northern Territory					South Australia					Western Australia					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*
Active cases requiring treatment	3	50	9	0	63	15	51	9		75	1	18	5		24	19	119	23		162
Active cases who received treatment	3	50	8	0	62	15	51	9		75	1	18	5		24	19	119	22		161
Active cases who received treatment (%)	100	100	89	0	98	100	100	100		100	100	100	100		100	100	100	96		99
Estimated community members requiring treatment	902	1,058	949	4,906	7,815	34	68	49	247	398	152	292	224	1,121	1,789	1,088	1,418	1,222	6,274	10,002
Number of community members who received treatment	798	960	772	4,082	6,612	34	67	48	239	388	147	284	210	1,079	1,720	979	1,311	1,030	5,400	8,720
Estimated community members who received treatment (%)	88	91	81	83	85	100	99	98	97	97	97	97	94	96	96	90	92	84	86	87
Estimated overall treatment coverage (%)	89	91	81	83	85	100	99	98	97	98	97	97	94	96	96	90	93	84	86	87
Doses administered in communities that were treated without screening*	650	754	602	3,301	5,307	0	0	0	0	0	123	205	158	881	1,367	773	959	760	4,182	6,674
Doses administered six-monthly*	273	325	230	1,522	2,350	0	0	0	0	0	0	0	0	0	0	273	325	230	1,522	2,350
Total number of doses of azithromycin delivered	801	1,010	780	4,082	6,674	49	118	57	239	463	148	302	215	1,079	1,744	998	1,430	1,052	5,400	8,881

* As per guidelines

Table 1.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults, Australia 2015

	Northern Territory		South Australia		Western Australia		Total		
Number of communities screened for trichiasis	**67**		**11**		**25**		**103**		
Age groups	*15-39*	*40 +*	*15-39*	*40 +*	*15-39*	*40 +*	*15-39*	*40 +*	*15+*
Estimated population in region*	14,310	8,108	2,895	2,000	6,057	3,586	23,262	13,694	36,956
Adults examined†	2,638	2,470	700	1,264	474	810	3,812	4,544	8,356
With trichiasis (% of adults examined)	6 (0.1%)	23 (1%)	3 (0.4%)	9 (0.7%)	0	7 (0.9%)	9 (0.24%)	39 (0.9%)	48 (0.57%)
Offered ophthalmic consultation	0	8	3	9	0	8	3	25	28
Declined ophthalmic consultation	0	6	0	0	0	2	0	8	8
Surgery in past 12 months	0	6	3	1	0	6	3	13	16

* Population estimate limited to trachoma endemic regions and does not take into account changing endemic regions over time and transiency between regions
† Number of adults examined limited to numbers reported. This number may not account for adults who have been examined in routine adult health checks, and may also include multiple screening

Northern Territory results

Trachoma program coverage

- In 2015, the NT identified 78 communities in five regions as being at risk of trachoma (Table 2.1, Figure 2.1).
- Of these at-risk communities 82% (64/78) required screening and/or treatment for trachoma according to current guidelines, with 16/64 requiring treatment but not screening (Table 2.1, Figure 2.3).
- Of the 64 communities that required screening and/or treatment 87% (56/64) received the required service (Table 2.1).
- The remaining 14 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see methodology) (Table 2.1, Figure 2.3).

Screening coverage

- In 2015, the NT identified 48 communities in the five regions requiring screening for trachoma with 40 of those screened (Table 2.1).
- Eight at-risk communities were not screened due to staffing restraints, road conditions and cultural ceremonies (Table 2.3, Figure 2.3)
- The proportion of children aged 5-9 years screened in the 40 communities was 89%, ranging from 84% in Darwin Rural and East Arnhem regions to 95% in Barkly and Katherine regions (Table 2.2, Figure 2.4).

Clean face prevalence

- Clean face prevalence was assessed in all communities that were screened and also in most that only received treatment.
- The overall prevalence of clean faces among children aged 5-9 years in the communities assessed was 85%, ranging from 68% in Alice Springs Remote region, to 98% in the East Arnhem region (Table 2.2, Figure 2.5).

Trachoma prevalence

- Active trachoma prevalence in those aged 5-9 years in 40 communities that were screened in 2015 was 2.5%. Prevalence ranged from 0% in East Arnhem region to 6.6% in Alice Springs Remote region (Table 2.2, Figure 2.6a).
- Active trachoma prevalence using most recent data carried forward in all 78 at-risk communities was 4.8%, ranging from 0.8 % in East Arnhem region to 12.7% in Alice Springs Remote region (Table 2.2, Figure 2.6b).
- No trachoma was reported in 31 communities. This includes communities that according to guidelines were and were not required to screen for trachoma in 2015 (Figure 2.7, Table 2.3).
- Endemic levels of trachoma (>5%) were reported in 29 communities in 2015 including communities that, according to guidelines, were and were not required to screen for trachoma (Figure 2.7, Table 2.3).
- Hyperendemic levels of trachoma (>20%) were reported in 11 communities in 2015 including communities that, according to guidelines, were and were not required to screen for trachoma (Figure 2.7, Table 2.3).
- Non-endemic levels of trachoma have been reported for 24 communities over a period of five years which may reclassify these communities as being not at risk for trachoma (Figure 2.8).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 34 communities (Figure 2.3).
- Treatment was delivered to active cases and households in 13 communities, and to the whole of community in 21 communities as per guidelines (Table 2.4).
- Five communities were not treated according to CDNA guidelines due to staffing restraints, road conditions and cultural ceremonies (Table 2.4).
- Total treatment coverage for case and contact treatment, and community wide treatment in all regions requiring treatment was 85% with 6,674 doses of azithromycin delivered (Table 2.5, Figure 2.9).

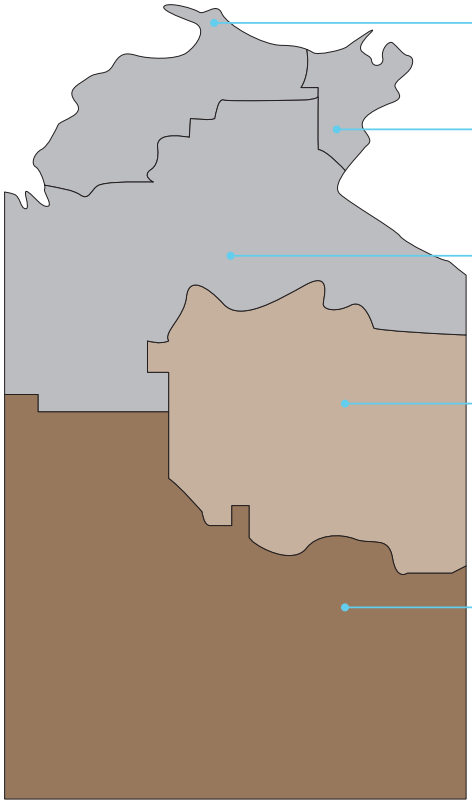
Trichiasis

- Reporting for trichiasis screening was available for 67 communities (Table 2.6).
- Overall 5,108 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 0.6%, and 1% in adults aged 40 years and over (Table 2.6).
- Surgery for trichiasis was reported to be undertaken for six adults, with remaining cases awaiting further review (Table 2.6).

Health promotion

- Health promotion activities were reported to have occurred in 34 communities in the Alice Springs Remote, Barkly, Darwin Rural, East Arnhem, and Katherine regions (Table 2.7).
- A total of 89 health promotion activities were reported (Table 2.7).
- The majority of the health promotion activities were delivered to children, caregivers/parents, teachers and childcare or preschool staff members (Table 2.7).

Figure 2.1 Number of at-risk communities screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years in the Northern Territory, 2015



Darwin Rural
8/12 at-risk communities screened and/or treated
4 at-risk communities did not require screening or treatment
Trachoma prevalence **1.0%**

East Arnhem
4/9 at-risk communities screened and/or treated
4 at-risk communities did not require screening or treatment
1 at-risk community not screened due to competing requirements in the region
Trachoma prevalence **0.8%**

Katherine
10/19 at-risk communities screened and/or treated
1 at-risk community did not require screening or treatment
6 at-risk communities not screened due to competing requirements in the region
Trachoma prevalence **2.6%**

Barkly
10/11 at-risk communities screened and/or treated
1 at-risk community not screened due to competing requirements in the region
Trachoma prevalence **9.2%**

Alice Springs Remote
25/27 at-risk communities screened and/or treated
2 at-risk communities did not require screening or treatment
Trachoma prevalence **12.7%**

≥10% and <20%
≥5% and <10%
<5%
No trachoma detected

No data/Not screened/Not at-risk

Figure 2.2 Number of communities at risk by region, Northern Territory 2007 – 2015

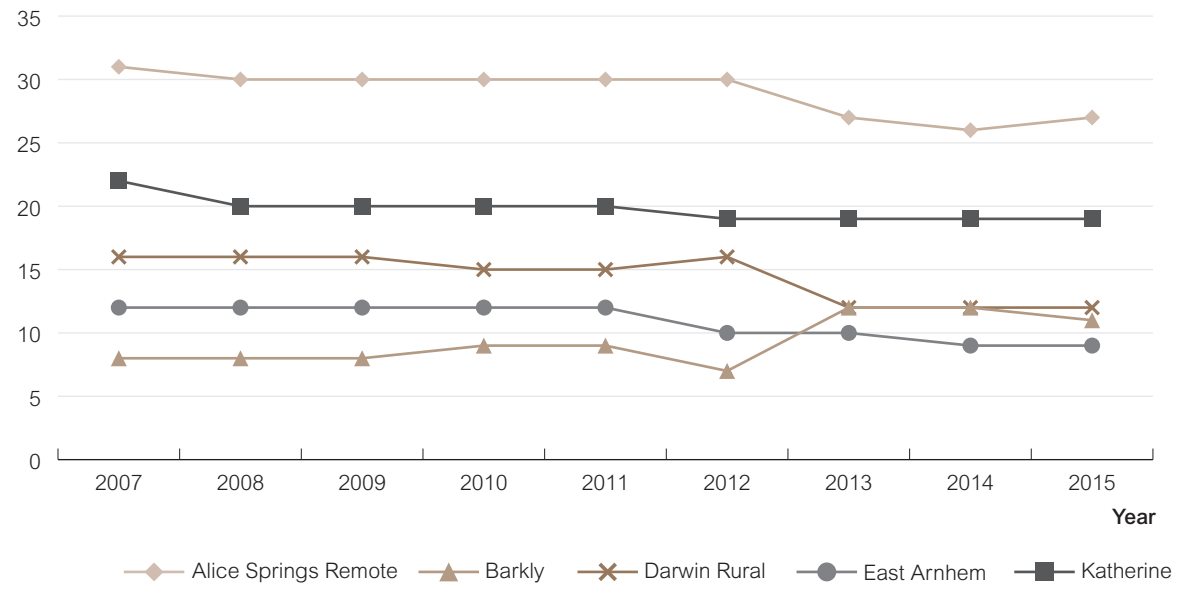


Figure 2.3 Number of at-risk communities according to trachoma control strategy implemented by region, Northern Territory 2015

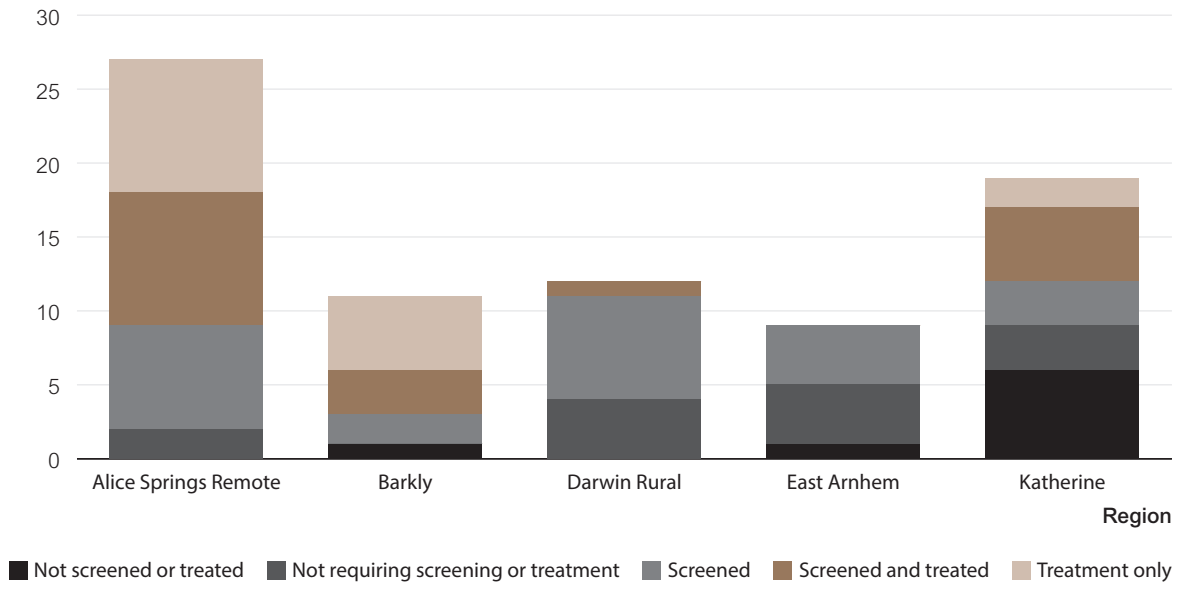


Figure 2.4 Population screening coverage of children aged 5-9 years in communities that required screening for trachoma by region, Northern Territory 2015

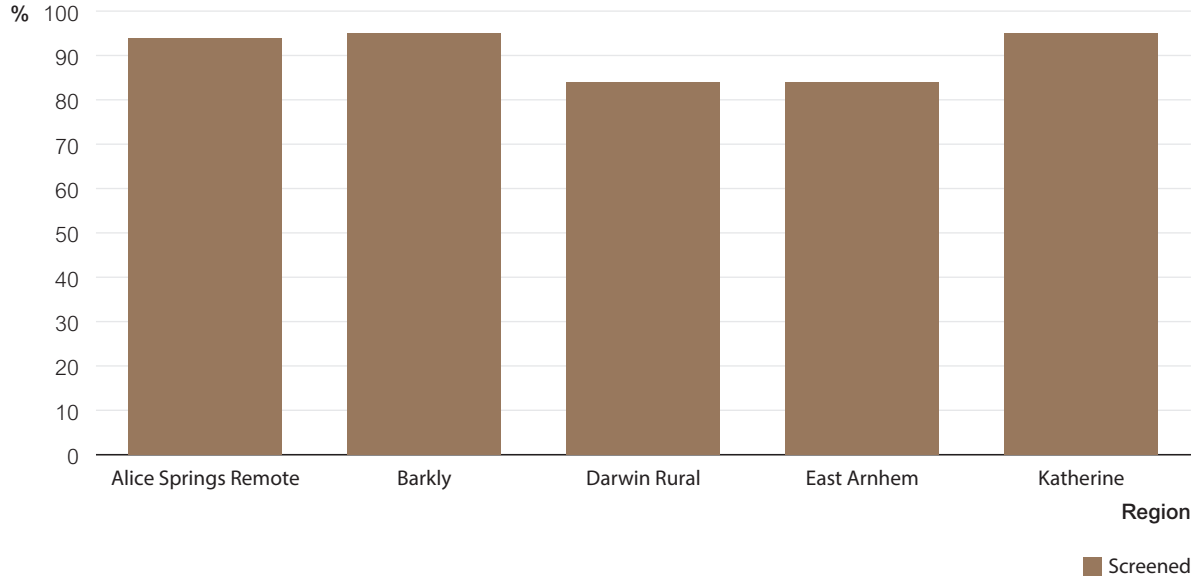


Figure 2.5 Proportion of screened children aged 5-9 years who had a clean face by region, Northern Territory 2007 – 2015

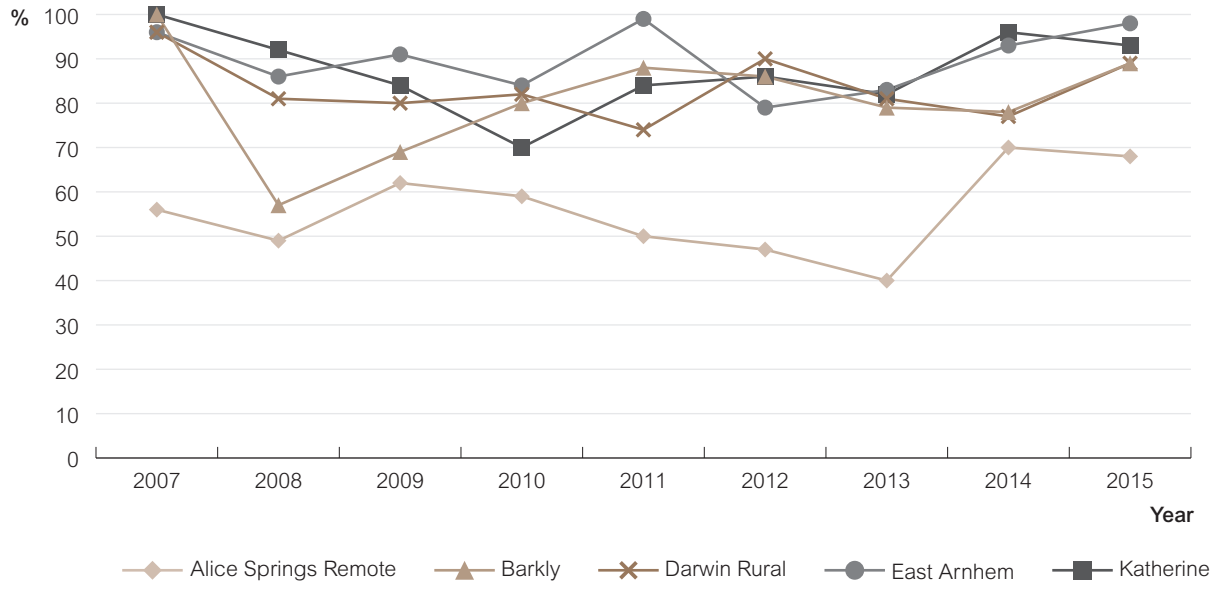


Figure 2.6a. Trachoma prevalence among children aged 5-9 years in communities that were screened by region, Northern Territory 2007 – 2015

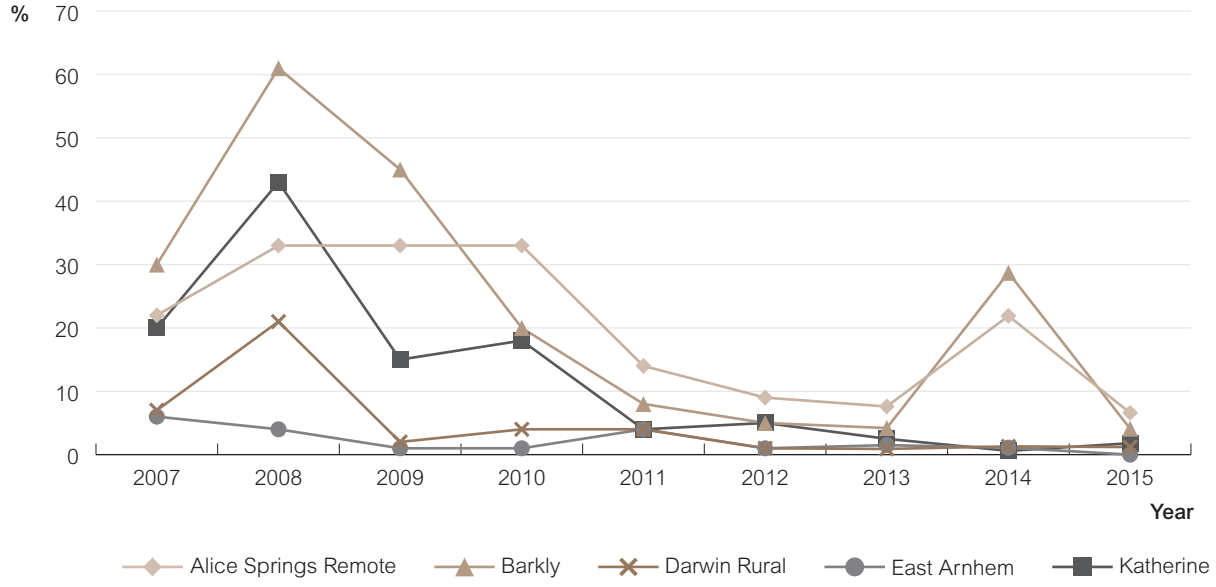
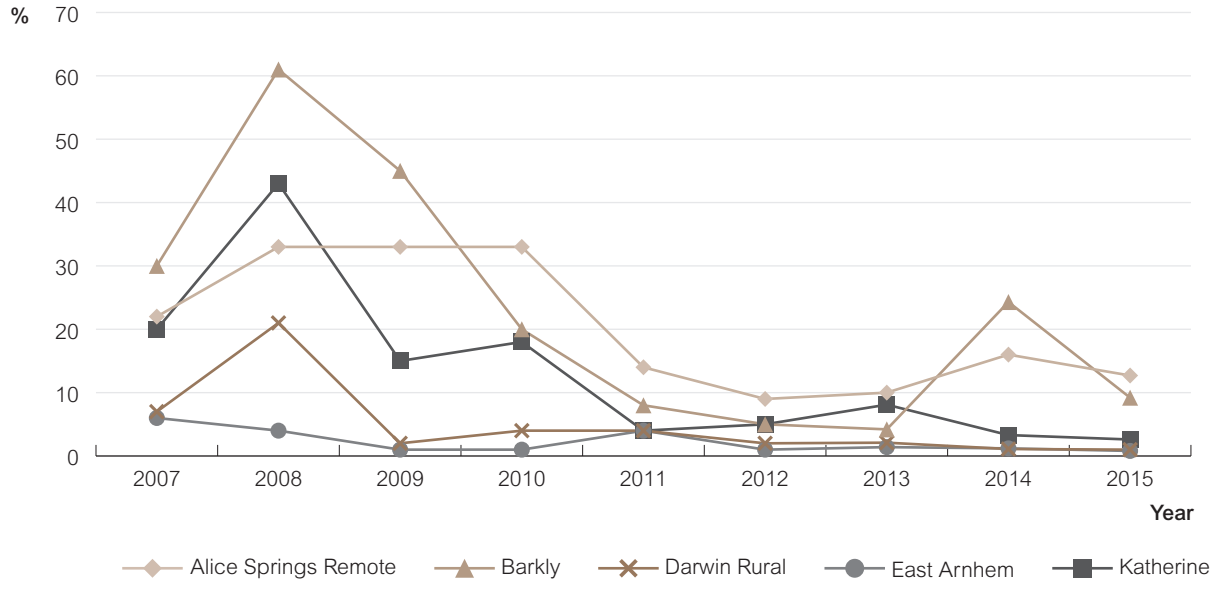
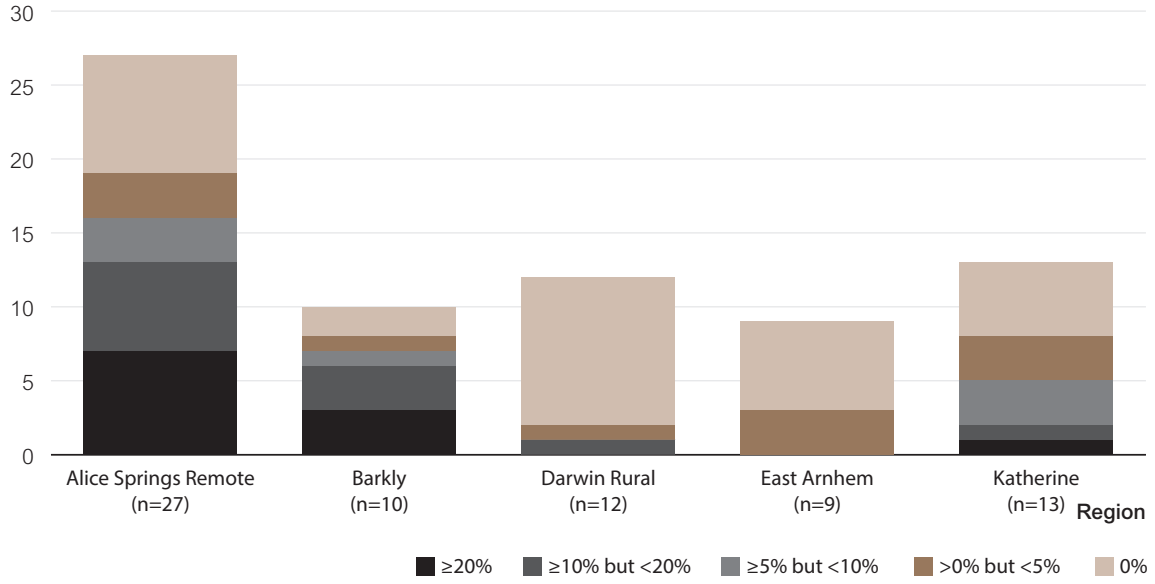


Figure 2.6b. Trachoma prevalence among children aged 5-9 years in all at-risk communities by region, Northern Territory 2007 – 2015



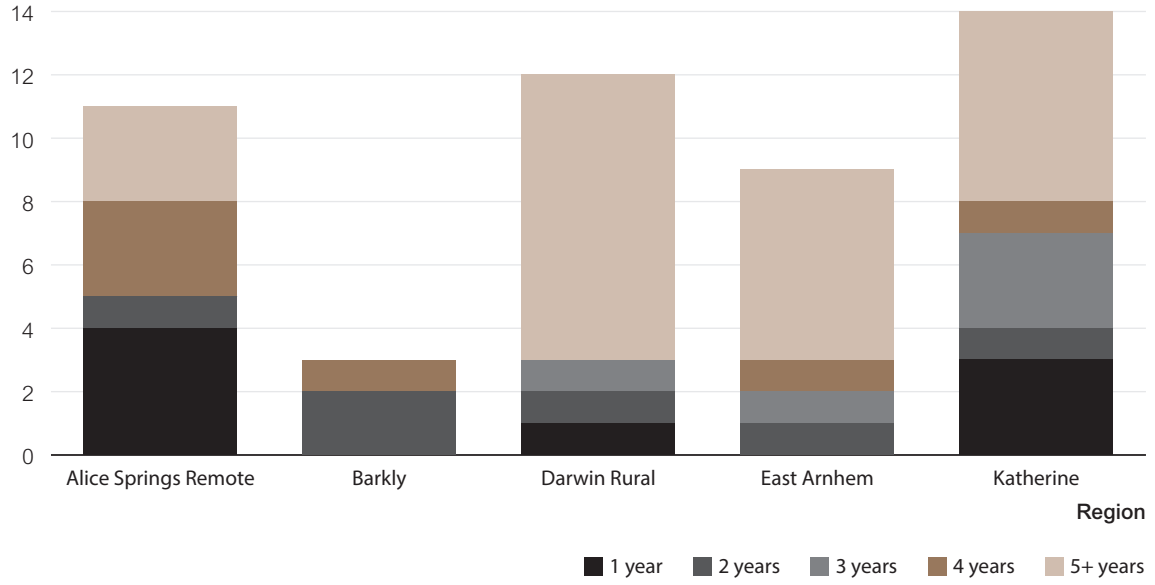
* Most recent estimates carried forward in communities that did not screen in 2015

Figure 2.7 Number of at-risk communities according to level of trachoma prevalence* in children aged 5-9 years by region, Northern Territory 2015



* Including communities that screened in 2015 and those that were not required to screen in 2015, in accordance with guideline instructions

Figure 2.8 Communities according to number of years* of trachoma prevalence† under 5% by region, Northern Territory 2015



* 5 years with a prevalence below 5% classifies a community as not at risk of trachoma
† Most recent estimates carried forward in communities that did not screen in 2015 in accordance with current guidelines

Figure 2.9 Number of doses of azithromycin administered for the treatment of trachoma by region, Northern Territory 2007 – 2015

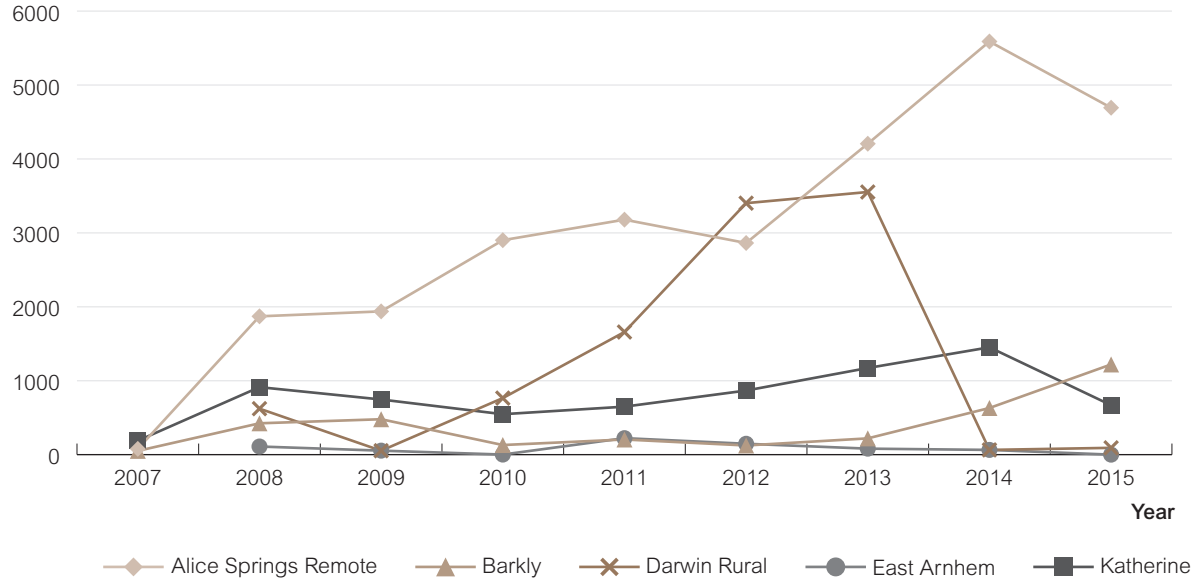


Table 2.1 Trachoma control delivery by region, Northern Territory 2015

Number of communities	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
At risk (A)	27	11	12	9	19	78
Requiring screening for trachoma (B)	16	5	8	5	14	48
Screened for trachoma (C)	16	4	8	4*	8*	40
Requiring treatment only (D)	9	5	0	0	2	16
Treated † (E)	9	5	0	0	2	16
Screened and/or treated for trachoma (F = C+E)	25	9	8	4	10	56
Requiring neither screening or treatment for trachoma (G=A-B-D)	2	1	4	4	3	14

* Some at-risk communities not screened due to competing requirements within the region. All communities will be screened in 2016
† Communities requiring &/ treated without screening in 2015 in accordance with guideline instructions. Other communities have received treatment in 2015 in response from screening activities undertaken in 2015, as detailed in Table 2.4.

Table 2.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Northern Territory 2015

	Alice Springs Remote				Barkly				Darwin Rural				East Arnhem				Katherine				Total			
Number of communities screened	16				5				8				4				8				41			
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	329	662	190	1,181	129	427	300	856	106	807	232	1,145	36	246	137	419	167	470	236	873	767	2,612	1,095	4,474
Children with clean face	124	452	175	751	91	380	296	767	77	715	225	1,017	35	240	137	412	128	431	224	783	455	2,218	1,057	3,730
Clean face prevalence (%)	38	68	92	64	71	89	99	90	73	89	97	89	97	98	100	98	77	92	95	90	59	85	97	83
Estimated number* of Aboriginal children in communities†	277	336	310	923	57	330	212	599	901	932	1,031	2,864	201	286	390	877	759	401	448	1,608	2,195	2,285	2,391	6,871
Children examined for trachoma	18	316	94	428	16	314	185	515	90	780	232	1,102	30	240	142	412	105	381	152	638	259	2,031	805	3,095
Trachoma screening coverage (%)	6	94	30	46	28	95	87	86	10	84	23	38	15	84	36	47	14	95	34	40	12	89	34	45
Children with active trachoma	1	21	5	27	0	13	2	15	1	9	0	10	0	0	0	0	1	7	2	10	3	50	9	62
Active trachoma prevalence (%)	5.6	6.6	5.3	6.3	0.0	4.1	1.1	2.9	1.1	1.2	0.0	0.9	0.0	0.0	0.0	0.0	1.0	1.8	1.3	1.6	1.2	2.5	1.1	2.0
Active trachoma prevalence using most recent data carried forward (%)		12.7%				9.2%				1.0%				0.8%				2.6%				4.8%		

* Jurisdiction provides estimate 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

Table 2.3 Number and proportion of at-risk communities according to level of trachoma prevalence* in children aged 5-9 years, Northern Territory 2007 – 2015

	2007		2008		2009		2010		2011		2012		2013		2014		2015	
Communities at-risk †	89		87		86		86		86		82		80		78		78	
Communities not screened ‡	25		25		33		21		19		4		12		0		8	
Number of communities §	60		43		53		64		65		76		68		78		70	
≥20%	12	20%	25	58%	19	36%	27	42%	9	14%	5	7%	5	7%	14	18%	11	16%
≥10% but <20%	8	13%	6	14%	8	15%	4	6%	9	14%	9	12%	14	21%	14	18%	11	16%
≥5% but <10%	4	7%	4	9%	3	6%	9	14%	11	17%	9	12%	9	13%	10	13%	7	10%
>0% but <5%	7	12%	4	9%	9	17%	9	14%	14	22%	13	17%	9	13%	6	8%	10	14%
0%	29	48%	4	9%	14	26%	15	23%	22	34%	40	53%	31	46%	34	44%	31	44%

* Based on current or most recent year
† As defined annually by each jurisdictions
‡ Or treated as per guideline instructions
§ Screened or receiving ongoing annual treatment

Table 2.4 Treatment strategies by region, Northern Territory 2015

Number of communities	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Required treatment for trachoma *	18	8	1	0	7	34
Treated for trachoma *	18	8	1	0	7	34
Screened and treated	9	3	1	0	5	18
Received treatment only	9	5	0	0	2	16
Received 6-monthly treatment	4	0	0	0	0	4
Did not require treatment	9	3	10	9	10	41
Treated active cases and households	5	3	1	0	4	13
Treated the whole of community	13	5	0	0	3	21
Not treated according to CDNA guidelines	1*	4†	0	0	0	5

* Required MDA, however community declined due to cultural ceremony. Case and household contacts treated.
† Three communities received one of two required 6-monthly treatments due to staffing constraints, road conditions and cultural ceremonies. One community required 6-monthly MDA; however community requested rescreening and results required active case and household contact treatment only.

Table 2.5 Trachoma treatment coverage by region*, Northern Territory 2015

	Alice Springs Remote					Barkly					Darwin Rural					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*
Active cases requiring treatment	1	21	5		27	0	13	2		15	1	9	0		10	1	7	2		11	3	50	9		63
Active cases who received treatment	1	21	4		26	0	13	2		15	1	9	0		10	1	7	2		11	3	50	8		62
Active cases who received treatment (%)	100	100	80		96	0	100	100		100	100	100	0		100	100	100	100		100	100	100	89		98
Estimated community members requiring treatment	659	726	587	3,660	5,632	159	199	244	753	1,355	14	14	13	41	82	70	119	105	452	746	902	1,058	949	4,906	7,815
Number of community members who received treatment*	576	652	468	2,971	4,667	149	182	193	681	1,205	14	14	13	41	82	59	112	98	389	658	798	960	772	4,082	6,612
Estimated community members who received treatment † (%)	87	90	80	81	83	94	91	79	90	89	100	100	100	100	100	84	94	93	86	88	88	91	81	83	85
Total number of doses of azithromycin delivered	577	673	472	2,971	4,693	149	195	195	681	1,220	15	23	13	41	92	60	119	100	389	669	801	1,010	780	4,082	6,674
Estimated overall treatment coverage (%)	87	90	80	81	83	94	92	79	90	89	100	100	100	100	100	85	94	93	86	88	89	91	81	83	85

* All East Arnhem communities did not require treatment.
† Includes household contacts and community members requiring/receiving MDA

Table 2.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults by region, Northern Territory 2015

	Alice Springs Remote		Barkly		Darwin Rural		East Arnhem		Katherine		Total		
Number of communities screened for trichiasis	**21**		**9**		**16**		**6**		**15**		**67**		
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 region*	2,221	1,234	1,918	1,168	4,971	2,699	2,789	1,596	2,411	1,411	14,310	8,108	22,418
Adults examined	527	446	328	160	859	964	458	360	466	540	2,638	2,470	5,108
With trichiasis (% of adults examined)	3 (0.6%)	20 (4.5%)	0	1 (0.6%)	2 (2%)	0	0	1 (0.3%)	1 (0.2%)	1 (0.2%)	6(0.2%)	23 (1%)	29 (0.6%)
Offered ophthalmic consultation	0	7	0	0	0	0	0	0	0	1	0	8	8
Declined ophthalmic consultation	0	5	0	0	0	0	0	0	0	1	0	6	6
Surgery in past 12 months ‡	0	5	0	1	0	0	0	0	0	0	0	6	6

* Population estimate limited to trachoma endemic regions and does not take into account 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 2.7 Health promotion activities by region, Northern Territory 2015

	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Number of communities at risk	**27**	**11**	**12**	**9**	**19**	**78**
Number of communities that reported health promotion activities	**17**	**10**	**3**	**2**	**2**	**34**
Total number of programs reported	**64**	**10**	**3**	**2**	**10**	**89**
Methods of health promotion						
One-on-one discussion	33	9	3	1	8	54
Presentation to group	20	5	1	1	2	29
Interactive group session	17	2	0	0	4	23
Social marketing	4	0	0	0		4
Print material/mass media	23	3	0	0	8	34
Sporting/community events	0	0	0	0		0
Other	0	1	0	0	10	11
Target audience						
Health professionals/staff	16	4	0	1	6	27
Children	21	9	3	0	10	43
Youth	10	6	0	0	4	20
Teachers/childcare/preschool staff	13	7	0	0	8	28
Caregivers/parents	12	8	1	1	8	30
Community members	13	7	1	0	6	27
Community educators/health promoters	6	1	0	0	2	9
Interagency members	4	0	0	0	8	12
Frequency of health promotion activities						
Once	12	5	1	0	10	28
2-4 times per year	52	0	2	2	0	56
5-12 times per year	0	0	0	0	0	0
Ongoing/routine	0	5	0	0	0	5

Northern Territory Trachoma Health Promotion in 2015

In 2015, trachoma health promotion in the Northern Territory continued to focus on broad, hygiene-related messages relevant to the prevention of multiple hygiene related illness such as skin, ear and respiratory illness. Health Education sessions using these broad hygiene messages were delivered at schools, Families as First Teachers facilities and child care facilities. Health education was also given to individuals and family groups during screening and treatment. Information sessions were provided to teachers, clinic staff, local authority committees and other service providers working in communities.

In 2015, the 4-Step Hygiene poster first developed in 2013 which depicts nose blowing, hand washing, face washing and drying either with paper towels or air drying was further developed to include teeth brushing. The poster was also printed onto A5 cards with the trachoma myths on the back, these were distributed widely to community members and service providers during screening and treatment visits.

The Melbourne Football Club made two visits to the Northern Territory in 2015. The trip to Central Australia allowed for trachoma health promotion at a football clinic in one of the communities. Both visits resulted in media coverage for the trachoma program and Milpa the trachoma goanna, was present at all events. The Yamba and Milpa roadshow travelled to several Central Australian communities and was very well received by the community.

Work continued on a poster that provides visual information regarding treatment cycles. It was found most useful when presented to groups rather than individuals. This poster has been translated into Walpri and has had good responses from Walpri-speaking communities. Several information brochures have been developed which are made available at the clinic, store and council office during screening and treatment trips. These are also distributed to individuals. Work will continue in 2016 to have information translated into relevant local languages.

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South Australia results

Trachoma program coverage

- In 2015 SA identified 11 communities in three regions as being at risk of trachoma (Table 3.1, Figure 3.1).
- Due to no evidence of active trachoma, Yorke and Mid North Region are no longer considered at risk of trachoma.
- All 11 at-risk communities were screened for trachoma (Table 3.1, Figure 3.1).
- In 2014 and 2015 the Anangu Pitjantjatjara Yankunytjatjara (APY) Lands aggregated nine communities into one single community to simplify surveillance due to small population size of communities and high mobility between communities.

Screening coverage

- Trachoma screening coverage of children aged 5-9 years in the 11 at-risk communities screened was 91%, ranging from 90% in the Far North region to 93% in the APY Lands (Table 3.2, Figure 3.4).

Clean face prevalence

- 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 72%, ranging from 51% in the APY Lands, to 87% in the Far North region (Table 3.2, Figure 3.5).

Trachoma prevalence

- The active trachoma prevalence in children aged 5-9 years screened was 7%. Prevalence ranged from 6.7% in the Far North region to 7.8% in Eyre and Western region (Table 3.2, Figure 3.6).
- No trachoma was reported in four communities (Table 3.3, Figure 3.7).
- Endemic levels of trachoma (5% or more) were reported in six communities (Table 3.3, Figure 3.7).
- Non endemic levels of trachoma have been reported for four communities over a period of five years which may reclassify these communities as being not at risk for trachoma (Figure 3.8).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in seven communities (Table 3.4).
- Treatment was delivered to active cases and households in all seven communities (Table 3.4).
- Total treatment coverage for case and contact treatment, and community wide treatment in all regions requiring treatment was 98% with 463 doses of azithromycin delivered (Table 3.5).

Trichiasis

- Screening for trichiasis was undertaken in 11 communities (Table 3.6).
- Overall 1,964 adults aged 15 years and over were screened (Table 3.6).
- The prevalence of trichiasis in adults aged 15 years and over was 0.6%, and 0.7% in adults aged 40 years and over (Table 3.6).
- Surgery for trichiasis was reported to be undertaken for four adults (Table 3.6).

Health promotion

- Health promotion activities were reported to have occurred in 11 communities in the APY Lands, Eyre and Western, and Far North regions (Table 3.7).
- A total of 25 health promotion activities were reported in SA (Table 3.7).
- The majority of the health promotion activities were delivered to children, teachers and childcare or preschool staff members, caregivers/parents, and youth (Table 3.7).

Figure 3.1 Number of at-risk communities, screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years, South Australia 2015

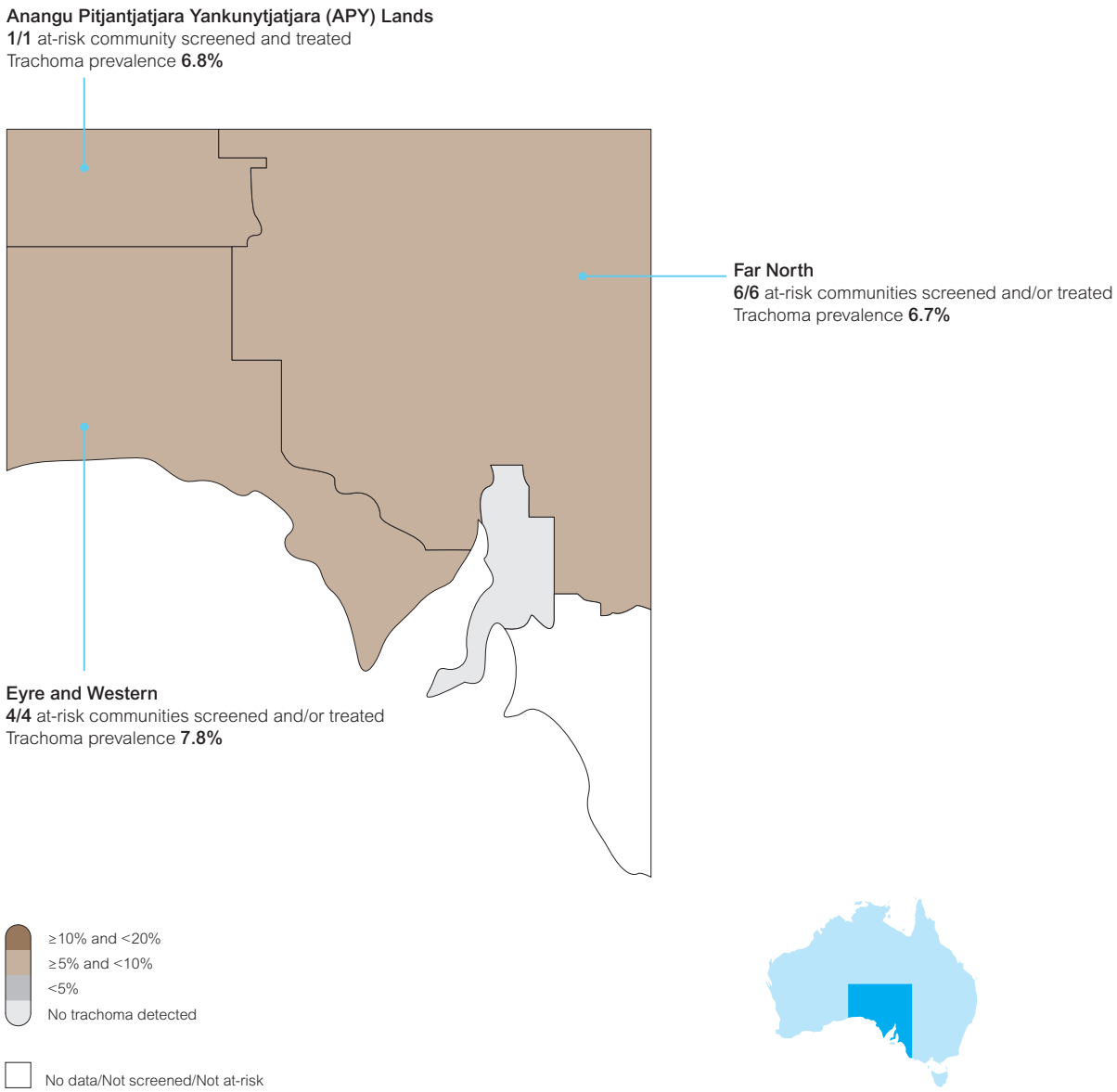
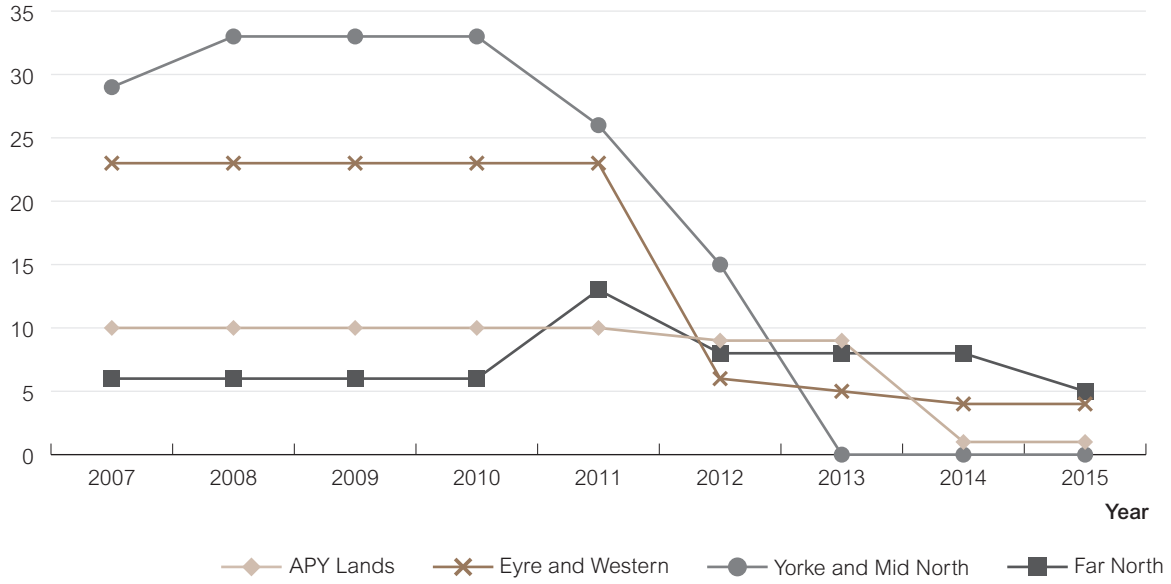
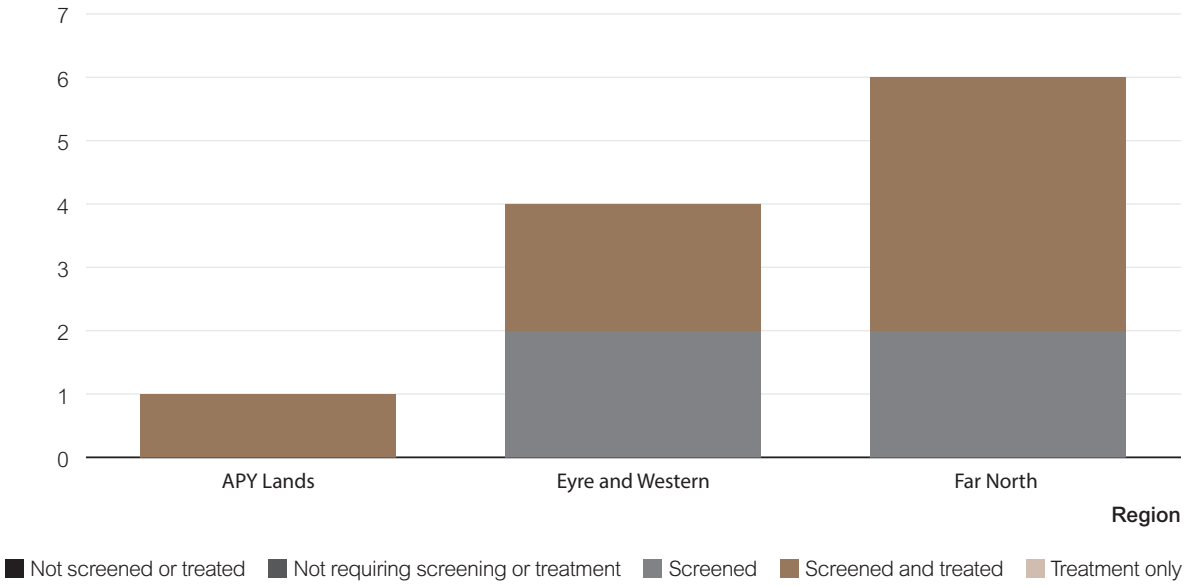


Figure 3.2 Number of communities at risk by region, South Australia 2007 – 2015



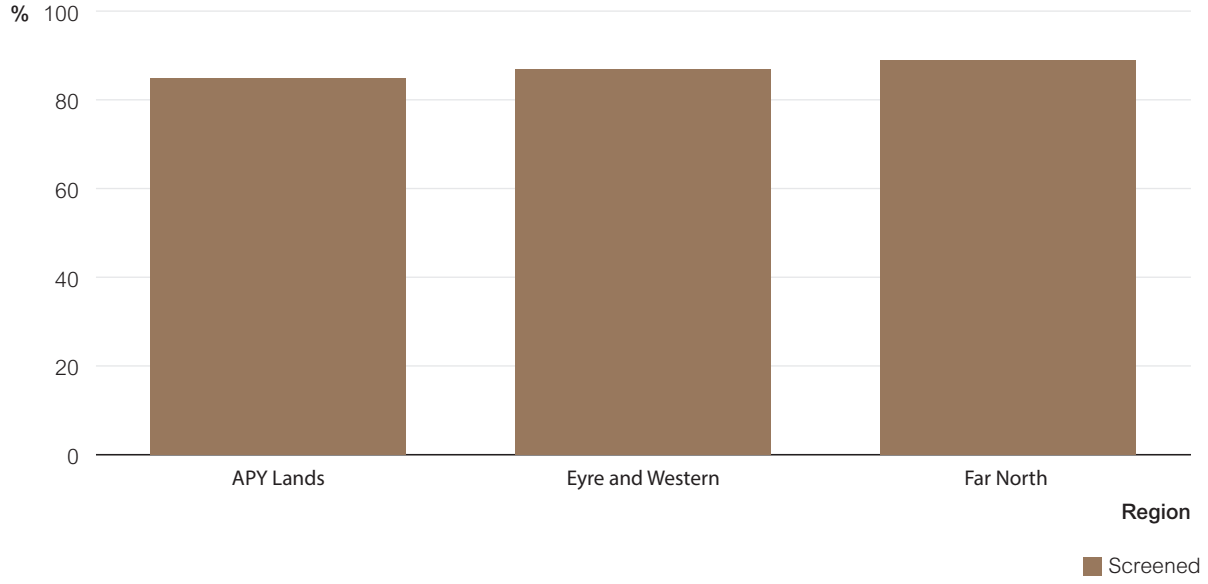
* Since 2014 APY Lands aggregated 9 communities into one community for presentation of data
APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.3 Number of at-risk communities according to trachoma control strategy implemented by region, South Australia 2015



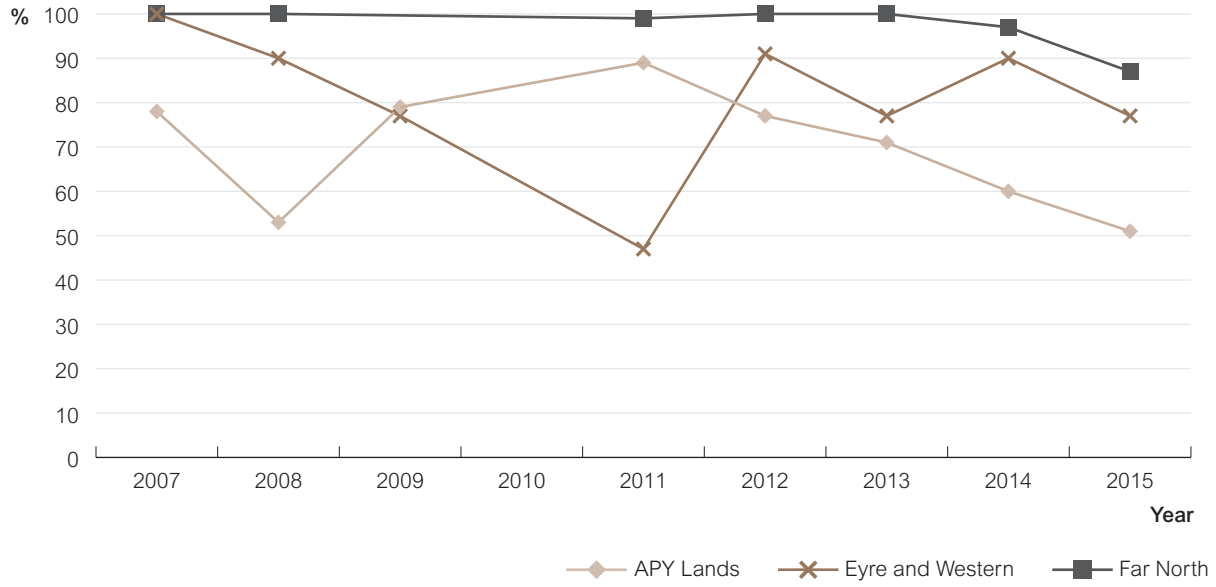
* APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.4 Population screening coverage of children aged 5-9 years in at-risk communities that required screening for trachoma by region, South Australia 2015



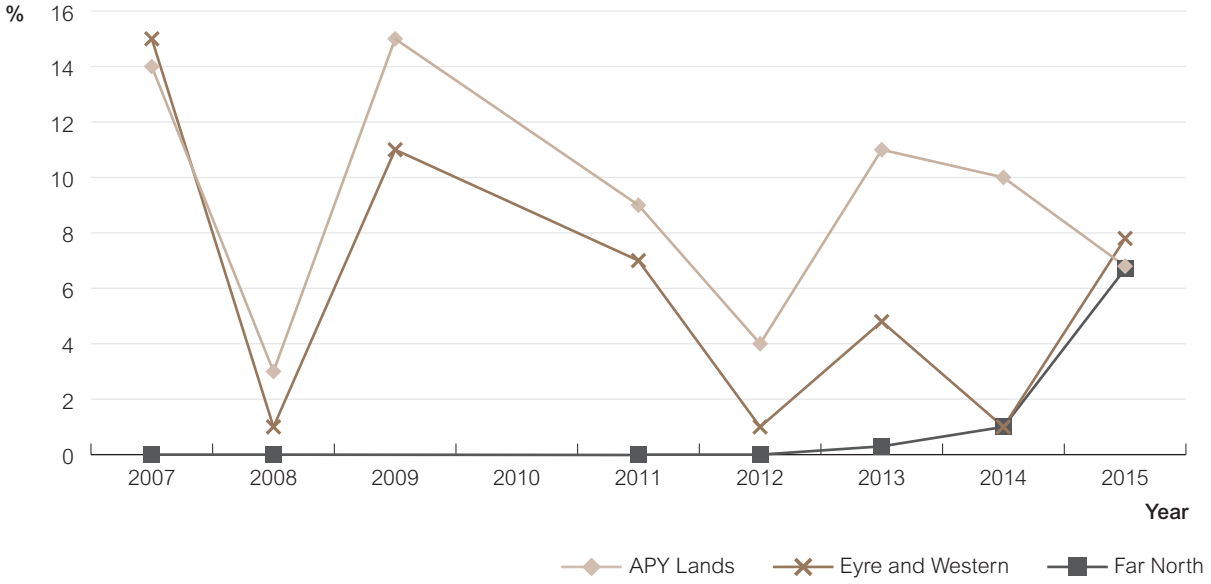
APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.5 Proportion of screened children* aged 5-9 years who had a clean face by region, South Australia 2007 – 2015



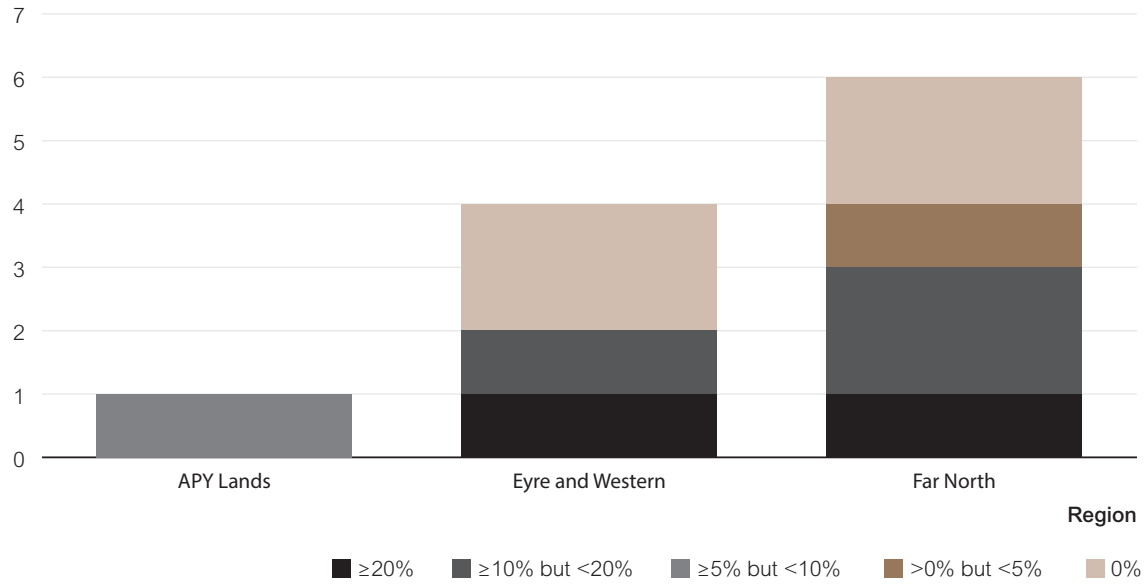
* In at-risk communities
APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.6 Trachoma prevalence among children aged 5-9 years in at-risk communities by region*, South Australia 2007 – 2015



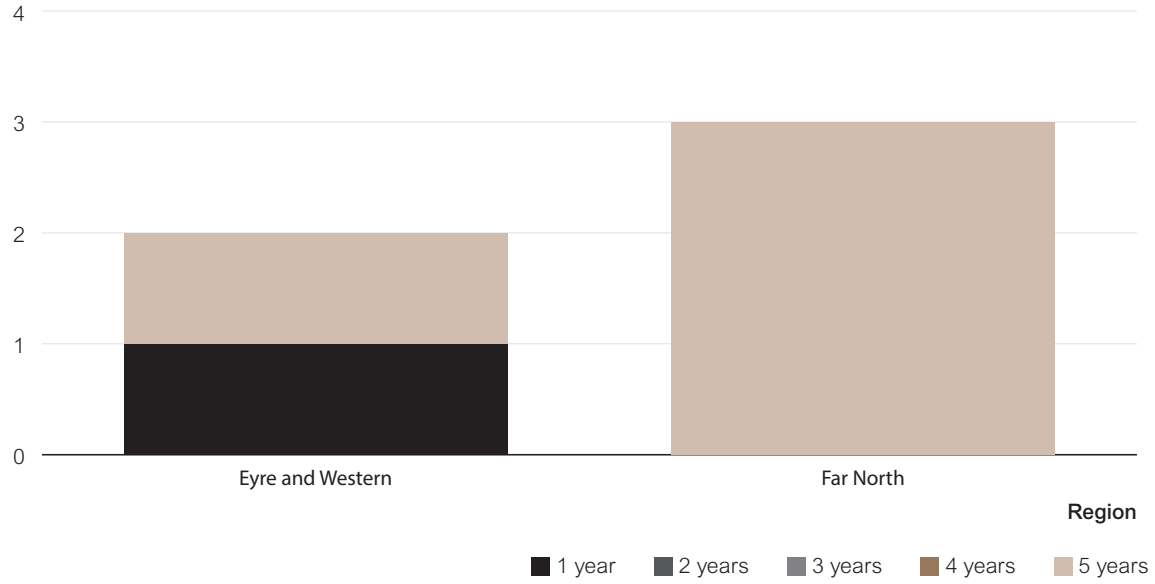
* Population sizes in all regions are small; therefore fluctuations in rates should be interpreted cautiously
APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, South Australia 2015



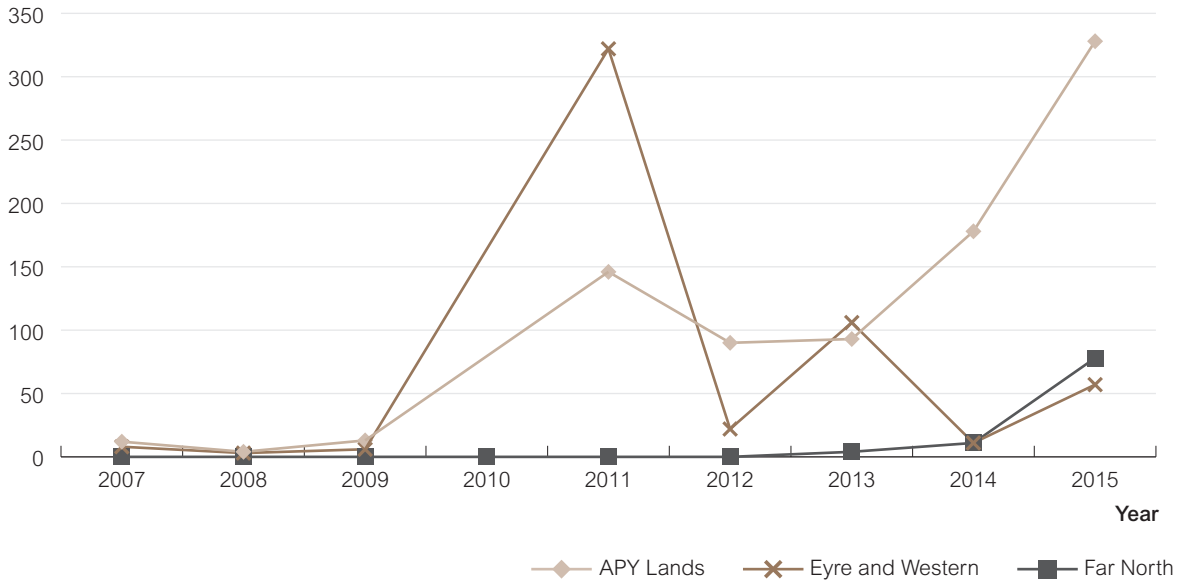
*APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.8 At-risk communities according to number of years* of trachoma prevalence under 5% by region, South Australia 2015



* 5 years with a prevalence below 5% classifies a community as not at risk of trachoma

Figure 3.9 Number of doses of azithromycin administered for the treatment of trachoma by region, South Australia 2007 – 2015



APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.1 Trachoma control delivery by region, South Australia 2015

Number of communities	APY Lands	Eyre and Western	Far North	Total
At risk* (A)	1*	4	6	11
Requiring screening for trachoma (B)	1	4	6	11
Screened for trachoma (C)	1	4	6	11
Requiring treatment only (D)	0	0	0	0
Treated† (E)	0	0	0	0
Screened and/or treated for trachoma (F = C+E)	1	4	6	11
Requiring neither screening or treatment for trachoma (G=A-B-D)	0	0	0	0

* In 2015 APY Lands aggregated 9 communities into one community for presentation of data
† Communities treated without screening in 2015 as per guideline instructions
APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, South Australia 2015

	APY Lands				Eyre and Western				Far North				Total			
Number of communities screened	1*				4				6				11			
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	160	249	240	649	88	154	124	366	145	326	202	673	393	729	566	1,688
Children with clean face	68	127	214	409	60	119	102	281	113	282	176	571	241	528	492	1,261
Clean face prevalence (%)	43	51	89	63	68	77	82	77	78	87	87	85	61	72	87	75
Estimated number* of Aboriginal children in communities†	255	269	254	778	146	170	158	474	330	364	339	1,033	731	803	751	2,285
Children examined for trachoma	160	249	240	649	88	154	124	366	145	326	202	673	393	729	566	1,688
Trachoma screening coverage (%)	63	93	94	83	60	91	78	77	44	90	60	65	54	91	75	74
Children with active trachoma	12	17	5	34	1	12	0	13	2	22	4	28	15	51	9	75
Active trachoma prevalence (%)	7.5	6.8	2.1	5.2	1.1	7.8	0.0	3.6	1.4	6.7	2.0	4.2	3.8	7.0	1.6	4.4

* In 2015 APY Lands aggregated 9 communities into one community for presentation of data
† ABS estimate
APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.3 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, South Australia 2007 – 2015

	2007		2008		2009		2010		2011		2012		2013		2014‖		2015	
Communities at-risk†	68		72		72		72		46		38		22		13		11	
Communities not screened‡	60		61		60		60		27		2		6		0		0	
Number of communities§	8		11		12		11		19		36		16		13		11	
≥20%	2	25%	0	0%	3	25%	3	27%	2	11%	1	3%	2	13%	1	8%	2	18%
≥10% but <20%	2	25%	1	9%	2	17%	1	9%	3	16%	1	3%	3	19%	1	8%	3	27%
≥5% but <10%	2	25%	2	18%	1	8%	0	0%	2	11%	1	3%	1	6%	0	0%	1	9%
>0% but <5%	0	0%	1	9%	1	8%	0	0%	1	5%	4	11%	0	0%	1	8%	1	9%
0%	2	25%	7	64%	5	42%	7	64%	11	58%	29	81%	10	63%	10	77%	4	36%

* Based on current year or most recent year
† As defined annually by each jurisdictions
‡ Or treated as per guideline instructions
§ Screened or receiving ongoing annual treatment
‖ Since 2014, 9 communities from the Anangu Pitjantjatjara Yankunytjatjara have been amalgamated into one community for reporting purposes

Table 3.4 Treatment strategies by region, South Australia 2015

Number of communities	APY Lands	Eyre and Western	Far North	Total*
Required treatment for trachoma	1*	2	4	7
Treated for trachoma	1	2	4	7
Screened and treated	1	2	4	7
Received treatment only	0	0	0	0
Received six-monthly treatment	0	0	0	0
Did not require treatment	0	2	2	4
Treated active cases and households	1	2	4	7
Treated the whole of community	0	0	0	0
Not treated according to CDNA guidelines	0	0	0	0

* In 2015 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.
APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.5 Trachoma treatment coverage by region, South Australia 2015

	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*
Active cases requiring treatment	12	17	5		34	1	12	0		13	2	22	4		28	15	51	9		75
Active cases who received treatment	12	17	5		34	1	12	0		13	2	22	4		28	15	51	9		75
Active cases who received treatment (%)	100	100	100		100	100	100	0		100	100	100	100		100	100	100	100		100
Estimated community members requiring treatment	26	29	31	213	299	5	17	10	14	46	3	22	8	20	53	34	68	49	247	398
Number of community members who received treatment	26	28	31	209	294	5	17	9	13	44	3	22	8	17	50	34	67	48	239	388
Estimated community members who received treatment (%)	100	97	100	98	98	100	100	90	93	96	100	100	100	85	94	100	99	98	97	97
Total number of doses of azithromycin delivered	38	45	36	209	328	6	29	9	13	57	5	44	12	17	78	49	118	57	239	463
Estimated overall treatment coverage (%)	100	98	100	98	98	100	100	90	93	97	100	100	100	85	96	100	99	98	97	98

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults by region, South Australia 2015

	APY Lands		Eyre and Western		Far North		Total		
Number of communities screened for trichiasis	**1***		**4**		**6**		**11**		
Age group (years)	***15-39***	***40+***	***15-39***	***40+***	***15-39***	***40+***	***15-39***	***40+***	***15+***
Estimated population*	1,124	611	498	433	1,273	956	2,895	2,000	4,895
Adults examined	533	411	20	290	147	563	700	1,264	1,964
With trichiasis (% of adults examined)	1 (0.2%)	8 (1.9%)	0	0	2 (1.4%)	1 (1.8%)	3 (0.4%)	9 (0.7%)	12 (0.6%)
Offered ophthalmic consultation	1	8	0	0	2	1	3	9	12
Declined ophthalmic consultation	0	0	0	0	0	0	0	0	0
Surgery in past 12 months	1	0	0	0	2	1	3	1	4

* In 2015 APY Lands aggregated 9 communities into one community for presentation of data
† Population estimate limited to trachoma endemic regions and does not take into account changing endemic regions over time and transiency between regions
‡ Number of adults examined limited to numbers reported. This number may not account for adults who may be examined in routine adult health checks, and may also include multiple screening

Table 3.7 Health promotion activities by region, South Australia 2015

	APY Lands	Eyre and Western	Far North	Total
Number of communities at-risk	**1**	**4**	**6**	**11**
Number of communities that reported health promotion activities	**1**	**4**	**6**	**11**
Total number of programs reported	**6**	**8**	**11**	**25**
Methods of health promotion				
One-on-one discussion	3	8	11	22
Presentation to group	3	4	2	9
Interactive group session	3	6	2	11
Social marketing	0	1	5	6
Print material/mass media	0	7	10	17
Sporting/community events	1	8	2	11
Other	0	2	1	3
Target audience				
Health professionals/staff	1	4	7	12
Children	3	8	11	22
Youth	1	8	10	19
Teachers/childcare/preschool staff	1	8	11	20
Caregivers/parents	2	6	11	19
Community members	1	6	10	17
Community educators/health promoters	0	6	7	13
Interagency members	0	6	2	8
Frequency of health promotion activities				
Once	0	0	0	0
2-4 times per year	5	5	11	21
5-12 times per year	0	3	0	3
Ongoing/routine	1	0	0	1

Western Australia results

Trachoma program coverage

- In 2015 WA identified 49 communities in four regions as being at risk of trachoma (Table 4.1, Figure 4.1).
- Of the 49 at-risk communities, 37% (18/49) required screening and/or treatment for trachoma according to current guidelines (Table 4.1)
- Three communities required treatment only and 15 communities required and were screened for trachoma (Table 4.1)
- All 18 communities that required screening and/or treatment, received the screening and/or treatment required (Table 4.1).
- In 2014 and 2015 WA aggregated ten communities in the Goldfields region into one community due to small population size of communities and high mobility between communities.
- In 2015 all at-risk communities in the Pilbara region were not required to screen or treat for trachoma under guideline recommendations.
- In all, 31 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see methodology) (Table 4.1, Figure 4.3).

Screening coverage

- Population screening coverage of children aged 5-9 years in the 15 at-risk communities that required screening was 89%, ranging from 88% in the Kimberley region to 93% in the Midwest region (Table 4.2).

Clean face prevalence

- Clean face prevalence was assessed in all communities that were screened and in communities that required treatment only.
- The overall prevalence of clean faces among children aged 5-9 years was 72%, ranging from 64% in the Midwest region to 76% in the Kimberley region (Table 4.2, Figure 4.5).

Trachoma prevalence

- The active trachoma prevalence in children aged 5-9 years in 15 communities that screened in 2015 was 4.4%. Prevalence ranged from 0% in the Kimberley region to 15.2% in the Midwest region (Table 4.2, Figure 4.6a).
- Active trachoma prevalence using most recent data carried forward in all 49 at-risk communities was 2.6%, ranging from 0% in the Pilbara region (carried forward from 2014) to 9.2% in the Midwest region (Table 4.2, Figure 4.6b).
- No trachoma was reported in 39 at-risk communities including communities that did and did not screen in 2015 (Figure 4.7).
- Endemic levels of trachoma (5% or more) were reported in five communities. (Figure 4.7).

Treatment delivery and coverage

- Trachoma treatment strategies were required in ten communities (Table 4.4).
- Treatment was delivered to active cases and households in five communities, and to the whole of community in a further five communities as per guidelines (Table 4.4).
- Total treatment coverage for case and contact treatment, and community wide treatment in all regions requiring treatment was 96% with 1,744 doses of azithromycin delivered (Table 4.5, Figure 4.8).

Trichiasis

- Overall, 1,284 adults 15 years and over were reported to be screened, with seven cases of trichiasis reported (Table 4.6).
- A large volume of trichiasis screening in WA is likely to be undertaken within the Medicare Health Assessment for Aboriginal and Torres Strait Islander People (MBS Item 715). These data are not made available to the NTSRU.

Health promotion

- Health promotion activities were reported to have occurred in 49 communities in the Goldfields, Kimberley, Midwest, and Pilbara regions, including two communities no longer considered at risk of trachoma. (Table 4.7).
- A total of 136 health promotion activities were reported in WA as part of the WA Trachoma Program (Table 4.7).
- The majority of the health promotion activities were delivered to children (Table 4.7).

Figure 4.1 Number of at-risk communities screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years, Western Australia 2015

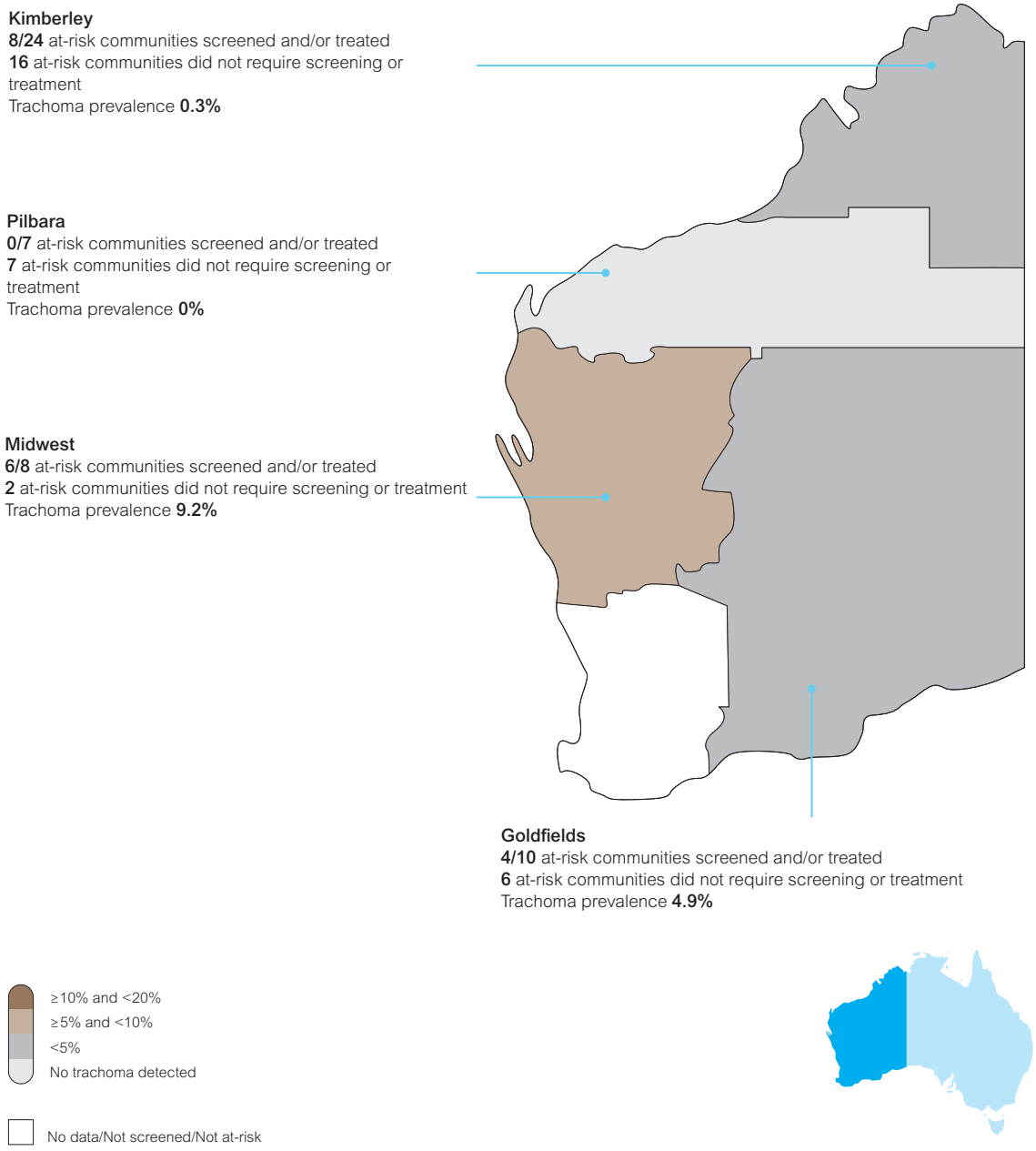
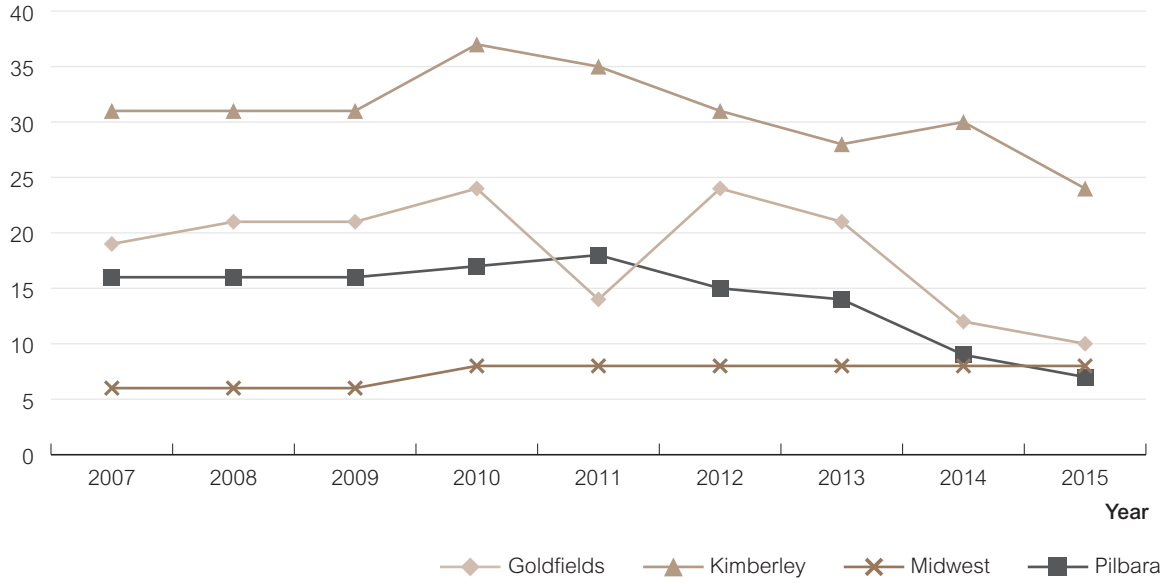


Figure 4.2 Number of communities at risk by region, Western Australia 2007 – 2015



* Since 2014 10 communities in the Goldfields region have been amalgamated into one community

Figure 4.3 Number of at-risk communities according to trachoma control strategy implemented by region, Western Australia 2015

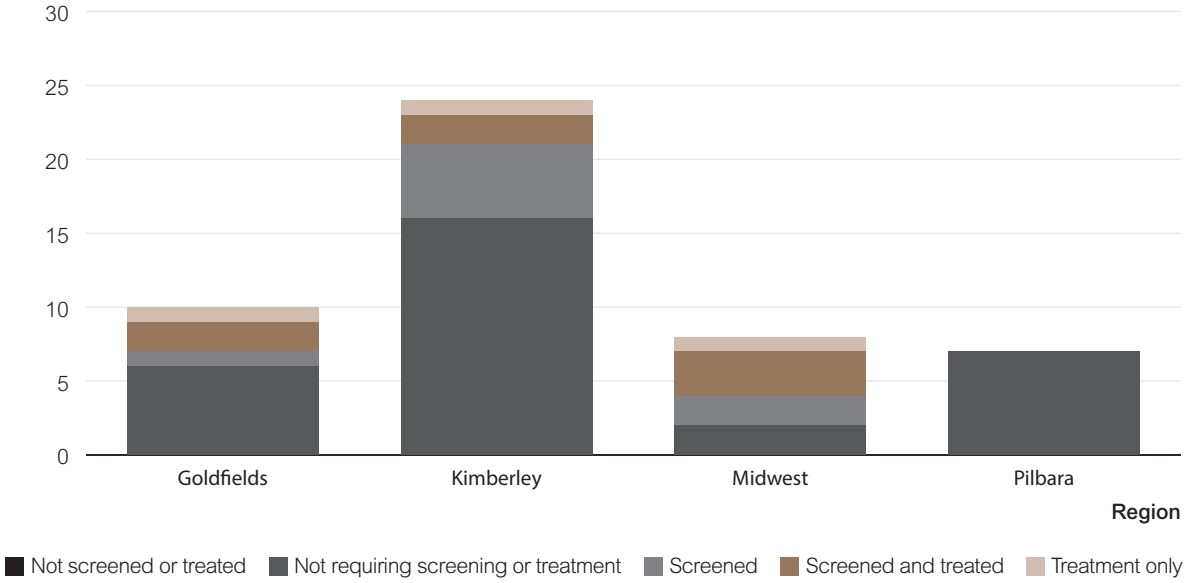


Figure 4.4 Population screening coverage in children aged 5-9 years in communities that required screening for trachoma by region, Western Australia 2015

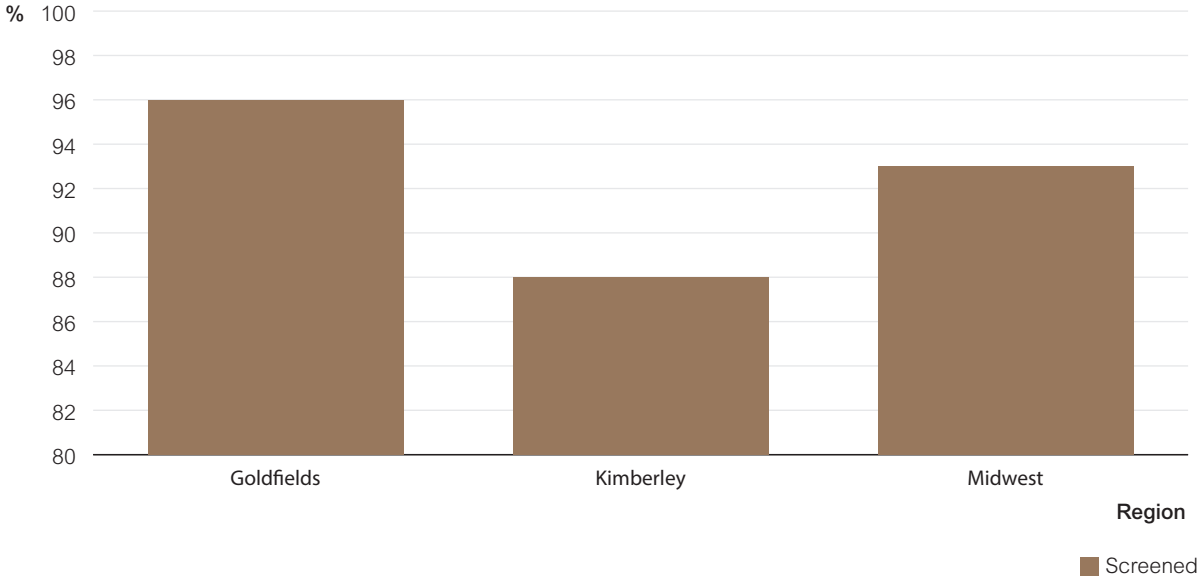


Figure 4.5 Proportion of screened children aged 5-9 years who had a clean face by region, Western Australia 2007 – 2015

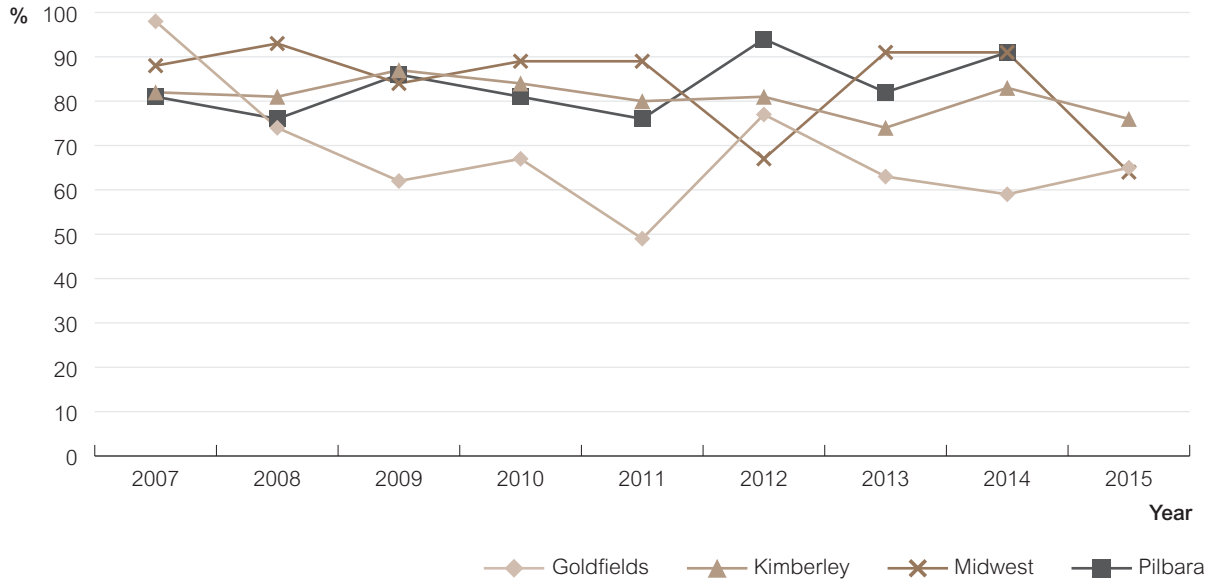


Figure 4.6a. Trachoma prevalence among children aged 5-9 years in communities that were screened by region, Western Australia 2007 – 2015

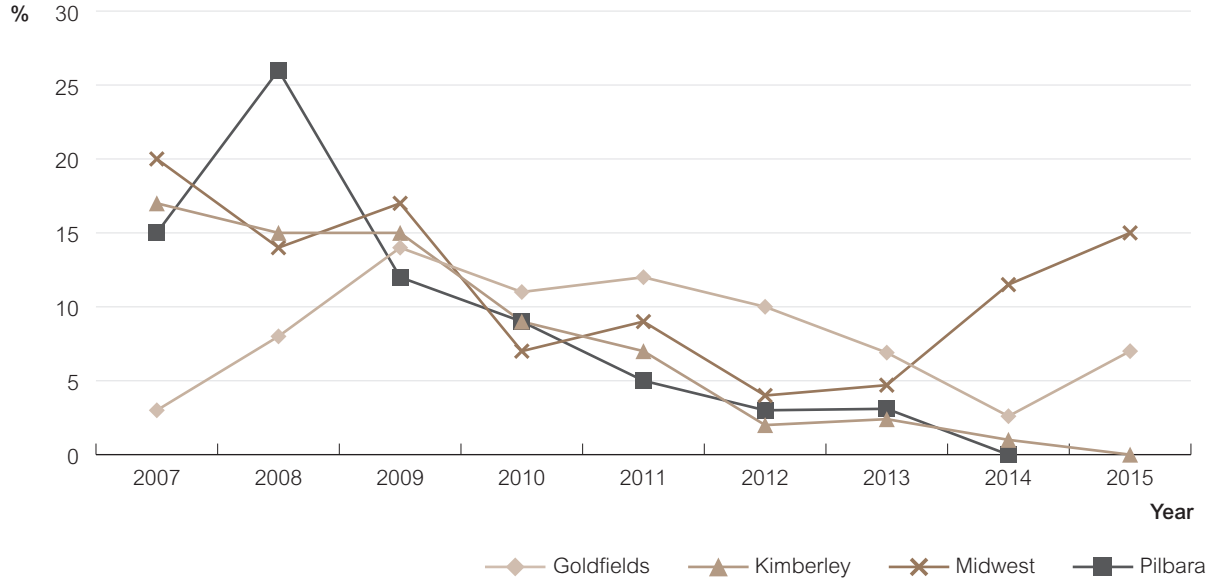
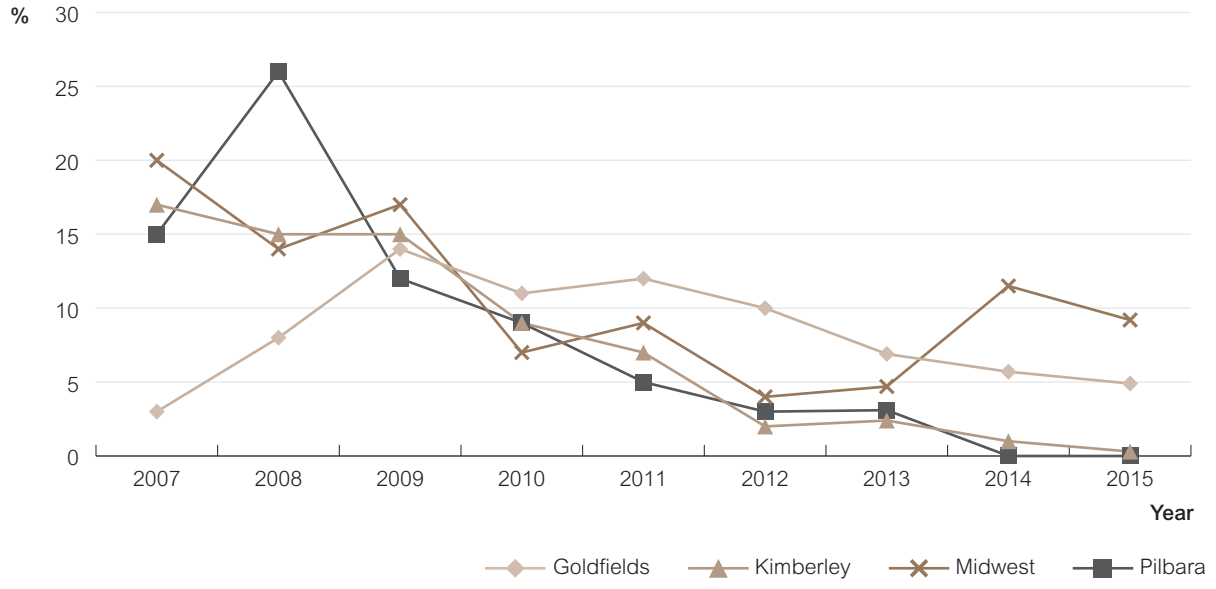
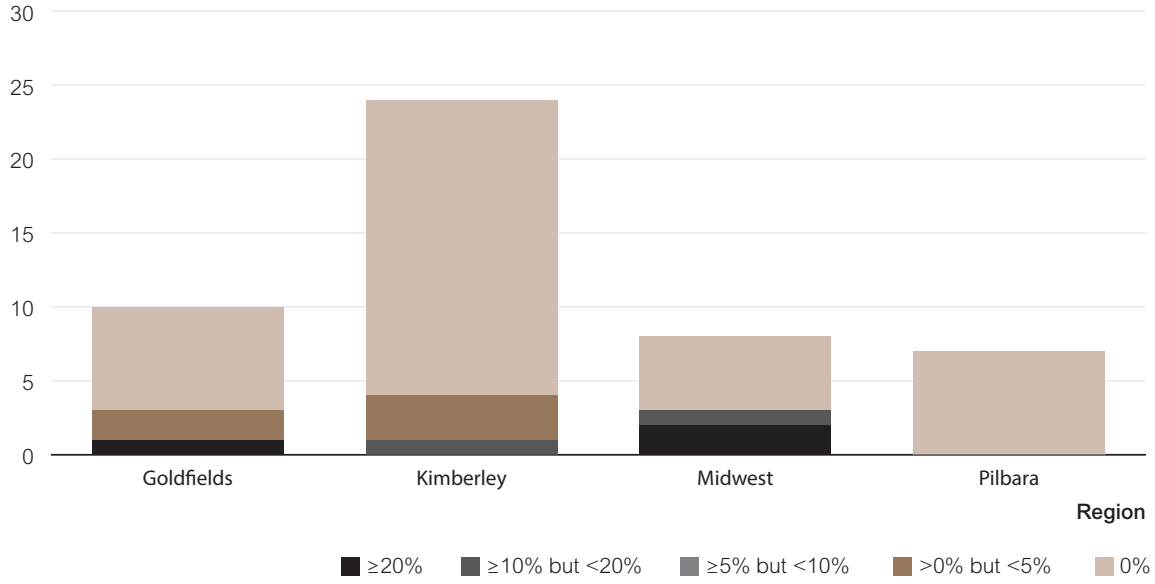


Figure 4.6b. Trachoma prevalence* among children aged 5-9 years in all at-risk communities by region, Western Australia 2007 – 2015



* Most recent estimates carried forward in communities that did not screen in 2015

Figure 4.7 Number of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years by region, Western Australia 2015



* Including communities that screened in 2015 and those that were not required to screen in 2015, in accordance with guideline instructions (see methodology)

Figure 4.8 At-risk communities according to number of years* of trachoma prevalence under 5% by region, Western Australia 2015

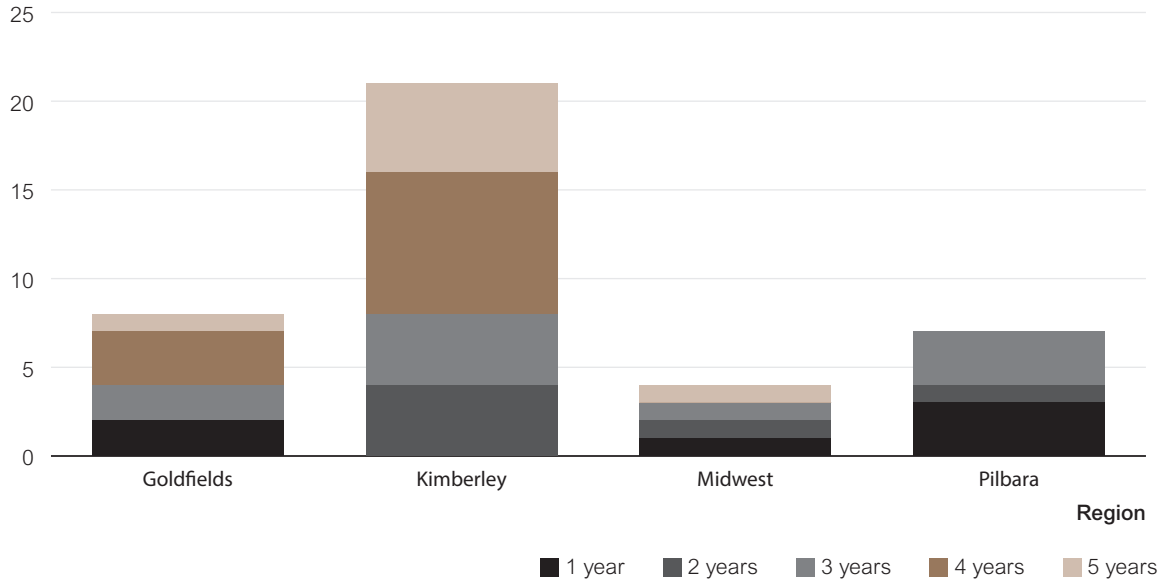
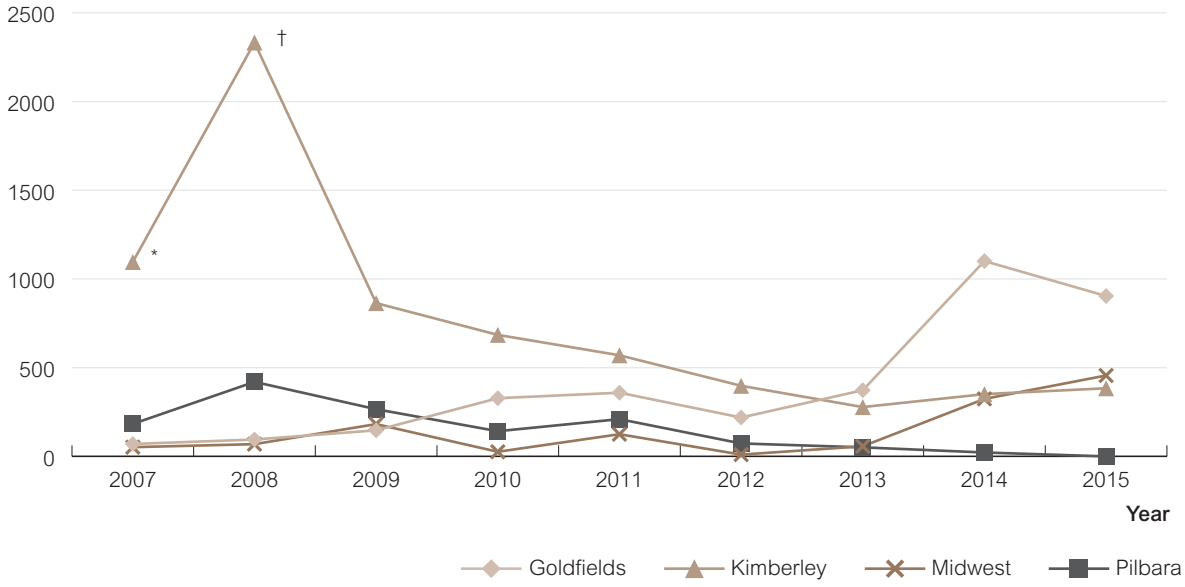


Figure 4.9 Number of doses of azithromycin administered for the treatment of trachoma by region, Western Australia 2007 – 2015



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

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

Table 4.1 Trachoma control delivery by region, Western Australia 2015

Number of communities	Goldfields*	Kimberley	Midwest	Pilbara	Total
At risk* (A)	10	24	8	7	49
Requiring screening for trachoma (B)	3	7	5	0	15
Screened for trachoma (C)	3	7	5	0	15
Requiring treatment only (D)	1	1	1	0	3
Treated† (E)	1	1	1	0	3
Screened and/or treated for trachoma (F = C+E)	4	8	6	0	18
Requiring neither screening or treatment for trachoma (G=A-B-D)	6	16	2	7	31

* WA aggregated 10 communities in the Goldfields region into one community
† Communities treated without screening in 2015 as per guideline instructions

Table 4.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Western Australia 2015

	Goldfields				Kimberley				Midwest				Total			
Number of communities screened	3				7				5				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	5	46	31	82	18	249	106	373	18	92	34	144	41	387	171	599
Children with clean face	3	30	25	58	11	188	88	287	15	59	32	106	29	277	145	451
Clean face prevalence (%)	60	65	81	71	61	76	83	77	83	64	94	74	71	72	85	75
Estimated number* of Aboriginal children in communities†	8	50	33	91	30	284	186	500	22	99	43	164	60	433	262	755
Children examined for trachoma	5	46	31	82	18	249	106	373	14	92	33	139	37	387	170	594
Trachoma screening coverage (%)	63	92	94	90	60	88	57	75	64	93	77	85	62	89	65	79
Children with active trachoma	0	3	1	4	0	0	2	2	0	14	2	16	0	17	5	22
Active trachoma prevalence (%)	0.0	6.5	3.2	4.4	0.0	0.0	1.9	0.5	0.0	15.2	6.1	11.5	0.0	4.4	2.9	3.7
Active trachoma prevalence using most recent data carried forward (%)		4.9				0.3				9.2				2.6		

* Jurisdiction provides estimate 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

Table 4.3 Number and proportion of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years, Western Australia 2007 – 2015

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

* Based on current year or most recent year
† As defined annually by each jurisdictions
‡ Or treated as per guideline instructions
§ Screened or receiving ongoing annual treatment
‖ Since 2014, 10 communities in WA have been amalgamated into one community reporting purposes

Table 4.4 Treatment strategies by region*, Western Australia 2015

Number of communities	Goldfields	Kimberley	Midwest	Total
Required treatment for trachoma	3	3	4	10
Treated for trachoma	3	3	4	10
Screened and treated	2	2	3	7
Received treatment only	1	1	1	3
Received six-monthly treatment	0	0	1	1
Did not require treatment	6	21	4	31
Treated active cases and households	1	2	2	5
Treated the whole of community	2	1	2	5
Not treated according to CDNA guidelines	0	0	0	0

* All 7communities in the Pilbara region did not require treatment.

Table 4.5 Trachoma treatment coverage by region, Western Australia 2015

	Goldfields					Kimberley					Midwest					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*
Active cases requiring treatment	0	4	1		5	0	0	2		2	1	14	2		17	1	18	5		24
Active cases who received treatment	0	4	1		5	0	0	2		2	1	14	2		17	1	18	5		24
Active cases who received treatment (%)	0	100	100		100	0	0	100		100	100	100	100		100	100	100	100		100
Estimated community members* requiring treatment	83	120	101	639	943	39	49	52	247	387	30	123	71	235	459	152	292	224	1,121	1,789
Number of community members* who received treatment	82	115	94	608	899	37	46	52	247	382	28	123	64	224	439	147	284	210	1,079	1,720
Estimated contacts who received treatment (%)	99	96	93	95	95	95	94	100	100	99	93	100	90	95	96	97	97	94	96	96
Total number of doses of azithromycin delivered	82	119	95	608	904	37	46	54	247	384	29	137	66	224	456	148	302	215	1,079	1,744
Estimated overall treatment coverage (%)	99	96	93	95	95	95	94	100	100	99	94	100	90	95	96	97	97	94	96	96

* Includes household contacts and community members requiring/receiving MDA

Table 4.6 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults by region, Western Australia 2015

	Goldfields		Kimberley		Midwest		Pilbara		Total		
Number of communities screened for trichiasis	**7**		**4**		**8**		**6**		**25**		
Age groups	***15-39***	***40+***	***15-39***	***40+***	***15-39***	***40+***	***15-39***	***40+***	***15-39***	***40+***	***15+***
Estimated population in region*	1,265	818	3,011	1,729	363	279	1,418	760	6,057	3,586	9,643
Adults examined	260	371	61	143	43	159	110	137	474	810	1,284
With trichiasis (% of adults examined)†	0	0	0	6 (4%)	0	1 (0.6%)	0	0	0	7 (0.9%)	7 (0.5%)
Offered ophthalmic consultation	0	0	0	6	0	2	0	0	0	8	0
Declined ophthalmic consultation	0	0	0	0	0	2	0	0	0	2	0
Surgery in past 12 months	0	0	0	6	0	0	0	0	0	6	0

* Population estimate limited to trachoma endemic regions and does not take into account changing endemic regions over time and transiency between regions
† Number of adults examined limited to numbers reported. This number may not account for adults who may be examined in routine adult health checks, and may also include multiple screening

Table 4.7 Health promotion activities by region, Western Australia 2015

	Goldfields	Kimberley	Midwest	Pilbara	Total
Number of communities at-risk	**10**	**24**	**8**	**7**	**49**
Number of communities that reported health promotion activities	**9**	**24**	**8**	**8**	**49**
Total number of programs reported	**36**	**30**	**36**	**34**	**136**
Methods of health promotion					
One-on-one discussion	2	10	0	3	15
Presentation to group	2	19	36	4	62
Interactive group session	6	1		14	58
Social marketing	0	0	0	0	0
Print material/mass media	16	4	36	4	61
Sporting/community events	6	0	0	6	12
Other	14	1	0	6	21
Target audience					
Health professionals/staff	2	0	0	1	3
Children	35	26	36	34	131
Youth	7	0	0	6	13
Teachers/childcare/preschool staff	0	17	36	11	64
Caregivers/parents	16	2	0	5	23
Community members	2	5	0	4	11
Community educators/health promoters	0	0	0	0	0
Interagency members	0	0	0	0	0
Frequency of health promotion activities					
Once	0	21	0	0	21
2-4 times per year	36	9	36	34	115
5-12 times per year	0	0	0	0	0
Ongoing/routine	0	0	0	0	0

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New South Wales Results

Trachoma program coverage

- NSW undertook follow-up screening in one community in the Western region NSW (Table 5.1, Table 5.2, Figure 5.1).

Screening coverage

- Population screening coverage for trachoma in children aged 5-9 years was 65% (Table 5.1).

Clean face prevalence

- The overall prevalence of clean faces among children aged 5-9 years in the screened community was 89% (Table 5.1).

Trachoma prevalence

- The prevalence of trachoma in children aged 5-9 years screened was 0% (Table 5.1).

Treatment delivery and coverage

- No treatment was required in 2015.

Trichiasis

- Trichiasis screening was not required to be undertaken in 2015.

Health Promotion

- Health promotion activities were not provided in 2015 as part of the NSW trachoma mapping exercise.

Figure 5.1 Number of at-risk communities screened, treated or both for trachoma and trachoma prevalence in children aged 5-9 years, New South Wales 2015

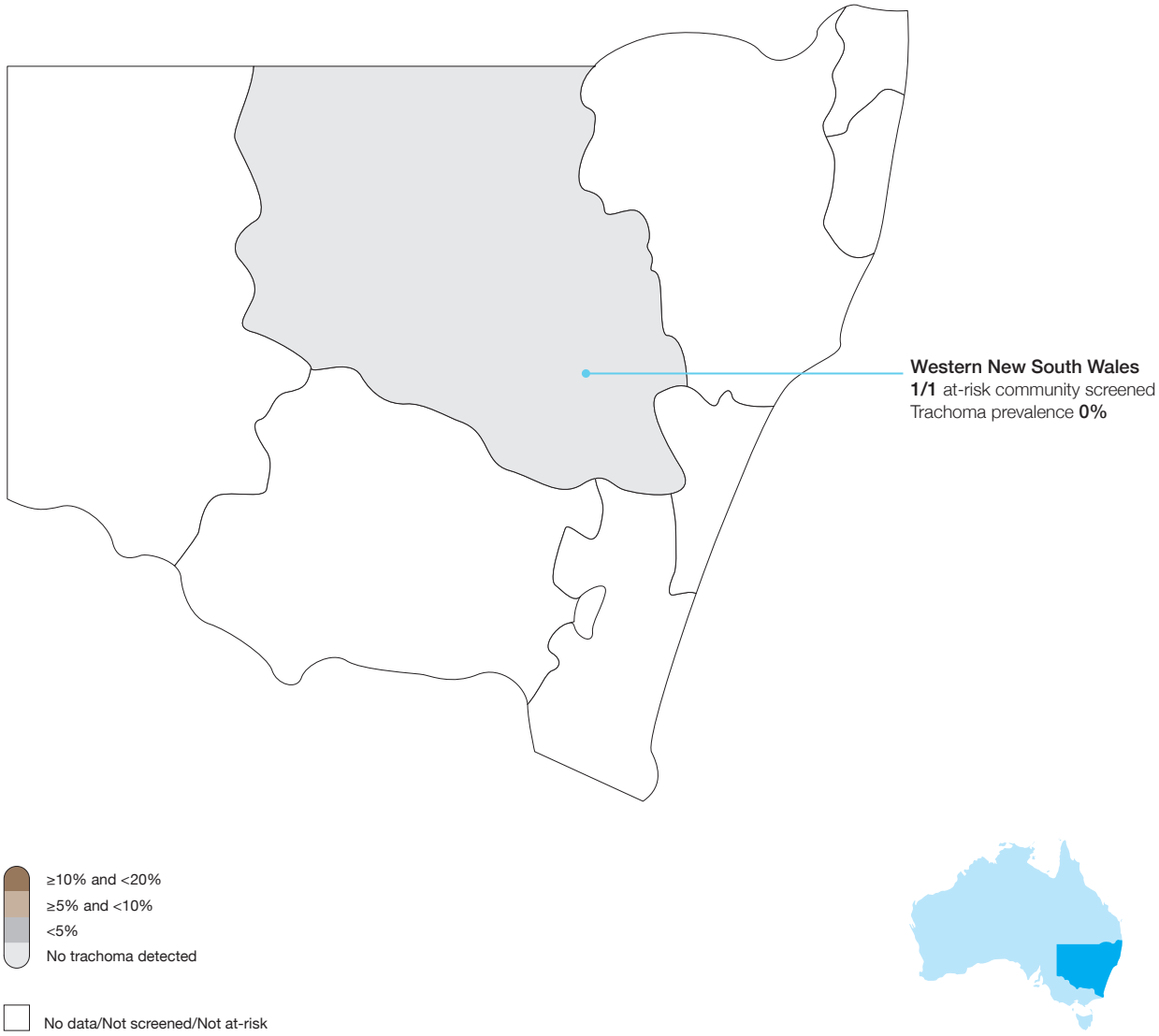

Table 5.1 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children aged 5-9 years, Western New South Wales 2015

	Western NSW
Number of communities screened	1
Age group (years)	5-9
Children examined for clean face	27
Children with clean face	24
Clean face prevalence (%)	89
Estimated number* of Aboriginal children in communities	40
Children examined for trachoma	26
Trachoma screening coverage (%)	65
Children with active trachoma	0
Active trachoma prevalence (%)	0

Table 5.2 Number and proportion of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, New South Wales 2013 – 2015

	2013		2014		2015	
Total number of communities screened	10		10		1	
≥20%	0	0%	0	0%	0	0%
≥10% but <20%	0	0%	0	0%	0	0%
≥5% but <10%	1	10%	0	0%	0	0%
>0% but <5%	0	0%	0	0%	0	0%
0%	9	90%	10	100%	1	100%

Discussion

Screening coverage

Screening coverage was measured as both the proportion of at-risk communities screened and the proportion of children aged 5-9 years screened in at-risk communities. A higher screening coverage provides confidence that those screened are representative of the community at risk therefore providing a more accurate reflection of the prevalence of disease within the community. The revised 2014 *National guidelines for the public health management of trachoma in Australia*[1] directs communities to focus resources on treatment without annual screening where trachoma prevalence is already well established. Communities with non-endemic levels of trachoma are not required to screen annually, unless resources are available to do so. In response to the 2014 revised guidelines, the annual report has shifted focus from screening coverage to the extent of implementation of the guidelines with respect to screening, treatment and health promotion activities. For communities that undertake screening for trachoma, the guidelines recommend screening coverage of 85%. Screening for trachoma is predominantly undertaken through primary school-based initiatives where the focus is on those aged 5-9 years. Screening of older (10-14 years) and younger (0-4 years) children also takes place, but less consistently and treatment strategies are informed by the prevalence in children aged 5-9 years. In 2015, population estimates provided by jurisdictions were used to calculate proportions.

In 2015, 89% of communities in all regions that required screening for trachoma received screening, with SA and WA screening all required communities. All regions except East Arnhem and Darwin Rural achieved 85% or over screening coverage with a national coverage level of 90%. This figure however does not include population numbers from communities that were required to be screened but were not screened in 2015.

The number of communities at risk of trachoma has decreased marginally in the NT and SA, and more substantially in WA in 2015. Since 2008, 80 communities have been removed from the at-risk register. This figure does not include communities that have been amalgamated in the WA and SA. Figure 1.8 illustrates more than 25 communities have reached the threshold for being considered no longer at risk for trachoma. Jurisdictions will assess other factors including known mobility patterns of the population with areas that are hyperendemic, to establish if these communities should be removed from the at-risk register. It is expected that this decreasing trend will continue in future years. The Trachoma Surveillance and Control Reference Group (TSCRG) will formulate advice on the ongoing monitoring of communities that were previously at risk.

Trachoma prevalence

Endemic trachoma is defined by the WHO as a prevalence of active trachoma of 5% or greater in children aged 1-9 years. Previously the National Trachoma Surveillance and Reporting Unit (NTSRU) had been able to estimate the prevalence using population weights. Due to the limited screening coverage of the children aged 1-4 years, it was considered that the results reported were not representative of that age group.

Across all three jurisdictions, the prevalence of trachoma in all at-risk communities in children aged 5-9 years was 4.6%, a slight decrease from 4.7% in 2014. At a regional level in 2015, the prevalence of trachoma in children aged 5-9 years ranged from 0 % in the Pilbara in the WA (carried forward from 2014) to 12.7% in the Alice Springs Remote region in the NT. The observed trachoma prevalence in communities that were screened in 2015 was 3.8%.

Trachoma prevalence in 2015 has slightly increased in SA and decreased marginally in the NT and WA. At the regional level, notable increases in prevalence were recorded in the Eyre and Western (SA), Far North (SA), and Midwest (WA) regions. In interpreting these changes it is important to keep in mind that many of the communities have small populations that are highly mobile. Therefore, fluctuations in rates at the community level can occur for statistical reasons or for mobility reasons. Anecdotal evidence from SA suggests the unexpected increase in trachoma prevalence in the Far North region occurred directly due to population movement between communities in the NT and SA. The continued need for health promotion programs that focus on facial cleanliness and environmental improvements may also be a contributing factor, including in communities that have high contact with other communities that are endemic, or communities previously at risk of trachoma. The TSCRG will continue to monitor changes in trachoma prevalence and consider the impact of possible variables. Nevertheless, the ongoing presence of trachoma in many communities is a timely reminder of the need for all jurisdictions to maintain their commitment to national control strategies in all of their aspects. Given the potential for re-infection to occur through movement between communities, the TSCRG will decide on strategic measures to implement for targeting the impact of mobility between communities and regions, which may include regional

groupings of communities. The NSTRU and TSCRG will also endeavour to determine the most appropriate manner in which to monitor environmental conditions and improvements.

Australia has seen great gains in the increasing number of communities recording less than endemic rates of trachoma (a prevalence of under 5% over time). In 2008[19], 27 of the 121 communities screened recorded a prevalence of less than 5%, and in 2015 this number increase to 97 communities of the 139 at-risk communities. Conversely the number of communities recording hyperendemic levels (greater than 20%) of trachoma has also decreased notably from 54 communities in 2008[19] to 16 in 2015.

Trachoma treatment

The 2014 CDNA guidelines recommend the treatment of active cases and their household contacts when trachoma prevalence is under 5% (non-endemic levels). When prevalence is greater than 5% in children aged 5-9 years and cases are not clustered within a few households, community-wide treatment is recommended. This approach includes treatment to all people living in households with children younger than 15 years of age annually for a period of three years. The guidelines also recommend six-monthly treatments over a period of three years for all people living in households with children younger than 15 years of age in hyperendemic communities (prevalence of at least 20% in children aged 5-9 years).

Trichiasis

Previous annual trachoma reports have described trichiasis screening coverage. The previous at-risk population was estimated using the current year's trachoma at-risk community adult population; however this does not account for changing endemic areas that have occurred over time, and transiency into non-endemic regions. It was therefore decided that estimating an at-risk population for trichiasis is not feasible as it cannot capture the actual potential risk for trichiasis.

The number of adults aged 40 years and older reported to be screened for trichiasis decreased in 2015, with 4,544 reported in 2015 and 5151 screened in 2014. Screening for trichiasis is believed to be greatly under-reported. Of the adults aged 40 years and older who were screened, 0.9% (39/4544) prevalence levels of trichiasis were reported. In 2015, 16 cases of trichiasis surgery were reported in Australia, with six in the NT, four in SA and six in WA. These cases may have been identified from previous years' screening activities. The reporting of trichiasis data regarding referral and surgery undertaken is limited due to incomplete data collection and compilation.

Facial cleanliness

Promoting facial cleanliness is a component of the SAFE strategy, recognising that the presence of nasal and ocular discharge is significantly associated with the risk for acquiring, transmitting and potential presence of trachoma. The proportion of screened children aged 5-9 years who had clean faces increased marginally in the NT and decreased in SA and WA. For sustainable trachoma control greater focus and efforts are required in environmental condition improvements and health promotion to increase facial cleanliness and decrease the risk of transmission of disease.

Program delivery and monitoring

Improvements in program delivery have been reported in 2015 with all jurisdictions committing to the updated guidelines, which have strengthened the trachoma control program planning in all jurisdictions by reducing ambiguity experienced in previous guidelines and providing clear guidance on screening and treatment methods. The impact of the new strategies - in particular treatment and screening schedules -, may not be evident for several years.

Progress towards Australia's elimination target

In April 2016, the annual global meeting of the partnership known as GET 2020 (the World Health Organization Alliance of the Global Elimination of Blinding Trachoma by the Year 2020) took place in Sydney, occurring for the first time in the Southern Hemisphere. The meeting reminded participants that trachoma is a disease of poverty and there is a strong expectation that Australia, as a high-income country, will ensure that trachoma is eliminated from affected communities.

The Australian Government's commitment to elimination of trachoma continues, with funding provided to jurisdictions to deliver rigorous trachoma screening and treatment programs and to evaluate the outcomes of these programs. Australia has made significant progress and is on track to meet the WHO goal of eliminating trachoma by 2020. The current focus on screening and treatment will need to continue to ensure that trachoma remains controlled and prevalence rates continue to decrease. In addition, the NTSCRG has highlighted the need to increase activity in the areas of health hygiene promotion and environmental improvements to address the Facial Cleanliness and Environmental improvements elements of the SAFE strategy. These key activities are essential to achieve elimination of trachoma by 2020 and receive WHO validation.

The NTSCRG will continue to provide guidance on the next phase of trachoma control activity to ensure that efforts are focussed where they are needed and will have maximum impact. The NTSRU will continue to work with service providers in affected jurisdictions to monitor the impact of trachoma control activity and progress toward elimination.

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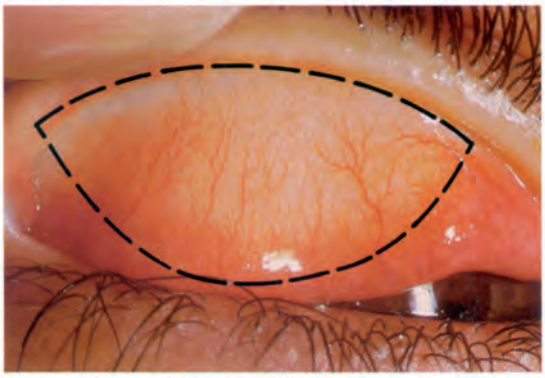
Appendix 1: World Health Organization trachoma grading card

TRACHOMA GRADING CARD

– Each eye must be examined and assessed separately.
– Use binocular loupes (x 2.5) and adequate lighting (either daylight or a torch).
– Signs must be clearly seen in order to be considered present.

The eyelids and cornea are observed first for inturned eyelashes and any corneal opacity. The upper eyelid is then turned over (everted) to examine the conjunctiva over the stiffer part of the upper lid (tarsal conjunctiva).

The normal conjunctiva is pink, smooth, thin and transparent. Over the whole area of the tarsal conjunctiva there are normally large deep-lying blood vessels that run vertically.



Normal tarsal conjunctiva (x 2 magnification). The dotted line shows the area to be examined.

TRACHOMATOUS INFLAMMATION – FOLLICULAR (TF): *the presence of five or more follicles in the upper tarsal conjunctiva.*

Follicles are round swellings that are paler than the surrounding conjunctiva, appearing white, grey or yellow. Follicles must be at least 0.5mm in diameter, i.e., at least as large as the dots shown below, to be considered.

Trachomatous inflammation – follicular (TF).

TRACHOMATOUS INFLAMMATION – INTENSE (TI): *pronounced inflammatory thickening of the tarsal conjunctiva that obscures more than half of the normal deep tarsal vessels.*

The tarsal conjunctiva appears red, rough and thickened. There are usually numerous follicles, which may be partially or totally covered by the thickened conjunctiva.

Trachomatous inflammation – follicular and intense (TF + TI).

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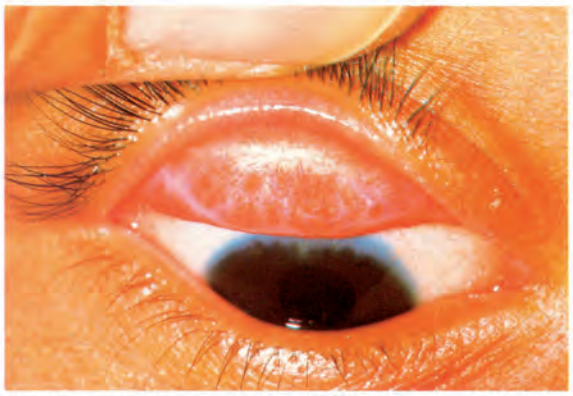
http://www.who.int/blindness/causes/trachoma_documents/en/index.html

***TRACHOMATOUS SCARRING (TS)**: the presence of scarring in the tarsal conjunctiva.*

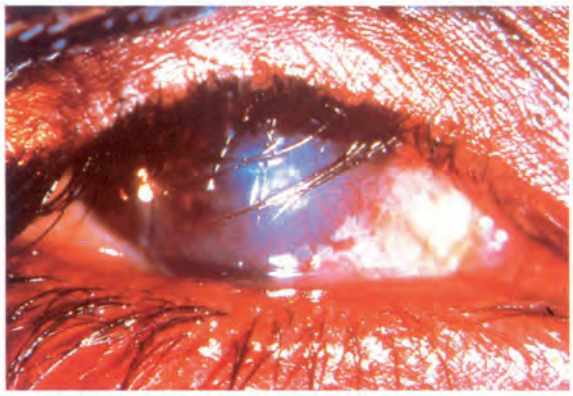
Scars are easily visible as white lines, bands, or sheets in the tarsal conjunctiva. They are glistening and fibrous in appearance. Scarring, especially diffuse fibrosis, may obscure the tarsal blood vessels.



Trachomatous scarring (TS)

***TRACHOMATOUS TRICHIASIS (TT)**: at least one eyelash rubs on the eyeball.*

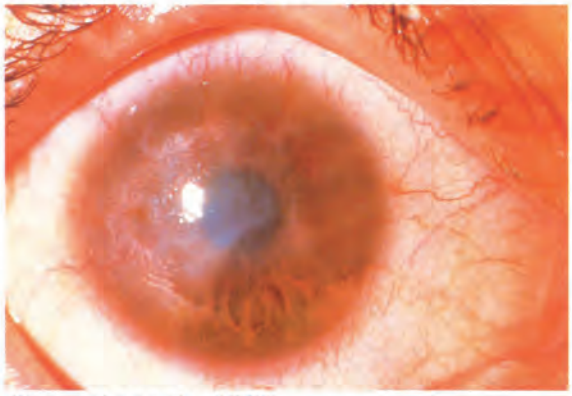
Evidence of recent removal of inturned eyelashes should also be graded as trichiasis.



Trachomatous trichiasis (TT)

***CORNEAL OPACITY (CO)**: easily visible corneal opacity over the pupil.*

The pupil margin is blurred viewed through the opacity. Such corneal opacities cause significant visual impairment (less than 6/18 or 0.3 vision), and therefore visual acuity should be measured if possible.



Corneal opacity (CO)

TREATMENT FOR TF AND TI IS SINGLE DOSE AZITHROMYCIN.

WORLD HEALTH ORGANIZATION
PREVENTION OF BLINDNESS AND DEAFNESS

Support from the partners of the WHO Alliance for the Global Elimination of Trachoma is acknowledged.

Appendix 2: Trachoma surveillance summary forms

Summary form 1: Screening for and treatment of active cases of trachoma

State/Territory		
Region		
Community		
School		
Dates of screening (Commenced -> Completed)		

	Age (in years)		
	0-4	5-9	10-14
Number of Aboriginal children in the community			
Number of children examined for Trachoma			
Number of children with TI			
Number of children with TF			
Number of children with TF / TI			
Number of children with TS			
Number of children screened for clean face			
Number of children with clean face			
Number of active cases requiring treatment with azithromycin			
Number of active cases who received treatment with azithromycin			
Number of active cases who received treatment with azithromycin within 1 week of commencement of treatment			
Trachoma Prevalence (%)			

TI: Trachomatous inflammation - intense
TF: Trachomatous inflammation - follicular
TS: Trachomatous scarring

Summary form 2:
Treatment of household contacts or community members

State/Territory	
Region	
Community	

Trachoma prevalence (%) informing treatment strategy					
Treatment strategy (select one)	☐ Community wide treatment ☐ Case and household contacts ☐ Case/s only (Not supported by National Guidelines)				
Treatment frequency (Community wide treatment only) select one:	☐ Six monthly ☐ Twelve monthly				
Treatment number (Community wide treatment only)					
Were cases obviously clustered within several households	☐ Yes ☐ No				
Date treatment started:					
Date treatment completed:					
Number of households requiring treatment					
Number of households that received treatment					
	Age (in years)				
	0 – 4	5 – 9	10 – 14	15+	Total
Number of household contacts or community members requiring treatment with azithromycin					
Number of household contacts or community members who received treatment with azithromycin					
Number of household contacts or community members who received treatment with azithromycin within one or two weeks of commencement of treatment distribution according to guideline recommendations					
Treatment coverage (%)					
Number of children screened for clean face (in communities that did not undertake trachoma screening in current year)					
Number of children with a clean face					
Comments					

Summary form 3: Trichiasis

State/Territory	
Region	
Community	
Year of screening	

	Sex/Age (in years)							
	15-39		40-49		50+		Total	
	M	F	M	F	M	F	M	F
Number of Aboriginal people in age group								
Number of Aboriginal people examined for trichiasis								
Number of Aboriginal people with trichiasis								
Number of Aboriginal people with trichiasis who were referred to ophthalmologist within 6 months of screening								
Number of Aboriginal people with trichiasis who were seen by ophthalmologist within 6 months of screening								
Number of Aboriginal adults with trichiasis who declined ophthalmological consultation								
Number of Aboriginal adults who underwent trichiasis surgery in the last year								

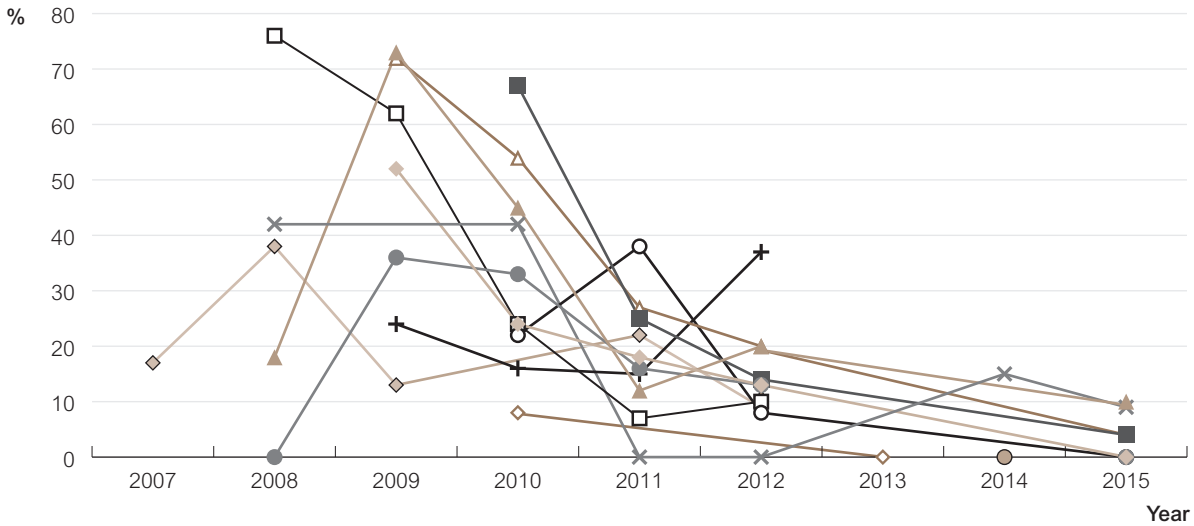
Summary form 4a: Health Promotion

State/Territory		Community	
Region		School	

Program Name						
Method	☐ One-on-one ☐ Presentation to group ☐ Interactive group session ☐ Social marketing/internet ☐ Print Material ☐ Mass media ☐ Sporting/ community events ☐ Other	☐ One-on-one ☐ Presentation to group ☐ Interactive group session ☐ Social marketing/internet ☐ Print Material ☐ Mass media ☐ Sporting/ community events ☐ Other	☐ One-on-one ☐ Presentation to group ☐ Interactive group session ☐ Social marketing/internet ☐ Print Material ☐ Mass media ☐ Sporting/ community events ☐ Other	☐ One-on-one ☐ Presentation to group ☐ Interactive group session ☐ Social marketing/internet ☐ Print Material ☐ Mass media ☐ Sporting/ community events ☐ Other	☐ One-on-one ☐ Presentation to group ☐ Interactive group session ☐ Social marketing/internet ☐ Print Material ☐ Mass media ☐ Sporting/ community events ☐ Other	☐ One-on-one ☐ Presentation to group ☐ Interactive group session ☐ Social marketing/internet ☐ Print Material ☐ Mass media ☐ Sporting/ community events ☐ Other
Target Audience	☐ Health professional staff ☐ Children/school students ☐ Youth ☐ Teachers/childcare or preschool staff ☐ Care givers - e.g. Mothers ☐ Community members ☐ Community educators or health promoters ☐ Interagency members	☐ Health professional staff ☐ Children/school students ☐ Youth ☐ Teachers/childcare or preschool staff ☐ Care givers - e.g. Mothers ☐ Community members ☐ Community educators or health promoters ☐ Interagency members	☐ Health professional staff ☐ Children/school students ☐ Youth ☐ Teachers/childcare or preschool staff ☐ Care givers - e.g. Mothers ☐ Community members ☐ Community educators or health promoters ☐ Interagency members	☐ Health professional staff ☐ Children/school students ☐ Youth ☐ Teachers/childcare or preschool staff ☐ Care givers - e.g. Mothers ☐ Community members ☐ Community educators or health promoters ☐ Interagency members	☐ Health professional staff ☐ Children/school students ☐ Youth ☐ Teachers/childcare or preschool staff ☐ Care givers - e.g. Mothers ☐ Community members ☐ Community educators or health promoters ☐ Interagency members	☐ Health professional staff ☐ Children/school students ☐ Youth ☐ Teachers/childcare or preschool staff ☐ Care givers - e.g. Mothers ☐ Community members ☐ Community educators or health promoters ☐ Interagency members
Estimated Coverage %						
Frequency	☐ Occasional (2-4 times/year) ☐ Regular (5-12 times/year) ☐ Ongoing/routine (daily/weekly) ☐ please specify duration	☐ Occasional (2-4 times/year) ☐ Regular (5-12 times/year) ☐ Ongoing/routine (daily/weekly) ☐ please specify duration	☐ Occasional (2-4 times/year) ☐ Regular (5-12 times/year) ☐ Ongoing/routine (daily/weekly) ☐ please specify duration	☐ Occasional (2-4 times/year) ☐ Regular (5-12 times/year) ☐ Ongoing/routine (daily/weekly) ☐ please specify duration	☐ Occasional (2-4 times/year) ☐ Regular (5-12 times/year) ☐ Ongoing/routine (daily/weekly) ☐ please specify duration	☐ Occasional (2-4 times/year) ☐ Regular (5-12 times/year) ☐ Ongoing/routine (daily/weekly) ☐ please specify duration
Comments						

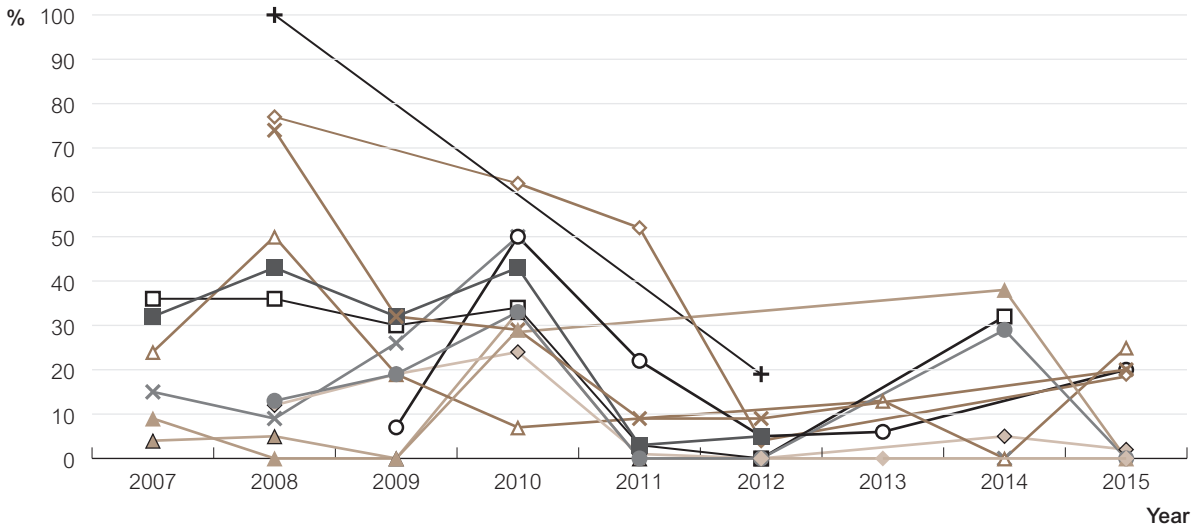
Appendix 3: De-identified community trachoma prevalence trends by regions, Australia, 2007 – 2015

Figure A.1 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in North Alice Springs Remote region, Northern Territory, 2007 – 2015



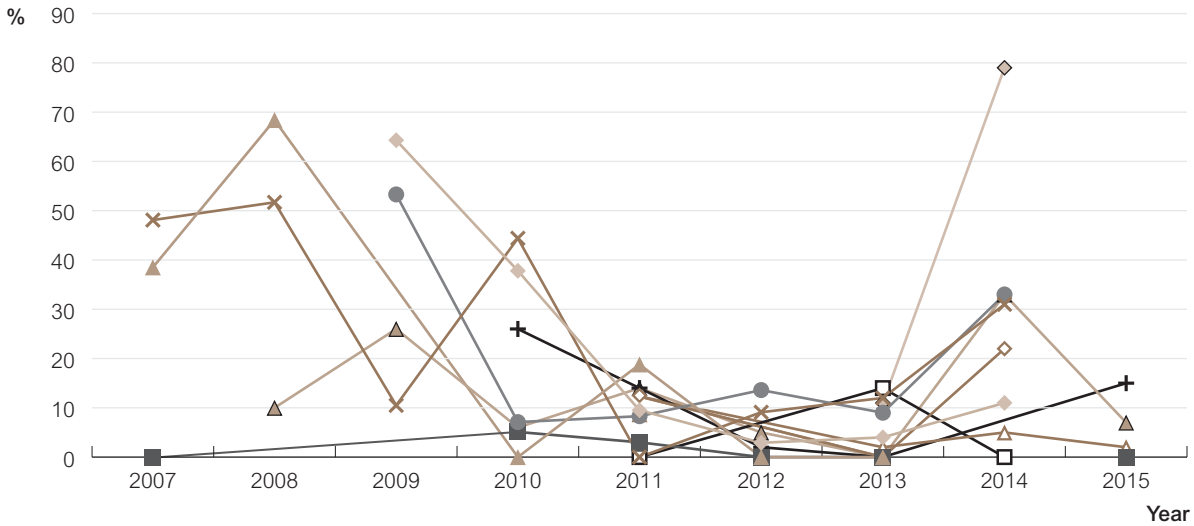
* Where more than 5 children were screened

Figure A.2 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community * in South Alice Springs Remote region, Northern Territory, 2007 – 2015



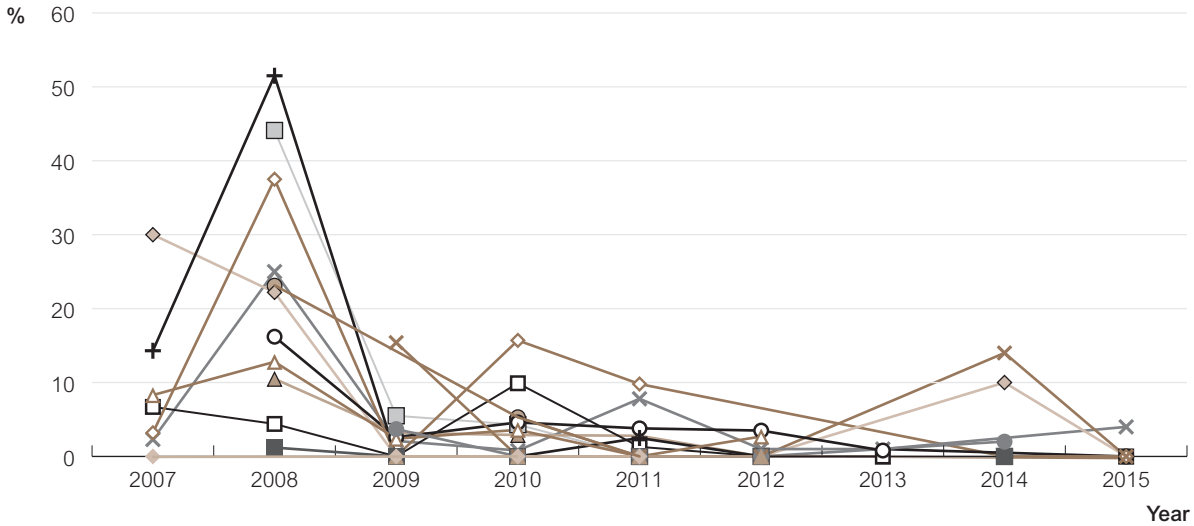
* Where more than 5 children were screened

Figure A.3 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Barkly region, Northern Territory, 2007 – 2015



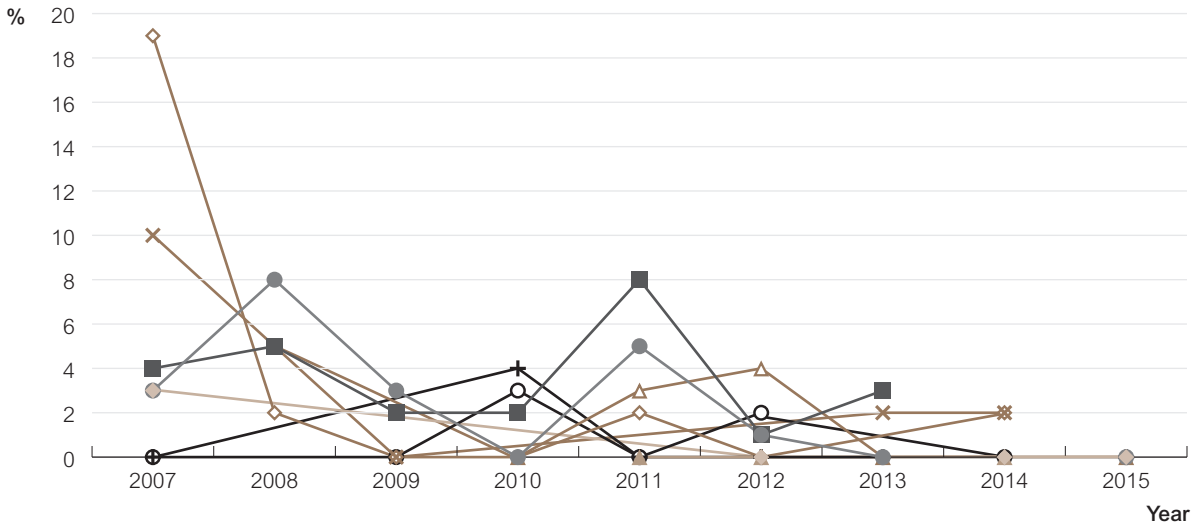
* Where more than 5 children were screened

Figure A.4 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Darwin Rural region, Northern Territory, 2007 – 2015



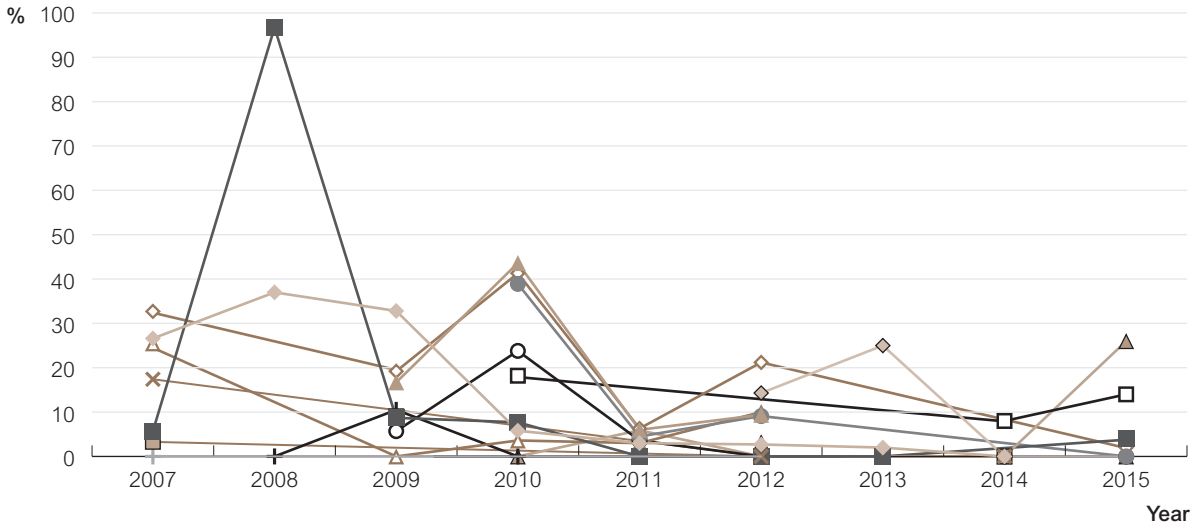
* Where more than 5 children were screened

Figure A.5 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in East Arnhem region, Northern Territory, 2007 – 2015



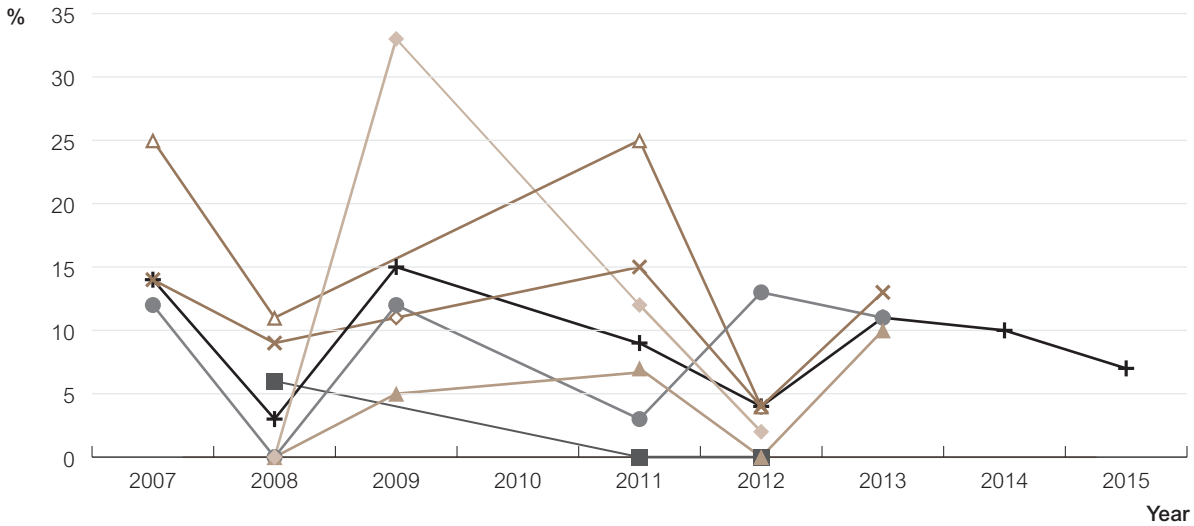
* Where more than 5 children were screened

Figure A.6 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Katherine region, Northern Territory, 2007 – 2015



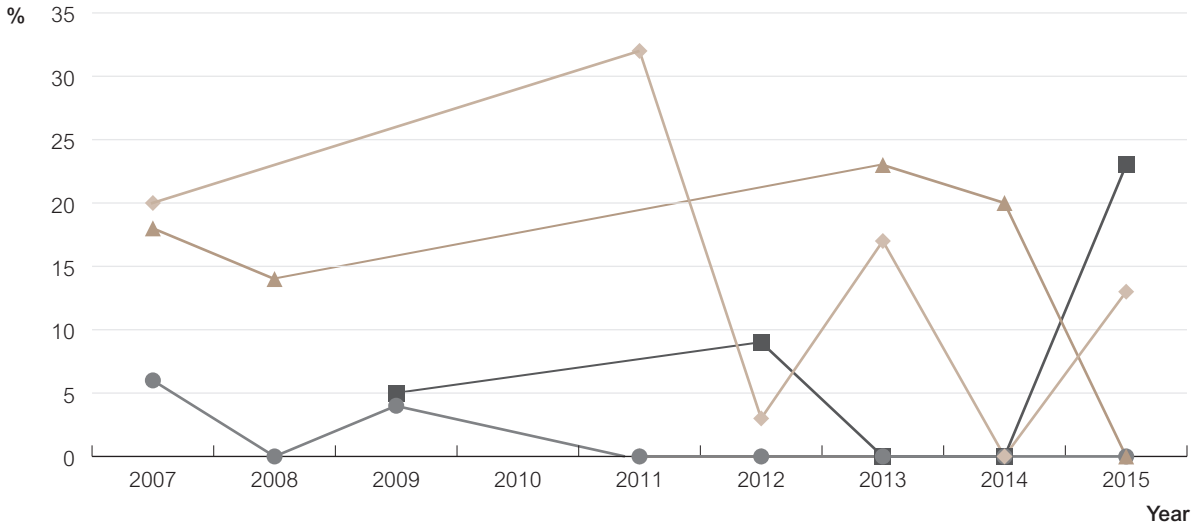
* Where more than 5 children were screened

Figure A.7 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in APY Lands region, South Australia, 2007 – 2015



* Where more than 5 children were screened

Figure A.8 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Eyre and Western region, South Australia, 2007 – 2015



* Where more than 5 children were screened

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All information in this publication is correct as at April 2017

11845 April 2017