

Australian Trachoma Surveillance Report 2017

The Kirby Institute, UNSW Sydney, WHO Collaborating Centre in Trachoma, 2018

Prepared by the National Trachoma Surveillance and Reporting Unit

The Kirby Institute, UNSW Sydney

On behalf of Australian organisations involved in trachoma control activities, under a funding agreement with the Australian Government.

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New South Wales

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Queensland

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Technical terms and definitions

Definitions are from the Communicable Diseases Network Australia's (CDNA) 2014 *National 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 \geq 5% in children aged 5-9 years in the last 5 years; or 3) data of $<$ 5% active trachoma prevalence but with a recorded prevalence of active trachoma \geq 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 more than 3 kg and live in a house with one or more children aged below 15 years who were treated for trachoma during an episode of community-wide treatment.

Abbreviations

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

Preface

This report is compiled by the National Trachoma Surveillance and Reporting Unit (NTSRU) in collaboration with the National Trachoma Surveillance and Control Reference Group (NTSCRG) and those jurisdictions funded to undertake trachoma control activities by the Department of Health.

Trachoma screening and management data for 2017 were provided by the Northern Territory (NT), South Australia (SA), Western Australia (WA) and Queensland (QLD). Program activities, data collection and analysis were guided by the *CDNA National guidelines for the public health management of trachoma in Australia*.¹

A short summary of methods used by the jurisdictions for trachoma surveillance and control, and methods of data analysis is provided. The main findings of the report are presented as tables and figures, with supporting summary text.

The report is available online at <http://www.kirby.unsw.edu.au/trachoma>

Executive summary

Australia's trachoma control efforts continued to deliver improvements in 2017, with fewer communities considered at risk for endemic trachoma in 2017 compared to 2016 and the overall prevalence of active trachoma in at-risk communities continuing to decline.

However, persistently high levels of trachoma were still found in some regions, highlighting the need for continued efforts in all aspects of trachoma control.

The NTSCRG has highlighted the need for current screening and treatment programs to be complemented by enhanced activity in the areas of health hygiene promotion and environmental improvements to achieve trachoma elimination.

Summary of findings

Trachoma program coverage

- In 2017, jurisdictions identified 130 remote Indigenous communities as at risk of endemic trachoma.
- The number of communities at risk of trachoma in Australia has continued to decline since 2016. There were fewer at-risk communities in 2017 compared to 2016 (130 in 2017 and 150 in 2016).
- Of 130 communities designated by jurisdictions to be at risk at the start of 2017, 109 (84%) were determined to require screening, antibiotic distribution or both according to the Guidelines, with 24 requiring antibiotic treatment but not screening (Table 1.1).
- The remaining 21 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5%.
- Of the communities that required screening and/or treatment, 98% (107/109) received the required screening and/or treatment (Table 1.1).

Screening coverage

- Jurisdictions undertook screening for 99% (84/85) of the communities determined to require screening in 2017 (Table 1.1, Table 1.2).
- Delivery of trachoma screening to those communities scheduled for screening was higher than in 2016 (99% compared to 95%).
- Within screened communities, 2872 (83%) of an estimated 3458 resident children aged 5-9 years were screened (Table 1.2). This was lower than in 2016 (83% compared to 91%).
- Screening coverage of children aged 5-9 years in the screened communities was 81% for the NT and SA, 91% for WA and 92% in QLD (Table 1.2, Figure 1.4).

Clean face prevalence

- A total of 2902 children aged 5-9 years in at-risk communities were examined for clean faces (Table 1.2).
- The prevalence of clean faces increased in all jurisdictions except WA, where there was a decline (See Facial cleanliness subheading within the Discussion and Interpretation section for further discussion of the decline in WA).

- The overall prevalence of clean faces in children aged 5-9 years was 75%, with 79% in the NT, 88% in SA, 43% in WA and 94% in QLD (Table 1.2, Figure 1.5).

Trachoma prevalence

- Overall trachoma prevalence in 5-9-year olds has declined from 4.7% in 2016 to 3.8% in 2017. However, there were more communities with endemic and hyperendemic levels of trachoma (56 and 15 compared to 60 and 17 in 2016 and 2017 respectively).
- The overall prevalence of active trachoma in children aged 5-9 years was 3.8%, with 0% in QLD, 1.6% in SA, 4.1% in WA and 5% in the NT (Table 1.2).
- No trachoma was reported in children aged between 5-9 years in 50 (39%) of the at-risk communities (Table 1.3).
- Trachoma was at endemic levels (prevalence above 5% in 5-9 year olds) in 60 (47%) of the at-risk communities (Table 1.3).
- Hyperendemic levels of trachoma (> 20%) were detected in 17 (13%) of the at-risk communities (Table 1.3).

Antibiotic distribution and coverage

- Antibiotic distribution took place in 73 communities, 99% of those requiring antibiotics according to the Guidelines (Table 1.4).
- One community in the NT that was due for treatment of the whole of community did not receive the required treatment in 2017 (Table 1.4).
- All children found on screening in 2017 to have trachoma in 2017 (139) received azithromycin (Table 1.5).
- The jurisdictional trachoma programs delivered a total of 9297 doses of azithromycin in 2017 (Table 1.5). However fewer doses of azithromycin were delivered compared to 2016 (9297 compared to 11 671).

Trachoma-related trichiasis

- Overall 15 485 adults aged 15 years and over were screened for trichiasis in 135 at-risk and previously at-risk communities (Table 1.6).
- The prevalence of trichiasis in screened adults aged 15 years and older was 0.3% and 0.5% in adults aged 40 years and older. There were 50 cases of trichiasis detected in adults aged 15 years and older (Table 1.6).
- Surgery for trachoma-related trichiasis in the past 12 months was reported to have been undertaken for 9 people in 2017 (Table 1.6).

Health promotion activities

- Trachoma teams conducted health promotion activities in 94 at-risk communities. These included over 310 activities. Some of these activities occur as part of screening visits. In 2017 the trachoma teams also worked in partnership with other organisations to deliver health promotion and environmental improvements. For example, with school health promotion initiatives, and in SA with the peak body for Aboriginal Community Controlled Health Organisations.

Interpretation

Sustained efforts by the jurisdictions and their clinical service partners over the past several years, under the guidance of the NTSCRG, have contributed to substantial gains in trachoma control in Australia. Jurisdictions have continued to deliver screening and treatment according to the *CDNA National guidelines for the public health management of trachoma in Australia*.¹

The jurisdictions have continued to support and document health promotion activities, with a greater emphasis on working with other sectors, focusing on improving hygiene-related practices and supporting environmental health improvements.

There were fewer doses of azithromycin delivered in 2017 compared to 2016. One explanation for this decrease is that there were fewer at-risk communities in 2017 compared to 2016, and a lower proportion of at-risk communities required guideline-scheduled antibiotic treatment, screening or both. However there are also reports of increasing numbers of people refusing community-wide treatment in some regions. This trend will require ongoing monitoring.

Overall these data highlight the need to maintain and strengthen health promotion strategies and linkages with communities and health services in comprehensively implementing all aspects of the SAFE (surgery for trichiasis, antibiotics, facial cleanliness and environmental improvement) strategy.

The Australian Government has made a commitment of \$20.8 million to NT, SA, WA, QLD and NSW through Project Agreements over the period 2017-18 to 2020-21 to continue trachoma screening and treatment. The Project Agreements include specific allocation for strengthened efforts in the area of health hygiene and environmental improvements. These activities are essential to achieving the elimination of trachoma as a public health problem by 2020 and validation of elimination by the World Health Organization (WHO).

Background

Trachoma is a disease of the eye, caused by infection with the *Chlamydia trachomatis* bacteria, particularly its serovars A, B, Ba and C. It is the world's leading infectious cause of preventable blindness. Based on reporting by the World Health Organization (WHO) in February 2018, trachoma remains endemic in 41 countries in which approximately 1.9 million people have visual impairment due to trachoma, worsening the quality of life in those who are already disadvantaged. Transmission of ocular *C. trachomatis* occurs through close facial contact, hand-to-eye contact, via contamination of personal items such as towels, clothing and bedding and possibly by flies. Trachoma generally occurs in dry, dusty environments and is strongly associated with poor living conditions and sanitation. Crowding 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 prevalence. Children have more frequent and longer-lasting episodes of infection than adults and are believed to be the main community reservoirs of infection.²⁻⁴

Infection with *C. trachomatis* causes inflammation of the conjunctival tissue in the eye, leading to clinically recognisable trachoma. Diagnosis is by visual inspection, and the detection of follicles (white spots) and papillae (red spots) on the inner upper eyelid. Repeated infections with *C. trachomatis*, especially during childhood, may lead to scarring of the eyelid, causing it to contract and distort, leading to the eyelashes turning inwards, trichiasis, and scratching of the outer surface of the cornea. The resulting damage to the cornea by trichiasis is the main pathway by which trachoma leads to vision loss and blindness.^{1, 5, 6} Trichiasis scarring is irreversible but if early signs of in-turned eyelashes are found, surgery to the eyelid is usually effective in preventing further damage to the cornea.

WHO, through the Global Alliance for the Elimination of Trachoma by 2020 (GET 2020), advocates the SAFE strategy for trachoma control. Key components of the strategy are Surgery (to correct trichiasis), Antibiotic treatment, via the mass distribution of azithromycin, Facial cleanliness and Environmental improvements. The strategy is designed to be implemented within a community health framework to ensure consistency and continuity of approach in the required screening, control measures, data collection and reporting, as well as building community capacity.⁷⁻⁹

WHO guidelines recommend that clinical trachoma is treated by a single dose of the antibiotic azithromycin. When prevalence exceeds 5% in children aged 1-9, guidelines recommend mass drug administration to the entire community on a regional or district basis. Australian guidelines differ slightly from WHO's recommendation to treat the whole community^{10,11} in that they provide for treatment at the household level at a lower prevalence, and define community coverage based on the treatment of households with at least one child aged 15 or under.

Trachoma control in Australia

Australia is the only high-income country with endemic trachoma. It occurs primarily in remote and very remote Indigenous communities in the NT, SA and WA. In 2008, cases were also found in NSW and QLD where trachoma was believed to have been eliminated. People with trichiasis are believed to be present in all jurisdictions.^{10,12} The National Trachoma Management Program was initiated in 2006. In 2009, the Australian Government's *Closing the Gap - Improving Eye and Ear Health Services for Indigenous Australians* initiative committed \$16 million over a 4-year period towards eliminating trachoma in Australia. In 2013, a further \$16.5 million and in 2017 a further \$20.8 million to continue, improve and expand trachoma control and health promotion initiatives in jurisdictions with endemic

trachoma were committed by the Australian Government. Funding was also provided to jurisdictions with a previous history of trachoma to ascertain the need for control programs. Since 2006 the Australian Government has funded the National Trachoma Surveillance and Report Unit to provide a national mechanism for monitoring and evaluating trachoma control.¹³

The surveillance and management of trachoma in 2017 in all jurisdictions were guided by the CDNA 2014 *National guidelines for the public health management of trachoma in Australia*.¹ The 2014 guidelines were an update to the 2006 version,¹⁴ with one of the main changes being the option of not screening all endemic communities every year, so that jurisdictions could instead 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 control strategies, data collection, reporting and analysis.

The National Trachoma Surveillance and Reporting Unit

NTSRU is responsible for data collection, analysis and reporting related to the ongoing evaluation of trachoma control strategies in Australia. The NTSRU has been managed by The Kirby Institute, UNSW Sydney since 2010,¹⁵⁻²⁰ with the Centre for Eye Research Australia²¹⁻²³ and the Centre for Molecular, Environmental, Genetic and Analytic Epidemiology, the University of Melbourne,²⁴ responsible for earlier years. The NTSRU operates under a contract between UNSW Sydney and the Australian Government Department of Health.

Methodology

Each jurisdiction undertook screening and antibiotic distribution for trachoma under the guidance of the 2014 *National guidelines, which* 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 communities determined to be at risk of trachoma based on historical prevalence data and other sources of knowledge. Over time, additional communities have been classified as being at risk, while some others have been reclassified as not at risk. Trachoma control activities focus on the communities designated at risk, but a small number of other communities designated as not at risk have also been included in screening activities, generally if there is anecdotal information suggesting the presence of active trachoma, or close geographic or cultural proximity to endemic communities.

The WHO Simplified Trachoma Grading criteria (see http://www.who.int/trachoma/resources/SAFE_documents/en/) were used to diagnose and classify individual cases of trachoma in all jurisdictions. Data collection forms for use at the community level were developed by the NTSRU, based on the CDNA guidelines. Completed forms were forwarded by jurisdictional coordinators to the NTSRU for checking and analysis. Information provided to the NTSRU at the community level for each calendar year include:

- Number of Indigenous children aged 1-14 years screened for clean faces and the number with clean faces, by age group
- Number of Indigenous children aged 1-14 years screened for trachoma and the number with trachoma, by age group

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

The target group for screening activities in all regions is Indigenous children aged 5-9 years. This age group was chosen because of ready accessibility through schools, feasibility of eye examination and a presumption of similar levels of trachoma compared to younger age groups. Screening in communities has also included children 1-4 and 10-14, but efforts have not been made to achieve substantial coverage in these age groups. Some data are now available for the 1-4 age group, and prevalence rates in that age group can now be more confidently estimated.

Northern Territory

From 2013, the NT followed the screening and treatment schedule recommended in the 2014 CDNA *National guidelines*. Trachoma screening and management in the NT were 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 is generally undertaken as a stand-alone exercise by the trachoma team and program partners with some support from local primary health-care centres or community controlled services. The NT uses school enrolment lists, electronic health records and local knowledge to determine the number of children aged 5-9 years present in the community at the time of screening. Following screening, treatment is undertaken by the trachoma team and program partners with support from primary health-care services.

In 2017, screening for trichiasis was undertaken opportunistically primarily by clinic staff during adult health checks, or by optometrists or ophthalmologists from the regional eye health services.

South Australia

In SA, the Trachoma Elimination Program is coordinated by Country Health SA Local Health Network. A new model was implemented in 2017 to build the capacity of local Aboriginal community controlled organisations to deliver trachoma and trichiasis screening in at-risk communities. A combination of opportunistic, community-wide and routine screening was undertaken. The Eye Health and Chronic Disease Specialist Support Program, coordinated by Aboriginal Health Council of South Australia, provided opportunistic screening by visiting optometrists and ophthalmologists. Aboriginal Community Controlled Health Organisations delivered community-wide screening in schools as well as routine screening through adult and child health checks. Embedding screening and treatment practices in local health services for the sustainable elimination of trachoma has been a key focus. Since 2014 the nine Anangu Pitjantjatjara Yankunytjatjara (APY) Lands communities have been aggregated and reported as a single community for the purpose of trachoma surveillance due to the small populations of each community and the kinship links resulting in frequent mobility between these communities. An interagency State Trachoma Reference Group provides guidance and opportunities to advocate for improved service provision.

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 operational principles which guide the program and provide consistent practice across the four endemic regions.

In collaboration with local primary health-care providers, the WACHS-Population Health Units screened communities in each region within a 4-week period, in August and September. People identified with active trachoma were treated at the time of screening. In communities with a prevalence above 5%, treatment of household contacts (and, if indicated, the overall community) was carried out in line with the WHO guidelines. In 2017, 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 and by adding names of children who were present in the community at the time of the screening. In conjunction with screening, an environmental assessment was carried out in the communities and, for some regions, health promotion activities were also included during the visit.

In WA, trichiasis screening was undertaken through a variety of strategies including during regional trips delivering health promotion and opportunistically in conjunction with adult influenza vaccinations. Screening of the target population also occurred 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, trichiasis screening may have occurred as part of the adult health checks provided through the Medicare Benefits Scheme (MBS) predominately at the Aboriginal Community Controlled Health Services and recorded on their electronic database Communicare.

In 2011, WACHS amalgamated ten previously distinct communities in the Goldfields region and reported them as a single community for the purpose of trachoma surveillance because of the small populations and kinship links resulting in frequent mobility between these communities. In 2016 and 2017 four communities in the Pilbara region were similarly reported as one. These reporting changes may influence trends presented in WA reports from 2010-2017.

New South Wales

There were no communities designated at risk in NSW in 2017. Historical data provided derive from NSW Health, focused on screening in potentially at-risk communities in north western and far western NSW, with the most recent screening conducted in 2014. No trichiasis screening was conducted in NSW in 2017.

Queensland

The Communicable Diseases Branch within the Queensland Department of Health coordinates trachoma prevention and control activities across Queensland in collaboration with Hospital and Health Services. In Queensland, trachoma screening includes review by an ophthalmologist who conducts a more detailed examination beyond that required for the WHO simplified grading tool. This examination includes looking for Herbert's pits and corneal pannus and collecting conjunctival swabs for laboratory testing.

The remote communities of the Torres Strait have had an uninterrupted ophthalmic service for the past 30 years. In addition to ophthalmic services, a visiting optometrist has been providing outreach optometry services to residents of the Torres Strait for the past 11 years. The optometrist visits most communities twice a year performing comprehensive eye exams that include a check for trachomatous trichiasis.

In 2017 trachoma screening, occurred in three communities in the Torres Strait. Screening was opportunistically offered to all children who were present in the community during the trachoma team's visit.

Data analysis

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

Data on resident population numbers were derived by each jurisdiction using enrolment lists from schools and health clinics and from local advice. This method has been used since 2012. For 2007 to 2011 estimates were projected 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). The 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. Data from 2006 were excluded from assessment of time trends as collection methods in this first year differed substantially from those subsequently adopted.

Calculations for trachoma prevalence

Three distinct methods were used to calculate trachoma prevalence. The 'observed prevalence', 'estimated prevalence' and 'overall prevalence' reported in subsequent sections of the report were calculated as follows. The *observed prevalence* of active trachoma was calculated using only the data from screening activities undertaken during the reporting year. Since implementation of the 2014 *National guidelines*, at-risk communities have not been required to undertake annual screening for trachoma. Therefore, for communities not screened in 2017 an *estimated prevalence* of active trachoma was calculated by carrying forward the most recent prevalence data, following a method endorsed by the NTSCRG. This method is likely to result in an over-estimate of current prevalence, particularly for communities receiving community-wide treatment with antibiotics. Finally, the *overall prevalence* of active trachoma was calculated by combining data from at-risk communities screened during 2017, the most recent prevalence from at-risk communities that did not screen in 2017 and the most recent prevalence carried forward from communities that were judged by jurisdictions to have eliminated trachoma and were therefore removed from the at-risk register. Community-specific data for communities amalgamated for reporting purposes were used or carried forward until the year of amalgamation.

Discussion and interpretation of findings

The national and jurisdictional-specific findings presented in the following sections show significant progress towards Australia's goal of elimination of trachoma as a public health problem by 2020. The level of program activity has increased and in many communities prevalence has continued to fall. However, upturns in the prevalence of active trachoma in some communities emphasise the need to continue to comprehensively implement all aspects of the SAFE strategy, with equal importance given to both the hygiene and environmental health components and the screening and distribution of antibiotics. The partnerships being forged through the link between trachoma-specific activities and other sectors in environmental health and health promotion show promise.

The Australian Government's commitment to eliminate trachoma has been demonstrated by renewed funding to jurisdictions for the delivery of enhanced trachoma control programs, and the embedding of practices aimed at sustainable elimination in health policy and programs. Australia has made steady progress towards the goal of eliminating trachoma as a public health problem by 2020. At the same time, the focus on screening and treatment will need to continue to ensure that prevalence decreases across all affected communities.

Particular attention needs to be given to communities with high levels of trachoma and, in lower prevalence communities, to households with children with trachoma. More attention must be directed to the environmental health and health hygiene components of the SAFE strategy, and to the detection and treatment of trichiasis.

Screening coverage

Screening coverage has been presented in this report as both the proportion of at-risk communities screened, and the proportion of children aged 5-9 years screened in these communities. Before the revision of the guidelines in 2014, jurisdictions were encouraged to screen all at-risk communities annually, so the proportion of communities screened provided an indication of how well this goal had been achieved. Under the revised guidelines, jurisdictions can choose to focus resources on control activities, including antibiotic distribution, rather than repeated annual screening in high prevalence communities. At the other end of the spectrum, communities with low levels of trachoma do not require annual screening. Therefore the proportion of communities screened should be viewed as an indicator of process, and not of the quality or success of the program. In contrast, the proportion of children aged 5-9 years assessed for trachoma in communities that have undertaken screening is an important performance measure, with the guidelines aiming for coverage of at least 85%. In 2017 overall coverage in screened communities was 83%, and at least 85% coverage was achieved in 88% of the communities. Furthermore, screening was implemented in 99% of communities for which screening was required on the basis of the Guidelines. One community was not screened in the Northern Territory due to staffing shortages. This community will be screened in 2018.

Trachoma prevalence

Trachoma prevalence at a regional and jurisdictional level in the high-risk communities was calculated by including the most recent prevalence estimates from all communities considered at risk at any time since 2007. Across all four jurisdictions, the overall prevalence of trachoma among children 5-9 years in 2017 was 3.8%, a decrease from 4.7% in 2016. At a regional level, the prevalence of trachoma in children aged 5-9 years in at-risk communities ranged from 0% to 12.4%.

Endemic trachoma is defined by WHO as prevalence of active trachoma at 5% or higher in children aged 1-9 years. With very limited screening coverage of the children aged 1-4 years in previous years in Australia, the data obtained for this age group cannot be assumed to be representative, so they have not been incorporated in the estimate. For the purpose of demonstrating elimination according to WHO criteria, the jurisdictional teams have committed to undertaking more comprehensive assessments in 1-4-year olds in a limited number of communities, to allow the prevalence in 1-9-year olds to be calculated. Results of these analyses will be presented in the 2018 Australian Trachoma Surveillance Report.

Trachoma control programs in Australia must ensure rigorous and accurate trachoma grading particularly where trachoma prevalence is decreasing (so there are fewer children affected, and an increased likelihood of false positive findings), and staff turnover in many remote areas is high. Ongoing attention to training graders is required to ensure the integrity of future screening activities.

Treatment for trachoma

Antibiotic distribution is a key component of the SAFE strategy. While treatment coverage remains high at 82% of community members requiring treatment under the Guidelines, jurisdictions have noted an increasing trend of treatment refusal, particularly in the over 15 age group. This trend will be closely monitored in 2018 and strategies devised to respond as needed.

Trachoma-related trichiasis

The number of adults aged 40 years and older reported to be screened for trichiasis increased in 2017, with 8206 adults screened compared to 5774 in 2016. Among those screened in 2017, 44 were found to have trichiasis, and nine episodes of trichiasis surgery were reported. The interpretation of these data is complicated by uncertainty in regard to the circumstances of the trichiasis diagnosis. Some cases of trichiasis recorded here may have been repeat diagnoses, or in people who had refused or deferred treatment. A protocol will be established for 2018 and beyond to ensure that new diagnoses can be clearly distinguished, and will be used to provide optimal estimates of newly detected trichiasis in affected communities.

The apparent discrepancy between documented cases of trichiasis and trichiasis-related surgery may be due to issues with reporting of trichiasis referral pathways and outcomes rather than the quality of service delivery itself. This issue will need to be addressed if Australia is to achieve validation by WHO of its trichiasis management practices within the

context of assessing whether trachoma elimination has been achieved. The NTSCRG has reviewed reporting methods and will implement alternative processes for monitoring trichiasis screening and detection.

The Australian Government recently approved a change to the MBS Item 42587 for trichiasis surgery to be split into two items (one for trachomatous trichiasis and one for non-trachomatous trichiasis) to allow accurate data to be captured for trachoma-related trichiasis surgery. This change is expected to take effect on 1 November 2018.

Facial cleanliness

The proportion of screened children aged 5-9 years who had clean faces has remained at similar levels to previous years overall, increasing in all jurisdictions except in WA where there was a decrease. While this decline is concerning, it should be noted that screening in WA is conducted in August and September, a time of year when respiratory viruses are commonplace in the 5-9-year cohort of children, so a spike in respiratory illness at the time of the screen may have affected results. Also, it may be the case that WA, having eliminated trachoma from many communities, is now screening children in communities disproportionately affected by poor environmental health conditions. Although much has been done to promote normalisation of facial cleanliness in communities, more work is needed to ensure that children have access to safe and functional washing facilities.

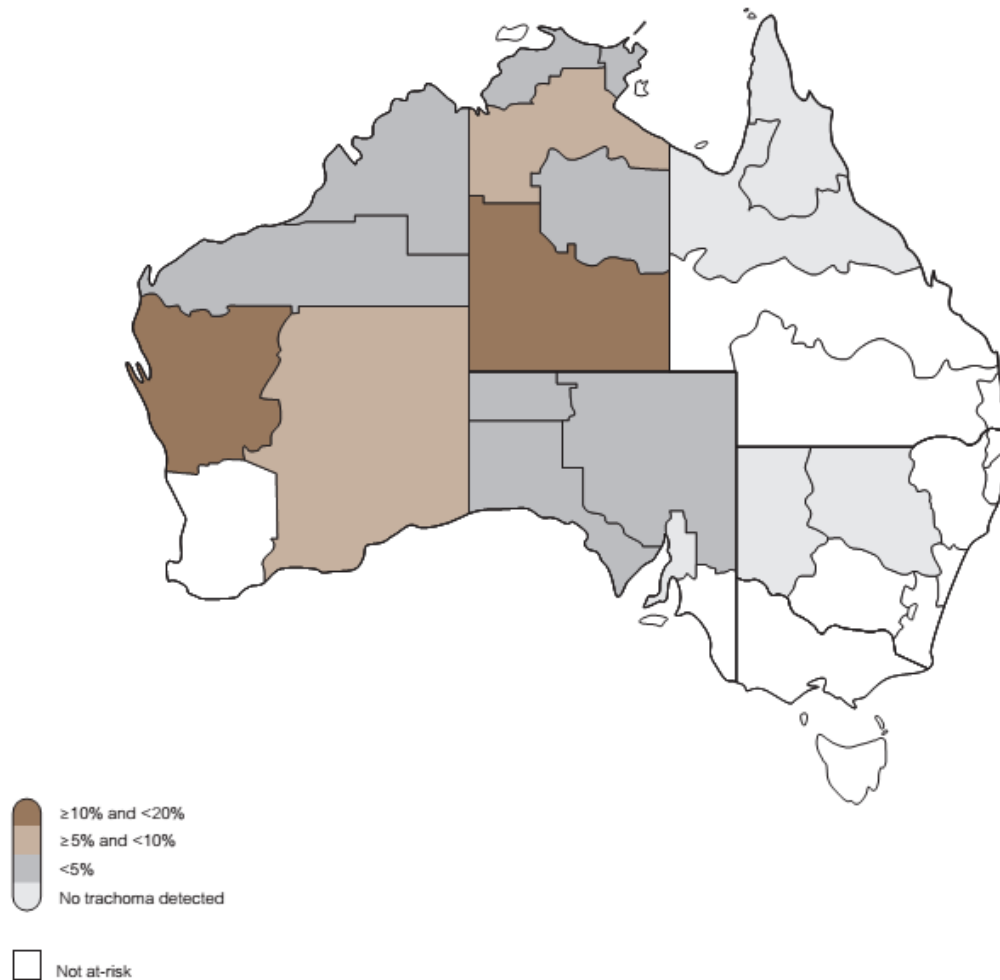
Monitoring of health promotion and environmental health activities

Jurisdictions have continued to support and document health promotion activities that focus on improving hygiene-related practices, particularly the need for clean faces in children. A sustained effort in health promotion will be crucial in achieving the goal of trachoma elimination. Equally important is the need for a greater focus on environmental health improvements, to ensure that people have access to running water, safe bathrooms and effective waste disposal in homes and communities. The Australian Department of the Prime Minister and Cabinet have initiated discussions and forums in the at-risk jurisdictions collaborating with Departments of Health, Housing and Education to focus on functioning washing facilities in remote communities and the promotion of facial cleanliness. The new Project Agreements for Australian Government funding of jurisdictional trachoma control activities for 2017-18 to 2020-21 require the monitoring of all of the SAFE strategy elements including environmental health improvement activities. So far, there has not been a mechanism for systematically documenting and reporting on progress in environmental health improvement activities at the national level. The NTSCRG will continue to provide guidance on surveillance and monitoring issues related to both health promotion and environmental health, with the goal of presenting more comprehensive information on environmental health in the 2018 report.

National results

Figures and Tables

Figure 1.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Australia 2017*



*Most recent estimates carried forward in communities that did not screen in 2017

Figure 1.2 Number of communities designated at-risk by jurisdiction, Australia 2007 – 2017

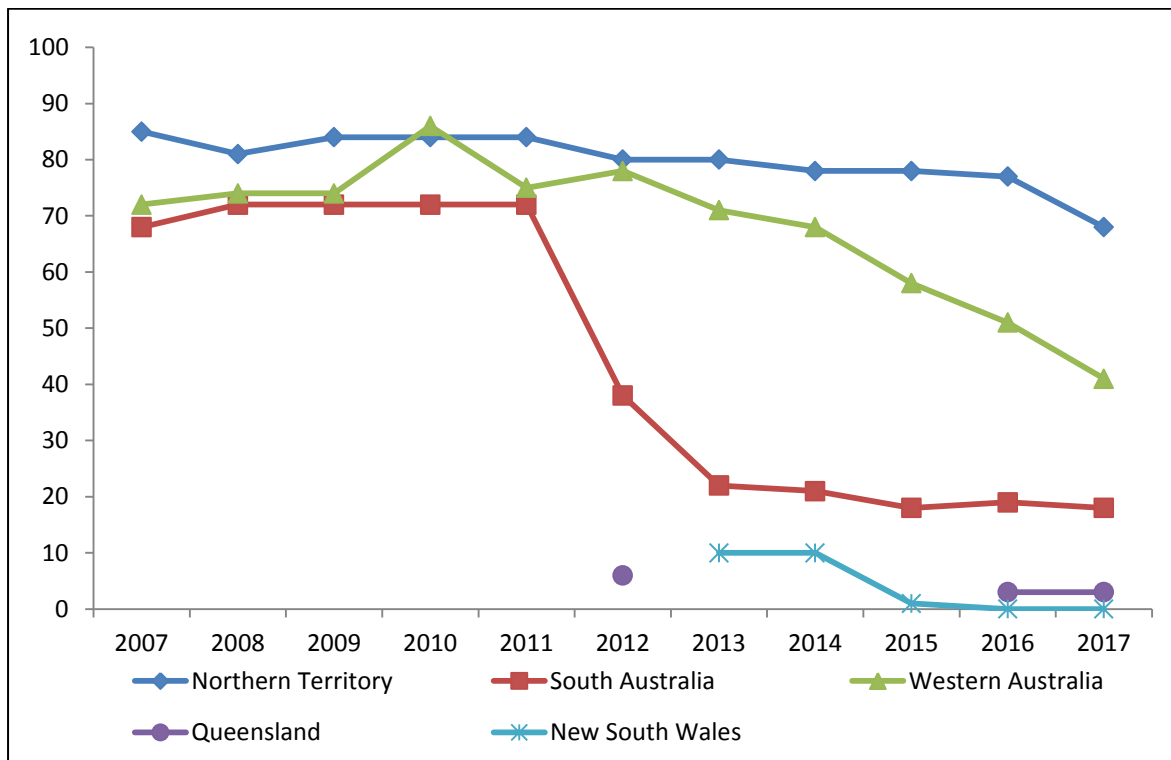


Figure 1.3 Number of at-risk communities according to trachoma control strategy implemented by jurisdiction, Australia 2017

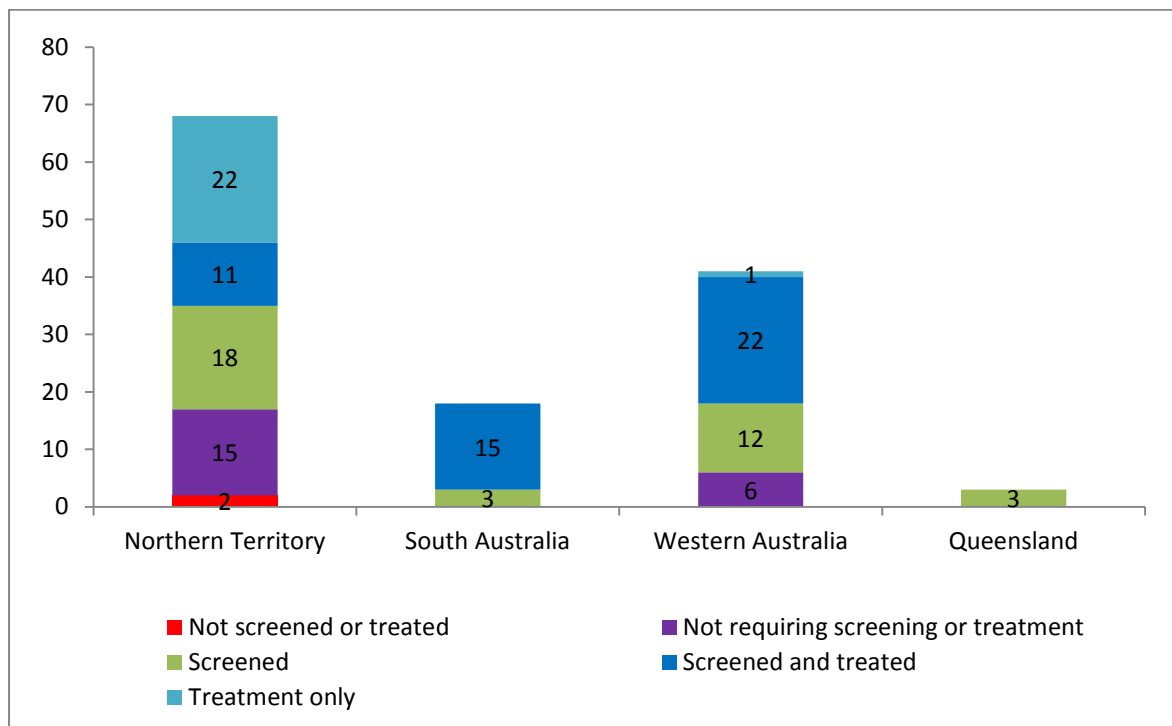


Figure 1.4 Population screening coverage in children aged 5-9 years in communities that were screened for trachoma by jurisdiction, Australia 2017

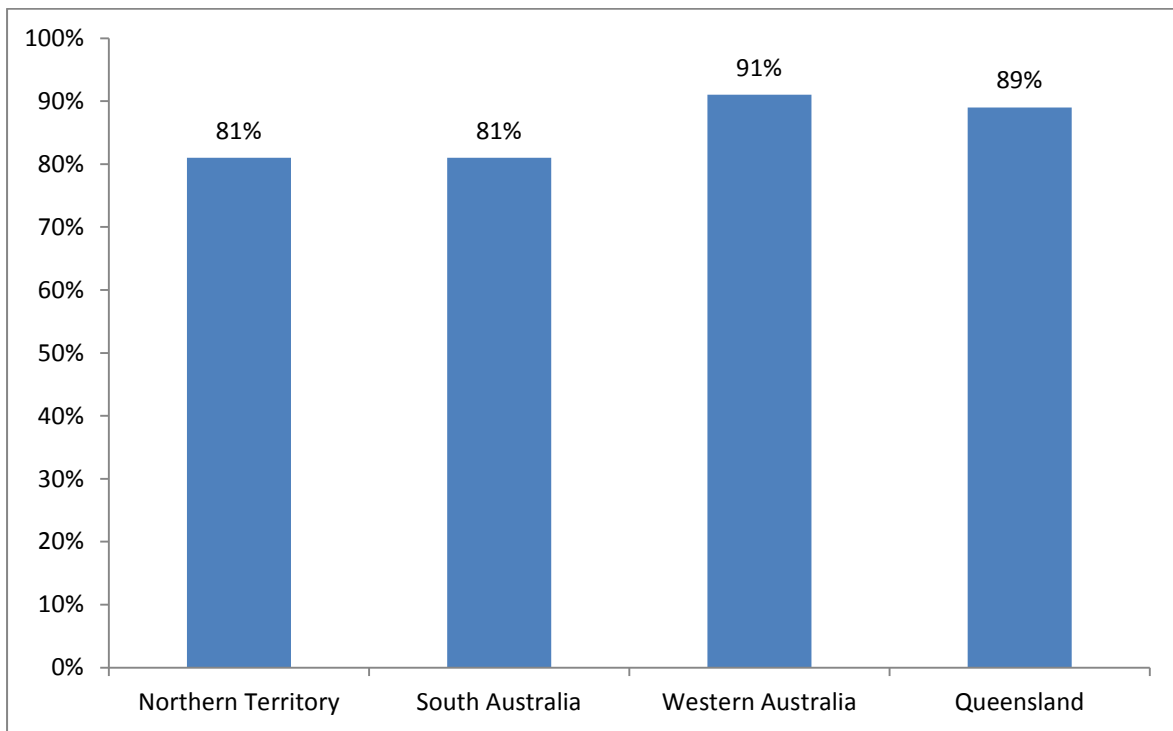


Figure 1.5 Proportion of screened children aged 5-9 years who had a clean face by jurisdiction, Australia 2007-2017

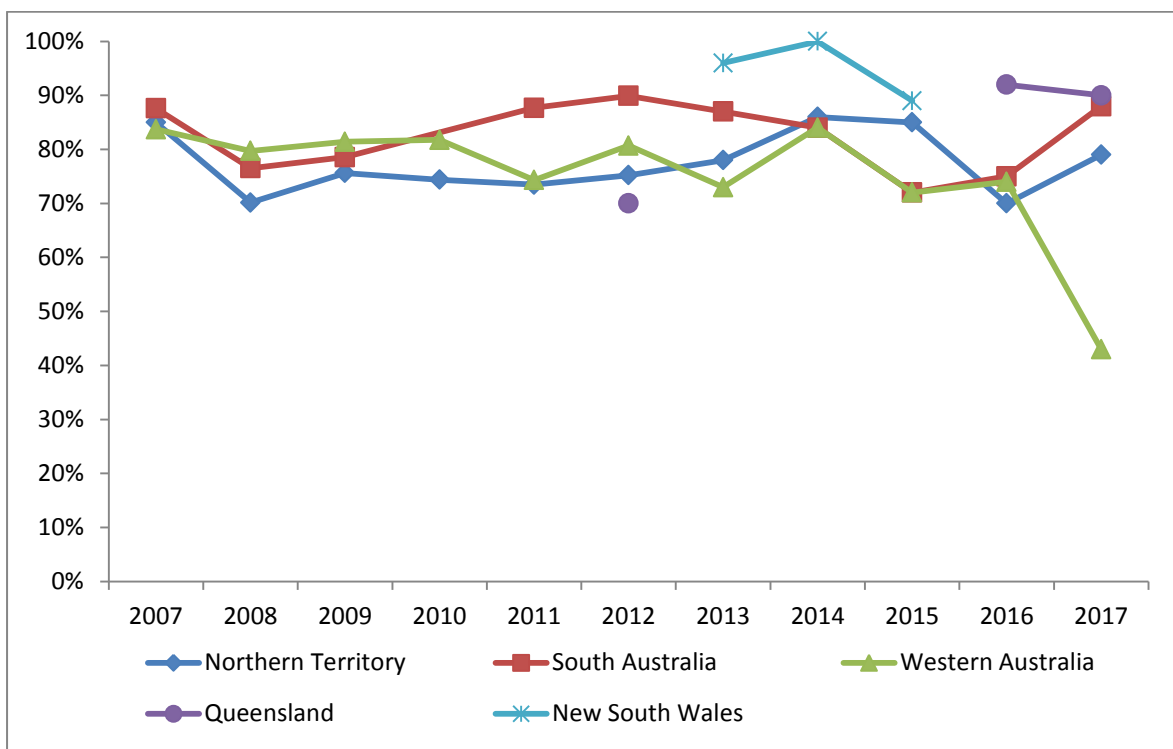


Figure 1.6a Observed prevalence of active trachoma among screened children aged 5-9 years by jurisdiction, Australia 2007-2017

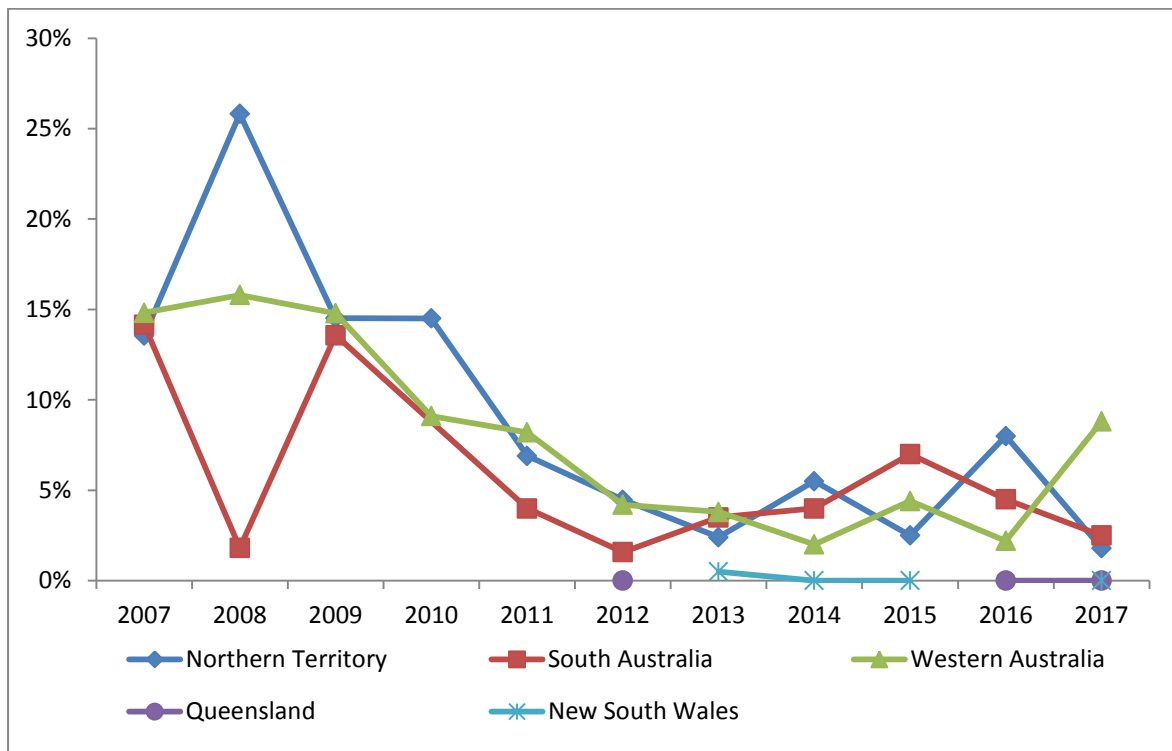
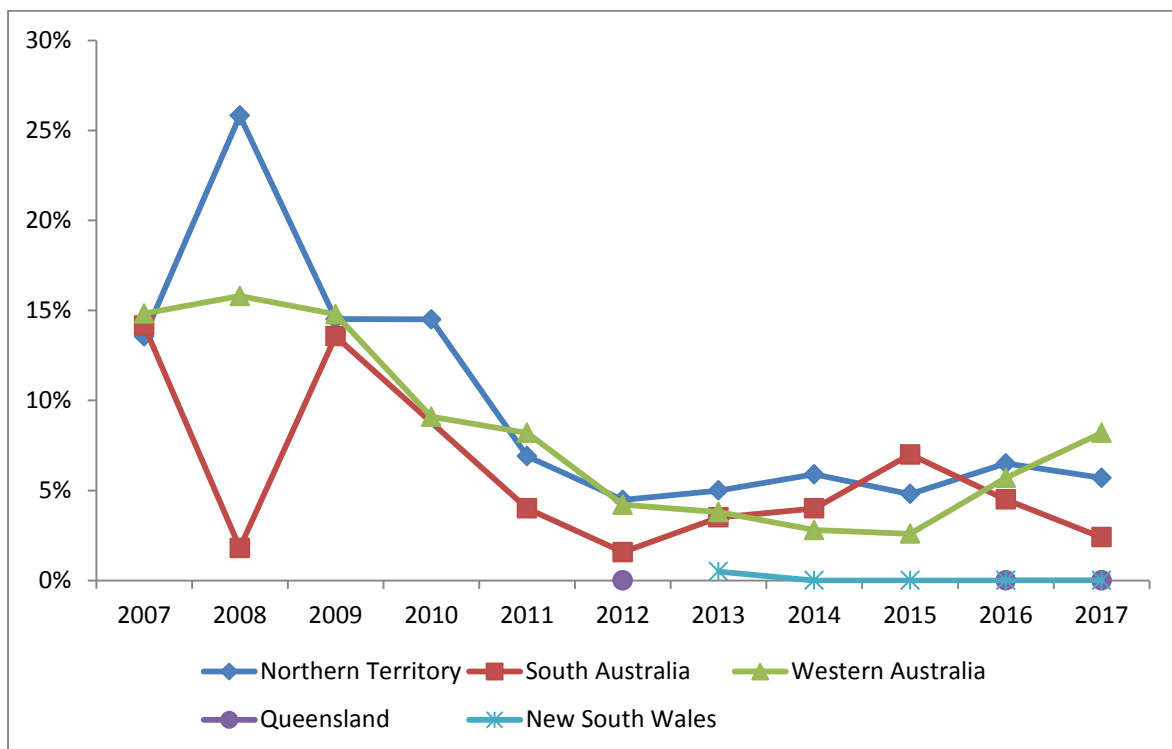
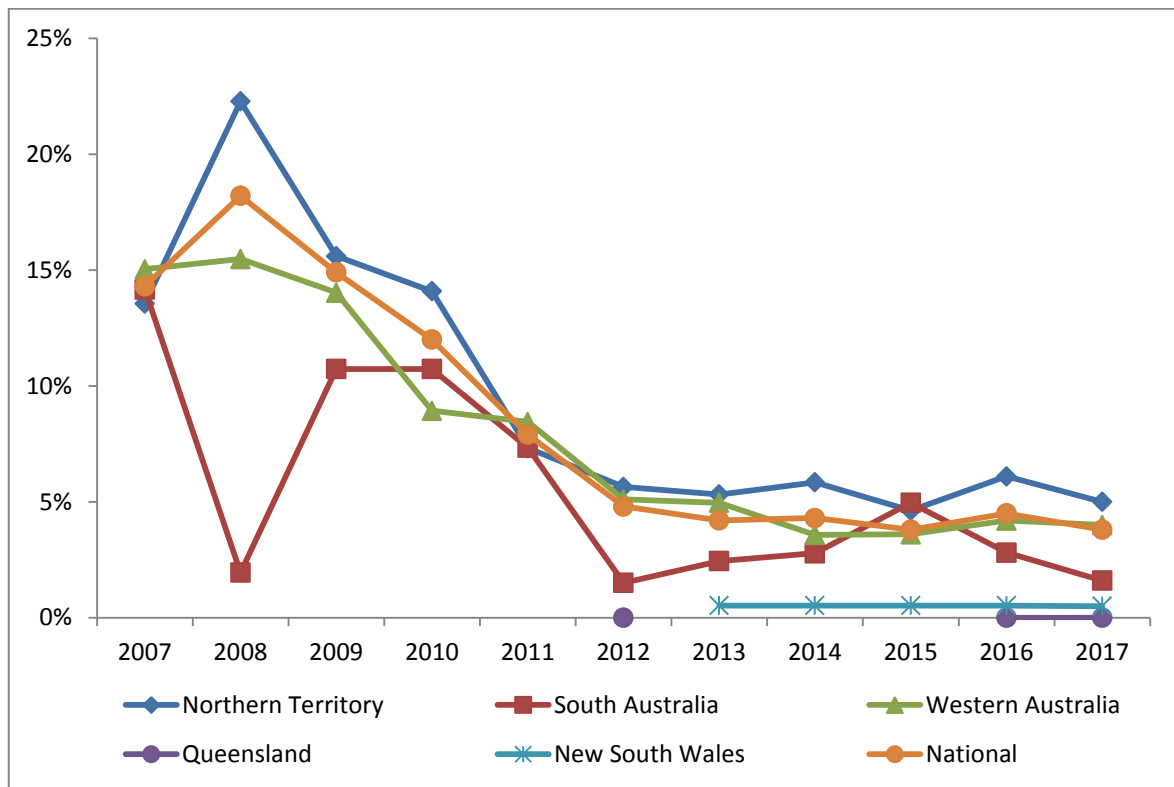


Figure 1.6b Estimated prevalence of active trachoma among children aged 5-9 years by jurisdiction, Australia* 2007-2017.



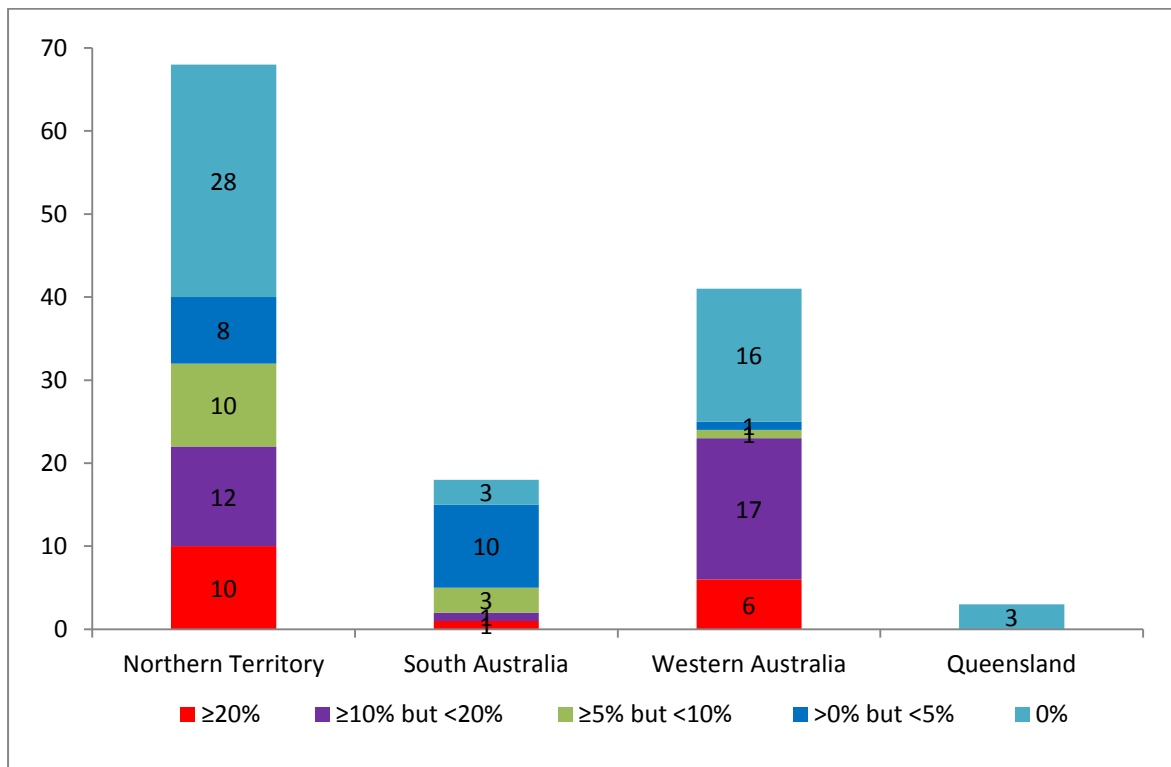
* Most recent estimates carried forward in at-risk communities that did not screen in 2017

Figure 1.6c Overall prevalence of active trachoma among children aged 5-9 years by jurisdiction and country, Australia* 2007-2017



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

Figure 1.7 Number of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years by jurisdiction, Australia 2017



* Including at-risk communities that did and did not screen in 2017

Figure 1.8 Proportion of at-risk communities with zero prevalence of trachoma by jurisdiction, Australia 2007-2017

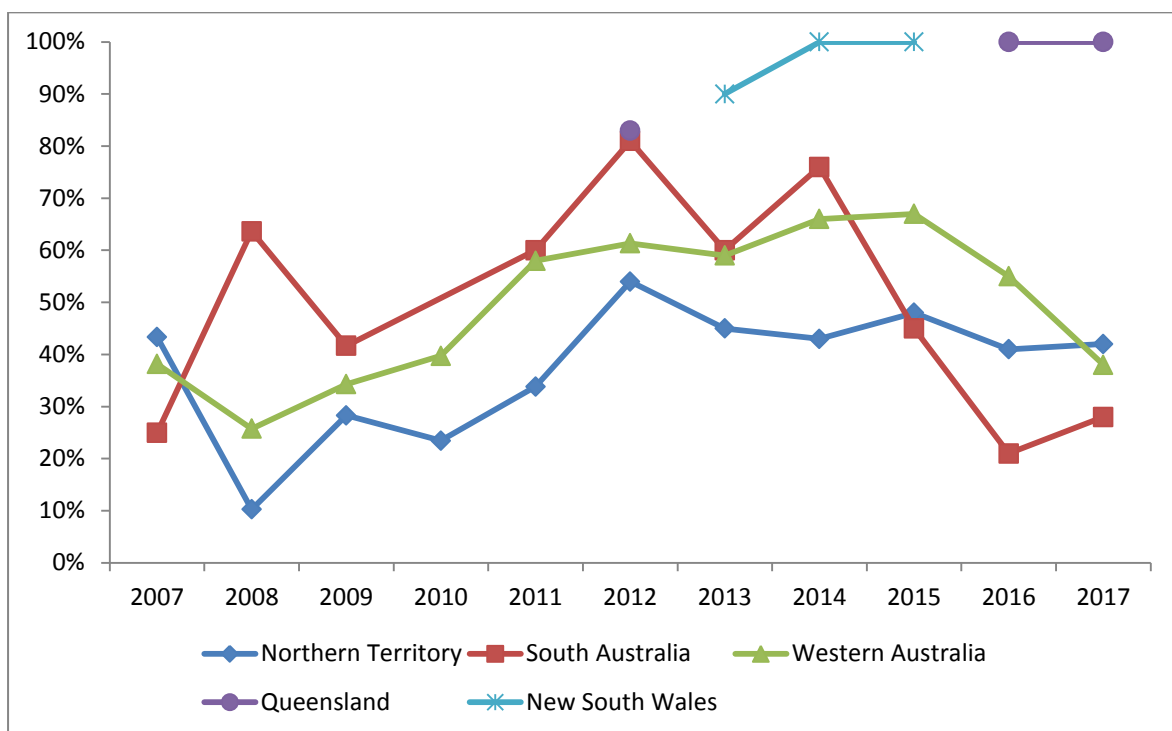


Figure 1.9 Proportion of at-risk communities with endemic (>5%) levels of trachoma by jurisdiction, Australia 2007-2017

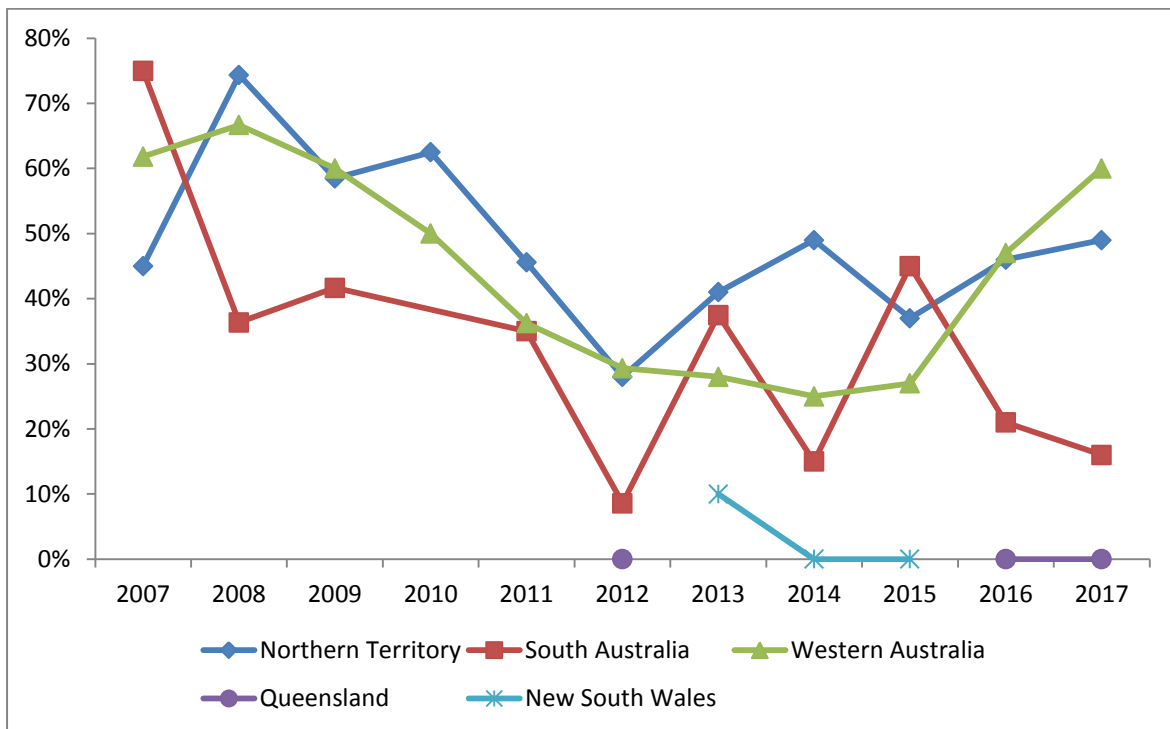


Figure 1.10 Number of doses of azithromycin administered for the treatment of trachoma by jurisdiction, Australia 2007-2017

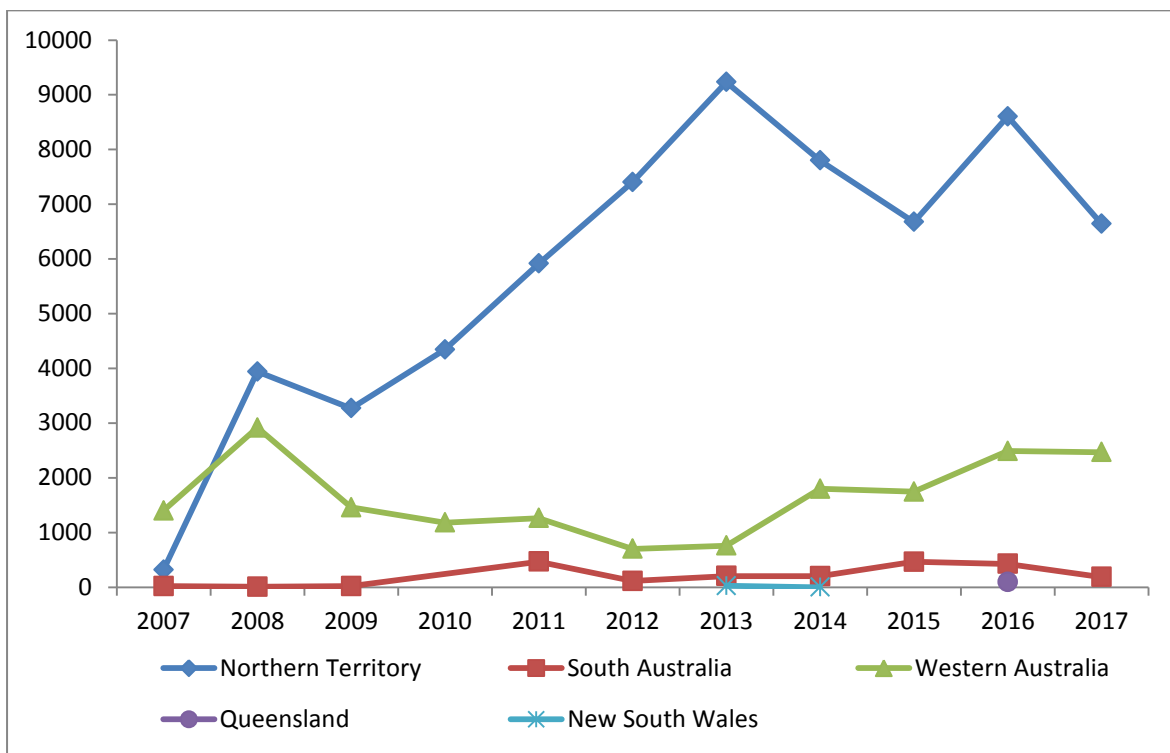


Table 1.1 Trachoma control delivery in at-risk* communities by jurisdiction, Australia 2017

Number of communities	Northern Territory	South Australia	Western Australia	Queensland	Total
At risk * (A)	68	18	41	3	130
Requiring screening for trachoma (B)	30	18	34	3	85
Screened for trachoma (C)	29	18	34	3	84
Requiring treatment without screening (D) †	23	0	1	0	24
Received treatment without screening (E) †	22	0	1	0	23
Screened and/or treated for trachoma (F = C+E)	51	18	35	3	107
Requiring neither screening or treatment for trachoma (G=A-B-D)	15	0	6	0	21

* As defined by each jurisdiction

† As per Guidelines

Table 1.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children aged 5-9 years by jurisdiction, Australia 2017

	Northern Territory	South Australia	Western Australia	Queensland	Total
Number of communities screened	29	18	34	3	84
Children examined for clean face	1611	598	534	159	2902
Children with clean face	1277	526	232	149	2184
<i>Clean face prevalence (%)</i>	79	88	43	94	75
Estimated number* of Indigenous children in communities [†]	1956	742	588	172	3458
Children screened for trachoma	1581	598	534	159	2872
<i>Trachoma screening coverage (%)</i>	81	81	91	92	83
Children with active trachoma	29	15	47	0	91
<i>Observed prevalence of active trachoma (%) ‡</i>	1.8	2.5	8.8	0	3.2
<i>Estimated prevalence of active trachoma (%) ‡</i>	5.7	2.5	8.2	0	5.4
<i>Overall prevalence of active trachoma (%) ‡</i>	5	1.6	4.1	0	3.8

* Jurisdictional estimate

† Communities that were screened for trachoma in 2017

‡ Methods of calculating prevalence rates on page 15

Table 1.3 Number and proportion * of at-risk communities according to level of trachoma prevalence in children aged 5-9 years, Australia 2007-2017

	2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017	
Communities at-risk †	229		233		232		244		203		196		183		177		157		150		130	
Communities not screened ‡	102		107		116		89		53		9		20		0		8		8		1	
Number of communities §	123		121		116		152		152		187		163		177		149		142		129	
≥20%	32	26%	54	45%	26	22%	44	29%	21	14%	15	8%	14	9%	17	10%	16	11%	15	11%	17	13%
≥10% but <20%	22	18%	14	12%	13	11%	23	15%	20	13%	13	7%	20	12%	36	20%	27	18%	29	20%	30	23%
≥5% but <10%	11	9%	14	12%	12	10%	15	10%	20	13%	20	11%	21	13%	12	7%	16	11%	12	8%	13	10%
>0% but <5%	7	6%	12	10%	24	21%	16	11%	19	13%	24	13%	17	10%	13	7%	16	11%	21	15%	19	15%
0%	51	41%	27	22%	41	35%	54	36%	72	47%	115	61%	91	56%	99	56%	74	50%	65	46%	50	39%

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per Guidelines

§ Screened or receiving ongoing annual treatment as per Guidelines

Table 1.4 Treatment strategies by jurisdiction, Australia 2017

Number of communities	Northern Territory	South Australia	Western Australia	Queensland	Total
Required treatment for trachoma	34	15	25	0	74
Treated for trachoma	33	15	25	0	73
Screened and treated	11	15	24	0	50
Received treatment without screening	22	0	1	0	23
Received 6-monthly treatment	7	0	1	0	8
Did not require treatment	34	3	16	3	56
Treated active cases and households	9	15	4	0	28
Treated the whole of community	22	0	21	0	43
Not treated according to CDNA guidelines	1	0	0	0	1

Table 1.5 Trachoma treatment coverage, Australia 2017

	Northern Territory					South Australia					Western Australia					Queensland †					Total				
Age group (years)	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for active trachoma	1	29	5	N/A	35	4	15	8	N/A	27	13	47	17	N/A	77	0	0	0	N/A	0	18	91	30	N/A	139
Received treatment for active trachoma	1	29	5	N/A	35	4	15	8	N/A	27	13	47	17	N/A	77				N/A		18	91	30	N/A	139
Received treatment for active trachoma (%)	100	100	100	N/A	100	100	100	100	N/A	100	100	100	100	N/A	100				N/A		100	100	100	N/A	100
Estimated community members* requiring treatment	847	1053	965	5522	8387	16	25	16	112	169	250	399	323	1698	2670						1113	1477	1304	7332	11226
Number of community members* who received treatment	707	978	829	4095	6609	13	24	15	107	159	232	376	298	1484	2390						952	1378	1142	5686	9158
Estimated community members who received treatment (%)	83	93	86	74	79	81	96	94	96	94	93	94	92	87	90						86	93	88	78	82
Total number of doses of azithromycin delivered	708	1007	834	4095	6644	17	39	23	107	186	245	423	315	1484	2467						970	1469	1172	5686	9297

	Northern Territory					South Australia					Western Australia					Queensland †					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
Doses administered in communities that were treated without screening*	464	629	537	2782	4412	0	0	0	0	0	45	90	41	210	386	0	0	0	0	0	509	719	578	2992	4798
Doses administered six-monthly*	128	192	159	952	1431	0	0	0	0	0	45	90	41	210	386	0	0	0	0	0	173	282	200	1162	1817
Estimated overall treatment coverage (%)	83	93	86	74	79	85	98	96	96	95	93	95	93	87	90	N/A	N/A	N/A	N/A	N/A	86	94	88	78	82

* Estimated as per Guidelines

Table 1.6 Trichiasis screening coverage, prevalence and treatment among Indigenous adults, Australia 2017

	Northern Territory		South Australia		Western Australia		Total		
Number of communities screened for trichiasis	73		19		43		135		
Age group	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in region	20234	11763	2954	2118	18896	20767	42084	34648	76732
Estimated population in region *	5632	5600	768	769	815	1901	7215	8270	15485
Adults examined †	6	33	0	8	0	3	6	44	50
With trichiasis (%)	0.1	0.6	0.0	1.0	0.0	0.2	0.1	0.5	0.3
Offered ophthalmic consultation	0	13	0	8	0	2	0	23	23
Declined ophthalmic consultation	0	1	0	0	0	0	0	1	1
Surgery in past 12 months	0	7	0	2	0	0	0	9	9

* 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

Jurisdictional-specific results

Northern Territory results

Trachoma program coverage

- In 2017, the NT identified 68 communities in five regions as being at risk of trachoma (Table 2.1, Figure 2.2).
- Of these at-risk communities 78% (53/68) required screening or treatment for trachoma according to current guidelines, with 34% (23/68) requiring treatment but not screening (Table 2.1, Figure 2.3).
- Of the communities that required screening and/or treatment, 96% (51/53) received the required service (Table 2.1).
- One community in the Darwin Rural region was not screened in 2017 due to staffing shortages. This community will be screened in 2018.
- The remaining 15 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see Methodology section) (Table 2.1, Figure 2.3).

Screening coverage

- In 2017, the NT identified 30 communities in the five regions requiring screening for trachoma with 29 of those screened (Table 2.1).
- The proportion of children aged 5-9 years screened in the 29 communities was 81%, ranging from 68% in the Barkly region to 100% in Katherine region (Table 2.2, Figure 2.4). Low coverage in the Barkly region was due to poor screening coverage in one community.

Clean face prevalence

- Clean face prevalence was assessed in all communities that were screened and in most communities that only received treatment.
- The overall prevalence of clean faces among children aged 5-9 years in the communities assessed was 79%, ranging from 57% in Alice Springs Remote region, to 94% in Katherine region (Table 2.2, Figure 2.5).

Trachoma prevalence

- The observed prevalence of active trachoma in those aged 5-9 years in 29 communities that were screened in 2017 was 1.8%. Prevalence ranged from 0% in East Arnhem and Katherine regions to 12% in Alice Springs Remote region (Table 2.2, Figure 2.6a).
- The estimated prevalence of active trachoma in those aged 5-9 years using most recent data carried forward in all 68 at-risk communities was 5.7%, ranging from 0.7% in Darwin Rural region to 13.7% in Alice Springs Remote region (Table 2.2, Figure 2.6b).
- The overall prevalence of active trachoma in those aged 5-9 years was 5%, ranging from 0.6% in Darwin Rural region to 12.4% in Alice Springs Remote region (Table 2.2, Figure 2.6c).
- No trachoma was reported in 42% (28/67) of the screened at-risk communities (Table 2.3)
- Endemic levels of trachoma ($\geq 5\%$) were reported in 46% (31/67) of the at-risk communities (Table 2.3)
- Hyperendemic levels of trachoma ($\geq 20\%$) were reported in 15% (10/67) of the at-risk communities (Table 2.3)

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 33 communities (Table 2.4)

- Treatment was delivered to active trachoma cases and household contacts in 9 communities, and community wide in 22 communities as per Guidelines (Table 2.4).
- One community in the Katherine region did not receive the treatment which was required by the CDNA Guidelines due to staffing shortages (Table 2.4).
- Total treatment coverage for those with active trachoma and community members, and community-wide treatment in all regions requiring treatment was 79% with 6644 doses of azithromycin delivered (Table 2.5, Figure 2.8).
- In 2017 the NT recorded 438 refusals of treatment with 396 in the Alice Springs remote region and 42 in the Katherine region.

Trichiasis

- Reporting for trichiasis screening was available for 73 communities (Table 2.6).
- Overall 11 232 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 0.3%, and 0.6% in adults aged 40 years and over (Table 2.6).
- Surgery for trichiasis was reported to be undertaken for 7 adults (Table 2.6).

Health promotion

- Health promotion activities were reported to have occurred in 41 communities in the Alice Springs Remote, Barkly, Darwin Rural, East Arnhem, and Katherine regions (Table 2.7).
- A total of 121 health promotion activities were reported (Table 2.7).
- The majority of the health promotion activities were delivered to children, teachers and childcare or preschool staff members, caregivers/parents and community members (Table 2.7).

In 2017 partnerships continued to be developed with several organisations which enabled an increase in health promotion activities across the Northern Territory. These programs delivered messages relevant to the prevention of several hygiene-related diseases, including trachoma, and infections of the skin and respiratory tract.

Yamba and Milpa roadshows, Uncle Jimmy Thumbs Up and the Indigenous Hip Hop art mural programs visited multiple communities across Central Australia and the Barkly. Trachoma health promotion was also included in the Barkly Desert Culture Program and the Tjunjgu Festival. The Melbourne Football Club made two visits to the NT which, provided opportunities for health promotion at sports days, as well as heightened media coverage of the trachoma program and Milpa. Community service announcements continued on local radio and television to provide a broad reach for the ‘Clean Faces, Strong Eyes’ message using Melbourne Football Club ambassadors. In 2017, community service announcements on radio and crawlers on television advertisements to advertise trachoma clinical actives in remote communities were trialled.

The NT Hygiene Network was established following a multi-agency meeting to address hygiene-related illnesses held by the Trachoma Program in Alice Springs in February. The Hygiene Network aims to improve safe hygiene practices and access to functioning health hardware across the NT. The initial focus on the network is to build leadership and advocacy for health promotion in Aboriginal communities, engage Aboriginal people, facilitate communication and enhance collaboration between government departments, non-government organisations (NGOs) and Aboriginal Peak Bodies. The membership includes representatives from the Department of Health, Department of Housing and Community Development, Department of Education, Aboriginal Medical Services Association Northern Territory and various other NGOs.

The ‘Clean Faces, Strong Eyes’ project was implemented in nine communities in Central Australia, the Barkly and Katherine regions. This project is a collaboration between NT Department of Health, NT Department of Education and Melbourne University which aims to support remote schools to establish a

regular hygiene routine in line with the national curriculum. Extra funding from the Department of Education will allow these schools to improve infrastructure to support regular hygiene routines.

In the final months of 2017, planning commenced to establish a cross-agency working group to address environmental aspects of the SAFE strategy. Activities in this area will be implemented during 2018.

Figures and Tables – Northern Territory

Figure 2.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Northern Territory, 2017

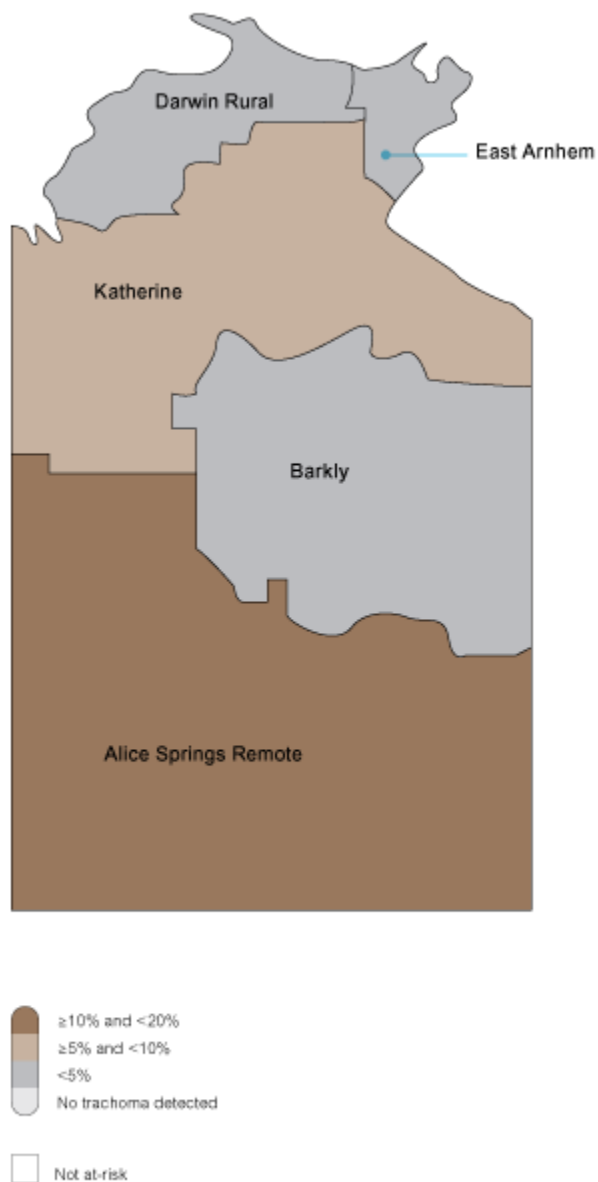


Figure 2.2 Number of at-risk communities by region, Northern Territory 2007- 2017

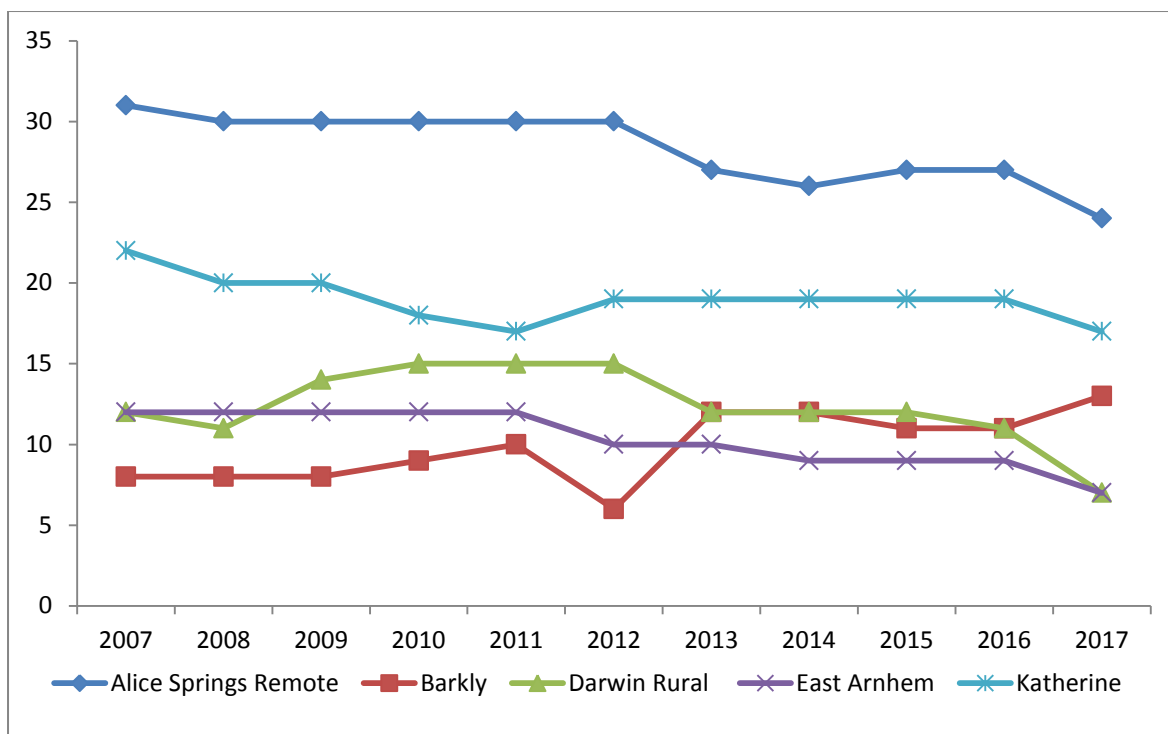


Figure 2.3 Number of at-risk communities by region and trachoma control strategy, Northern Territory, 2017

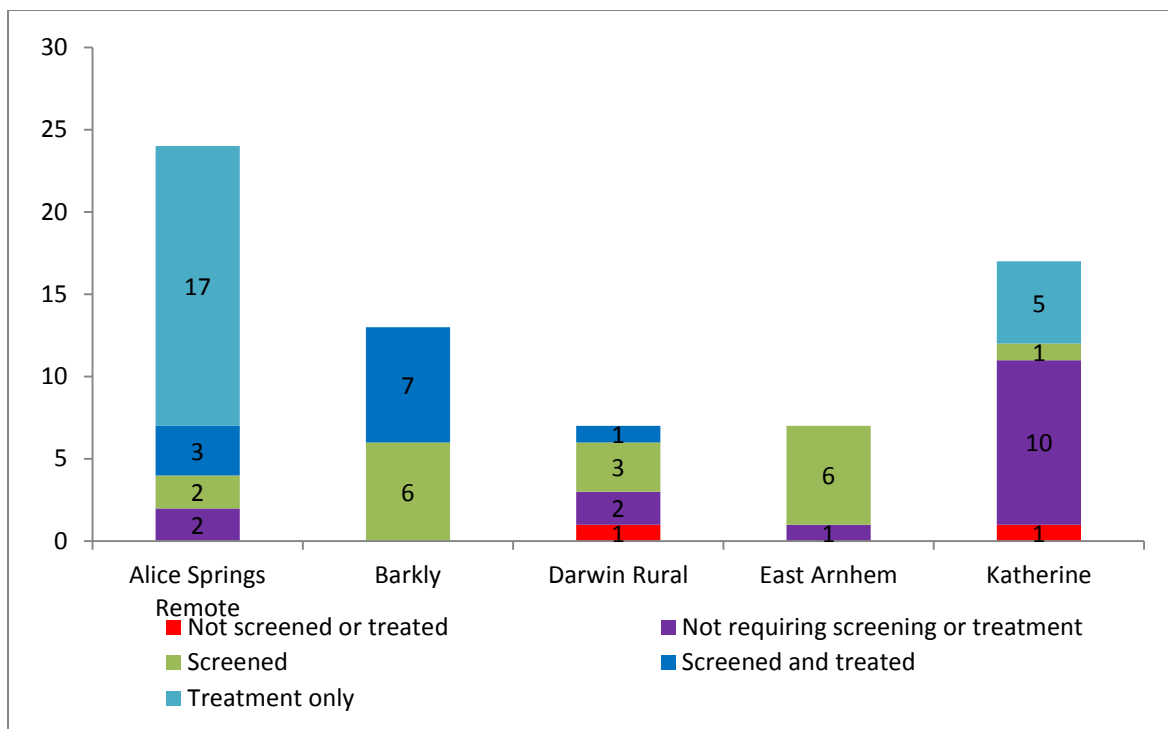


Figure 2.4 Population screening coverage of children aged 5-9 years in communities that required screening for trachoma by region, Northern Territory, 2017

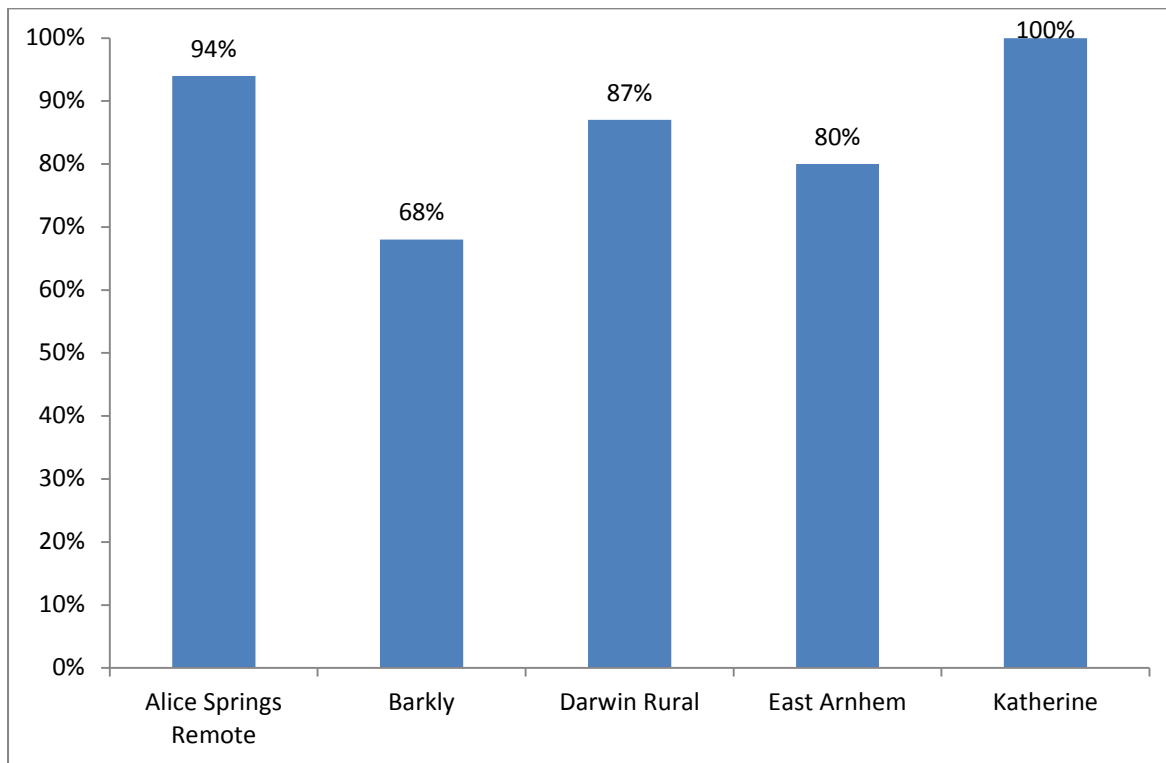


Figure 2.5 Proportion of screened children aged 5-9 years who had a clean face by region, Northern Territory 2007- 2017

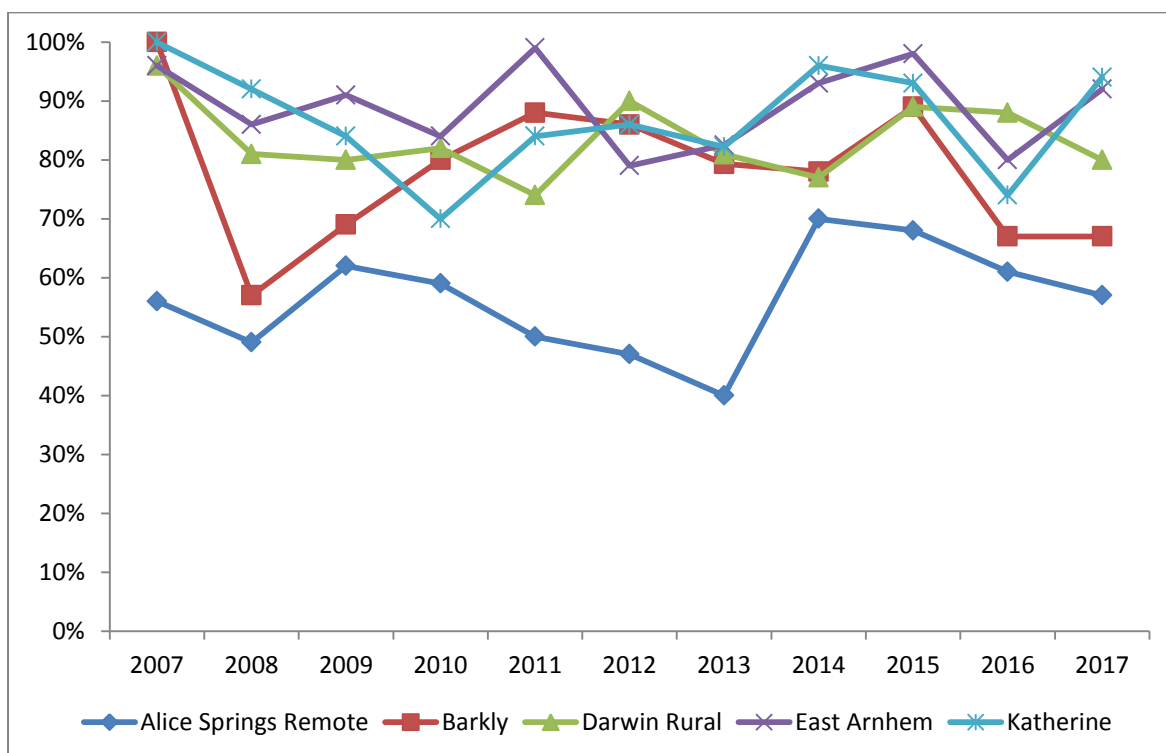


Figure 2.6a Observed prevalence of active trachoma among children aged 5-9 years in communities that were screened by region, Northern Territory 2007- 2017

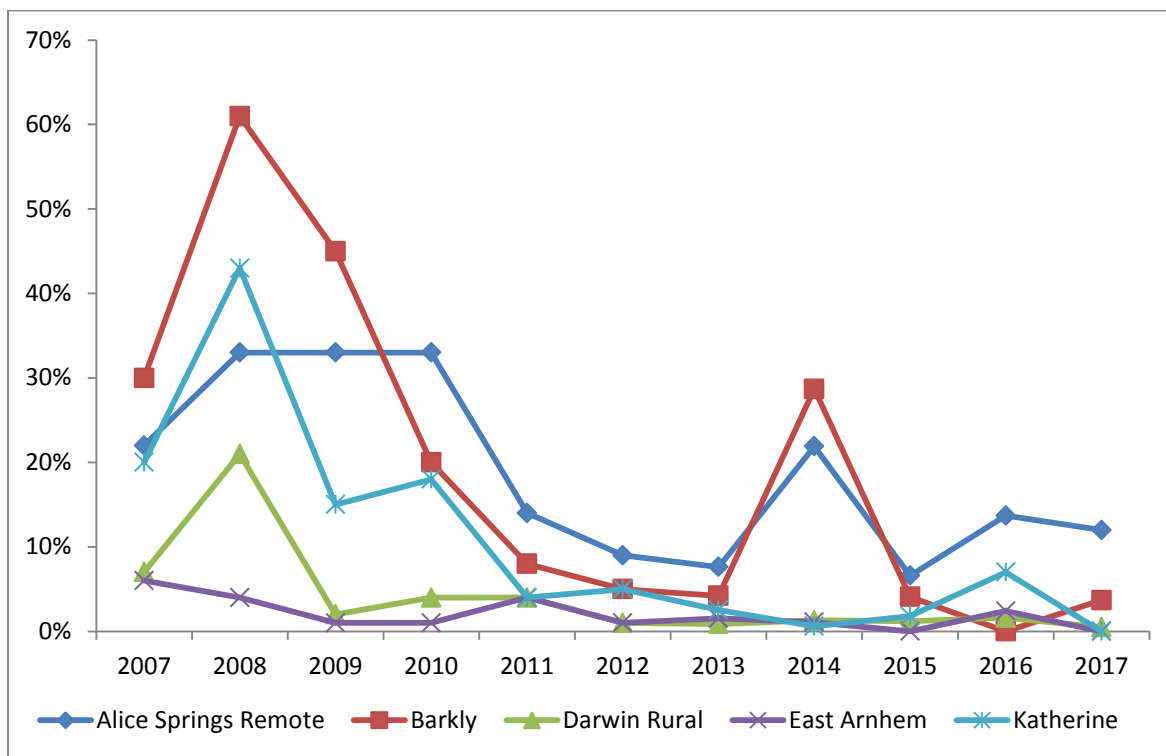
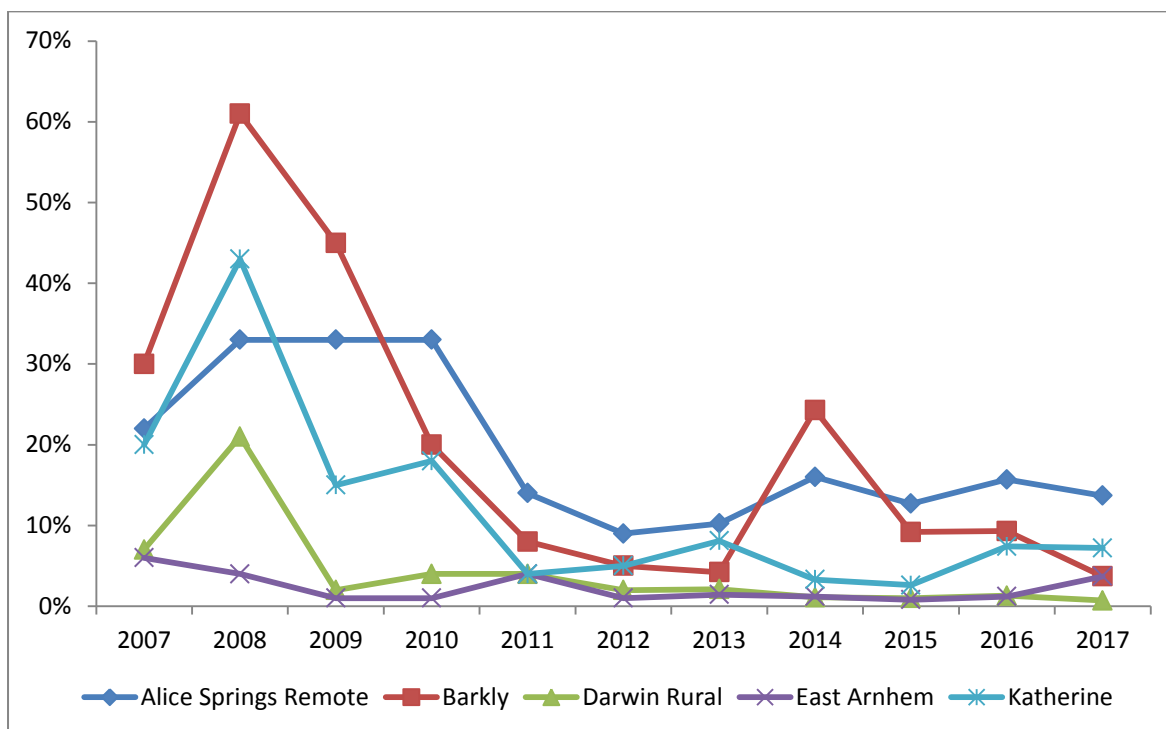
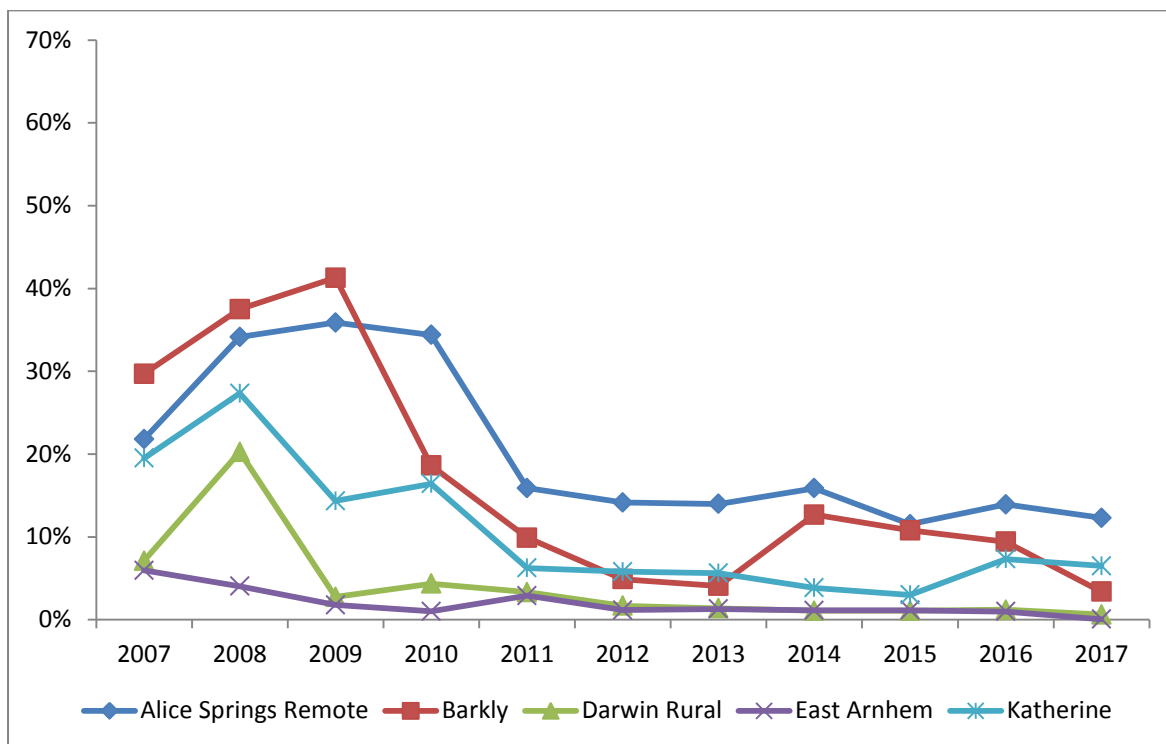


Figure 2.6b Estimated prevalence of active trachoma among children aged 5-9 years in all at-risk communities* by region, Northern Territory 2007- 2017



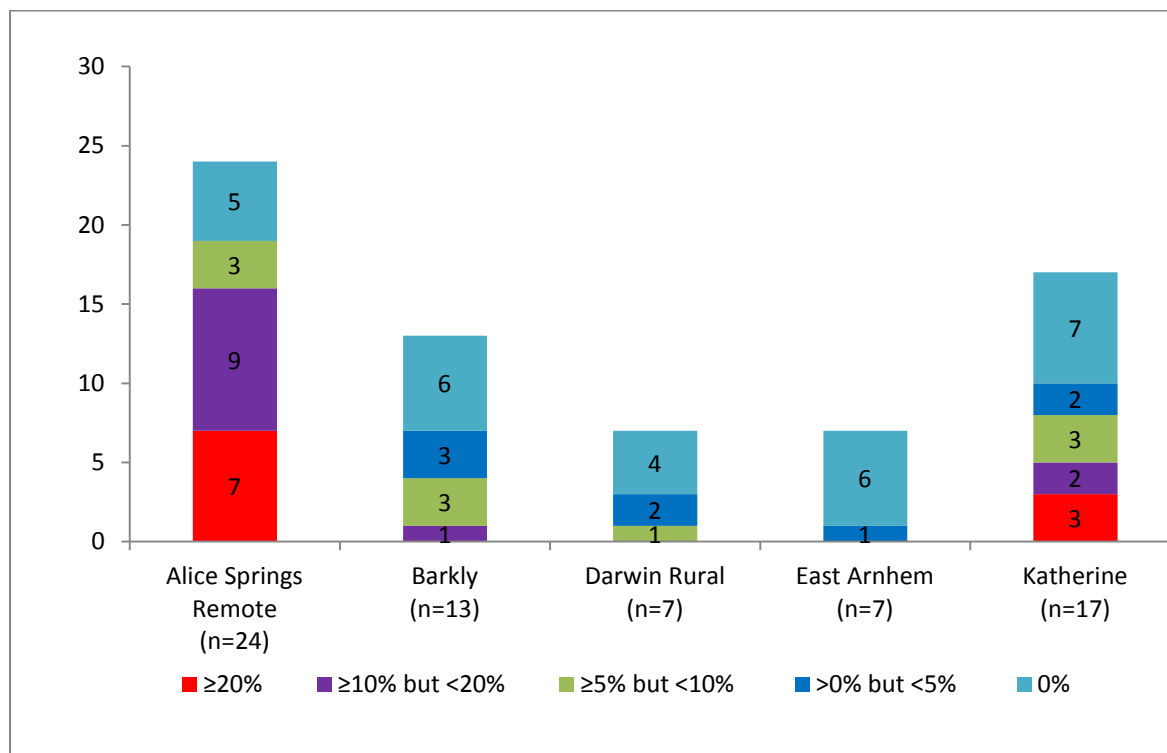
* Most recent estimates carried forward in at-risk communities that did not screen in 2017

Figure 2.6c Overall prevalence of active trachoma* among children aged 5-9 years by region, Northern Territory 2007- 2017



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

Figure 2.7 Number of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years by region, Northern Territory, 2017



* Including at-risk communities that did and did not screen in 2017

Figure 2.8 Number of doses of azithromycin administered for the treatment of trachoma by region, Northern Territory 2007- 2017

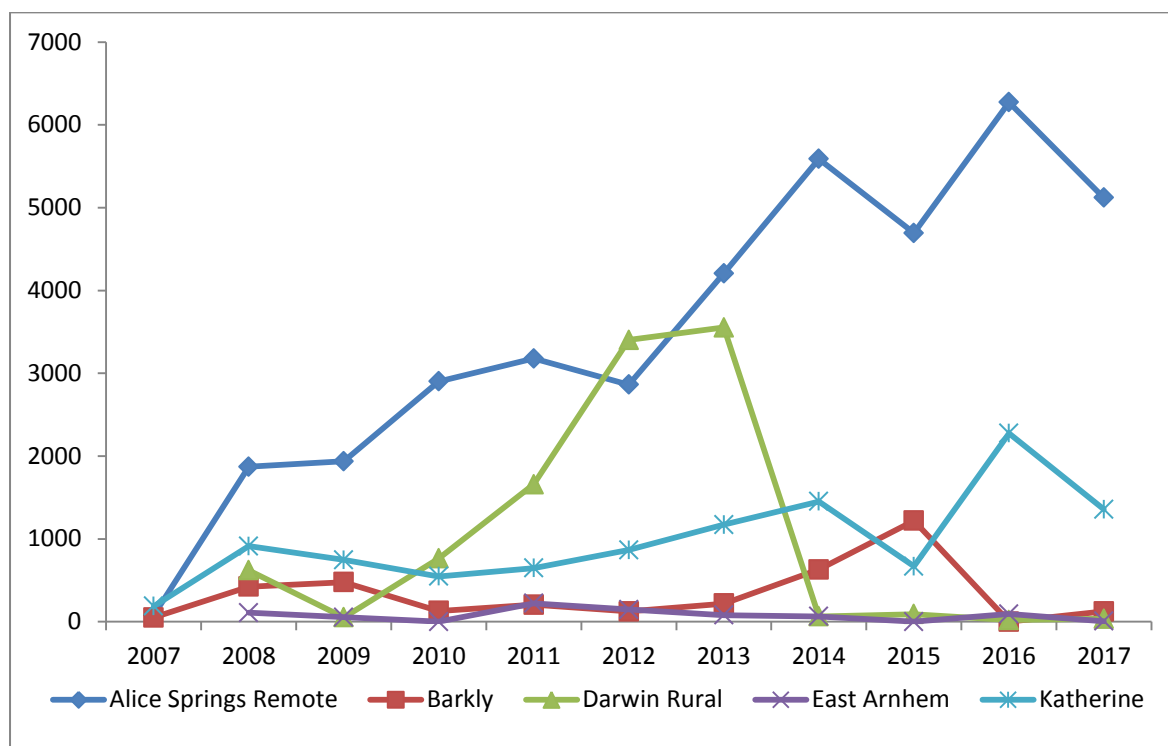


Table 2.1 Trachoma control delivery in at-risk* communities by region, Northern Territory 2017

Number of communities	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
At risk * (A)	24	13	7	7	17	68
Requiring screening for trachoma (B)	5	13	5	6	1	30
Screened for trachoma (C)	5	13	4	6	1	29
Requiring treatment without screening † (D)	17	0	0	0	6	23
Received treatment without screening † (E)	17	0	0	0	5	22
Screened and/or treated for trachoma (F = C+E)	22	13	4	6	6	51
Requiring neither screening or treatment for trachoma (G=A-B-D)	2	0	2	1	10	15

* As defined by each jurisdiction

† As per Guidelines

Table 2.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Northern Territory 2017

	Alice Springs Remote				Barkly				Darwin Rural				East Arnhem				Katherine				Total			
Number of communities screened	5				13				4				6				1				29			
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	17	119	21	157	46	337	70	453	24	660	22	706	25	479	174	678	0	16	1	17	112	1611	288	2011
Children with clean face	8	68	21	97	19	225	58	302	18	528	20	566	20	441	172	633	0	15	1	16	65	1277	272	1614
Clean face prevalence (%)	47	57	100	62	41	67	83	67	75	80	91	80	80	92	99	93	N/A	94	100	94	58	79	94	80
Estimated number* of Aboriginal children in communities†	77	125	95	297	513	480	471	1464	435	742	610	1787	543	593	773	1909	0	16	14	30	1568	1956	1963	5487
Children screened for trachoma	6	117	18	141	33	328	68	429	22	644	22	688	23	476	174	673	0	16	1	17	84	1581	283	1948
Trachoma screening coverage (%)	8	94	19	47	6	68	14	29	5	87	4	39	4	80	23	35	N/A	100	7	57	5	81	14	36
Children with active trachoma‡	1	14	2	17	0	12	2	14	0	3	0	3	0	0	1	1	0	0	0	0	1	29	5	35
Observed prevalence of active trachoma‡ (%)	16.7	12.0	11.1	12.1	0.0	3.7	2.9	3.3	0.0	0.5	0.0	0.4	0.0	0.0	0.6	0.1	N/A	0.0	0.0	0.0	1.2	1.8	1.8	1.8
Estimated prevalence of active trachoma‡ (%)	N/A	13.7	N/A	N/A	N/A	3.7	N/A	N/A	N/A	0.7	N/A	N/A	N/A	3.7	N/A	N/A	N/A	7.2	N/A	N/A	N/A	5.7	N/A	N/A
Overall prevalence of active trachoma‡ (%)	N/A	12.4	N/A	N/A	N/A	3.5	N/A	N/A	N/A	0.6	N/A	N/A	N/A	0.7	N/A	N/A	N/A	6.5	N/A	N/A	N/A	5.0	N/A	N/A

* 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 in 2017

‡ Methods of calculating prevalence rates on page 15

Table 2.3 Number and proportion of at-risk communities according to level of trachoma prevalence* in children aged 5-9 years, Northern Territory 2007-2017

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Communities at-risk †	89	87	86	86	86	82	80	78	78	77	68
Communities not screened ‡	25	25	33	21	19	4	12	0	8	8	1
Number of communities §	60	43	53	64	65	76	68	78	70	69	67
≥20%	12 20%	25 58%	19 36%	27 42%	9 14%	5 7%	5 7%	14 18%	11 16%	11 16%	10 15%
≥10% but <20%	8 13%	6 14%	8 15%	4 6%	9 14%	9 12%	14 21%	14 18%	11 16%	13 19%	12 18%
≥5% but <10%	4 7%	4 9%	3 6%	9 14%	11 17%	9 12%	9 13%	10 13%	7 10%	8 12%	9 13%
>0% but <5%	7 12%	4 9%	9 17%	9 14%	14 22%	13 17%	9 13%	6 8%	10 14%	9 13%	8 12%
0%	29 48%	4 9%	14 26%	15 23%	22 34%	40 53%	31 46%	34 44%	31 44%	28 41%	28 42%

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per Guidelines

§ Screened or receiving ongoing annual treatment as per Guidelines

Table 2.4 Treatment strategies by region, Northern Territory 2017

	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Required treatment for trachoma	20	7	1	0	6	34
Treated for trachoma*	20	7	1	0	5	33
Screened and treated	3	7	1	0	0	11
Received treatment only	17	0	0	0	5	22
Received 6-monthly treatment	6	0	0	0	1	7
Did not require treatment	4	6	6	7	11	34
Treated active trachoma and households	1	7	1	0	0	9
Community-wide treatment	17	0	0	0	5	22
Not treated according to CDNA Guidelines*	0	0	0	0	1	1

* One community in the Katherine region did not receive the treatment which was required by the CDNA Guidelines due to staffing shortages

Table 2.5 Trachoma treatment coverage by region,* Northern Territory 2017

	Alice Springs Remote					Barkly					Darwin Rural					East Arnhem					Katherine					Total					
	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	
Requiring treatment for active trachoma	1	14	2	N/A	17	0	12	2	N/A	14	0	3	0	N/A	3	0	0	1	N/A	1	0	0	0	N/A	0	0	1	29	5	N/A	35
Received treatment for active trachoma	1	14	2	N/A	17	0	12	2	N/A	14	0	3	0	N/A	3	0	0	1	N/A	1	0	0	0	N/A	0	0	1	29	5	N/A	35
Received treatment for active trachoma (%)	100	100	100	N/A	100	N/A	100	100	N/A	100	N/A	100	N/A	N/A	100	N/A	N/A	N/A	100	N/A	100	N/A	N/A	N/A	N/A	N/A	100	100	100	N/A	100
Estimated community members* requiring treatment	676	816	748	4472	6712	19	14	11	67	111	5	3	9	19	36	0	1	1	3	5	147	219	196	961	1523	847	1053	965	5522	8387	
Number of community members* who received treatment	552	749	627	3176	5104	19	14	11	67	111	4	3	9	16	32	0	1	1	3	5	132	211	181	833	1357	707	978	829	4095	6609	
Estimated community members who received treatment (%)	82	92	84	71	76	100	100	100	100	100	80	100	100	84	89	N/A	100	100	100	100	90	96	92	87	89	83	93	86	74	79	
Total number of doses of azithromycin delivered	553	763	629	3176	5121	19	26	13	67	125	4	6	9	16	35	0	1	2	3	6	132	211	181	833	1357	708	1007	834	4095	6644	
Estimated overall treatment coverage (%)	82	92	84	71	76	100	100	100	100	100	80	100	100	84	90	N/A	100	100	100	100	90	96	92	87	89	83	93	86	74	79	

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

Table 2.6 Trichiasis screening coverage, prevalence and treatment among Indigenous adults by region, Northern Territory 2017

	Alice Springs Remote		Barkly		Darwin Rural		East Arnhem		Katherine		Total		
Number of communities screened for trichiasis	23		5		16		10		19		73		
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*	7272	4631	718	331	5147	2757	4312	2464	2785	1580	20234	11763	31997
Adults examined†	2640	2528	320	220	1730	1509	493	360	449	983	5632	5600	11232
With trichiasis	3	27	1	2	0	0	2	0	0	4	6	33	39
<i>With trichiasis (%)</i>	0.1	1.1	0.3	0.9	0.0	0.0	0.4	0.0	0.0	0.4	0.1	0.6	0.3
Offered ophthalmic consultation‡	0	10	0	2	0	0	0	0	0	1	0	13	13
Declined ophthalmic consultation‡	0	1	0	0	0	0	0	0	0	0	0	1	1
Surgery in past 12 months§	0	6	0	1	0	0	0	0	0	0	0	7	7

* 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

‡ Within 6-months of screening for trichiasis

§ Surgery cases may include cases identified in previous years

||One further surgery for a patient from another jurisdiction was undertaken in the NT in 2017

Table 2.7 Health promotion activities by region, Northern Territory 2017

	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Number of communities that reported health promotion activities	21	13	3	3	1	41
Total number of programs reported	73	21	11	10	6	121
Methods of health promotion						
One-on-one discussion	27	16	6	6	1	56
Presentation to group	35	9	6	5	3	58
Interactive group session	25	3	2	1	1	32
Social marketing	3	0	0	0	0	3
Print material/mass media	4	11	1	0	0	16
Sporting/community events	2	0	0	0	0	2
Other	6	1	1	0	1	9
Target audience						
Health professionals/staff	16	3	3	2	1	25
Children	51	17	7	4	3	82
Youth	26	0	3	1	2	32
Teachers/childcare/preschool staff	42	14	4	4	2	66
Caregivers/parents	33	12	4	4	2	55
Community members	34	2	2	2	2	42
Community educators/health promoters	7	0	1	0	0	8
Interagency members	8	0	1	0	0	9
Frequency of health promotion activities						
Once	17	0	0	1	0	18
Occasional *	55	21	11	9	6	102
Regular†	0	0	0	0	0	0
Ongoing/routine	1	0	0	0	0	1

*2-4 times per year

†5-12 times per year

South Australia results

Trachoma program coverage

- In 2017 SA identified 18 communities in three regions as being at risk of trachoma (Table 3.1, Figure 3.2).
- Due to no evidence of active trachoma, Yorke and Mid North region are no longer considered at risk of trachoma.
- All at-risk communities that required screening were screened for trachoma (Table 3.1)

Screening coverage

- Trachoma screening coverage of children aged 5-9 years in the 18 at-risk communities screened was 81%, ranging from 63% in the Eyre and Western region to 95% 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 88%, ranging from 75% in the APY Lands, to 99% in the Eyre and Western region (Table 3.2, Figure 3.5).

Trachoma prevalence

- The observed prevalence of active trachoma in children aged 5-9 years screened was 2.5%. Prevalence ranged from 1.1% Far North region to 3.7% Eyre and Western region (Table 3.2, Figure 3.6a).
- The estimated prevalence of active trachoma in 5-9-year olds using most recent data carried forward in all 18 at-risk communities was 2.5%, ranging from 1.1% in the Far North region to 3.7% in Eyre and Western region (Table 3.2, Figure 3.6b).
- The overall prevalence of active trachoma was 1.6%, ranging from 1% in the Far North region and 3.6% in the APY Lands (Table 3.2, Figure 3.6c)
- No trachoma was reported in 17% (3/18) of the at-risk communities (Table 3.3, Figure 3.7).
- Endemic levels of trachoma ($\geq 5\%$) were reported in 27% (5/18) of the at-risk communities (Table 3.3, Figure 3.7).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 15 communities (Table 3.4).
- Treatment was delivered for active trachoma cases and household contacts in the 15 communities (Table 3.4).
- Total treatment coverage for active trachoma cases and community members in all regions requiring treatment was 95% with 186 doses of azithromycin delivered (Table 3.5, Figure 3.8).

Trichiasis

- Screening for trichiasis was undertaken in 19 communities (Table 3.6).
- Overall 1537 adults aged 15 years and over were screened (Table 3.6).

- The prevalence of trichiasis in adults aged 15 years and over was 0.5%, and 1.0% in adults aged 40 years with 8 cases of trichiasis detected (Table 3.6).
- Surgery for trichiasis was reported to be undertaken for 2 adults (Table 3.6).

Health promotion

- Health promotion activities were reported to have occurred in 16 communities in the APY Lands, Eyre and Western, and Far North regions (Table 3.7).
- A total of 33 health promotion activities were reported in SA (Table 3.7).
- The majority of the health promotion activities were delivered to children, caregivers/parents, youth and community members (Table 3.7).

Aboriginal Community Controlled Health Organisations deliver health promotion and environmental health activities in at-risk communities. On the APY Lands, Nganampa Health Council delivers health promotion and environmental health initiatives, assisted by Aboriginal Community Services with the roll out of their environmental and health promotion program Kuru Ngukintjuku. In addition, Aboriginal Community Advisory Committees were established on the APY Lands to bring key community members together to build local capacity, develop local solutions and to reinforce the eye health messages in community.

Figures and Tables – South Australia

Figure 3.1 Trachoma prevalence in children aged 5-9 years in all at-risk communities by region, South Australia, 2017



Figure 3.2 Number of communities at risk by region, South Australia 2007-2017

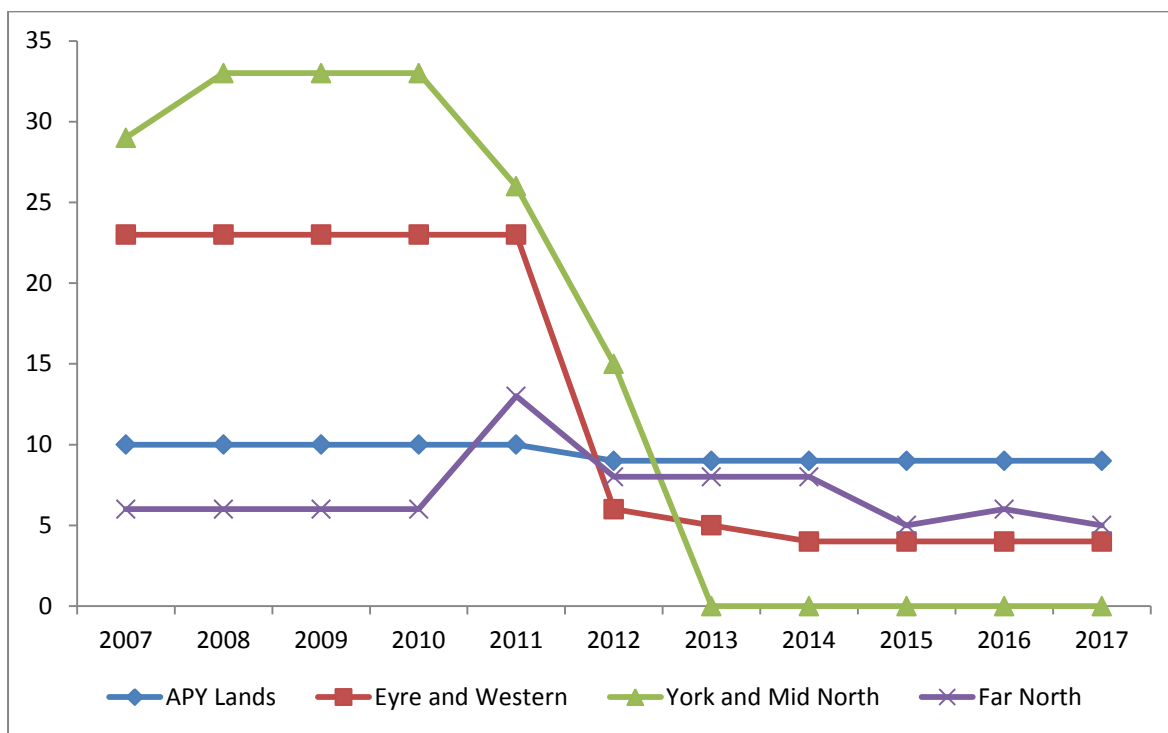


Figure 3.3 Number of at-risk communities according to trachoma control strategy implemented by region, South Australia 2017

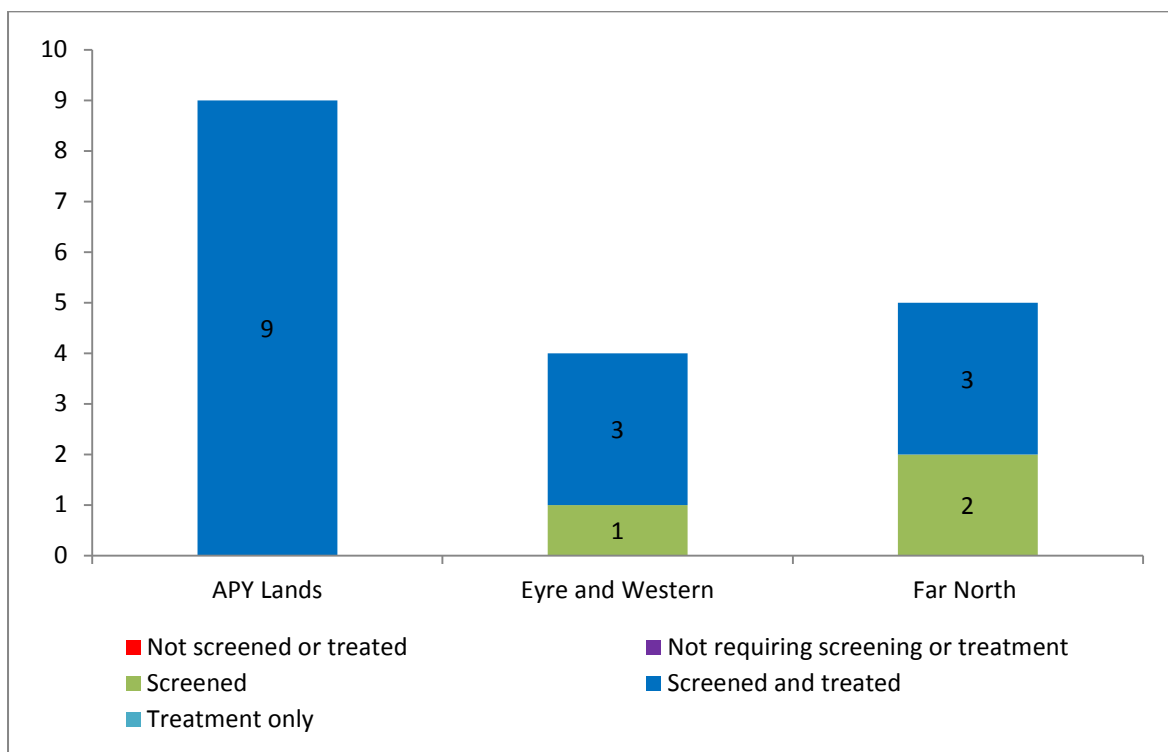


Figure 3.4 Population screening coverage of children aged 5-9 years in at-risk communities that required screening for trachoma by region, South Australia 2017

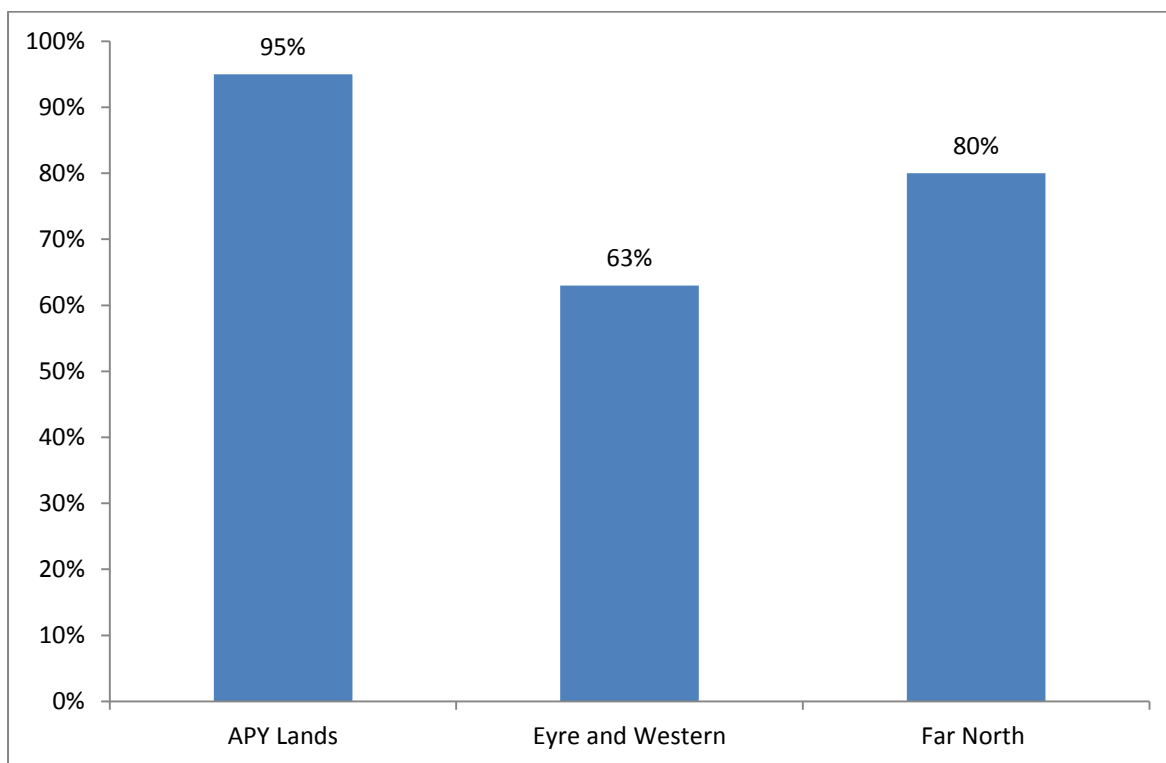


Figure 3.5 Proportion of screened children aged 5-9 years who had a clean face by region, South Australia 2007-2017

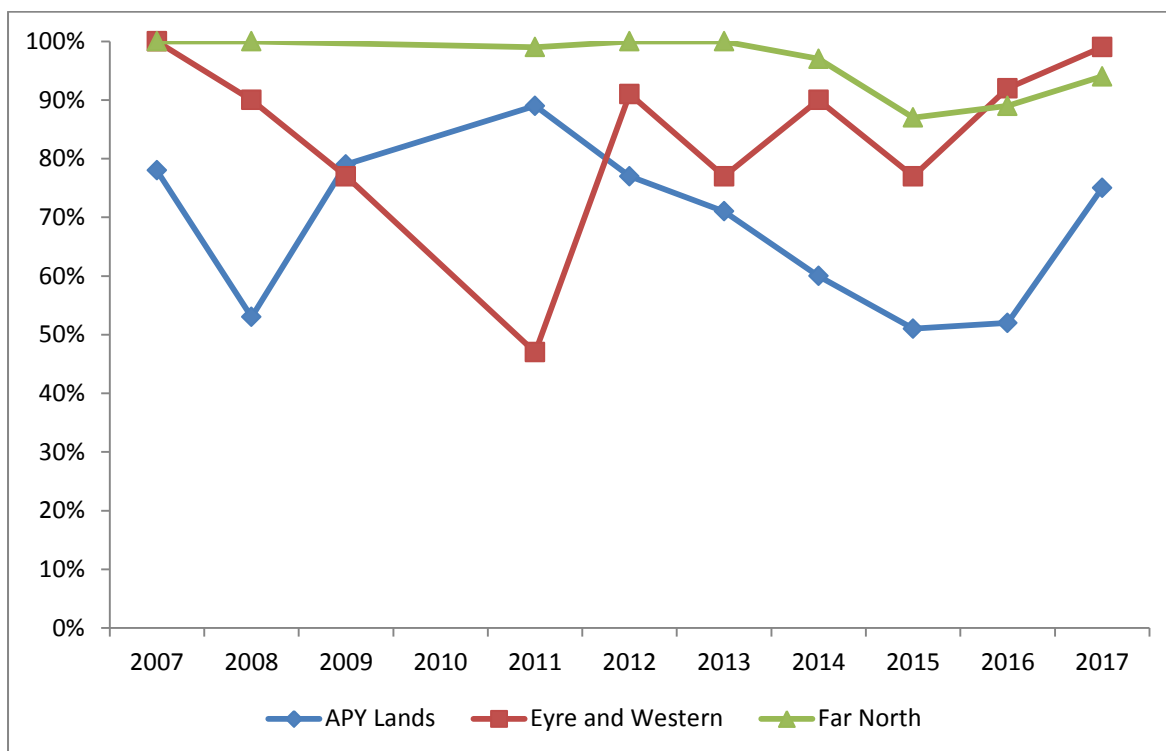


Figure 3.6a Observed prevalence of active trachoma among children aged 5-9 years in at-risk communities by region, South Australia 2007-2017

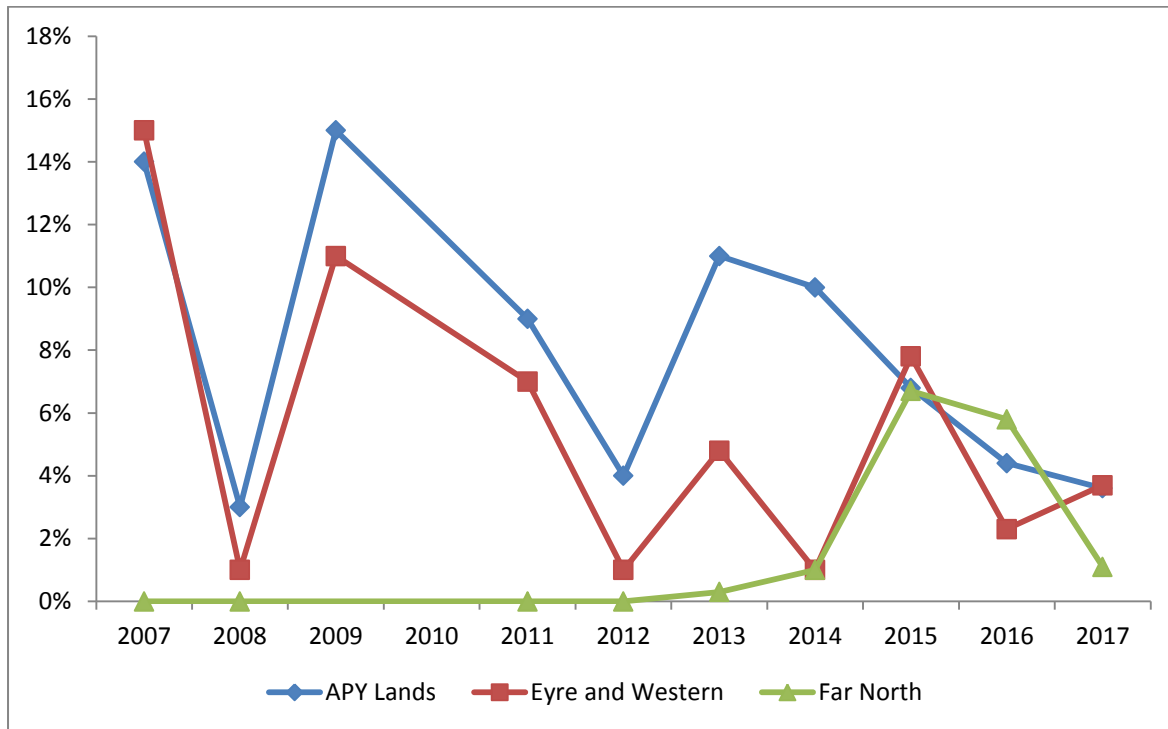
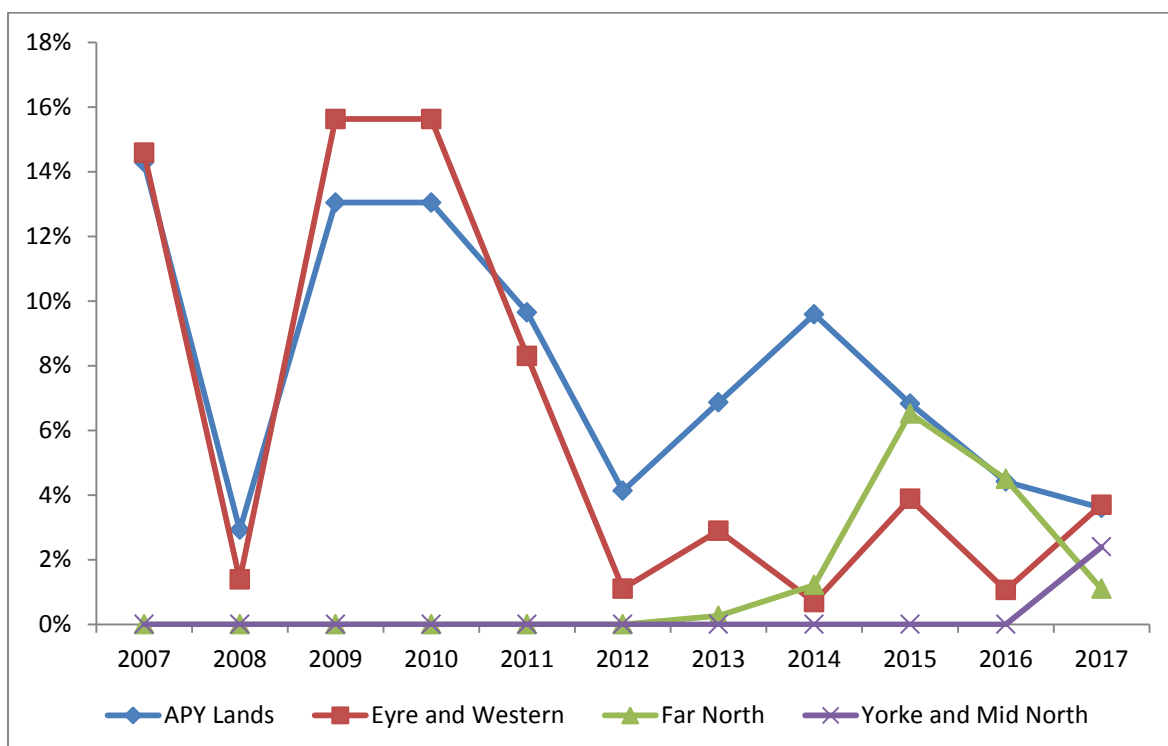
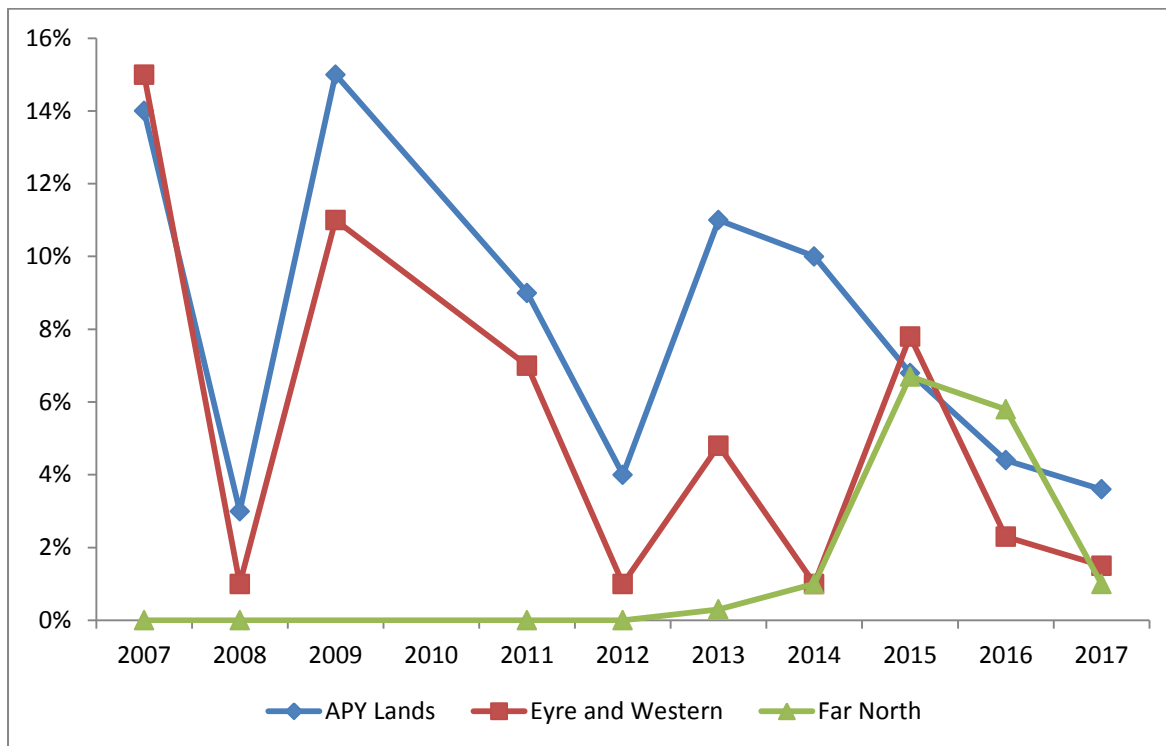


Figure 3.6b Estimated prevalence of active trachoma among children aged 5-9 years in all at-risk communities* by region, South Australia 2007-2017



* Most recent estimates carried forward in at-risk communities that did not screen in 2017

Figure 3.6c Overall prevalence of active trachoma among children aged 5-9 years in all communities* by region, South Australia 2007-2017



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

Figure 3.7 Number of at-risk communities according to level of trachoma prevalence in children aged 5-9 years by region, South Australia 2017

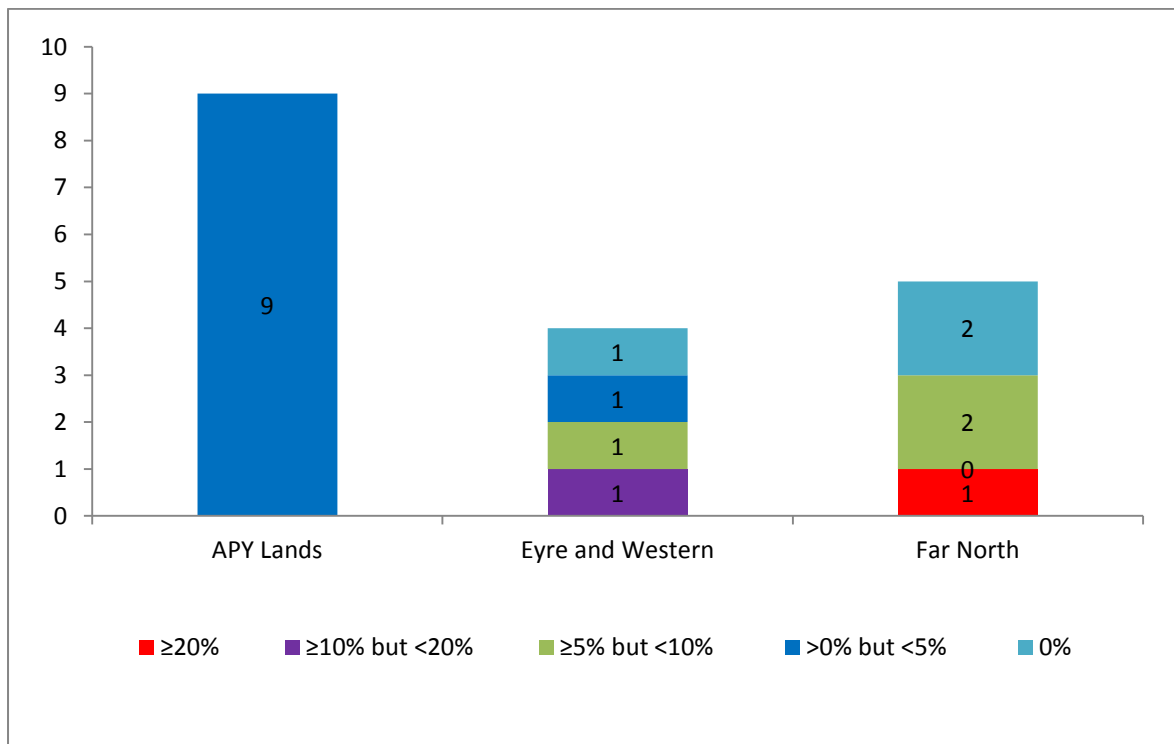


Figure 3.8 Number of doses of azithromycin administered for the treatment of trachoma by region, South Australia 2007-2017

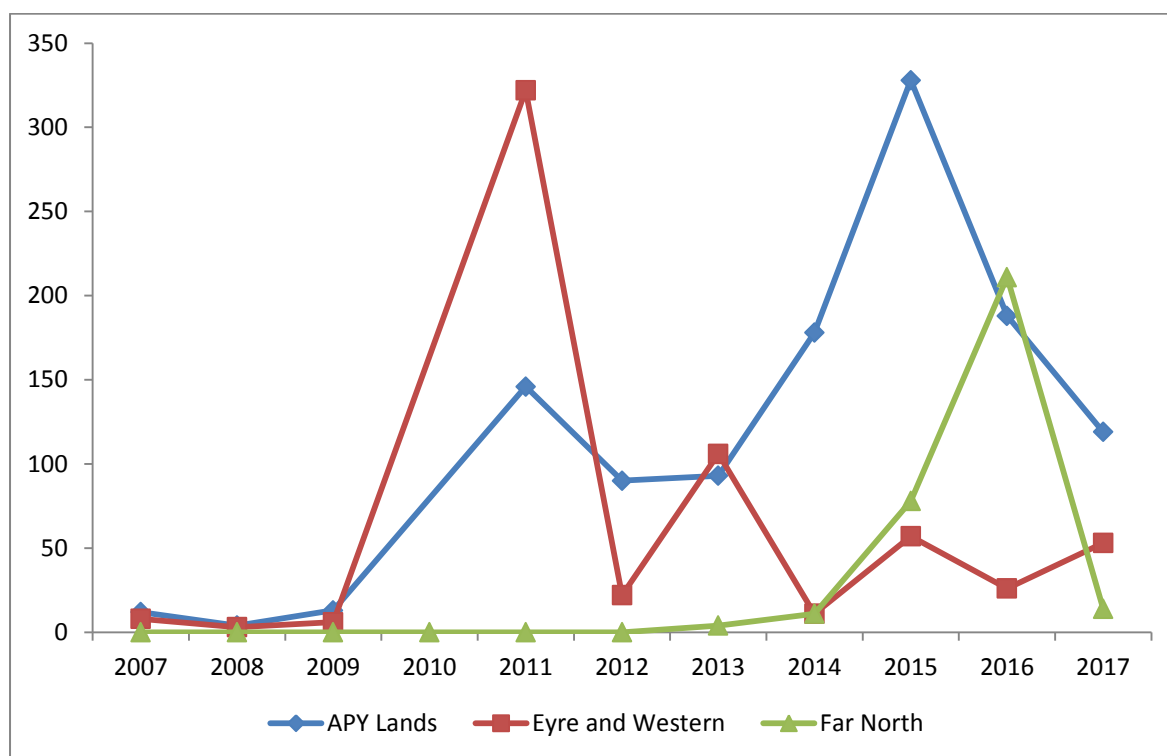


Table 3.1 Trachoma control delivery in at-risk* communities by region, South Australia 2017

Number of communities	APY Lands	Eyre and Western	Far North	Total
At risk* (A)	9	4	5	18
Requiring screening for trachoma (B)	9	4	5	18
Screened for trachoma (C)	9	4	5	18
Requiring treatment without screening † (D)	0	0	0	0
Received treatment without screening † (E)	0	0	0	0
Screened and/or treated for trachoma (F = C+E)	9	4	5	18
Requiring neither screening or treatment for trachoma (G=A-B-D)	0	0	0	0

* As defined by each jurisdiction

† As per guidelines

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, South Australia 2017

	APY Lands				Eyre and Western				Far North				Total			
Number of communities screened	9				4				5				18			
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	212	220	261	693	55	109	98	262	3	269	64	336	270	598	423	1291
Children with clean face	146	165	248	559	53	108	98	259	2	253	64	319	201	526	410	1137
<i>Clean face prevalence (%)</i>	69	75	95	81	96	99	100	99	67	94	100	95	74	88	97	88
Estimated number* of Aboriginal children in communities†	265	232	278	775	198	173	162	533	300	337	327	964	763	742	767	2272
Children screened for trachoma	212	220	261	693	55	109	98	262	2	269	63	334	269	598	422	1289
<i>Trachoma screening coverage (%)</i>	80	95	94	89	28	63	60	49	0.7	80	19	35	35	81	55	57
Children with active trachoma‡	2	8	7	17	2	4	1	7	0	3	0	3	4	15	8	27
<i>Observed prevalence of active trachoma‡ (%)</i>	0.9	3.6	2.7	2.5	3.6	3.7	1.0	2.7	0.0	1.1	0.0	0.9	1.5	2.5	1.9	2.1
<i>Estimated prevalence of active trachoma‡ (%)</i>	N/A	3.6	N/A	N/A	N/A	3.7	N/A	N/A	N/A	1.1	N/A	N/A	N/A	2.5	N/A	N/A
<i>Overall prevalence of active trachoma‡ (%)</i>	N/A	3.6	N/A	N/A	N/A	1.5	N/A	N/A	N/A	1.0	N/A	N/A	N/A	1.6	N/A	N/A

* ABS estimate

† Communities that were screened for trachoma in 2017

‡ Methods of calculating the different prevalence rates on page 15

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 2007-2017

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

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per Guidelines

§ Screened or receiving ongoing annual treatment as per Guidelines

Table 3.4 Treatment strategies by region, South Australia 2017

	APY Lands	Eyre and Western	Far North	Total
Required treatment for trachoma	9	3	3	15
Treated for trachoma*	9	3	3	15
Screened and treated	9	3	3	15
Received treatment only	0	0	0	0
Received 6-monthly treatment	0	0	0	0
Did not require treatment	0	1	2	3
Treated active trachoma and households	9	3	3	15
Community wide treatment	0	0	0	0
Not treated according to CDNA Guidelines*	0	0	0	0

* In 2017 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 2017

	APY Lands					Eyre and Western					Far North					Total				
	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for active trachoma	2	8	7	N/A	17	2	4	1	N/A	7	0	3	0	N/A	3	4	15	8	N/A	27
Received treatment for active trachoma	2	8	7	N/A	17	2	4	1	N/A	7	0	3	0	N/A	3	4	15	8	N/A	27
Received treatment for active trachoma (%)	100	100	100	N/A	100	100	100	100	N/A	100	N/A	100	N/A	N/A	100	100	100	100	N/A	100
Estimated community members* requiring treatment	8	16	8	79	111	6	5	7	28	46	2	4	1	5	12	16	25	16	112	169
Number of community members* who received treatment	6	15	7	74	102	6	5	7	28	46	1	4	1	5	11	13	24	15	107	159
Estimated community members who received treatment (%)	75	94	88	94	92	100	100	100	100	100	50	100	100	100	92	81	96	94	96	94
Total number of doses of azithromycin delivered	8	23	14	74	119	8	9	8	28	53	1	7	1	5	14	17	39	23	107	186
Estimated overall treatment coverage (%)	80	96	93	94	93	100	100	100	100	100	50	100	100	100	93	85	98	96	96	95

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

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.6 Trichiasis screening coverage, prevalence and treatment among Indigenous adults by region, South Australia 2017

	APY Lands		Eyre and Western		Far North		Total		
Number of communities screened for trichiasis	9		4		6		19		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in region*	1096	610	701	467	1157	1041	2954	2118	5072
Adults examined†	639	450	84	197	45	122	768	769	1537
With trichiasis	0	4	0	4	0	0	0	8	8
<i>With trichiasis (%)</i>	<i>0.0</i>	<i>0.9</i>	<i>0.0</i>	<i>2.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>1.0</i>	<i>0.5</i>
Offered ophthalmic consultation	0	4	0	4	0	0	0	8	8
Declined ophthalmic consultation	0	0	0	0	0	0	0	0	0
Surgery in past 12 months‡	0	2	0	0	0	0	0	2	2

* 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 3.7 Health promotion activities by region, South Australia 2017

	APY Lands	Eyre and Western	Far North	Total
Number of communities that reported health promotion activities	9	4	3	16
Total number of programs reported	6	10	17	33
Methods of health promotion				
One-on-one discussion	3	10	8	21
Presentation to group	2	2	1	5
Interactive group session	1	2	8	11
Social marketing	1	2	9	12
Print material/mass media	4	10	8	22
Sporting/community events	1	4	1	6
Other	5	3	1	9
Target audience				
Health professionals/staff	1	2	13	16
Children	3	7	15	25
Youth	3	8	15	26
Teachers/childcare/preschool staff	1	6	15	22
Caregivers/parents	2	8	14	24
Community members	1	9	14	24
Community educators/health promoters	0	2	12	14
Interagency members	1	4	6	11
Frequency of activities				
Once	0	1	1	2
Occasional *	4	6	8	18
Regular†	0	2	1	3
Ongoing/routine	2	1	7	10

* 2-4 times per year.

† 5-12 times per year.

Western Australia results

Trachoma program coverage

- In 2017 WA identified 41 communities in four regions as being at risk of trachoma (Table 4.1, Figure 4.2).
- Of these at-risk communities 85% (35/41) required screening or treatment for trachoma according to current guidelines, with one community requiring treatment but not screening (Table 4.1, Figure 4.3).
- All communities that required screening and/or treatment received the required service (Table 4.1).
- The remaining 6 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see Methodology section) (Table 4.1, Figure 4.3).

Screening coverage

- The proportion of children aged 5-9 years screened in the 34 communities was 91%, ranging from 88% in the Goldfields region to 100% in the Pilbara region (Table 4.2, Figure 4.4).

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 43%, ranging from 25% in the Goldfields region to 94% in the Midwest region (Table 4.2, Figure 4.5).
- See Facial cleanliness subheading within the Discussion and Interpretation section for discussion of results in WA.

Trachoma prevalence

- The observed prevalence of active trachoma in children aged 5-9 years in 34 communities that screened in 2017 was 8.8%. Prevalence ranged from 4.8% in the Midwest region to 13.1% in the Pilbara region (Table 4.2, Figure 4.6a).
- The estimated prevalence of active trachoma using most recent data carried forward in all 41 at-risk communities was 8.2%, ranging from 3.7% in the Kimberley region to 13.1% in the Pilbara region (Table 4.2, Figure 4.6b).
- The overall prevalence of active trachoma was 4.1% ranging from 1.6% in the Kimberley region to 11.0% in the Midwest region (Table 4.2, Figure 4.6c).
- No trachoma was reported in 39% (16/41) of the at-risk communities including communities (Table 4.3, Figure 4.7).
- Endemic levels of trachoma ($\geq 5\%$) were reported in 59% (24/41) of the at-risk communities (Table 4.3, Figure 4.7).

Treatment delivery and coverage

- Trachoma treatment strategies were required in 25 communities (Table 4.4).
- Treatment was delivered for active trachoma cases and household contacts in 4 communities, and community wide in 21 communities as per Guidelines (Table 4.4).
- Total treatment coverage for active trachoma cases and community members, and community-wide treatment in all regions requiring treatment was 90% with 2467 doses of azithromycin delivered (Table 4.5, Figure 4.8).

Trichiasis

- Screening for trichiasis was undertaken in 43 communities (Table 4.6).
- Overall, 2716 adults 15 years and over were reported to be screened (Table 4.6).
- The prevalence of trichiasis in adults aged 15 years and over was 0.1%, and 0.2% in adults aged 40 years with 3 cases of trichiasis reported (Table 4.6).

Health promotion

- Health promotion activities were reported to have occurred in 34 communities in the Goldfields, Kimberley, Midwest, and Pilbara regions (Table 4.7).
- A total of 156 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 and teachers, childcare and preschool staff (Table 4.7).

In 2017, 156 health promotion programs were conducted in 34 Aboriginal communities. Health promotion activities included one-on-one provision of health messages or talks to small groups. School education sessions were conducted using: No Germs on Me; Jabby and Friends; Clean Faces, Strong Eyes Story Kits; Glow Germ glitter-boxes; and interactive displays to demonstrate trachoma transmission and the importance of clean faces and hands in preventing trachoma infection. Some regions conducted community-wide activities promoting face washing, drawing people together over a barbeque lunch to discuss screening results and increase engagement with the program messages. One region supported health promotion programs by providing hygiene packs to school students. The Program partnered with Aboriginal Community Controlled Health Organisations (ACCHO's), Environmental Health organisations and schools to promote the SAFE strategy.

Squeaky Clean Kids (SCK), a health promotion program implemented in 63 Aboriginal communities in the four trachoma endemic regions in WA, works alongside the trachoma program and provides free soap (with soap holders) and health promotion messages to individual households and communities. SCK aligns and leverages existing resources to tackle social and environmental health issues, build individual and community capacity and reduce the incidence of trachoma and other diseases influenced by the same determinants. WA Country Health has partnered with the Aboriginal Health Council of WA (AHCWA), the Environmental Health Directorate and a not-for-profit organisation Soap Aid to support the program. The program was officially launched by the Minister for Health on 16 June 2017.

A major component of the SCK program is educating and increasing the community's awareness of trachoma. The program uses a core set of health promotion resources including:

- Milpa Goanna
- No Germs on Me
- Clean Face, Strong Eyes
- Trachoma is Everyone's Business
- My Dirt activity

In addition, two state-wide posters, Squeaky Clean Kids and Didya Wash Face and Hands, were developed in collaboration with the AHCWA.

Environmental health interventions are an integral component of the SCK program and an additional strategy that uses environmental health workers to conduct domestic bathroom audits and support SCK health promotion messaging has been added to the program. In 2017 training of environmental health workers has been conducted across the four regions. SCK is being formally evaluated by an external consultant.

Figures and Tables - Western Australia

Figure 4.1 Overall trachoma prevalence in children aged 5-9 years in all at-risk communities by region, Western Australia 2017



Figure 4.2 Number of at-risk communities at risk by region, Western Australia 2007-2017

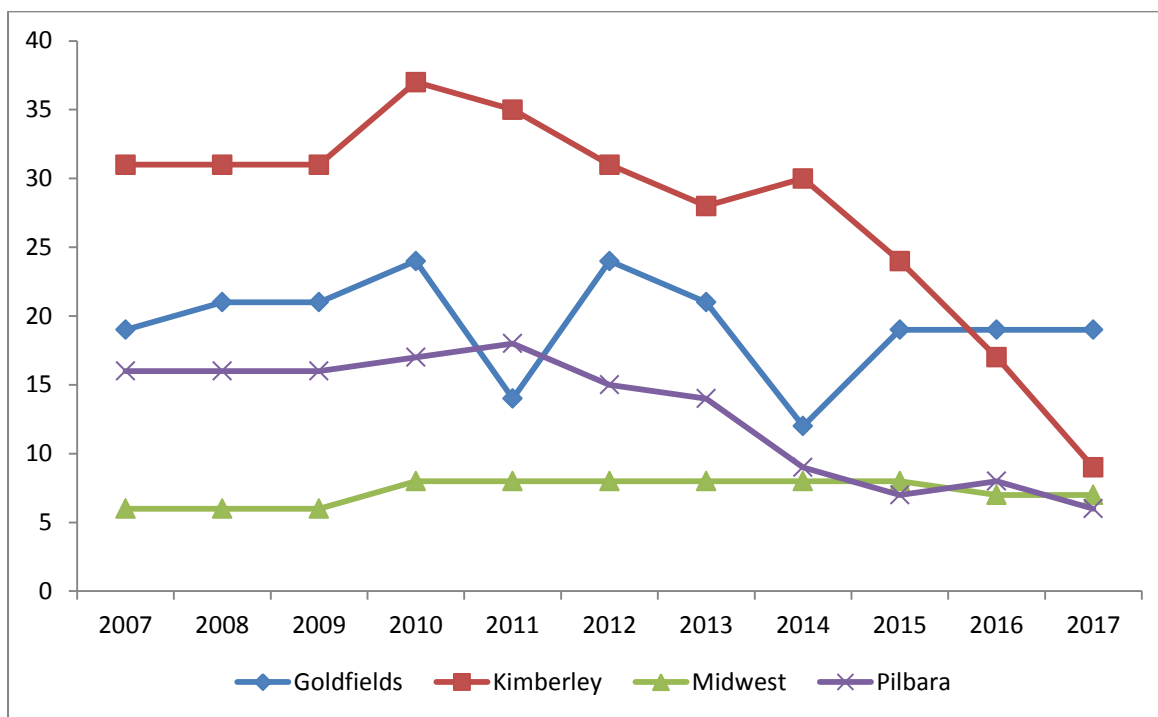


Figure 4.3 Number of at-risk communities according to trachoma control strategy implemented by region, Western Australia 2017

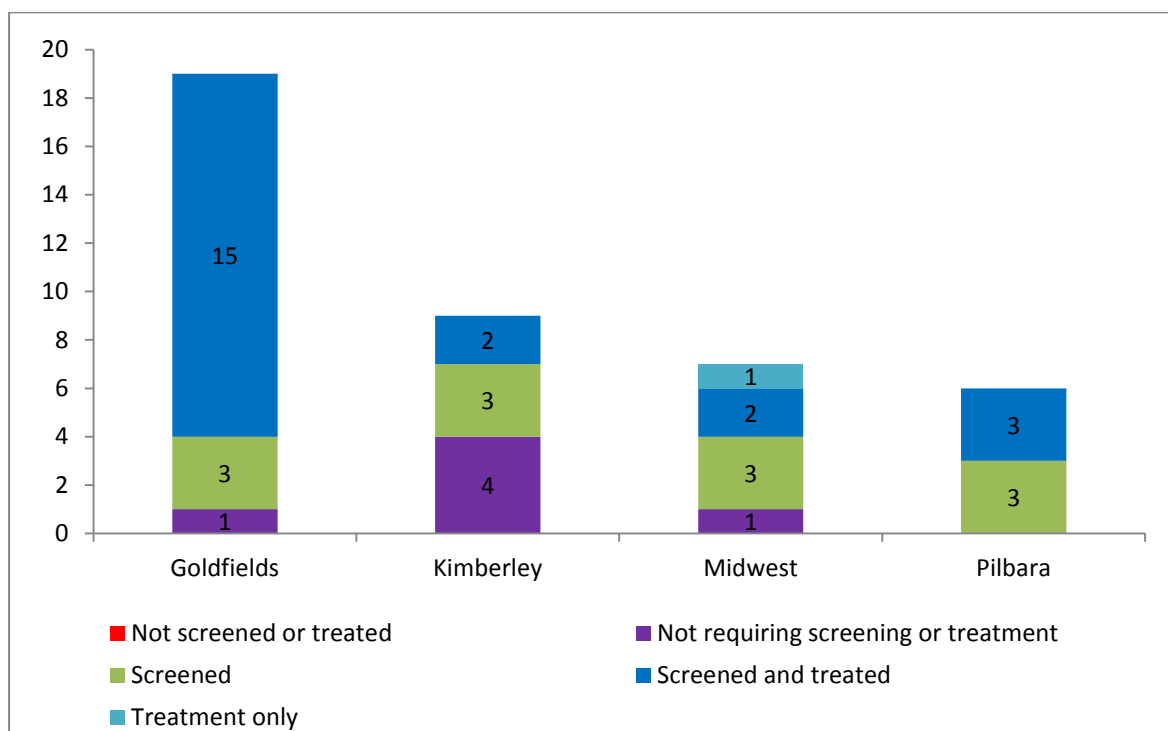


Figure 4.4 Population screening coverage in children aged 5-9 years in communities that required screening for trachoma by region, Western Australia 2017

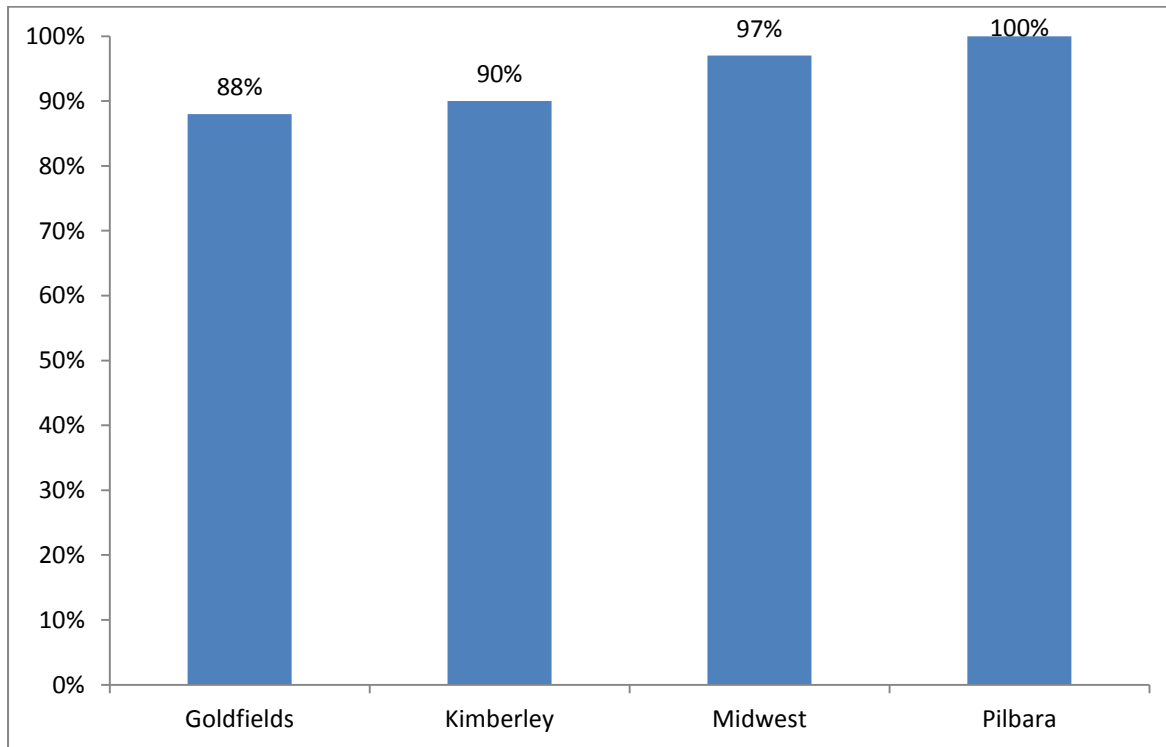


Figure 4.5 Proportion of screened children aged 5-9 years who had a clean face by region, Western Australia 2007-2017

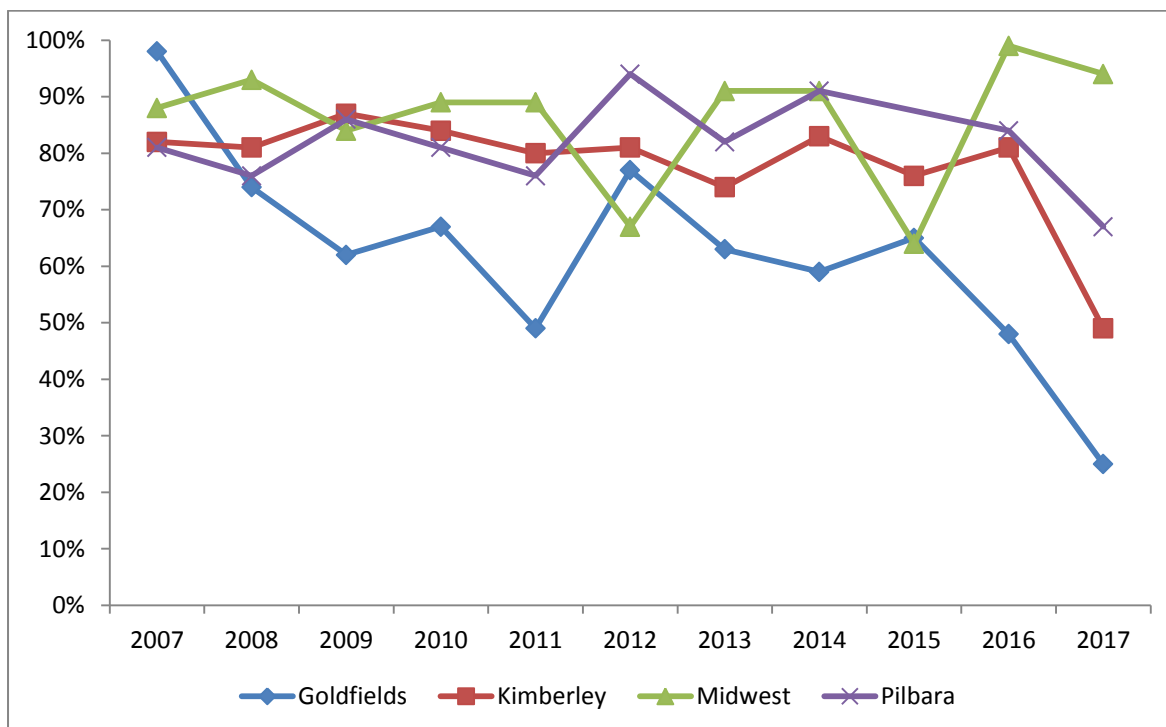


Figure 4.6a Observed prevalence of active trachoma among children aged 5-9 years in communities that were screened by region, Western Australia 2007-2017

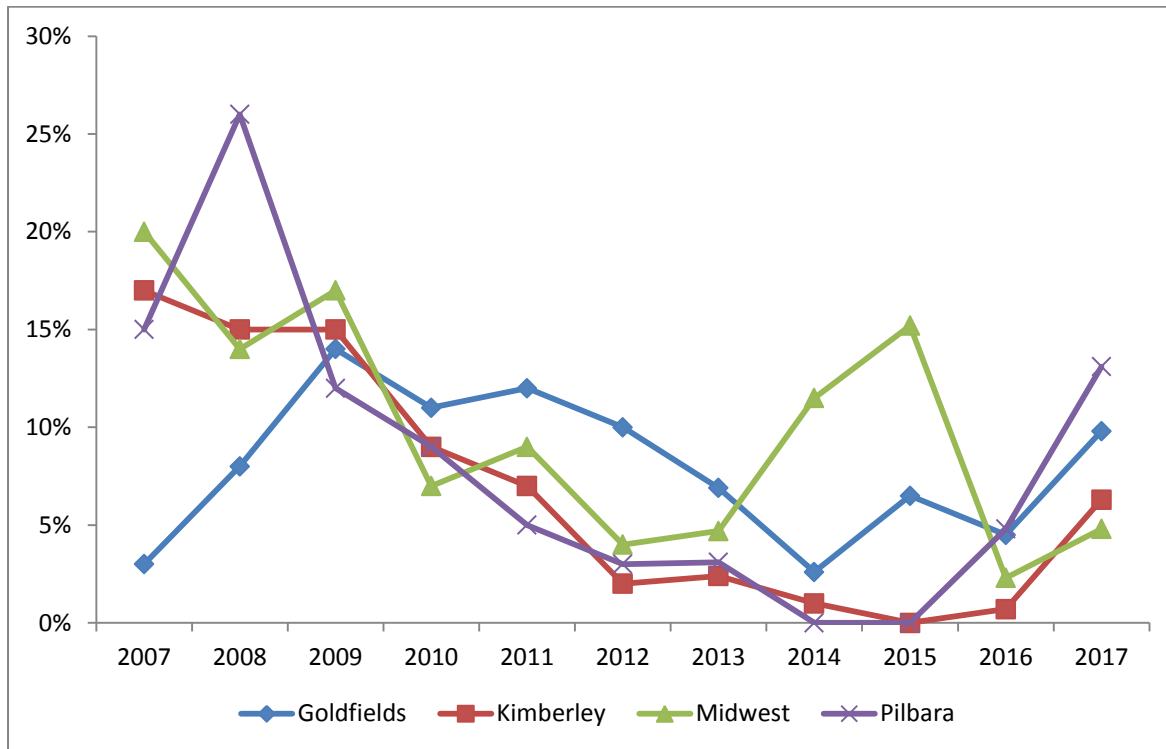
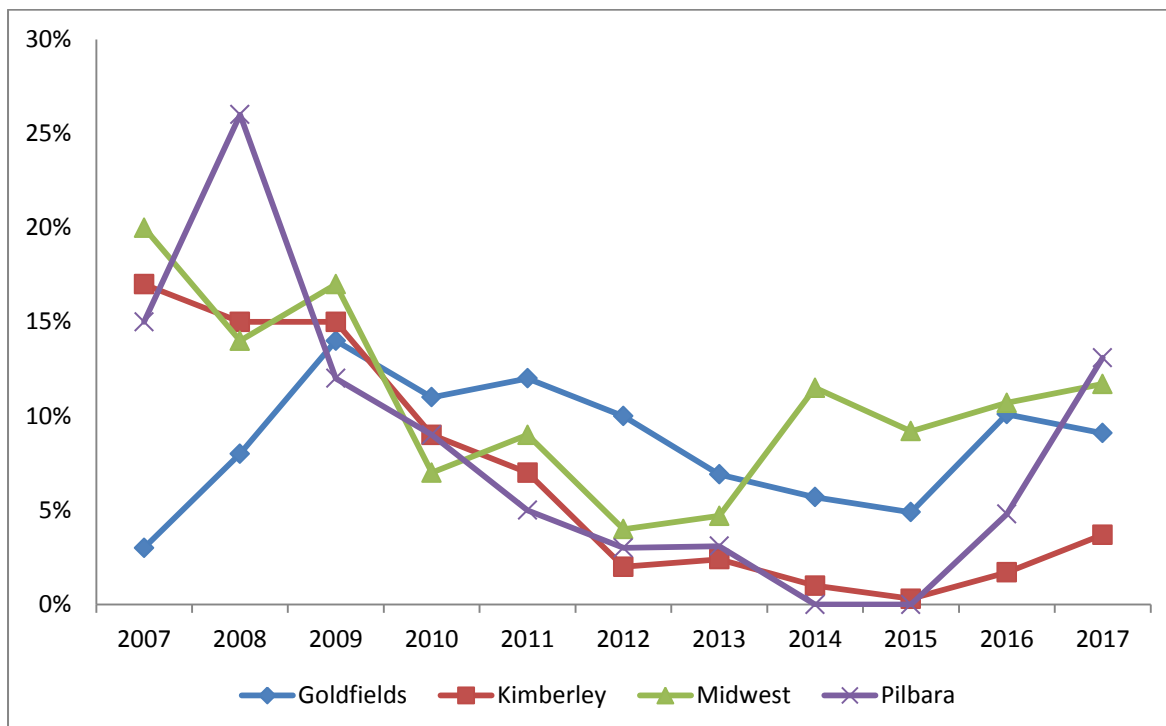
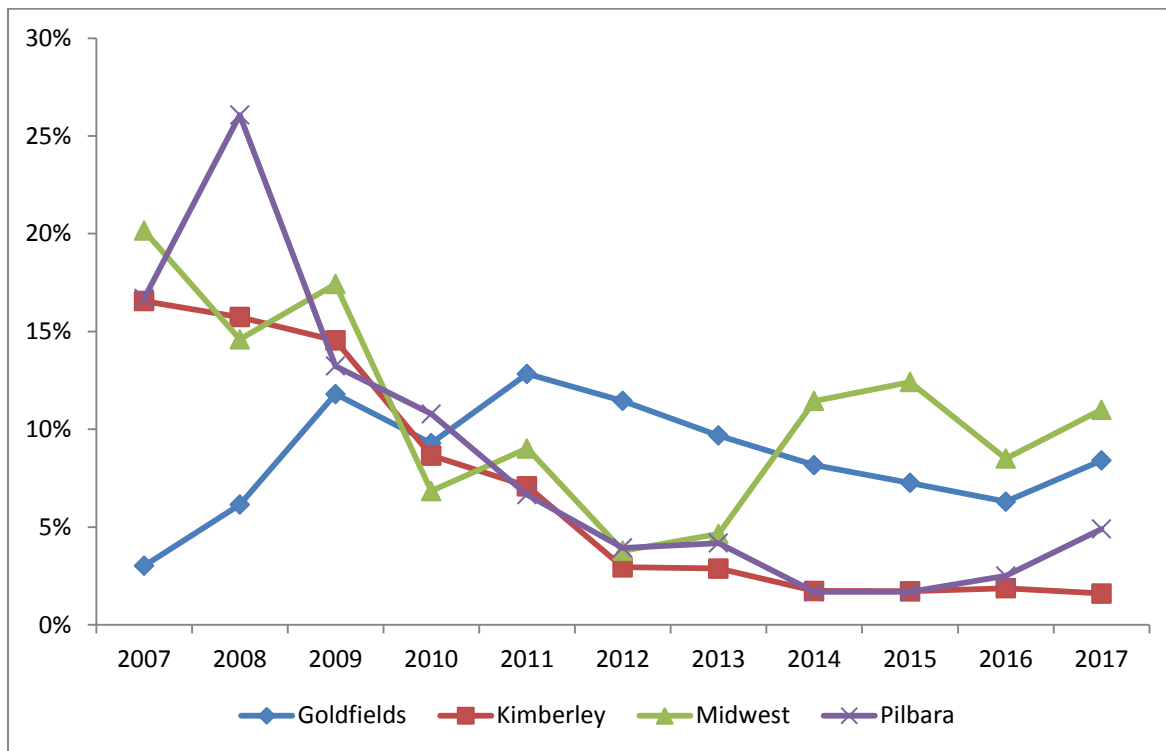


Figure 4.6b Estimated prevalence* of active trachoma among children aged 5-9 years in all at-risk communities by region, Western Australia 2007-2017



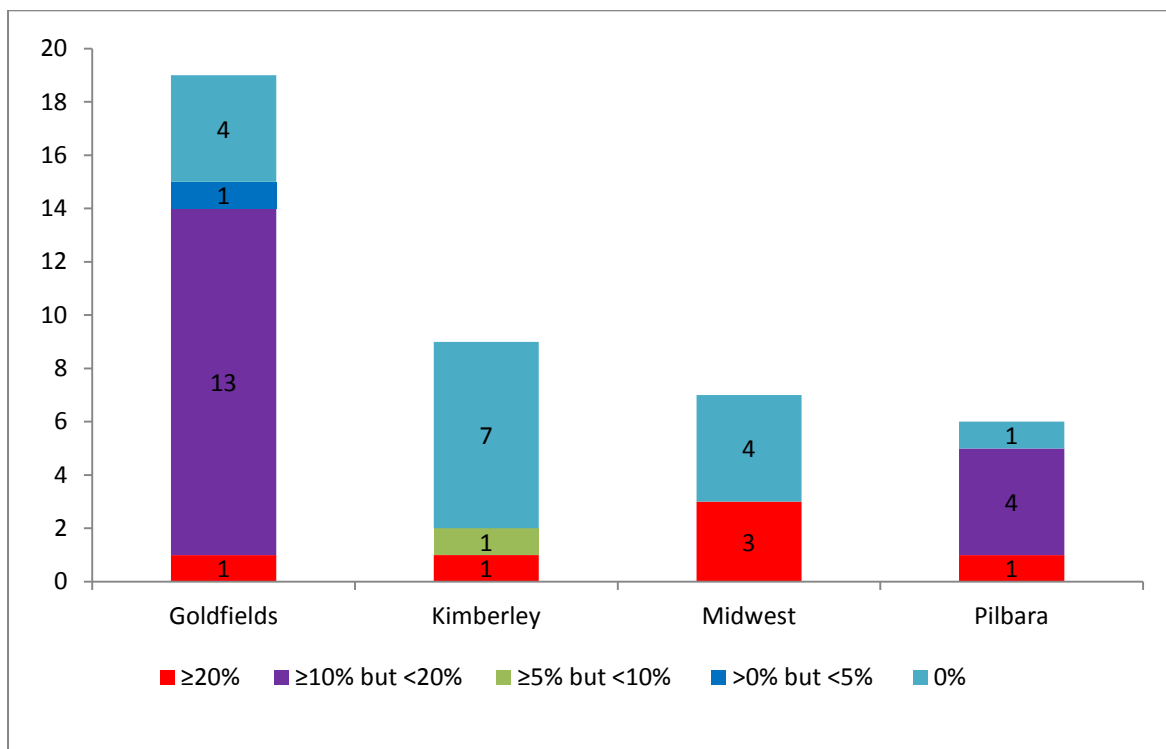
* Most recent estimates carried forward in at-risk communities that did not screen in 2016

Figure 4.6c Overall prevalence of active trachoma among children aged 5-9 years in all communities* by region, Western Australia 2007-2017



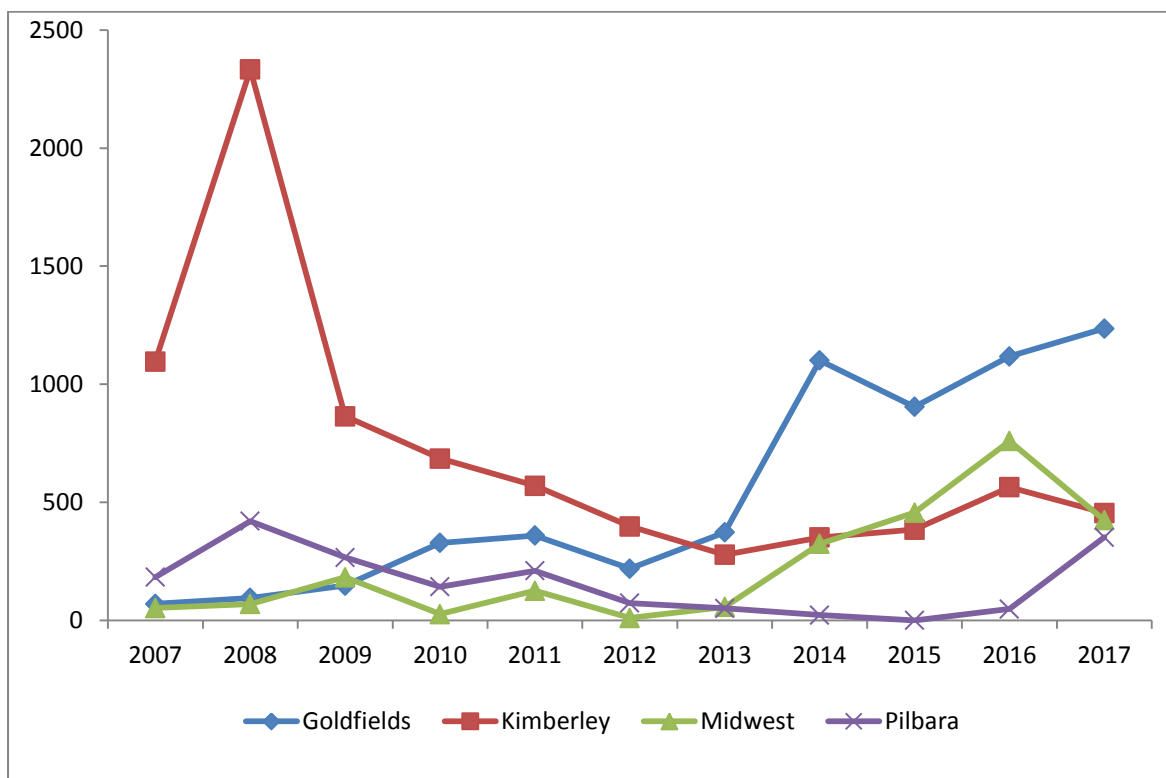
* Calculated carrying forward most recent data in all communities considered at risk of trachoma at some time since 2007

Figure 4.7 Number of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years by region, Western Australia 2017



* Including at-risk communities that did and did not screen in 2016

Figure 4.8 Number of doses of azithromycin administered for the treatment of trachoma by region, Western Australia 2007-2017



* 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 2017

Number of communities	Goldfields	Kimberley	Midwest	Pilbara	Total
At risk (A)	19	9	7	6	41
Requiring screening for trachoma (B)	18	5	5	6	34
Screened for trachoma (C)	18	5	5	6	34
Requiring treatment without screening * (D)	0	0	1	0	1
Received treatment without screening * (E)	0	0	1	0	1
Screened and/or treated for trachoma (F = C+E)	18	5	6	6	35
Requiring neither screening or treatment for trachoma (G=A-B-D)	1	4	1	0	6

*Communities treated without screening in 2017 as per Guidelines

Table 4.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence by region, Western Australia 2017

	Goldfields				Kimberley				Midwest				Pilbara				Total			
Number of communities screened	18				5				5				6				34			
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
Children examined for clean face	86	285	102	473	50	126		176	34	62	46	142	24	61	51	136	194	534	199	927
Children with clean face	15	71	50	136	24	62		86	30	58	46	134	12	41	39	92	81	232	135	448
<i>Clean face prevalence (%)</i>	17	25	49	29	48	49		49	88	94	100	94	50	67	76	68	42	43	68	48
Estimated number* of Aboriginal children in communities†	163	323	157	643	56	140		196	39	64	19	122	24	61	52	137	282	588	228	1098
Children screened for trachoma	87	285	102	474	50	126		176	12	62	46	120	24	61	51	136	173	534	199	906
<i>Trachoma screening coverage (%)</i>	53	88	65	74	89	90		90	31	97	242	98	100	100	98	99	61	91	87	83
Children with active trachoma‡	10	28	10	48	2	8		10	0	3	1	4	1	8	6	15	13	47	17	77
<i>Observed prevalence of active trachoma‡ (%)</i>	11.5	9.8	9.8	10.1	4.0	6.3		5.7	0.0	4.8	2.2	3.3	4.2	13.1	11.8	11.0	7.5	8.8	8.5	8.5
<i>Estimated prevalence of active trachoma‡ (%)</i>	N/A	9.1	N/A	N/A	N/A	3.7	N/A	N/A	N/A	11.7	N/A	N/A	N/A	13.1	N/A	N/A	N/A	8.2	N/A	N/A
<i>Overall prevalence of active trachoma‡ (%)</i>	N/A	8.4	N/A	N/A	N/A	1.6	N/A	N/A	N/A	11.0	N/A	N/A	N/A	4.9	N/A	N/A	N/A	4.1	N/A	N/A

* 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 in 2017

‡ Methods of calculating the different prevalence rates on page 15

§Data not provided for the 10-14 age group in the Kimberley region

Table 4.3 Number and proportion of at-risk communities* according to level of trachoma prevalence in children aged 5-9 years, Western Australia 2007-2017

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

* Based on current or most recent year

† As defined annually by each jurisdiction

‡ Or treated as required per Guidelines

§ Screened or receiving ongoing annual treatment as per Guidelines

Table 4.4 Treatment strategies by region, Western Australia 2017

	Goldfields	Kimberley	Midwest	Pilbara	Total
Required treatment for trachoma	15	2	3	5	25
Treated for trachoma	15	2	3	5	25
Screened and treated	15	2	2	5	24
Received treatment only	0	0	1	0	1
Received 6-monthly treatment	0	0	1	0	1
Did not require treatment	4	7	4	1	16
Treated active trachoma and households	4	0	0	0	4
Community-wide treatment	11	2	3	5	21
Not treated according to CDNA Guidelines	0	0	0	0	0

Table 4.5 Trachoma treatment coverage by region, Western Australia 2017

	Goldfields					Kimberley					Midwest					Pilbara					Total				
	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All	0-4	5-9	10-14	15+	All
Requiring treatment for active trachoma	10	28	10	N/A	48	2	8	0	N/A	10	0	3	1	N/A	4	1	8	6	N/A	15	13	47	17	N/A	77
Received treatment for active trachoma	10	28	10	N/A	48	2	8	0	N/A	10	0	3	1	N/A	4	1	8	6	N/A	15	13	47	17	N/A	77
<i>Received treatment for active trachoma (%)</i>	100	100	100	N/A	100	100	100	N/A	N/A	100	N/A	100	100	N/A	100	100	100	100	N/A	100	100	100	100	N/A	100
Estimated community members* requiring treatment	135	164	147	900	1346	36	78	76	315	505	57	102	54	259	472	22	55	46	224	347	250	399	323	1698	2670
Number of community members* who received treatment	124	149	133	782	1188	34	74	69	268	445	52	98	51	219	420	22	55	45	215	337	232	376	298	1484	2390
<i>Estimated community members who received treatment (%)</i>	92	91	90	87	88	94	95	91	85	88	91	96	94	85	89	100	100	98	96	97	93	94	92	87	90
Total number of doses of azithromycin delivered	134	177	143	782	1236	36	82	69	268	455	52	101	52	219	424	23	63	51	215	352	245	423	315	1484	2467
<i>Estimated overall treatment coverage (%)</i>	92	92	91	87	89	95	95	91	85	88	91	96	95	85	89	100	100	98	96	97	93	95	93	87	90

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

Table 4.6 Trichiasis screening coverage, prevalence and treatment among Indigenous adults by region, Western Australia 2017

	Goldfields		Kimberley		Midwest		Pilbara		Total		
Number of communities screened for trichiasis	13		20		6		4		43		
Age group (years)	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15-39	40+	15+
Estimated population in region*	2372	863	14611	18803	390	299	1523	802	18896	20767	39663
Adults examined†	77	194	738	1063	0	389	0	255	815	1901	2716
With trichiasis	0	1	0	2	0	0	0	0	0	3	3
<i>With trichiasis (%)</i>	<i>0.0</i>	<i>0.5</i>	<i>0.0</i>	<i>0.2</i>	<i>N/A</i>	<i>0.0</i>	<i>N/A</i>	<i>0.0</i>	<i>0.0</i>	<i>0.2</i>	<i>0.1</i>
Offered ophthalmic consultation	0	1	0	1	0	0	0	0	0	2	2
Declined ophthalmic consultation	0	0	0	0	0	0	0	0	0	0	0
Surgery in past 12 months‡§	0	0	0	0	0	0	0	0	0	0	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 all adults who may be examined in routine adult health checks, and may also include multiple screening

‡ Surgery cases may include cases identified in previous years

Table 4.7 Health promotion activities by region, Western Australia 2017

	Goldfields	Kimberley	Midwest	Pilbara	Total
Number of communities that reported health promotion activities	19	4	5	6	34
Total number of programs reported	16	80	25	35	156
Methods of health promotion					
One-on-one discussion	3	25	10	15	53
Presentation to group	3	37	18	8	66
Interactive group session	9	45	22	20	96
Social marketing	1	0	0	3	4
Print material/mass media	7	39	20	9	75
Sporting/community events	0	8	0	1	9
Other	1	1	6	9	17
Target audience					
Health professionals/staff	4	44	0	8	56
Children	11	11	24	30	76
Youth	1	20	0	18	39
Teachers/childcare/preschool staff	11	26	22	13	72
Caregivers/parents	1	21	0	17	39
Community members	2	32	0	19	53
Community educators/health promoters	2	44	0	4	50
Interagency members	3	26	0	4	33
Frequency of health promotion activities					
Once	9	12	1	0	22
Occasional *	7	23	24	30	84
Regular†	0	10	0	5	15
Ongoing/routine	0	35	0	0	35

* 2-4 times per year.

† 5-12 times per year.

Queensland Results

Trachoma program coverage

- In 2017 QLD undertook a mapping exercise in 3 communities in the Torres Strait Islands identified as being potentially at risk of trachoma (Table 5.1).

Screening coverage

- Population screening coverage of children aged 5-9 years was 92% (Table 5.1).

Clean face prevalence

- The overall prevalence of clean faces among children aged 5-9 years was 94% (Table 5.1).

Trachoma prevalence

- No trachoma was observed in the communities screened.

Treatment delivery and coverage

- No treatment was required.

Trachoma-related trichiasis

- Trichiasis data were not able to be extracted from QLD health information systems in 2017.
- The optometrist that services the Torres Strait Islands visits most communities twice a year performing comprehensive eye exams, including trichiasis evaluation.
- In his 11 years visiting the Torres Strait Islands, he reports that he has never seen a case of trachoma-related trichiasis in an individual whose childhood was spent in the Torres Strait Islands.
- The ophthalmologist who conducts clinics in the Torres Strait Islands reports that in the past 30 years he has performed no operations for trachoma-related trichiasis nor has he seen any corneal scarring or blindness caused by trachoma. This report includes individuals who spent their childhood in the Torres Strait Islands and elsewhere.

Health promotion

- Health promotion activities were delivered in the 3 communities screened with 9 programs reported.

Figures and Tables – Queensland

Table 5.1 Trachoma screening coverage, trachoma prevalence and clean face prevalence, Queensland 2017

	Queensland			
Number of communities screened	3 †			
Age group (years)	0-4	5-9	10-14	0-14
Children examined for clean face	36	159	55	250
Children with clean face	32	149	54	235
Clean face prevalence (%)	89	94	98	94
Estimated number* of Indigenous children in communities	78	172	66	316
Children screened for trachoma	36	159	55	250
Trachoma screening coverage (%)	46	92	83	79
Children with active trachoma	0	0	0	0
Observed trachoma prevalence (%)	0	0.0	0	0.0

* 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 one community in the Torres Strait QLD Health undertook screening on two separate occasions as the community was experiencing a conjunctivitis outbreak when the trachoma team first visited. The team returned to the community once the outbreak had resolved and results from the second episode of screening are included in the annual reporting data.

Table 5.2 Health promotion activities in Queensland 2017

	Torres Strait
Number of communities that reported health promotion activities	3
Total number of programs reported	9
Methods of health promotion	
One-on-one discussion	2
Presentation to group	3
Interactive group session	2
Social marketing	
Print material/mass media	1
Sporting/community events	2
Other	
Target audience	
Health professionals/staff	4
Children	1
Youth	
Teachers/childcare/preschool staff	1
Caregivers/parents	1
Community members	2
Community educators/health promoters	
Interagency members	1
Frequency of health promotion activities	
Once	
Occasional *	5
Regular†	2
Ongoing/routine	2

* 2-4 times per year.

† 5-12 times per year.

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