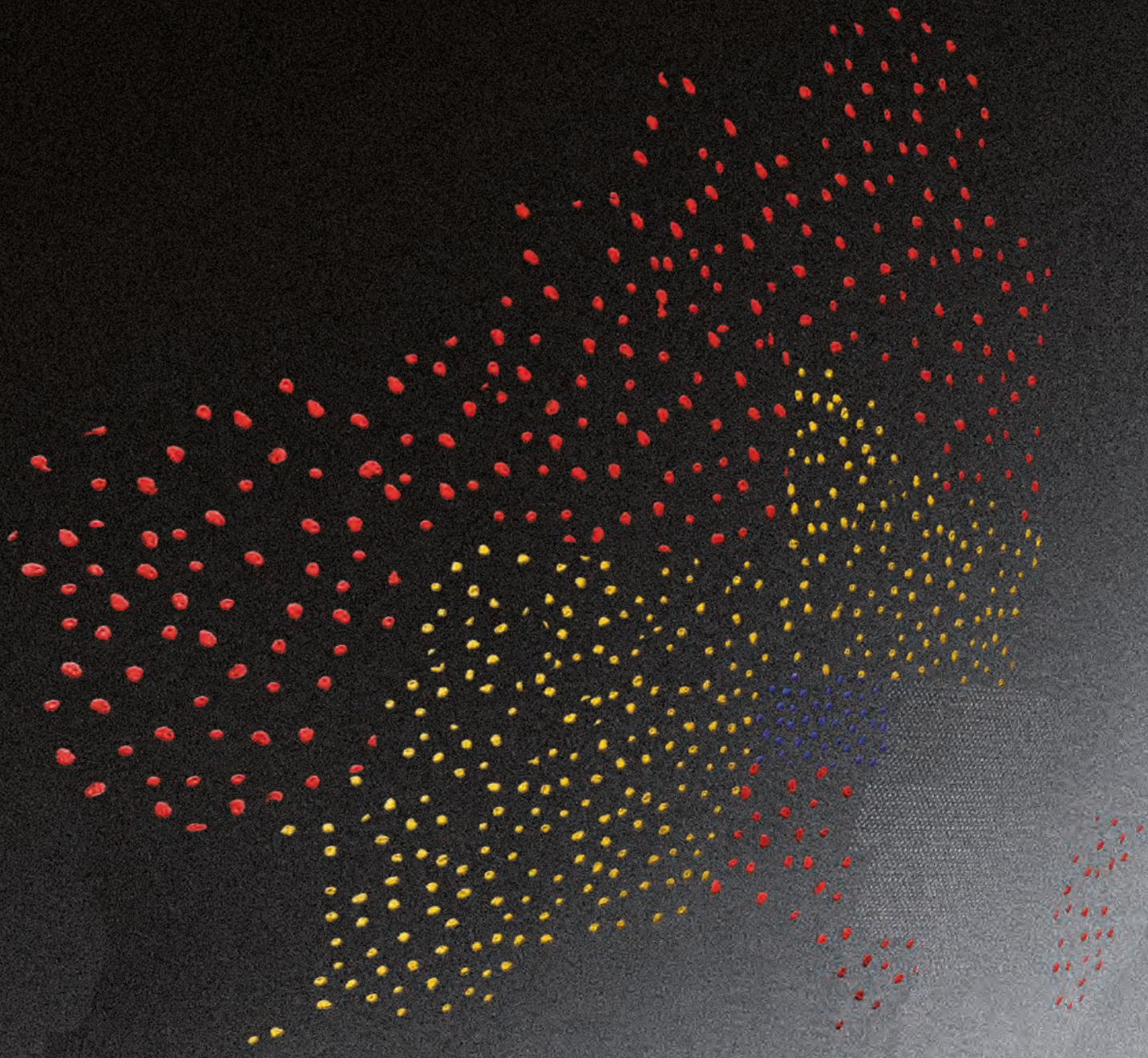
Australian Trachoma Surveillance Report

2013



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Australian Trachoma Surveillance Report 2013

The Kirby Institute, UNSW Australia

June 2014

Prepared by the National Trachoma Surveillance and Reporting Unit,
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Jurisdictional contributors to trachoma data collection

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- Aboriginal Medical Services Alliance of the Northern Territory
- Centre for Disease Control, Northern Territory Department of Health
- Healthy School-Age Kids Program: Top End and Central Australia

South Australia

- Aboriginal Community Controlled Health Services
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- Country Health SA Local Health Network, South Australia Health

Western Australia

- Aboriginal Community Controlled Health Services
- Communicable Disease Control Directorate, Department of Health, Western Australia
- Goldfields Population Health Unit
- Kimberley Population Health Unit
- Midwest Population Health Unit
- Pilbara Population Health Unit

New South Wales

- Population Health Unit, Western NSW Local Health District

Technical terms and definitions

Definitions are based on the 2006 CDNA *Guidelines for the public health management of trachoma in Australia*.[1] Three of the four jurisdictions contributing to the data collection implemented their trachoma control programs in 2013 according to these guidelines. The fourth jurisdiction implemented its program according to the 2014 update of the guidelines.[2]

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

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

Clean face:
Absence of dirt, dust and crusting (nasal and ocular discharge) on cheeks and forehead.

Community-screening coverage:
The number of communities screened for trachoma as a proportion of communities designated by jurisdictions to be at risk of trachoma.

Community-wide treatment:
In the NT whole-of-community treatment using the 2014 guidelines is the antibiotic treatment of all people in the community who weigh > 3 kg living in houses with children under15 years of age. In WA and SA whole-of-community treatment guided by the 2006 guidelines is defined as active cases, household contacts and all children in the community aged 6 months to 14 years.

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:
Defined as the proportion of 5-9 year old Aboriginal and Torres Strait Islander children 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:
The proportion of Aboriginal and Torres Strait Islander people in a community who weigh > 3kg and live in a house with 1 or more children aged below 15 years and who were treated for trachoma during each episode of community-wide treatment.

Abbreviations

ABS	Australian Bureau of Statistics
ACCHS	Aboriginal Community Controlled Health Service
AHCSA	Aboriginal Health Council of South Australia
CDC	Centre for Disease Control, NT Department of Health
CDNA	Communicable Diseases Network Australia
CHSA	Country Health South Australia
DoH	Commonwealth Department of Health
EH&CDSSP	Eye Health and Chronic Disease Specialist Support Program
HSAK	Healthy School-Age Kids Program
MSOAP	Medical Specialist Outreach Assistance Program
NACCHO	National Aboriginal Community Controlled Health Organisation
NSW	New South Wales
NT	Northern Territory
N/R	Not Reported
NTSRU	National Trachoma Surveillance and Reporting Unit
SA	South Australia
SAFE	Surgery, antibiotics, facial cleanliness and environment
TSCRG	Trachoma Surveillance and Control Reference Group
TF	Trachomatous inflammation – follicular
TI	Trachomatous inflammation – intense
TT	Trachomatous trichiasis
WA	Western Australia
WHO	World Health Organization

Executive summary

Trachoma screening and management data for 2013 were provided to the National Trachoma Surveillance and Reporting Unit by the Northern Territory (NT), South Australia (SA), Western Australia (WA) and New South Wales (NSW). Data were analysed by region in the NT (5), SA (4), WA (4) and NSW (1). Jurisdictional authorities designated 173 remote Aboriginal communities as being at risk of endemic trachoma in 2013. NSW undertook a mapping exercise in 2013 screening 10 communities and data were aggregated for analysis. In 2013 WA, SA and NSW were guided by the 2006 Communicable Diseases Network Australia (CDNA) *Guidelines for the public health management of trachoma in Australia,*[1] and the NT was guided by the recently revised 2014 CDNA *National guidelines for the public health management of trachoma in Australia*.[2]

Trachoma program coverage

- Jurisdictions identified 183 communities as being at risk of trachoma, or potentially at risk for the purposes of a mapping exercise in NSW (Table 1.1).
- The number of communities designated as being at risk has plateaued in the NT, marginally decreased in WA and substantially decreased in SA since 2012 (Figure 1.2).
- Of 183 at-risk/potentially at-risk communities, 145 communities were determined to require screening for trachoma, a further 18 were identified to require treatment without screening (see methodology), leading to a total of 163 communities that were determined to require screening, treatment or both screening and treatment for trachoma (Table 1.1).
- Of these 163 communities, 144 (88%) received screening, treatment or both screening and treatment. (Table 1.1).
- The remaining 20 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see methodology section).
- A total of 15 communities deemed not at risk were screened for trachoma in 2013 (Table 1.1).

Screening coverage

- Jurisdictions identified 145 communities in the four states and territory requiring screening for trachoma in 2013 and of these 127 (88%) were screened for trachoma in 2013 (Table 1.1, Table 1.2).
- Within these communities 4,213 (84%) of an estimated 5,017 resident children aged 5-9 years were screened (Table 1.2).
- Screening coverage in children aged 5-9 years in at-risk communities was 81% for the NT, 90% for SA and WA and 72% for NSW (Table 1.2, Figure 1.4).

Clean face prevalence

- A total of 4,244 children aged 5-9 years in 127 at-risk communities were assessed for clean faces during 2013 (Table 1.2).
- The overall prevalence of clean faces in children aged 5-9 years was 81%, with 78% in the NT, 87% in SA, 74% in WA and 96% in NSW (Table 1.2, Figure 1.5).

Trachoma prevalence

- The overall prevalence of active trachoma among children aged 5-9 years in screened communities (using projected data, see methodology) was 4%, with 5% in the NT, 3.8% in WA, 3.5% in SA, and 0.5% in NSW (Table 1.2).
- The observed trachoma prevalence in communities that screened in 2013 in the NT was 2%.
- Since 2009, the prevalence of trachoma in 5-9-year-old children has decreased significantly in all studied jurisdictions, with the projected national trachoma prevalence dropping from 14% in 2009 to 4% in 2013. From 2012 to 2013 the prevalence of trachoma in 5-9-year-old children has remained steady in WA, and increased in the NT and SA (Figure 1.6).
- No trachoma was reported or detected in children aged between 5-9 years in 91 (50%) communities in 2013, including communities that screened for trachoma in 5-9-year-old children and communities in the NT that did not screen in accordance with guidelines (Figure 1.7).
- Endemic levels of trachoma (> 5%) were reported in 55 (33%) communities in 2013 including communities that screened for trachoma in 5-9-year-old children and communities in the NT that did not screen in accordance with guidelines (Figure 1.7).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 73 communities, 99% of those requiring treatment (Table 1.3).
- Three communities, all in the NT did not treat according to CDNA guidelines (Table 1.3)
- Of all cases detected that required treatment, 99% received treatment (Table 1.4).
- Treatment was delivered to active cases and households in 45 communities, and to the whole of community in 29 communities according to the guidelines (Table 1.3).
- Treatment coverage in all jurisdictions was 81%, with 79% in the NT, 99% in SA, 94% in WA and 100% in NSW (Table 1.4).
- A total of 10 219 doses of azithromycin was delivered (Table 1.4).

Trichiasis

- Screening for trichiasis was undertaken in 143 communities (Table 1.5).
- Overall 5,635 adults aged over 15 years were screened.
- The prevalence of trichiasis in adults aged 15 years and over was 1% (55/5,635), and 1% (49/3,856) in adults aged 40 years and over.
- Surgery for trichiasis was reported to be undertaken for 31 adults in 2013 (Table 1.5).

Health promotion activities

- Health promotion activities were reported to have occurred in 128 communities, including at-risk and not at-risk communities.

Background

Trachoma is one of the major causes of preventable blindness globally.[3] It is an eye infection caused by the bacteria *Chlamydia trachomatis* serotypes A, B, Ba and C. The infection can be transmitted through close facial contact, hand-to-eye contact, via fomites (towels, clothing and bedding) or by flies. Trachoma generally occurs in dry, dusty environments and is linked to poor living conditions. Overcrowding of households, limited water supply for bathing and general hygiene, poor waste disposal systems and high numbers of flies have all been associated with trachoma. Children generally have the highest prevalence of trachoma and are believed to be the main reservoirs of infection, because the infection in children has a longer duration than in adults.[4]

Infection with the relevant *C. trachomatis* serotype causes inflammation of the conjunctiva. Diagnosis of trachoma is by visual inspection, and the detection of follicles (white spots) and papillae (red spots) on the inner upper eyelid. Repeated infections with *C. trachomatis*, especially during childhood, may lead to scarring with contraction and distortion of the eyelid, which may in turn cause the eyelashes to rub against the cornea; this condition is known as trichiasis which leads to gradual vision loss and blindness.[1,5,6] Scarring of the cornea due to trichiasis is irreversible. However, if early signs of in-turned eyelashes are found, then surgery is usually effective in preventing further damage to the cornea.

The Alliance for the Global Elimination of Blinding Trachoma by 2020 (GET 2020) initiative, supported by the World Health Organization (WHO), advocates the implementation of the SAFE strategy, with its key components of Surgery (to correct trichiasis), Antibiotic treatment, Facial cleanliness and Environmental improvements. This strategy is ideally implemented through a primary care model within a community framework, ensuring consistency and continuity in screening, control measures, data collection and reporting, as well as the building of community capacity.[7,8,9]

Trachoma is usually treated by a single dose of the antibiotic azithromycin repeated on an annual basis according to trachoma prevalence. Best public health practice involves treatment of all members of the household in which a case resides, whether or not they have evidence of trachoma. In hyperendemic communities, it is recommended that treatment is also extended to all children over 3 kg in weight up to 14 years of age, or to all members of the community over 3 kg in weight.[4,10]

Trachoma control in Australia

Australia is the only high-income country where trachoma is endemic. It occurs primarily in remote and very remote Aboriginal communities in the Northern Territory (NT), South Australia (SA) and Western Australia (WA). In 2008, cases were also found in New South Wales (NSW) and Queensland (Qld), states where trachoma was believed to have been eliminated. However, cases of trichiasis are believed to be present in all jurisdictions and sub-jurisdictional regions of Australia.[4,11] In 2009, the Australian Government invested in the *Closing the Gap - Improving Eye and Ear Health Services for Indigenous Australians* measure which included committing $16 million over a 4-year period towards eliminating trachoma in Australia. In 2013, the Australian Government committed a further $16.5 million to continue, improve and expand trachoma control initiatives in jurisdictions with known endemic levels of trachoma. Funding was also provided to jurisdictions with a previous history of trachoma for screening activities to ascertain if control programs were also required. These funds were also committed to establishing a strong framework for monitoring and evaluation.[112]

The surveillance and management of trachoma in 2013 in all jurisdictions except the NT was guided by the Communicable Disease Network Australia (CDNA) *2006 Guidelines for the public health management of trachoma in Australia*.[1] These guidelines underwent review in 2013 and were revised in 2014.[2] One of the main changes to the guidelines was the option of not screening all endemic communities every year. The NT trachoma control program in 2013 was guided by the revised *National guidelines for the public health management of trachoma in Australia*.[2] The guidelines were developed in the context of the WHO SAFE strategy and make recommendations for improving data collection, collation and reporting systems in relation to trachoma control in Australia.

The National Trachoma Surveillance and Reporting Unit

The National Trachoma Surveillance and Reporting Unit (NTSRU) is responsible for data collation, analysis and reporting related to the ongoing evaluation of trachoma control strategies in Australia. It operates under contract with the Australian Government Department of Health. The primary focus of reporting by the NTSRU from 2006 - 2011 was on trachoma levels and trends in the three jurisdictions (NT, SA and WA) funded by the Australian Government to undertake trachoma control activities.

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

In 2013, the NSW Ministry of Health was funded to undertake a baseline screening of selected remote communities to establish whether trachoma was a public health concern in NSW. These data are included in the 2013 report along with WA, NT and SA data. From the end of 2010, the NTSRU has been managed by The Kirby Institute, UNSW Australia.[13] For previous reports from 2006 to 2008, the NTSRU was managed by The Centre for Eye Research Australia [14,15,16] and the 2009 report was managed by the Centre for Molecular, Environmental, Genetic and Analytic Epidemiology, the University of Melbourne.[17]

Methodology

Each jurisdiction undertook screening and treatment for trachoma according to its respective protocols, and in the context of the national 2006 CDNA *Guidelines for the public health management of trachoma in Australia*, or the 2014 CDNA *National guidelines for the public health management of trachoma in Australia* which recommend specific treatment strategies depending on the prevalence of trachoma detected through screening.[1,2]

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

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

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

While data may be collected for Aboriginal children aged 0-14 years, the focus age group in all regions is the 5-9-year age group.

Community-wide treatment differs between regions. In the NT whole-of-community treatment according to the 2014 guidelines indicates the treatment of all people in the community over 3 kg in weight living in houses with children less than 15 years of age. In WA and SA whole-of-community treatment using the 2006 guidelines refers to active cases, household contacts and all children in the community aged 6 months to 14 years.

Northern Territory

In 2013, the NT adopted the treatment and screening schedule outlined in the revised CDNA national trachoma guidelines (then in draft form). The adoption of the new guidelines allowed resources to be directed towards community-wide treatment in high-prevalence communities, and ensured resources were not consumed by annual screening in areas where the prevalence was already well established. Trachoma screening and management in the NT was undertaken through collaboration between the Department of Health (Centre for Disease Control [CDC] and Health Development) and Aboriginal Community Controlled Health Services (ACCHS). Trachoma screening was incorporated into the Healthy School-Age Kids program annual check and conducted by either local primary health-care services or community-controlled services, with support from the CDC trachoma team. The NT uses school enrolment lists, electronic health records and local knowledge to best determine the 5-9-year-old children present in the community at the time of screening. Following screening, treatment was generally undertaken by primary health-care services with support from the CDC trachoma team, particularly where community-wide treatments were required.

In 2013, community screening for trichiasis was undertaken primarily by clinic staff, ACCHS, or by optometrists or ophthalmologists from the Regional Eye Health Service based in Alice Springs.

South Australia

In 2013, Country Health SA was responsible for managing the SA trachoma screening and treatment program. Country Health SA contracted with the Aboriginal Community Controlled Health Services, the Aboriginal Health Council of South Australia, Nganampa Health Service and Local Health Service providers to ensure coverage of screening services in all at-risk rural and remote areas. SA uses the Australian Bureau of Statistics census population estimates as the screening denominator in screened communities. Additional trichiasis screening activities were undertaken by the Eye Health

and Chronic Disease Specialist Support Program (EH&CDSSP), coordinated by the Aboriginal Health Council of South Australia and supported by the Medical Specialist Outreach Assistance Program (MSOAP). This program provides regular visits to SA remote Aboriginal communities by optometrists and ophthalmologists. Trichiasis screening was undertaken opportunistically for adults by the contracted trachoma screening service providers, the EH&CDSSP team and also routinely as part of the Adult Annual Health Checks.

Western Australia

Trachoma screening and management in WA is the responsibility of Population Health Units in the Kimberley, Goldfields, Pilbara and Midwest health regions. In collaboration with the local primary health-care providers, the Population Health Units screened communities in each region within a 2-week period, in August and September. People identified with active trachoma were treated at the time of screening. Each region determines the screening denominator in a different manner: in the Goldfields the denominator is based on the school register, without adjusting for absent children, plus other children present in the community at the time of screening; in Pilbara the denominator number is based on children present in the community at the time of screening; in the Midwest the denominator is based on the school register with removal of children from the school list who were known to be absent on the day of the screening, plus any other children present in the community at the time of screening; and in the Kimberley the denominator is based on the school register, updated at the time of screening.

Trichiasis screening was undertaken in conjunction with adult influenza vaccinations. Screening of the target population also occurs with the Visiting Optometrist Scheme (VOS) in the Kimberley region. The Goldfields region also undertook additional trichiasis screening during the trachoma screening period.

In 2011, WA Health amalgamated several previously distinct communities into one single community for the purpose of trachoma surveillance because of the small populations of each community and kinship links resulting in frequent mobility between these communities. This definition alters trends presented in reports from 2010 – 2013.

New South Wales

In 2013, NSW Health piloted a school-based trachoma screening project in ten potentially at-risk communities in north western NSW. The project aimed to determine if there was any evidence of trachoma in Aboriginal children living in rural and remote communities in NSW. Screening and treatment were conducted by the Population Health Unit in Bathurst with support from NSW Ministry of Health. No trichiasis screening was undertaken in NSW. In NSW, the denominator used to calculate screening coverage is based on the number of Aboriginal children aged 5-9 years enrolled in the school. The denominator was not adjusted if children were absent on the day of screening.

Data analysis

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

In 2013, population data for trachoma screening coverage were provided by each jurisdiction. The population for communities in years 2007 to 2011 was derived from projected data from the 2006 Australian census using Australian Bureau of Statistics (ABS) standard estimates of population increase (1.6%, 1.8% and 2.1% in the NT, WA and SA, respectively). Population estimates based on ABS census data do not account for population movements within communities, regions and jurisdictions. Prevalence of active trachoma was calculated using the number of children screened as the denominator.

Trachoma data were analysed in the age groups 0-4, 5-9 and 10-14 years. Comparisons over time were limited to the 5-9-year age group, which is the target age group for the trachoma screening programs in all regions. Data from 2006 were excluded from assessment of time trends as collection methods in this first year differed from those subsequently adopted.

Projected data for trachoma prevalence

In 2013 the NT delivered trachoma control activities according to the newly revised 2014 CDNA *National guidelines for the public health management of trachoma in Australia*.[2] Under these guidelines, a community would be excluded from screening activities for up to 3 years if high screening coverage had been achieved in the recent past and either prevalence of trachoma was less than 5%, or it was 5% or more without obvious clustering. Exclusion of these communities from screening activities leads to less reliable trachoma surveillance data during the interim period for the total level and trend in trachoma in which the community is located. For reporting purposes, the NTSRU has carried the most recent prevalence data forward in those communities that did not screen in the 2013 calendar year as a direct program decision, providing what is believed to be a conservative upper-bound on average levels of trachoma. This principle will apply to all tables and figures relating to trachoma prevalence data. This method of projecting data was approved by the Trachoma Surveillance and Control Reference Group on 26 November 2013.

National results 2013

Figure 1.1 Trachoma prevalence in children aged 5-9 years in at-risk communities in Australia, 2013

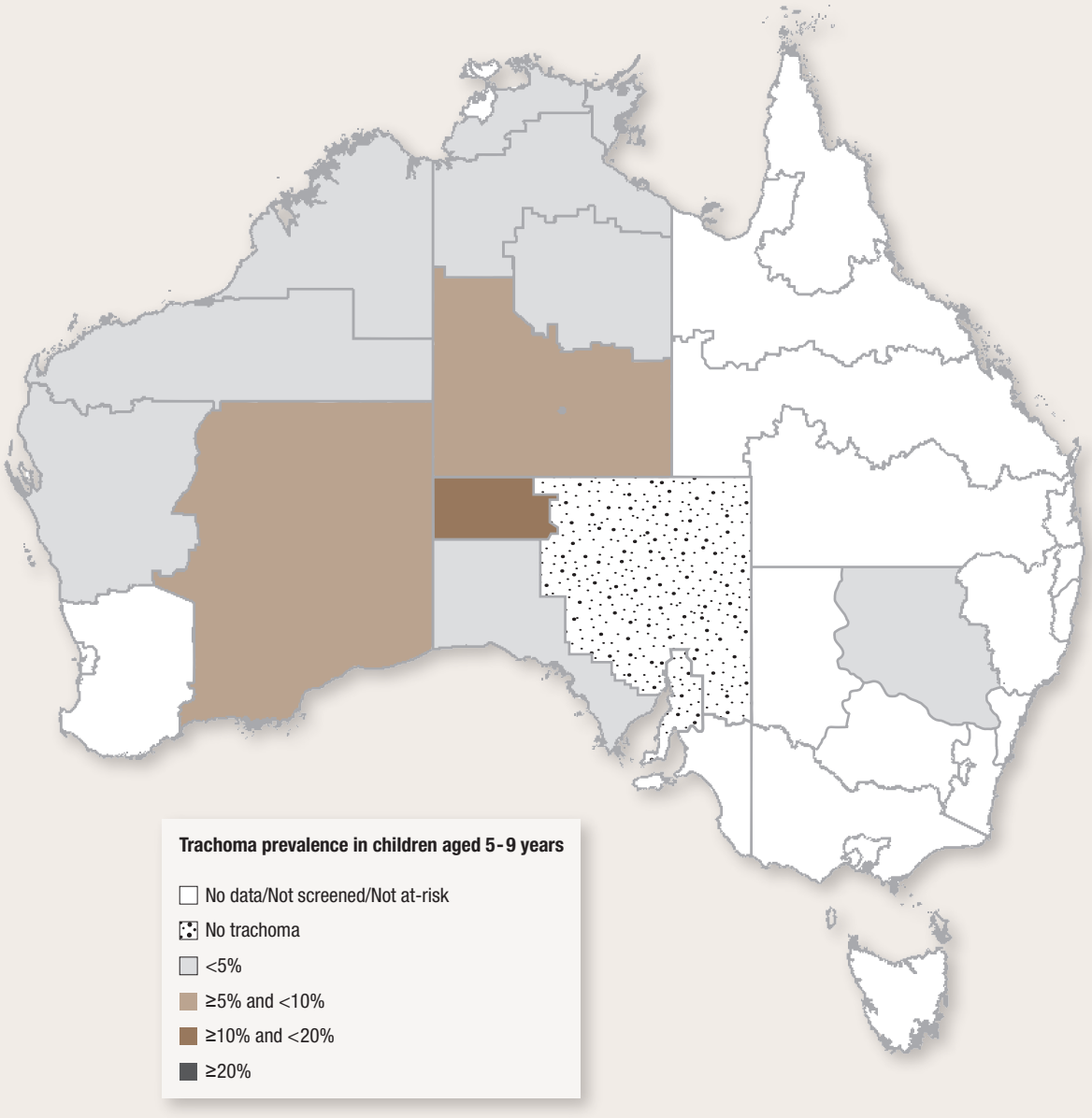
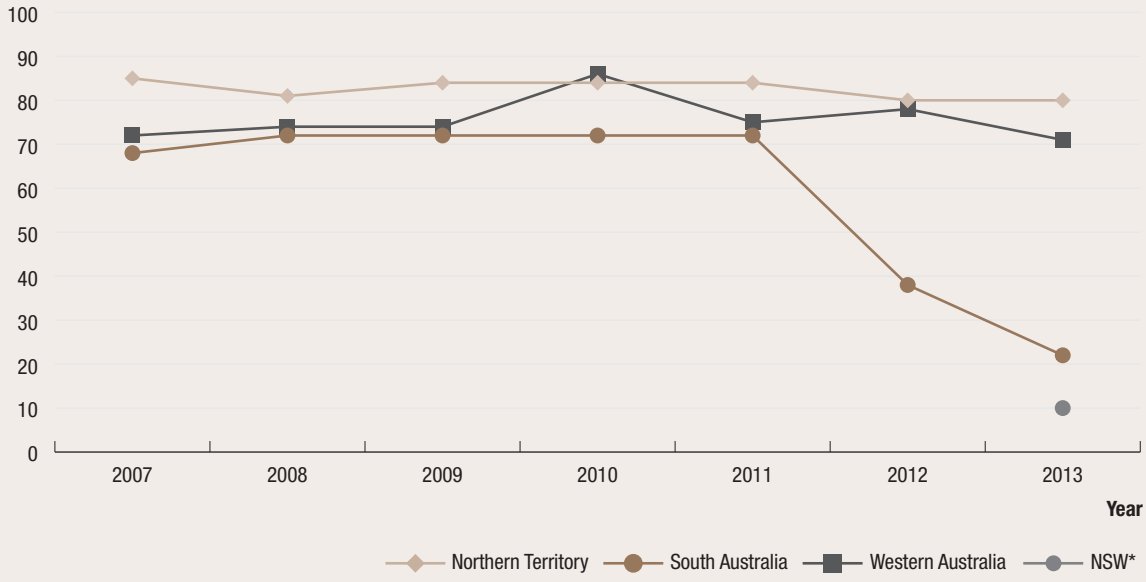


Figure 1.2 Number of communities at risk, by year and jurisdiction, Australia, 2007 – 2013



* In 2013 NSW communities have been designated as "potentially at risk" for the purposes of a mapping exercise

Figure 1.3 Number of at-risk communities by jurisdiction, according to trachoma control strategy implemented, Australia, 2013

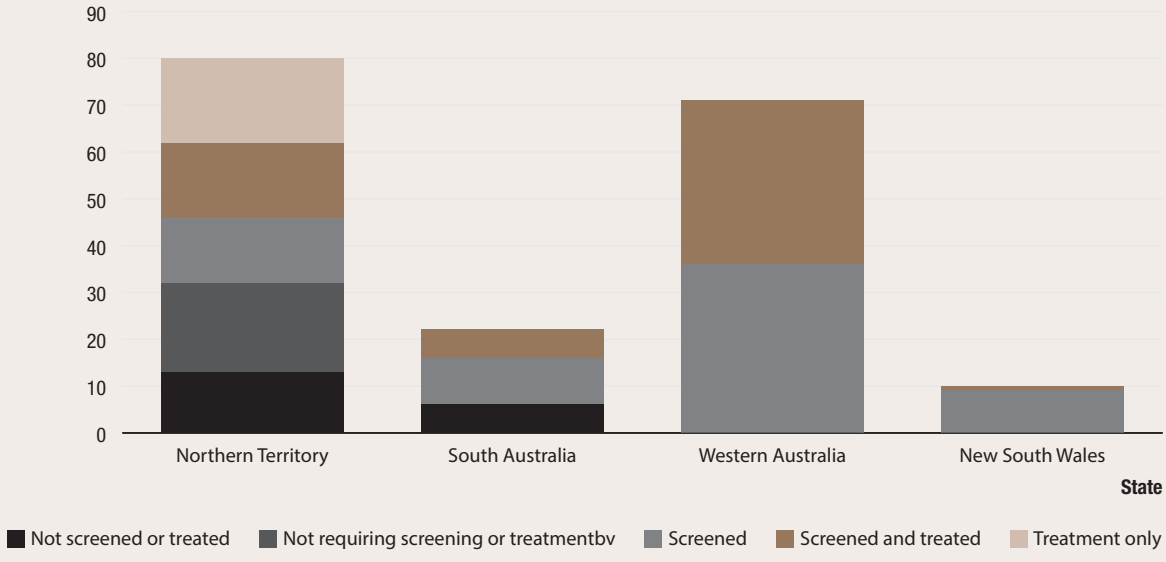


Figure 1.4 Population screening coverage in children aged 5-9 years in communities that were screened for trachoma by jurisdiction, Australia, 2013

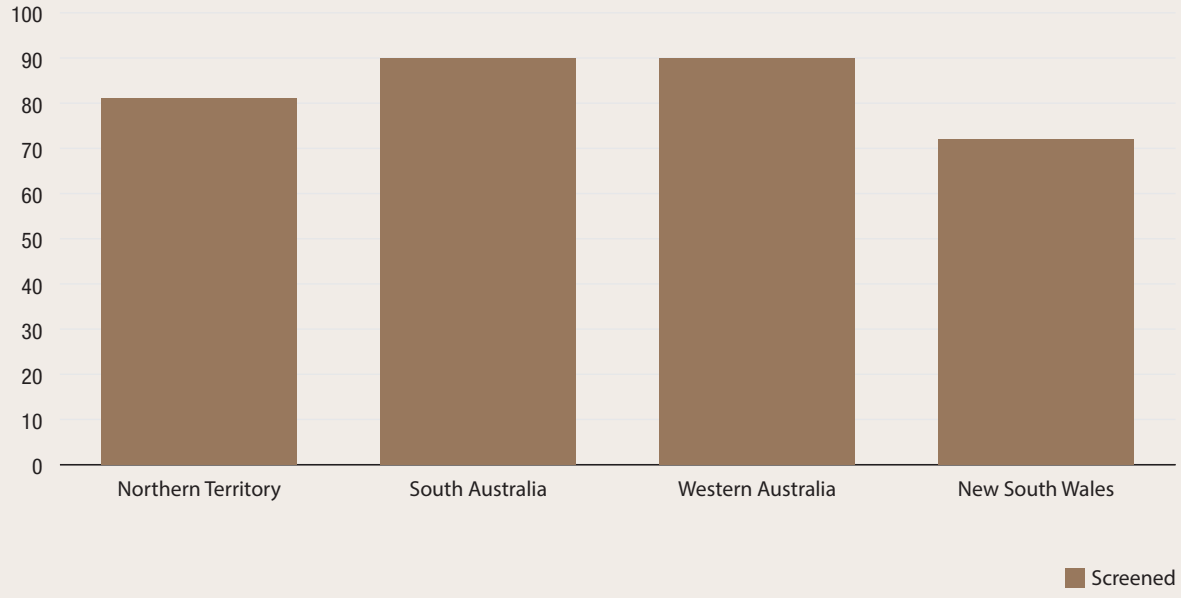


Figure 1.5 Proportion of screened children aged 5-9 years who had a clean face, by year and jurisdiction, Australia, 2007 – 2013

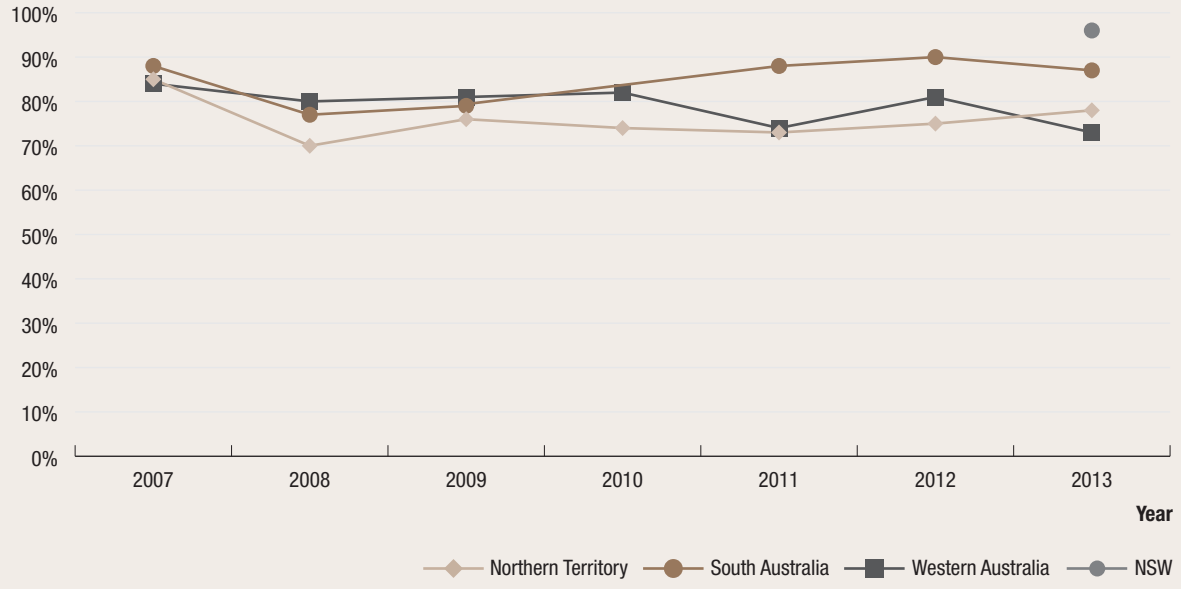


Figure 1.6 Trachoma prevalence among screened children* aged 5-9 years, by year and jurisdiction, Australia, 2007 – 2013

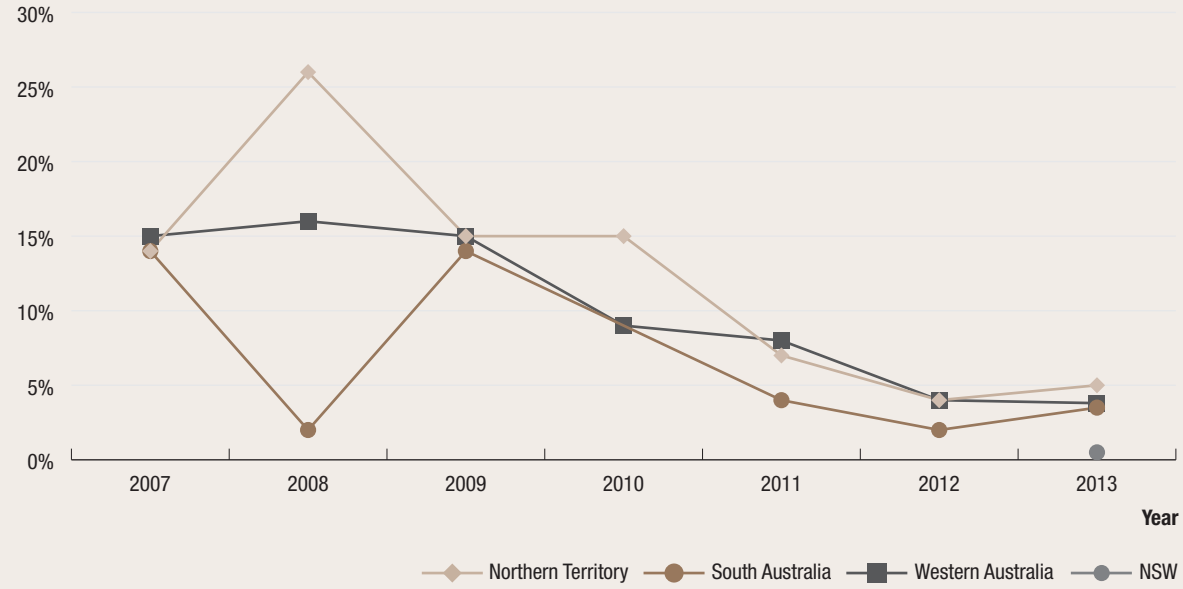


Figure 1.7 Number of screened at-risk communities* according to level of trachoma prevalence in 5-9-year-old children, by jurisdiction, Australia, in 2013

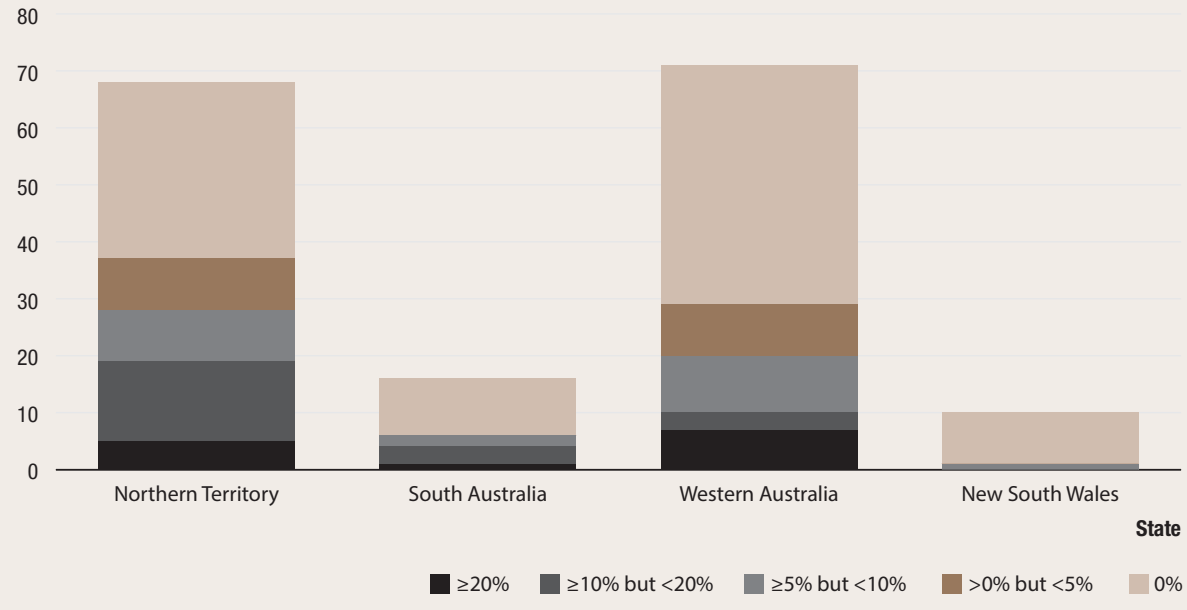
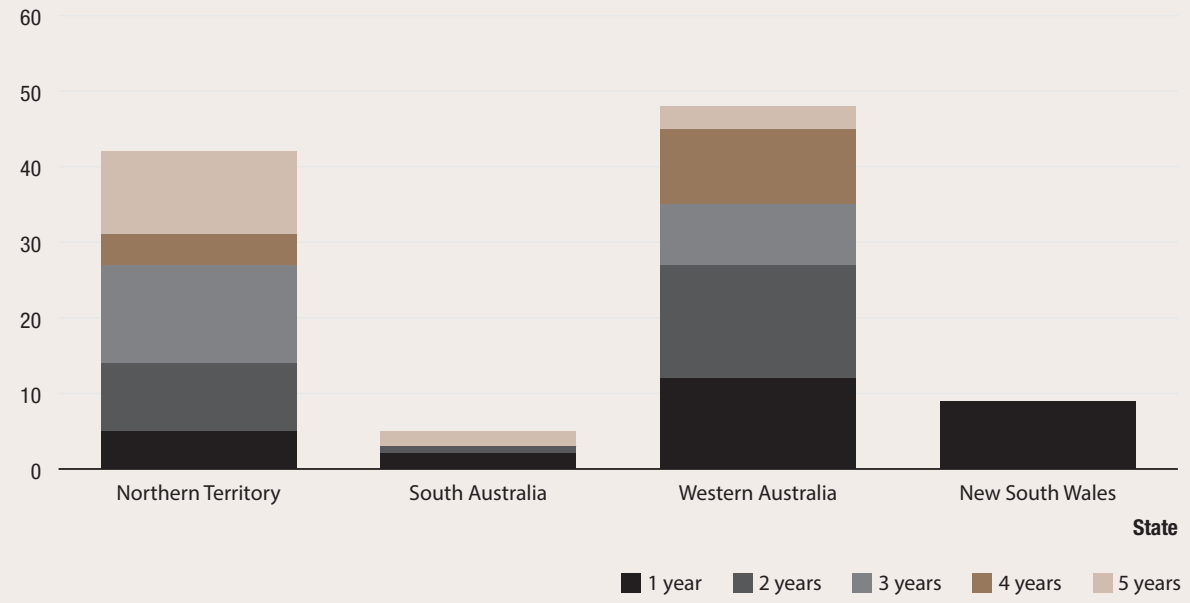


Figure 1.8 Number of communities according to number of years* of trachoma prevalence under 5%, by jurisdiction*† in Australia, 2013



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

† Including communities in the Northern Territory that screened in 2013 and those that did not screen in 2013 in accordance with revised guideline instructions (see methodology)

Figure 1.9 Number of doses of azithromycin administered for the treatment of trachoma by jurisdiction in Australia, 2007 – 2013

Table 1.1 Trachoma control delivery in Australia in 2013

Number of communities	Northern Territory	South Australia	Western Australia	New South Wales	Total	Not at-risk
At risk* (A)	80	22	71	10	183	N/A
Requiring screening for trachoma (B)	42	22	71	10	145	N/A
Screened for trachoma (C)	30	16	71	10	127	15
Requiring treatment only (D)	18	N/A	N/A	N/A	18	N/A
Treated† (E)	17	N/A	N/A	N/A	17	N/A
Screened and/or treated for trachoma (F = C+E)	47	16	71	10	144	15
Requiring neither screening or treatment for trachoma (G=A-B-D)	20	N/A	N/A	N/A	20	N/A

* In 2013 NSW communities have been designated as "potentially at risk" for the purposes of a mapping exercise

† Communities treated without screening in 2013 as per revised guideline instructions

Table 1.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence in Australia in 2013

	Northern Territory	South Australia	Western Australia	New South Wales	Total	Not at risk
Number of communities screened	30	16	71	10	127	15
Age group (years)	**5-9**	**5-9**	**5-9**	**5-9**	**5-9**	**5-9**
Children examined for clean face	1,358	768	1,510	608	4,244	266
Children with clean face	1,057	671	1,112	581	3,421	241
Clean face prevalence (%)	78	87	74	96	81	91
Estimated number* of Aboriginal children in communities†	1,681	857	1,684	795	5,017	380
Children screened for trachoma	1,362	768	1,508	575	4,213	265
Trachoma screening coverage (%)	81	90	90	72	84	70
Children with active trachoma	33	27	57	3	120	3
Active trachoma prevalence (%)	2.4	3.5	3.8	0.5	2.8	1.1
Active trachoma prevalence using projected data (%)	5	3.5	3.8	0.5	4.0	1.1

* Jurisdictional estimate

† In communities that were screened for trachoma

Table 1.3 Treatment strategies by jurisdiction in Australia in 2013

Number of communities	Northern Territory	South Australia	Western Australia	New South Wales	Total
Required treatment for trachoma	34	6	34	1	75
Treated for trachoma	33	6	34	1	74
Screened and treated	16	6	34	1	57
Received treatment only	17	N/A	N/A	N/A	17
Received 6-monthly treatment	5	N/A	N/A	N/A	5
Did not require treatment	34	10	37	9	90
Treated active cases and households	12	5	27	1	45
Treated the whole of community	21	1	7	0	29
Not treated according to CDNA guidelines	3	0	0	0	3

* In the NT whole-of-community treatment was guided by the 2014 guidelines. This is defined as the treatment of all people in the community weighing > 3 kg and living in households with children < 15 years of age. In WA and SA whole-of-community treatment was guided by the 2006 guidelines. This is defined as active cases, household contacts and all children in the community aged 6 months to 14 years.

Table 1.4 Trachoma treatment coverage in Australia in 2013

	Northern Territory					South Australia					Western Australia					New South Wales					Total				
Age group (years)	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*
Active cases requiring treatment	3	33	10		46	1	27	5		33	15	57	22		94	0	3	0		3	19	120	37		176
Active cases who received treatment	3	33	10		46	1	27	5		33	15	56	22		93		3			3	19	119	37		175
Active cases who received treatment (%)	100	100	100		100	100	100	100		100	100	98	100		99		100			100	100	99	100		99
Estimated contacts requiring treatment	1,184	1,497	1,306	7,597	11,584	25	41	29	78	173	102	158	140	317	717	2	3	1	16	22	1,313	1,699	1,476	8,008	12,496
Number of contacts who received treatment	1,033	1,297	1,057	5,799	9,186	25	41	28	76	170	81	142	128	315	666	2	3	1	16	22	1,141	1,483	1,214	6,206	10,044
Estimated contacts who received treatment (%)	87	87	81	76	79	100	100	100	97	98	79	90	91	99	93	100	100	100	100	100	87	87	82	77	80
Total number of doses of azithromycin delivered	1,036	1,330	1,067	5,799	9,232	26	68	33	76	203	96	198	150	315	759	2	6	1	16	25	1,160	1,602	1,251	6,206	10,219
Estimated overall treatment coverage (%)	87	87	81	76	79	100	100	97	97	99	82	92	93	99	94	100	100	100	100	100	87	88	83	77	81
Doses administered in communities that were treated without screening*	423	498	399	2,264	3,584																423	498	399	2,264	3,584
Doses administered six-monthly*	552	659	574	3,114	4,899																552	659	574	3,114	4,899

* As per revised guidelines

Table 1.5 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults in Australia in 2013

	Northern Territory		South Australia		Western Australia		Total		
Number of communities screened for trichiasis	56		23		64		143		
Age groups	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15+*
Estimated population in region*	14,087	7,146	3,385	2,121	5,898	3,450	23,370	12,717	36,087
Adults examined	1,106	878	512	1,322	161	1,656	1,779	3,856	5,635
With trichiasis (% of adults examined)	6 (0.05%)	33 (4%)	0	8 (0.6%)	0	8 (0.5%)	6 (0.3%)	49 (1%)	55 (1%)
Offered ophthalmic consultation	0	13		8	0	7	0	28	28
Declined ophthalmic consultation	0	2		0	0	1	0	3	3
Surgery in past 12 months	0	23		2	0	6	0	31	31

* 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 does not account for adults who may be examined in routine adult health checks, and may also include multiple screening

Northern Territory results 2013

Trachoma program coverage

- In 2013, the NT identified 80 communities in five regions as being at risk of trachoma (Table 2.1).
- Of 80 at-risk communities, 42 communities were determined to require screening for trachoma and a further 18 communities were identified as requiring treatment without screening (see methodology) leading to a total of 60 communities were determined to require screening, treatment or both screening and treatment for trachoma (Table 2.1).
- Of these 61 communities, 47 received screening, treatment or both screening and treatment according to the guidelines (Table 2.1, Table 2.3).
- The remaining 20 at-risk communities did not require screening or treatment as their previous year's prevalence was under 5% (see methodology section).
- In some regions, the NT did not conduct screening or treatment according to the guidelines due to financial and human resource constraints.

Screening coverage

- In 2013, the NT identified 42 communities in the five regions requiring screening for trachoma and, of these, 30 were screened for trachoma (Table 2.1).
- Barkly region had the highest community screening coverage with all 12 communities requiring screening being screened (Table 2.1).
- Katherine region had the lowest community screening coverage with only 3 communities screened of the 13 communities requiring screening (Table 2.1).
- The proportion of children aged 5-9 years screened in the 30 communities was 81%, ranging from 67% in East Arnhem region, to 94% in Katherine region (Table 2.2, Figure 2.4).

Clean face prevalence

- Clean face prevalence was assessed in all communities that were screened.
- The overall prevalence of clean faces among 5-9-year-old children in the screened communities was 78%, ranging from 40% in Alice Springs Remote region, to 83% in the East Arnhem Region (Table 2.2, Figure 2.5).

Trachoma prevalence

- The prevalence of trachoma in children aged 5-9 years screened in 2013 was 2.4%. Prevalence ranged from 0.9% in Darwin Rural region to 7.6% in Alice Springs Remote region (Table 2.2, Figure 2.6a).
- Projecting from the previous year's data in communities that did not screen due to new guideline implementation (see methodology), the prevalence of trachoma was 5%, ranging from 1.4% in East Arnhem region to 10% in Alice Springs Remote region (Table 2.2, Figure 2.6b).
- No trachoma was reported in 31 communities in 2013, including communities that screened for trachoma in 5-9-year-old children and that did not screen in accordance with guidelines (Figure 2.7).
- Endemic levels of trachoma were reported in 28 communities in 2013 including communities that screened for trachoma in 5-9-year-old children that did not screen in accordance with guidelines (Figure 2.7).
- Non endemic levels of trachoma have been reported for 11 communities over a period of 5 years which would reclassify these communities as being not at risk for trachoma (Figure 2.8).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 33 communities (Table 2.3).
- Treatment was delivered to active cases and households in 12 communities, and to the whole of community in 21 communities as per guidelines (Table 2.3).
- The overall treatment coverage in all regions was 79% with 9232 doses of azithromycin delivered (Table 2.4).
- Three communities did not treat according to CDNA guidelines (Table 2.3).

Trichiasis

- Screening for trichiasis was undertaken in 56 communities (Table 2.5).
- Overall 1,984 adults aged over 15 years were screened.
- The prevalence of trichiasis in adults aged 15 years and over was 2%, and 4% in adults aged 40 years and over.
- Surgery for trichiasis was reported to be undertaken for 23 adults in 2013 (Table 2.5).

Health promotion

- Health promotion activities were reported to have occurred in 32 communities in the Alice Springs Remote, Darwin Rural, East Arnhem and Katherine regions.
- A total of 82 health promotion activities were reported.
- The majority of the health promotion activities were delivered to children, teachers and childcare or preschool staff members (Table 2.6).

Figure 2.1 **Trachoma prevalence in children aged 5-9 years, number of communities that were screened, treated or both for trachoma and number of at-risk communities in the Northern Territory, 2013**

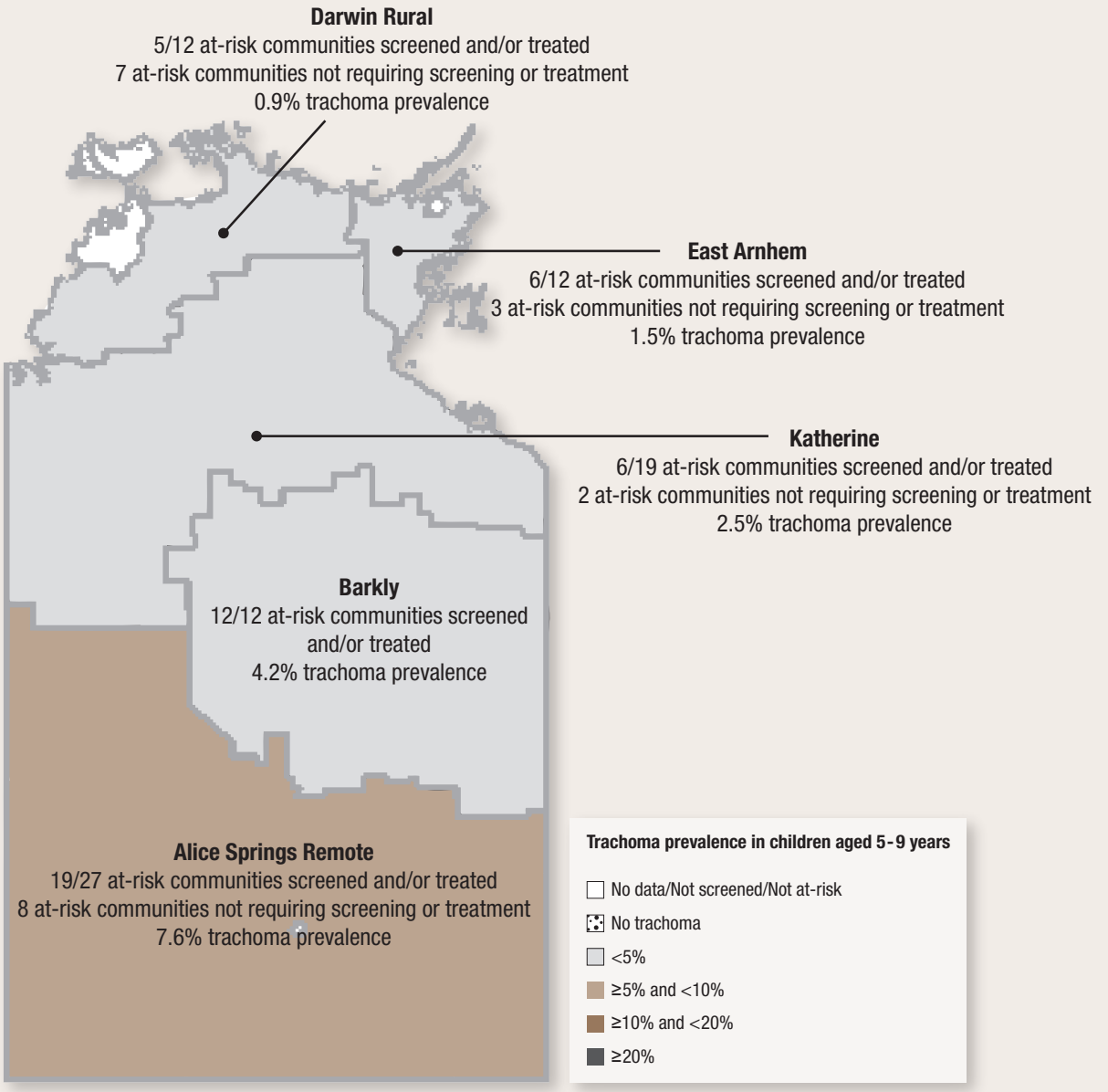


Figure 2.2 Number of communities at risk, by region, in the Northern Territory, 2007 – 2013

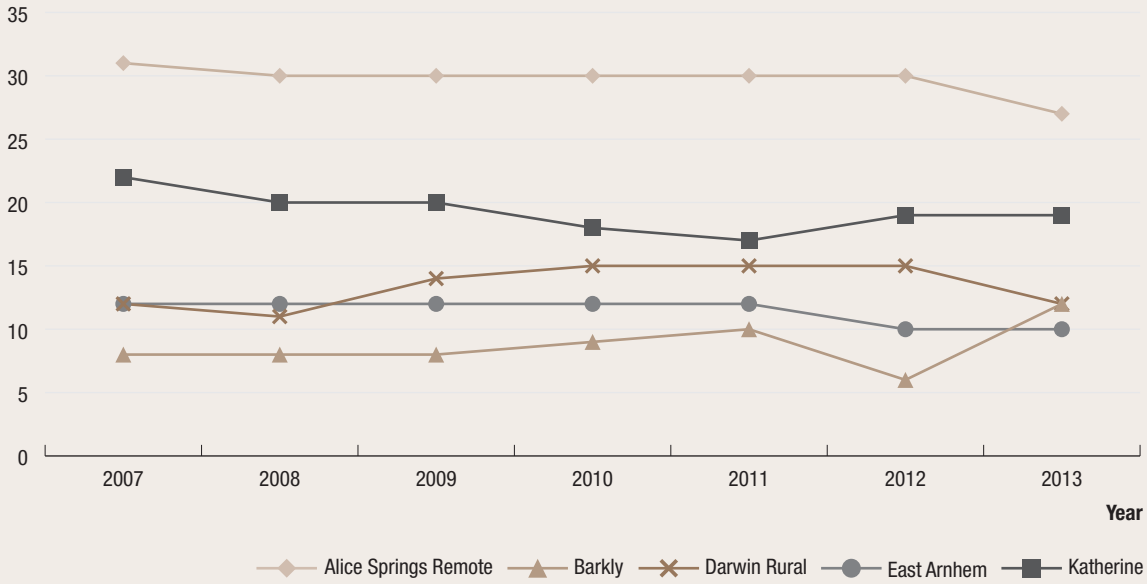


Figure 2.3 Number of at-risk communities by region, according to trachoma control strategy implemented, Northern Territory, 2013

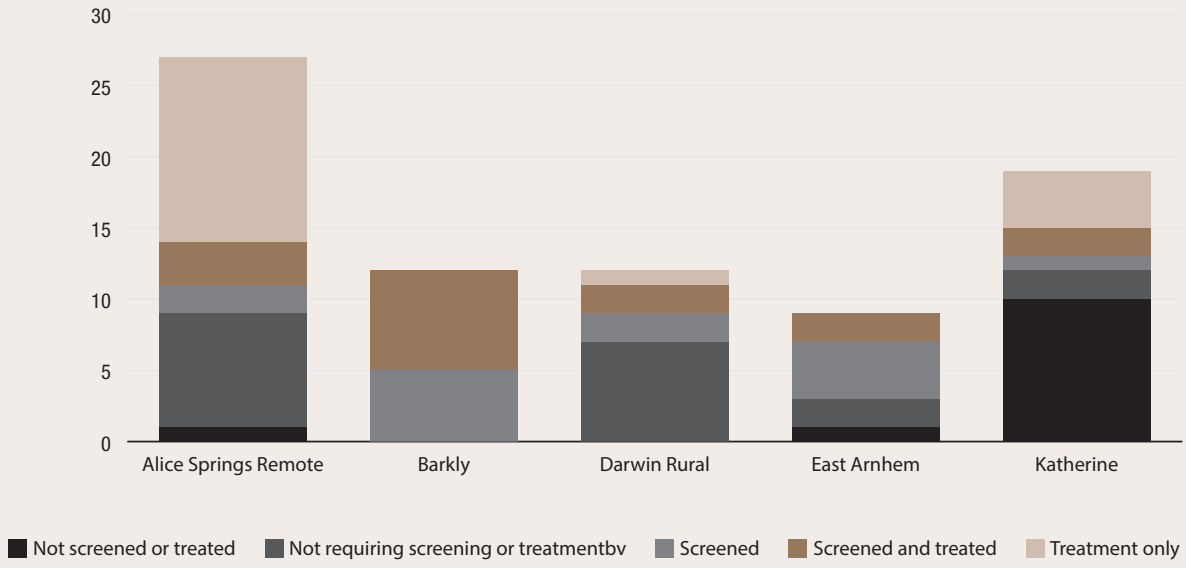


Figure 2.4 Population screening coverage of children aged 5-9 years in communities that required screening for trachoma, by region, in the Northern Territory, 2013

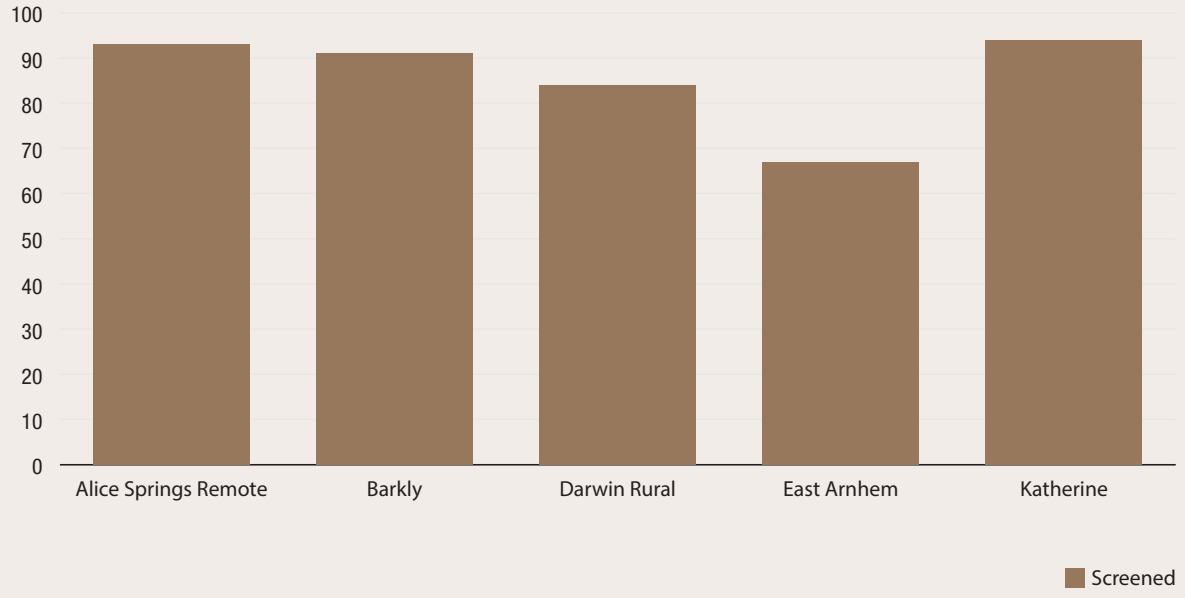


Figure 2.5 Proportion of screened children aged 5-9 years who had a clean face, by region, in the Northern Territory, 2007 – 2013

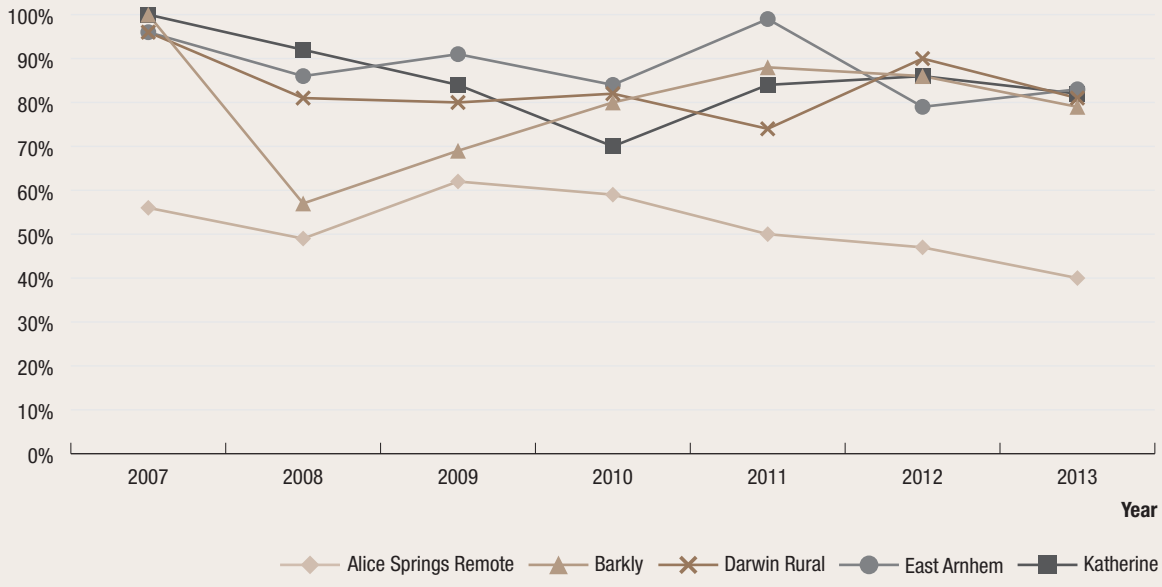


Figure 2.6 a. **Trachoma prevalence among children aged 5-9 year in communities that were screened, by region, in the Northern Territory, 2007 – 2013**

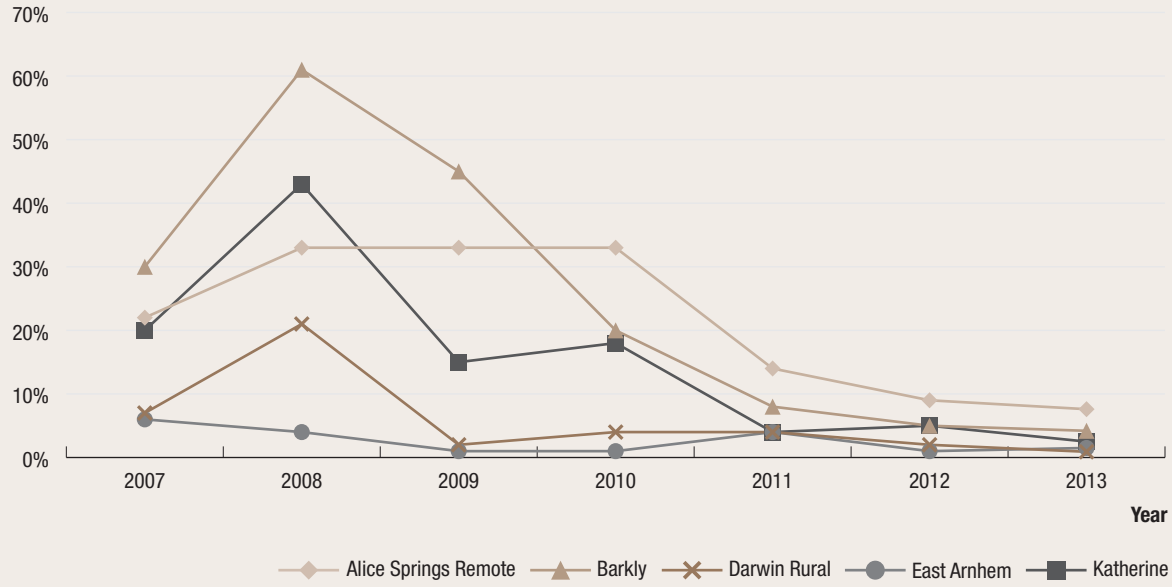
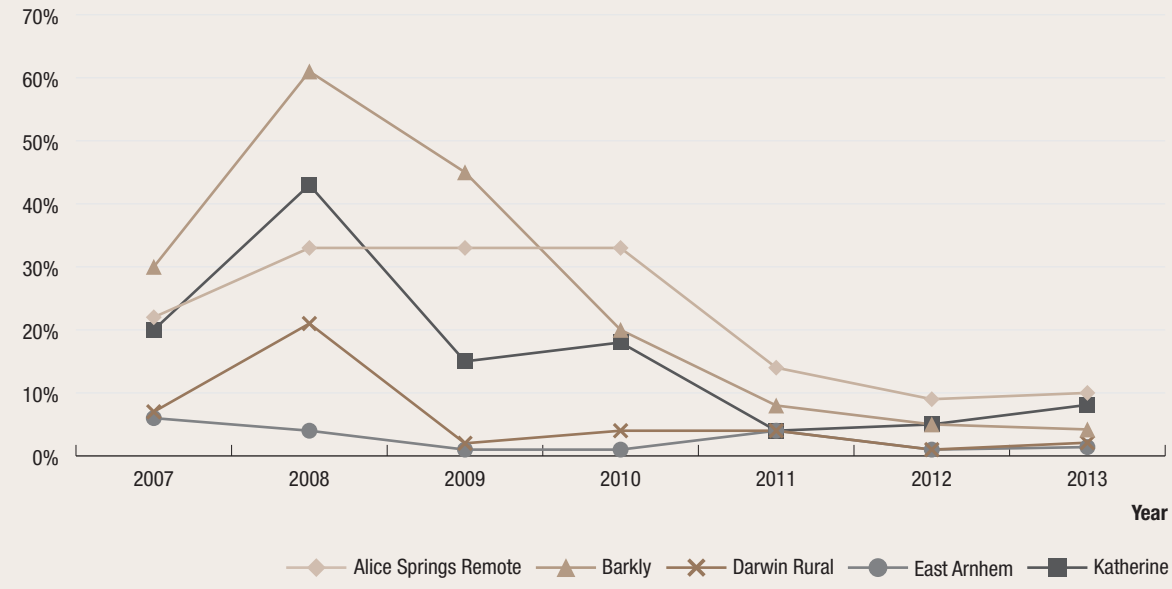
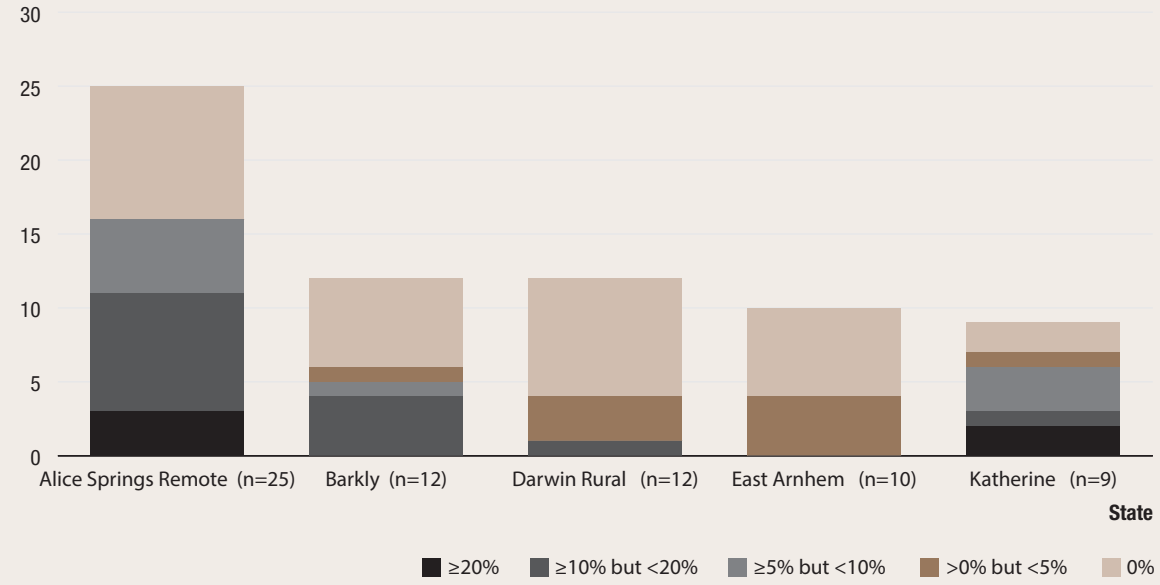


Figure 2.6 b. **Trachoma prevalence among children aged 5-9 years, by region, in the Northern Territory with projected values,* 2007 – 2013**



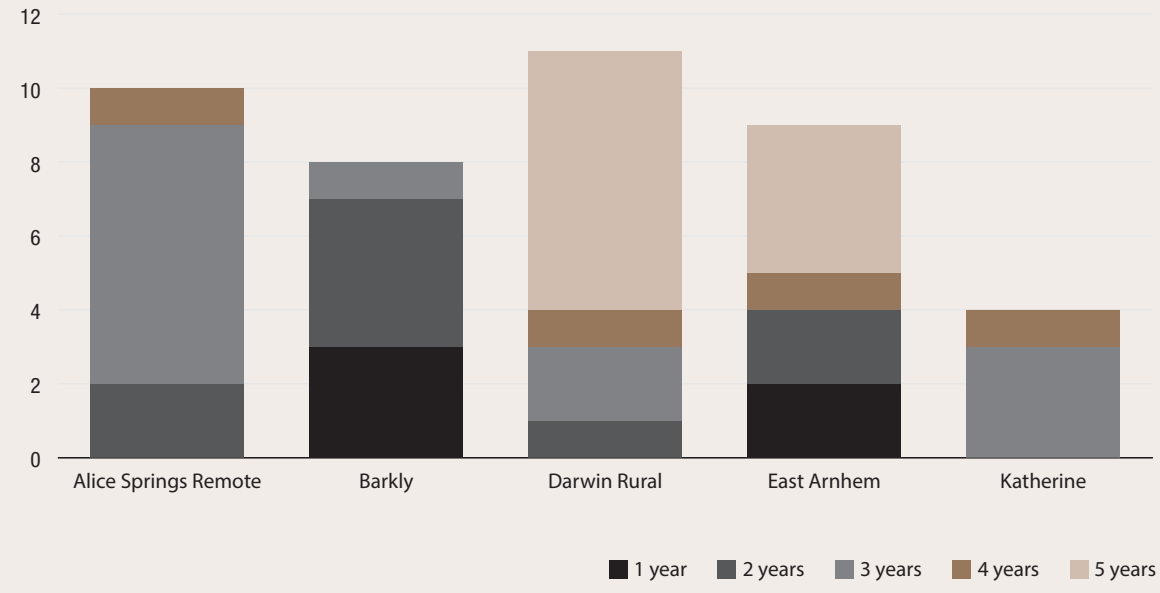
* Including communities that screened in 2013 and those that did not screen in 2013 in accordance with revised guideline instructions (see methodology)

Figure 2.7 Number of at-risk communities according to level of trachoma prevalence* in 5-9-year-old children, by region, in the Northern Territory in 2013



* Including communities that screened in 2013 and those that did not screen in 2013 in accordance with revised guideline instructions (see methodology)

Figure 2.8 Communities according to number of years* of trachoma prevalence under 5%, by region†, in the Northern Territory, 2013



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

† Including communities in the Northern Territory that screened in 2013 and those that did not screen in 2013 in accordance with guideline instructions (see methodology)

Figure 2.9 Number of doses of azithromycin administered for the treatment of trachoma, by region, the Northern Territory, 2007 – 2013

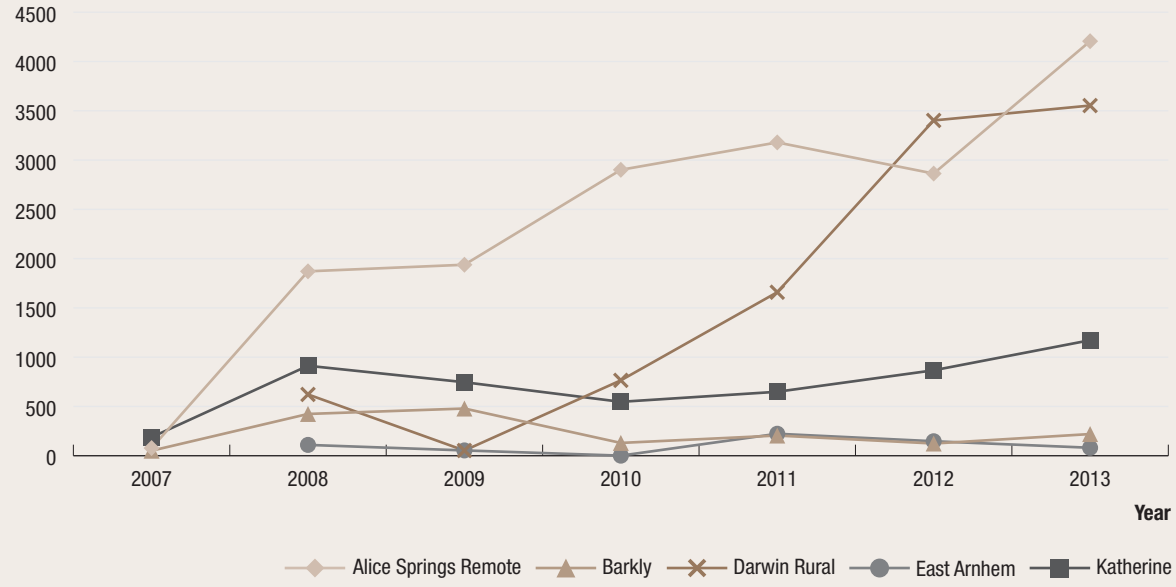


Table 2.1 Trachoma control delivery in the Northern Territory in 2013

Number of communities	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total	Not at-risk
At risk (A)	27	12	12	10	19	80	N/A
Requiring screening for trachoma (B)	6	12	4	7	13	42	0
Screened for trachoma (C)	5	12	4	6	3	30	2
Requiring treatment only (D)	13	0	1	0	4	18	N/A
Treated* (E)	13	0	1	0	3	17	N/A
Screened and/or treated for trachoma (F = C+E)	18	12	5	6	6	47	2
Requiring neither screening or treatment for trachoma (G=A-B-D)	8	0	7	3	2	20	N/A

* Communities treated without screening in 2013 as per revised guideline instructions

Table 2.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children (0-14 years old) in the Northern Territory in 2013

	Alice Springs Remote				Barkly				Darwin Rural				East Arnhem				Katherine				Total				Not at-risk			
Number of communities screened	**5**				**12**				**4**				**6**				**3**				**30**				**2**			
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***	***0-4***	***5-9***	***10-14***	***0-14***
Children examined for clean face	12	110	56	178	45	285	203	533	81	462	208	751	20	383	180	583	22	118	27	167	180	1,358	674	2,212	22	114	41	177
Children with clean face	1	44	23	68	34	226	199	459	67	374	203	644	12	316	163	491	13	97	26	136	127	1,057	614	1,798	22	96	41	159
Clean face prevalence (%)	8	40	41	38	76	79	98	86	83	81	98	86	60	83	91	84	59	82	96	81	71	78	91	81	100	84	100	90
Estimated number* of Aboriginal children in communities†	94	113	83	290	71	313	239	623	356	548	562	1,466	613	581	715	1,909	136	126	178	440	1,270	1,681	1,777	4,728	27	167	72	266
Children examined for trachoma	11	105	29	145	40	285	203	528	84	463	212	759	17	390	182	589	15	119	25	159	167	1,362	651	2,180	0	114	41	155
Trachoma screening coverage (%)	12	93	35	50	56	91	85	85	24	84	38	52	3	67	25	31	11	94	14	36	13	81	37	46	0	68	57	58
Children with active trachoma	0	8	0	8	2	12	3	17	0	4	5	9	1	6	3	10	0	3	1	4	3	33	12	48	0	3	0	3
Active trachoma prevalence (%)	0.0	7.6	0.0	5.5	5.0	4.2	1.5	3.2	0.0	0.9	2.4	1.2	5.9	1.5	1.6	1.7	0.0	2.5	4.0	2.5	1.8	2.4	1.8	2.2		2.6	0.0	1.9
Active trachoma prevalence using projected data	10				4.2				2.1				1.4				7.8				5.0							

* Jurisdictional estimate

† In communities that were screened for trachoma

Table 2.3 Treatment strategies by region in the Northern Territory in 2013

Number of communities	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Required treatment for trachoma	16	7	3	2	6	34
Treated for trachoma	16	7	3	2	5	33
Screened and treated	3	7	2	2	2	16
Received treatment only	13	0	1	0	3	17
Received 6-monthly treatment	4	0	1	0	0	5
Did not require treatment	10	5	9	7	3	34
Treated active cases and households	2	5	2	2	1	12
Treated the whole of community	14	2	1	0	4	21
Not treated according to CDNA guidelines	1	0	0	0	2	3

Table 2.4 Trachoma treatment coverage in the Northern Territory in 2013

	Alice Springs Remote					Barkly					Darwin Rural					East Arnhem					Katherine					Total				
Age group (years)	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*
Active cases requiring treatment	0	8	0		8	2	12	3		17	0	4	5		9	1	6	1		8	0	3	1		4	3	33	10		46
Active cases who received treatment	0	8	0		8	2	12	3		17	0	4	5		9	1	6	1		8	0	3	1		4	3	33	10		46
Active cases who received treatment (%)	_	100	_		100	100	100	100	_	100	_	100	100	_	100	100	100	100	_	100	_	100	100	_	100	100	100	100	_	100
Estimated contacts requiring treatment	510	668	487	3,131	4,796	18	52	32	108	210	448	585	605	3,522	5,160	14	14	8	37	73	194	178	174	799	1,345	1,184	1,497	1,306	7,597	11,584
Number of contacts who received treatment	432	628	437	2,701	4,198	18	52	32	101	203	412	433	430	2,269	3,544	14	14	8	37	73	157	170	150	691	1,168	1,033	1,297	1,057	5,799	9,186
Estimated contacts who received treatment (%)	85	94	90	86	88	100	100	100	94	97	92	74	71	64	69	100	100	100	100	100	81	96	86	86	87	87	87	81	76	79
Total number of doses of azithromycin delivered	432	636	437	2,701	4,206	20	64	35	101	220	412	437	435	2,269	3,553	15	20	9	37	81	157	173	151	691	1,172	1,036	1,330	1,067	5,799	9,232
Estimated overall treatment coverage (%)	85	94	90	86	88	100	100	100	94	97	92	74	71	64	69	100	100	100	100	100	81	96	86	86	87	87	87	81	76	79

Table 2.5 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults aged over 40 years in the Northern Territory in 2013

	Alice Springs Remote		Barkly		Darwin Rural		East Arnhem		Katherine		Total		
Number of communities screened for trichiasis	21		5		16		4		10		56		
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*	3,367	1,801	645	281	4,245	2,124	3,529	1,838	2,301	1,101	14,087	7,146	21,233
Adults examined†	467	388	152	11	34	68	18	36	435	375	1,106	878	1,984
With trichiasis (% of adults examined)	4 (0.9%)	19 (5%)	0	3 (27%)	1 (3%)	3 (4%)	0	0	1 (0.2%)	8 (2%)	6 (0.05%)	33 (4%)	39 (2%)
Offered ophthalmic consultation	0	3	0	3	0	0	0	0	0	7	0	13	13
Declined ophthalmic consultation	0	0	0	0	0	0	0	0	0	2	0	2	2
Surgery in past 12 months	0	17	0	3	0	0	0	0	0	3	0	23	23

* 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 does not account for adults who may be examined in routine adult health checks, and may also include multiple screening

Table 2.6 Health promotion activities by region in the Northern Territory in 2013

	Alice Springs Remote	Barkly	Darwin Rural	East Arnhem	Katherine	Total
Number of communities at risk	**27**	**12**	**12**	**10**	**19**	**80**
Number of communities that reported health promotion activities	**18**	**0**	**5**	**4**	**5**	**32**
Total number of programs reported	**51**	**0**	**13**	**9**	**9**	**82**
Methods of Health Promotion						
One-on-one discussion	9		5	3	2	
Presentation to group	14		4	2	5	25
Interactive group session	16		1	1		18
Social marketing	1					1
Print material/mass media			1			1
Sporting/community events	3			1		4
Other	2					2
Target audience						
Health professionals/staff	14		4	2	2	22
Children	19		5	4	5	33
Youth	2					2
Teachers/childcare/preschool staff	14		3	3	5	25
Caregivers/parents	8			2		10
Community members	11		2	1		14
Community educators/health promoters	2		1			3
Interagency members	4		1	1	1	7
Frequency of health promotion activities						
Once	1					1
Occasional*	41		13	9	9	72
Regular†	3					3
Ongoing/routine	6					6

* 2 -4 times per year

† 5-12 times per year

Health promotion summary

Health promotion in the NT in 2013 followed a comprehensive approach. The Indigenous Eye Health Unit based at the University of Melbourne continued to provide support for health promotion. Territory-wide coverage of the Melbourne Football Club ambassadors' promotion of trachoma elimination and the presence of the mascot, Milpa the goanna, and the team at clinics and games raised awareness among decision-makers and the public. The Clean Faces, Strong Eyes campaign messages developed by the Indigenous Eye Health Unit and the supporting materials and activities were consistently reinforced during screening and treatment visits to communities and Milpa made frequent appearances.
In Central Australia the Health Promotion team led by the Central Australian Aboriginal Congress and the Fred Hollows Foundation continued working on a settings-based approach in schools, clinics and the community to promote face washing and personal hygiene messages. A four-step facial hygiene poster has been developed as part of a Clean Faces – Healthy Places program which complements the Clean Faces, Strong Eyes campaign. These messages have been supported by other agencies and programs that promote personal hygiene, so the messages received by communities are consistent. A pilot *Trachoma Story Book* in a local language has been developed and was showcased at the 2013 National Aboriginal and Torres Strait Islander Environmental Health Conference held in Adelaide. Work to engage and collaborate with the housing and education sectors to improve environmental conditions and support good hygiene is ongoing.

South Australia results 2013

Trachoma program coverage

- In 2013 SA identified 22 communities in three regions as being at risk of trachoma (Table 3.1).
- Of the 22 communities at risk, 16 were screened for trachoma (Table 3.1).
- Screening of only 3 of the 9 at-risk communities in the APY Lands occurred because practicalities in finalising contracts resulted in delays.
- SA also screened 11 not at-risk communities in the York and Mid North region.

Screening coverage

- Population screening coverage of 5-9-year-old children in the 16 at-risk communities screened was 90%, ranging from 78% in the APY Lands to 96% in the Far North region (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 5-9-year-old children in the screened communities was 87%, ranging from 71% in the APY Lands, to 100% in the Far North region (Table 3.2, Figure 3.5).

Trachoma prevalence

- The prevalence of trachoma in children aged 5-9 years screened was 3.5%. Prevalence ranged from 0.3% in the Far North region to 11% in the APY Lands (Table 3.2, Figure 3.6).
- No trachoma was reported in 10 communities (Figure 3.7).
- Endemic levels of trachoma were reported in six communities (Figure 3.7).
- Non endemic levels of trachoma have been reported for four communities over a period of 5 years which would reclassify these communities as being not at risk for trachoma (Figure 3.8)

Treatment delivery and coverage

- Trachoma treatment strategies were applied in six communities (Table 3.3)
- Treatment was delivered to active cases and households in five communities, and to the whole of community in one community as per guidelines (Table 3.3)
- The overall treatment coverage in all regions was 99% with 203 doses of azithromycin delivered (Table 3.4)

Trichiasis

- Screening for trichiasis was undertaken in 23 communities.
- Overall 1,834 adults aged over 15 years were screened.
- The prevalence of trichiasis in adults aged 15 years and over was 0.4%, and 0.6% in adults aged 40 years and over.
- Surgery for trichiasis was reported to be undertaken for two adults (Table 3.5).

Health promotion

- Health promotion activities were reported to have occurred in 26 communities in all regions.
- A total of 37 health promotion activities were reported.
- The majority of the health promotion activities were delivered to children and health professional staff members (Table 3.6).

Figure 3.1 Trachoma prevalence in children aged 5-9 years, number of communities that were screened, treated or both for trachoma and number of at-risk communities in South Australia, 2013

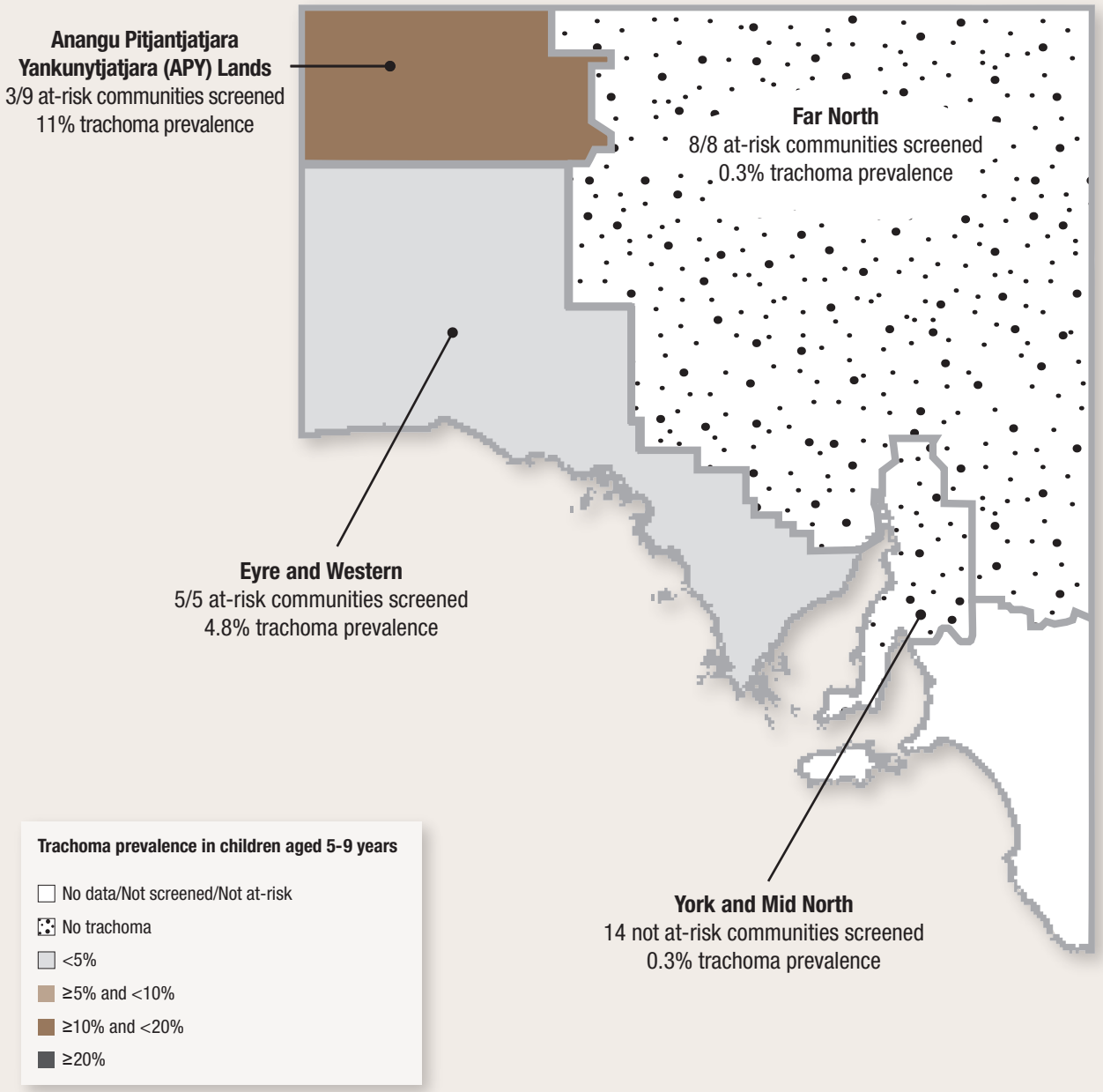
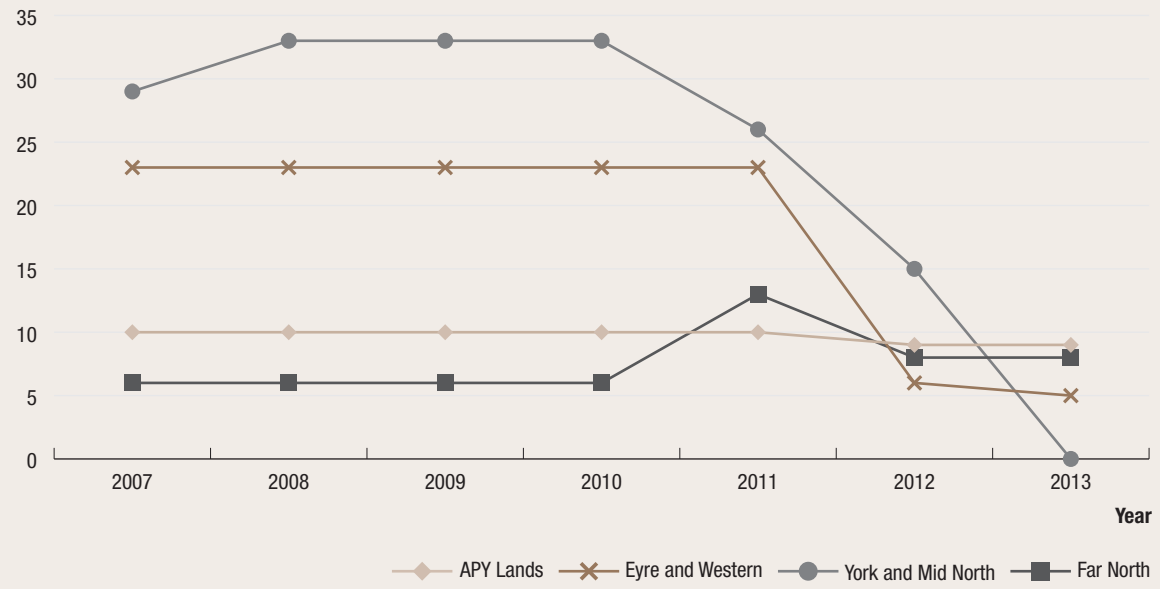
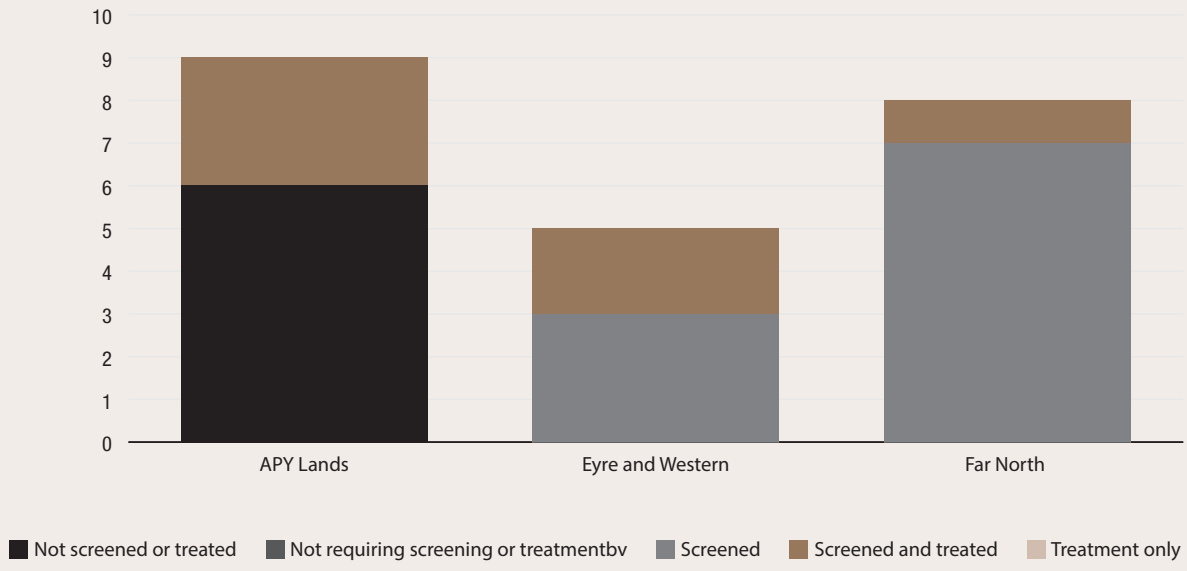


Figure 3.2 Number of communities at risk, by region, in South Australia, 2007 – 2013



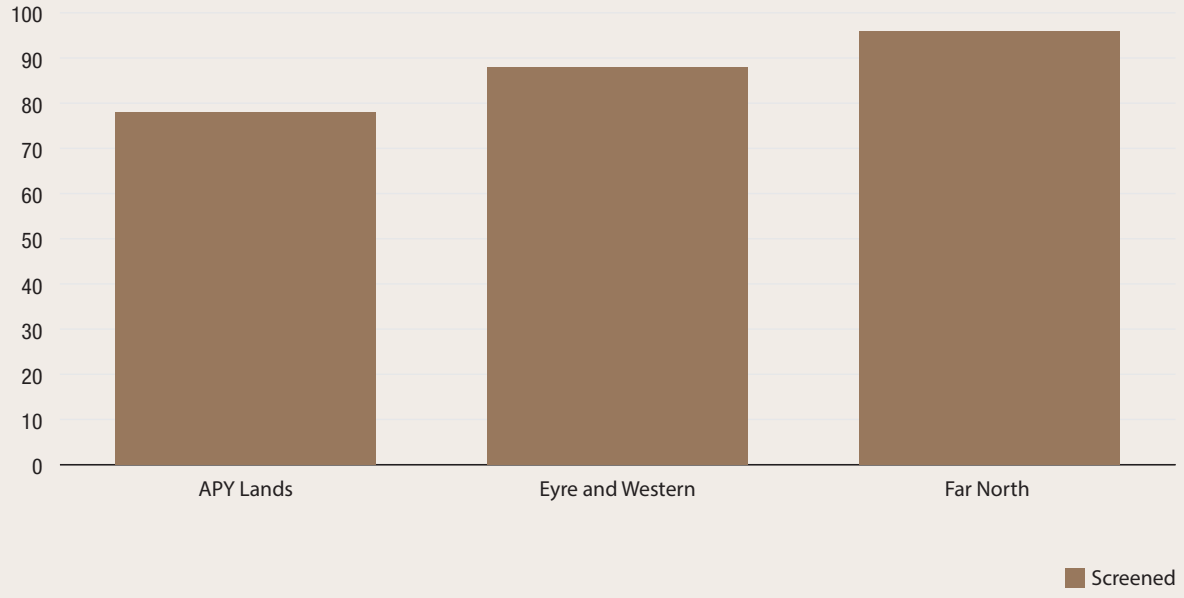
APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.3 Number of at-risk communities, by region, according to trachoma control strategy implemented, South Australia, 2013



APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.4 Population screening coverage of children aged 5-9 years in at-risk communities that required screening for trachoma, by region, in South Australia in 2013



APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.5 Proportion of screened children* aged 5-9 years who had a clean face, by region, in South Australia, 2007 – 2013

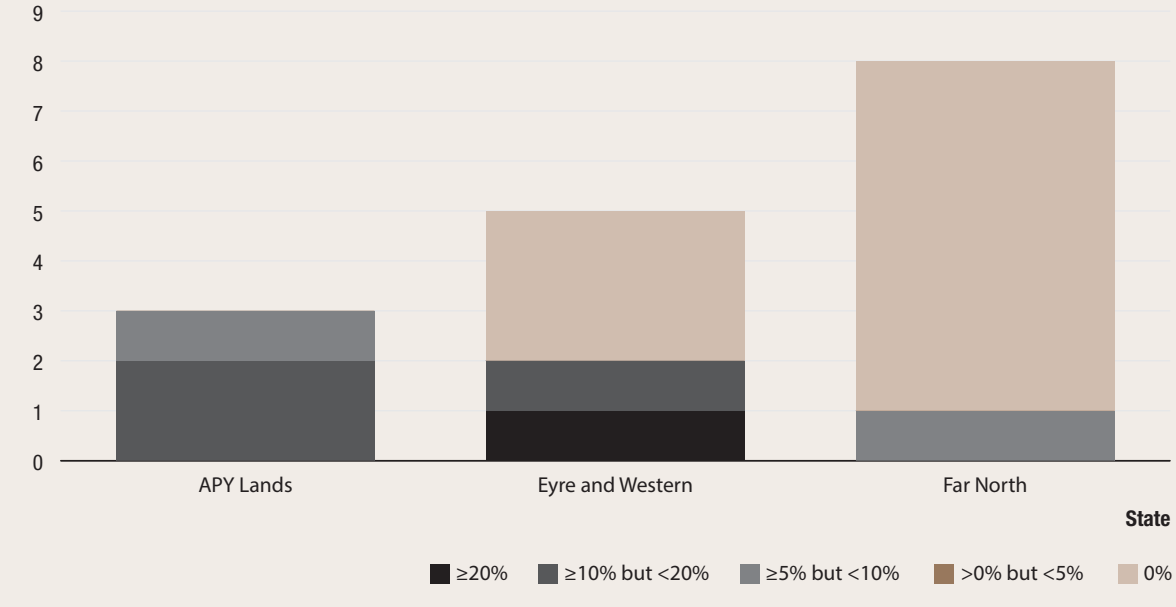
* In at-risk communities

APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.6 Trachoma prevalence among children aged 5-9 year in at-risk communities that were screened, by region, in South Australia, 2007 – 2013

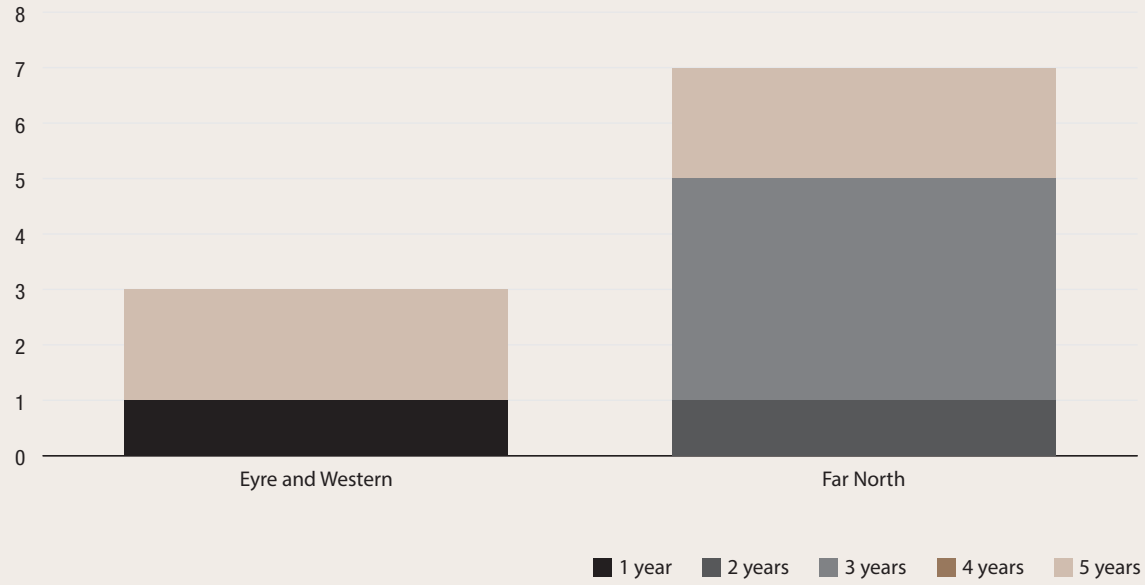
APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.7 Number of at-risk communities according to level of trachoma prevalence in 5-9-year-old children, by region, South Australia, 2013



APY: Anangu Pitjantjatjara Yankunytjatjara

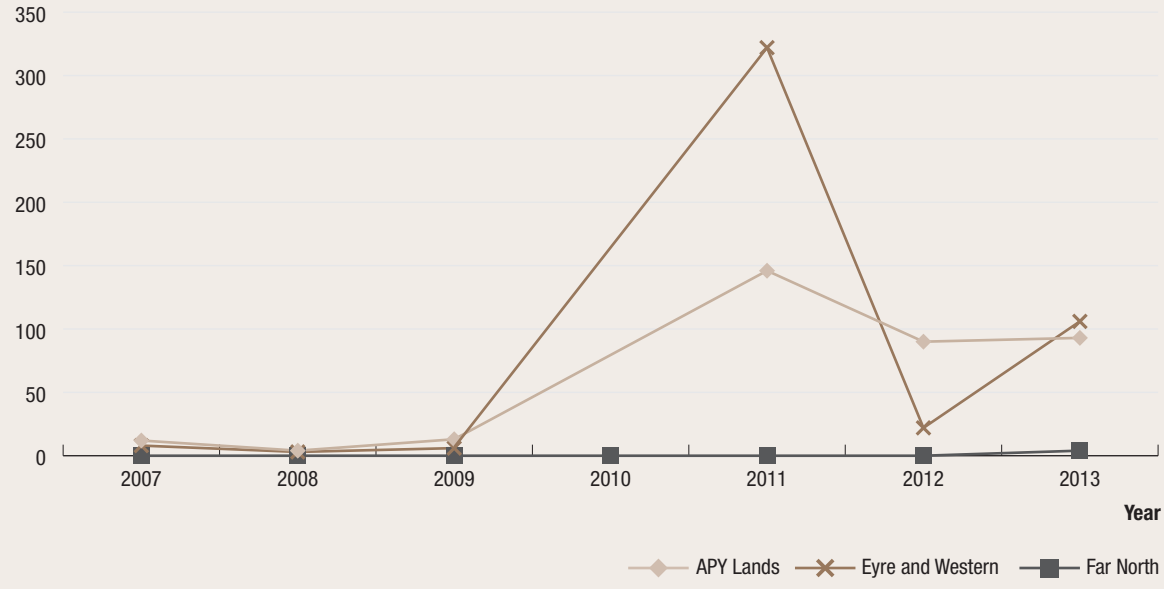
Figure 3.8 At-risk communities according to number of years* of trachoma prevalence under 5% by region, South Australia, 2013



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

APY: Anangu Pitjantjatjara Yankunytjatjara

Figure 3.9 Number of doses of azithromycin administered for the treatment of trachoma, by region, South Australia, 2007 – 2013



APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.1 Trachoma control delivery in South Australia in 2013

	At risk				Not at risk
Number of communities	APY Lands	Eyre and Western	Far North	Total	York and Mid North
At risk (A)	9	5	8	22	0
Requiring screening for trachoma (B)	9	5	8	22	0
Screened for trachoma (C)	3	5	8	16	11
Requiring treatment only (D)	N/A	N/A	N/A	N/A	N/A
Treated* (E)	N/A	N/A	N/A	N/A	N/A
Screened and/or treated for trachoma (F = C+E)	3	5	8	16	11
Requiring neither screening or treatment for trachoma (G=A-B-D)	N/A	N/A	N/A	N/A	N/A

*Communities treated without screening in 2013 as per guideline instructions

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children (0-14 years old), by region, in South Australia in 2013

	APY Lands				Eyre and Western				Far North				Total				York and Mid North			
Number of communities screened	3				5				8				16				11			
Age group (years)	***0-4***	***5-9***	***10-14***	***0-14***	***0-4***	***5-9***	***10-14***	***0-14***	***0-4***	***5-9***	***10-14***	***0-14***	***0-4***	***5-9***	***10-14***	***0-14***	***0-4***	***5-9***	***10-14***	***0-14***
Children examined for clean face	0	121	0		12	270	105	387	36	377	274	687		768			1	116	86	203
Children with clean face		86			11	208	68	287	33	377	274	684		671			1	116	86	203
Clean face prevalence (%)		71			92	77	65	74	92	100	100	100		87			100	100	100	100
Estimated number* of Aboriginal children in communities†		156			258	308	207	773	334	393	388	1,115		857			143	151	126	420
Children examined for trachoma	0	121	0		12	270	105	387	36	377	274	687		768			1	116	86	203
Trachoma screening coverage (%)		78			5	88	51	50	11	96	71	62		90			1	77	68	48
Children with active trachoma		13			1	13	5	19	0	1	0	1		27			0	0	0	0
Active trachoma prevalence (%)		11			8.3	4.8	4.8	4.9	0.0	0.3	0.0	0.1		3.5			0.0	0.0	0.0	0.0

* ABS estimate
† In communities that were screened for trachoma
APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.3 Treatment strategies, by region, in South Australia in 2013

Number of communities	APY Lands	Eyre and Western	Far North	Yorke and Mid North	Total
Required treatment for trachoma	3	2	1	0	6
Treated for trachoma	3	2	1	0	6
Screened and treated	3	2	1	0	6
Received treatment only	N/A	N/A	N/A	N/A	0
Received 6-monthly treatment	N/A	N/A	N/A	N/A	0
Did not require treatment	0	3	7	0	10
Treated active cases and households	3	1	1	0	5
Treated the whole of community	0	1	0	0	1
Not treated according to CDNA guidelines	0	0	0	0	0

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.4 Trachoma treatment coverage, by region, in South Australia in 2013

	APY Lands					Eyre and Western					Far North					York and Mid North (Not at-risk)					Total				
Age group (years)	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*
Active cases requiring treatment		13			13	1	13	5		19	0	1	0		1	N/A	N/A	N/A		N/A	1	27	5	0	33
Active cases who received treatment		13			13	1	13	5		19	0	1	0		1						1	27	5	0	33
Active cases who received treatment (%)		100			100	100	100	100		100		100			100						100	100	100		100
Estimated contacts requiring treatment	13	14	11	45	83	11	26	18	32	87	1	1	0	1	3	N/A	N/A	N/A	N/A	N/A	25	41	29	78	173
Number of contacts who received treatment	13	14	10	43	80	11	26	18	32	87	1	1	0	1	3						25	41	28	76	170
Estimated contacts who received treatment (%)	100	100	91	96	96	100	100	100	100	100	100	100	_	100	100						100	100	97	97	98
Total number of doses of azithromycin delivered	13	27	10	43	93	12	39	23	32	106	1	2	0	1	4						26	68	33	76	203
Estimated overall treatment coverage (%)	100	100	91	96	97	100	100	100	100	100	100	100		100	100						100	100	97	97	99

APY: Anangu Pitjantjatjara Yankunytjatjara

Table 3.5 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults aged over 40 years, by region, in South Australia in 2013

	APY Lands		Eyre and Western		Far North		Yorke and Mid North		Total		
Number of communities screened for trichiasis	**9**		**5**		**7**		**2**		**23**		
Age group (years)	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15+*
Estimated population in region*	1,020	495	639	340	1,189	850	537	436	3,385	2,121	5,506
Adults examined†	411	333		452	82	508	19	29	512	1,322	1,834
With trichiasis (% of adults examined)	0	4 (1%)		0	0	3 (0.6%)	0	1 (3%)	0	8 (0.6%)	8 (0.4%)
Offered ophthalmic consultation	0	4		0		3		1		8	8
Declined ophthalmic consultation	0	0		0		0		0		0	0
Surgery in past 12 months	0	2		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 does not account for adults who may be examined in routine adult health checks, and may also include multiple screening

Table 3.6 Health promotion activities, by region in South Australia in 2013

	APY Lands	Eyre and Western	Far North	York and Midnorth	Total
Number of communities at risk	**9**	**5**	**8**		**22**
Number of communities who reported health promotion activities	**3**	**5**	**8**	**10**	**26**
Total number of programs reported	**3**	**9**	**13**	**12**	**37**
Methods of Health Promotion					
One-on-one discussion	3	8	13	12	36
Presentation to group		9	1	1	11
Interactive group session		7	1		8
Social marketing		6			6
Print material/mass media	3	6	12	1	22
Sporting/community events		7	1		8
Other		5			5
Target audience					
Health professionals/staff	1	7	13	2	23
Children	3	9	13	12	37
Youth					0
Teachers/childcare/preschool staff	3	8	2		13
Caregivers/parents		8			8
Community members	3	7	1		11
Community educators/health promoters	3	7	1		11
Interagency members		6	1	2	9
Frequency of health promotion activities					
Once					
Occasional*	3	4	13	12	32
Regular†		5			5
Ongoing/routine					

* 2 -4 times per year

† 5-12 times per year

Health promotion summary

South Australian agencies that undertake screening and treatment work also undertake health promotion activities including community education with regard to the importance of clean faces. The clean face message is communicated with the clean hand message. Information is provided to teachers, health workers, families and children with the aim of achieving a social norm in which clean faces are expected, and unclean faces are rarely observed. Environmental changes are also being focused on. Mirrors at schools are being fixed to walls at the eye level of younger children, house maintenance officers are being encouraged to fix household taps in short time frames. Environmental health officers working in remote communities have received training to improve their knowledge of the factors impacting on trachoma transmission and the SAFE strategy (Surgery, Antibiotics, Facial Cleanliness and Environment). Country Health SA is monitoring the housing upgrades and housing maintenance in remote communities of the state, recognising that working taps are health hardware in housing and are essential both to improving general health and reducing the prevalence of trachoma.

Western Australia results 2013

Trachoma program coverage

- In 2013 WA identified 71 communities in four regions as being at risk of trachoma (Table 4.1).
- All 71 at-risk communities were screened for trachoma (Table 4.1).
- WA also screened two not at-risk communities in the Kimberley Region.

Screening coverage

- Population screening coverage of 5-9-year-old children in the 71 at-risk communities screened was 90%, ranging from 87% in the Goldfields region to 97% in the Pilbara region (Table 4.2).

Clean face prevalence

- Clean face prevalence was assessed in all communities that were screened.
- The overall prevalence of clean faces among 5-9-year-old children in the screened communities was 74%, ranging from 63% in the Goldfields region, to 91% in the Midwest Region (Table 4.2, Figure 4.5).

Trachoma prevalence

- The prevalence of trachoma in children aged 5-9 years screened was 3.8%. Prevalence ranged from 2.4% in the Kimberley region to 6.9% in the Goldfields region (Table 4.2, Figure 4.6).
- No trachoma was reported in 41 communities (Figure 4.7).
- Endemic levels of trachoma were reported in 20 communities (Figure 4.7).
- Non endemic levels of trachoma have been reported for three communities over a period of 5 years which would reclassify these communities as being not at risk for trachoma (Figure 4.8).

Treatment delivery and coverage

- Trachoma treatment strategies were applied in 34 communities (Table 4.3).
- Treatment was delivered to active cases and households in 27 communities, and to the whole of community in seven communities as per guidelines (Table 4.3).
- The overall treatment coverage in all regions was 94% with 759 of azithromycin delivered (Table 4.4, Figure 4.9).

Trichiasis

- Screening for trichiasis was undertaken in 64 communities.
- Overall 1,817 adults aged over 15 years were screened (Table 4.5).
- The prevalence of trichiasis in adults aged 15 years and over was 0.4%, and 0.5% in adults aged 40 years and over.
- Surgery for trichiasis was reported to be undertaken for six adults (Table 4.5).

Health promotion

- Health promotion activities were reported to have occurred in all 71 at-risk communities in all regions.
- A total of 169 health promotion activities were reported.
- The majority of the health promotion activities were delivered to children, teachers, childcare or preschool staff members (Table 4.6)

Figure 4.1 Trachoma prevalence in children aged 5-9 years, number of communities that were screened treated or both for trachoma and number of at-risk communities in Western Australia, 2013

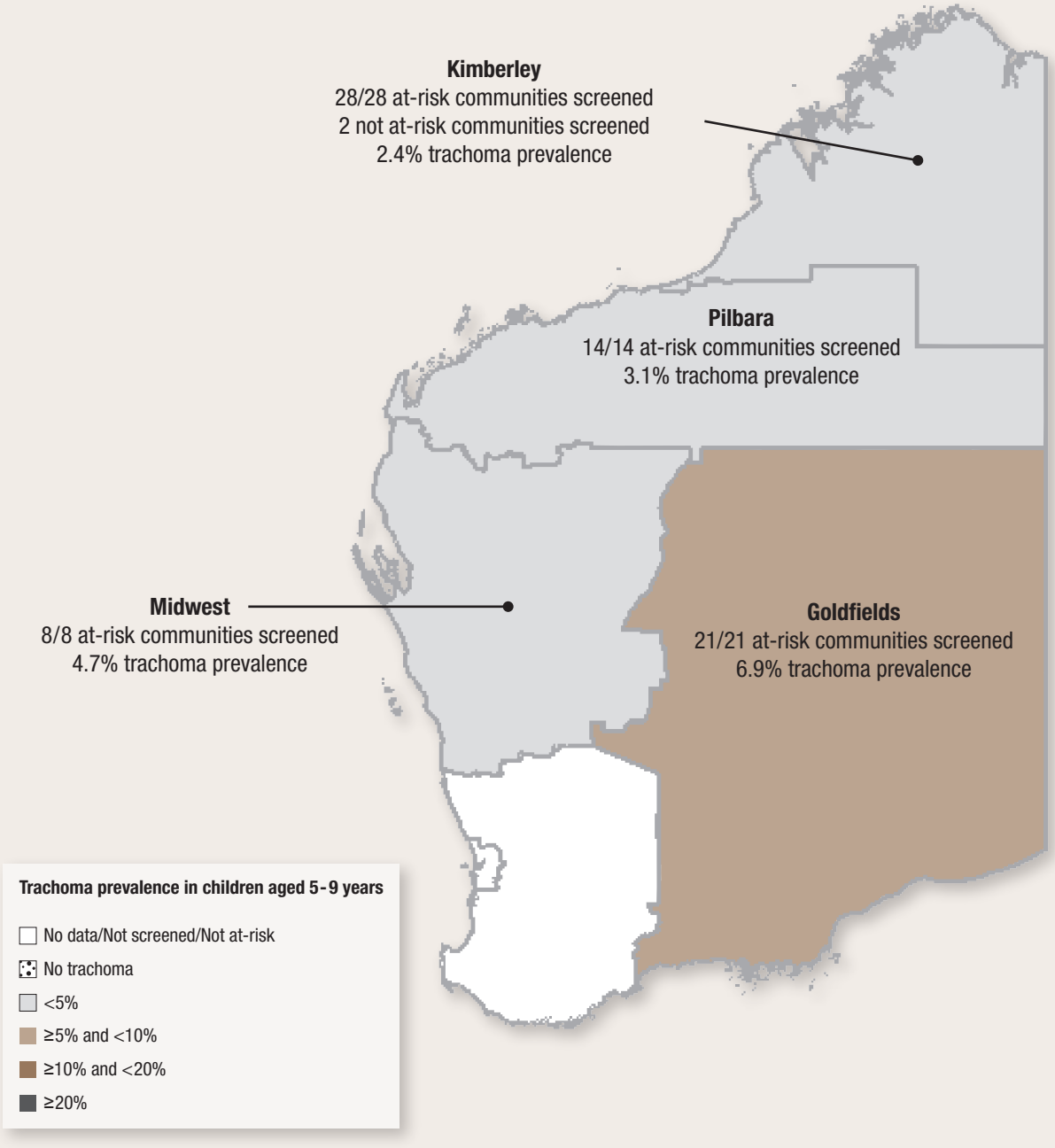


Figure 4.2 Number of communities at risk, by region, in Western Australia, 2007 – 2013

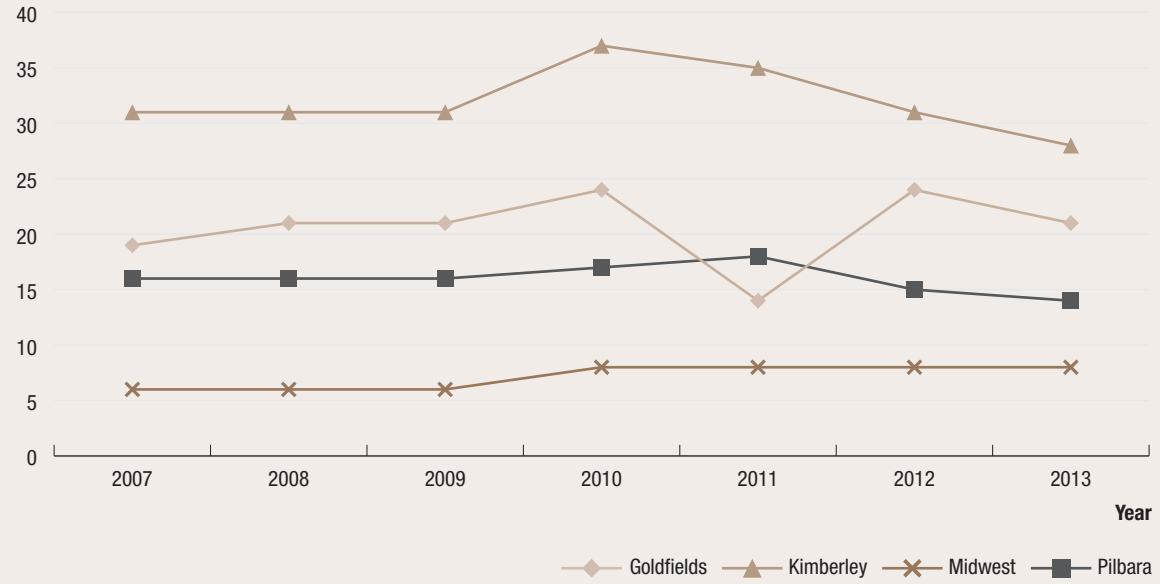


Figure 4.3 Number of at-risk communities, by region, according to trachoma control strategy implemented, Western Australia, 2013

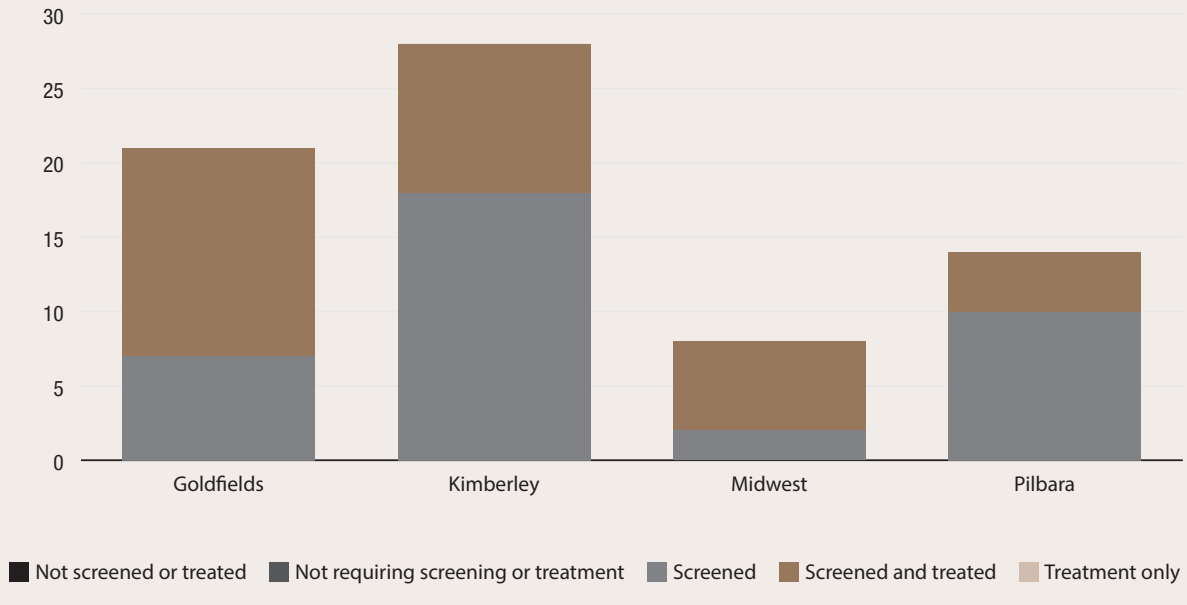


Figure 4.4 Population screening coverage in children aged 5-9 years in communities that required screening for trachoma, by region, in Western Australia in 2013

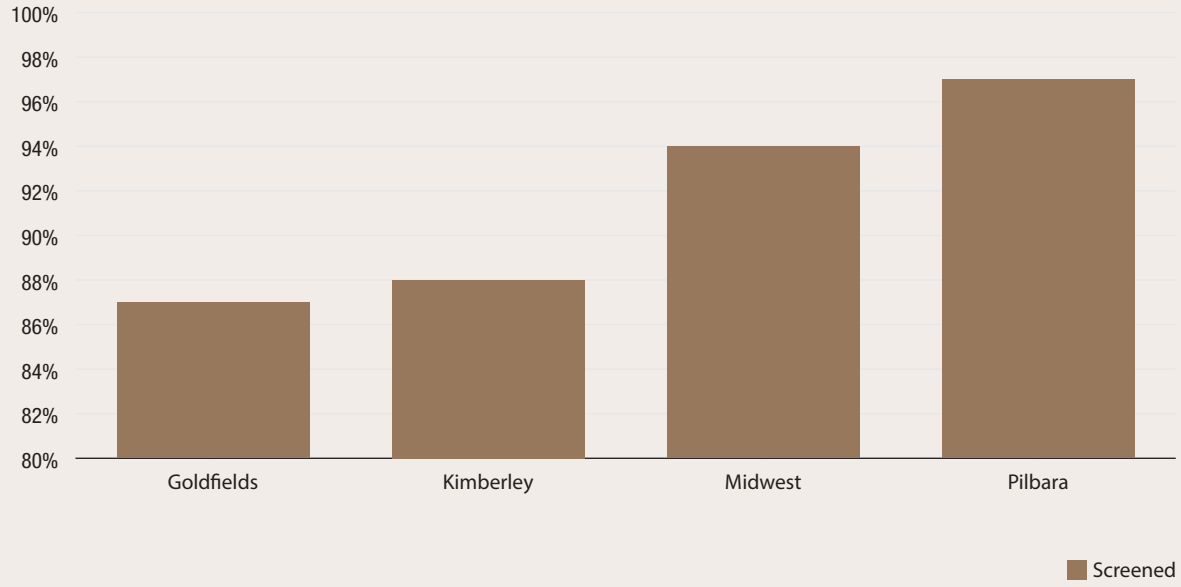


Figure 4.5 Proportion of screened children aged 5-9 years who had a clean face, by region, in Western Australia, 2007 – 2013

Figure 4.6 Trachoma prevalence among children aged 5-9 year in communities that were screened, by region, in Western Australia, 2007 – 2013

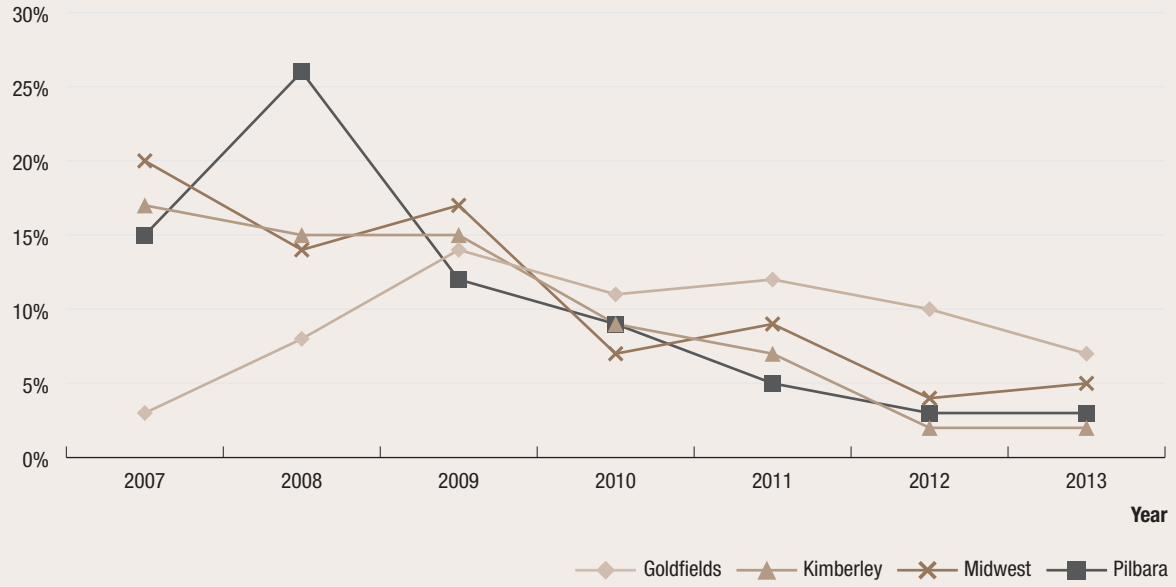


Figure 4.7 Number of at-risk communities according to level of trachoma prevalence in 5-9-year-old children in 2013, by region, in Western Australia

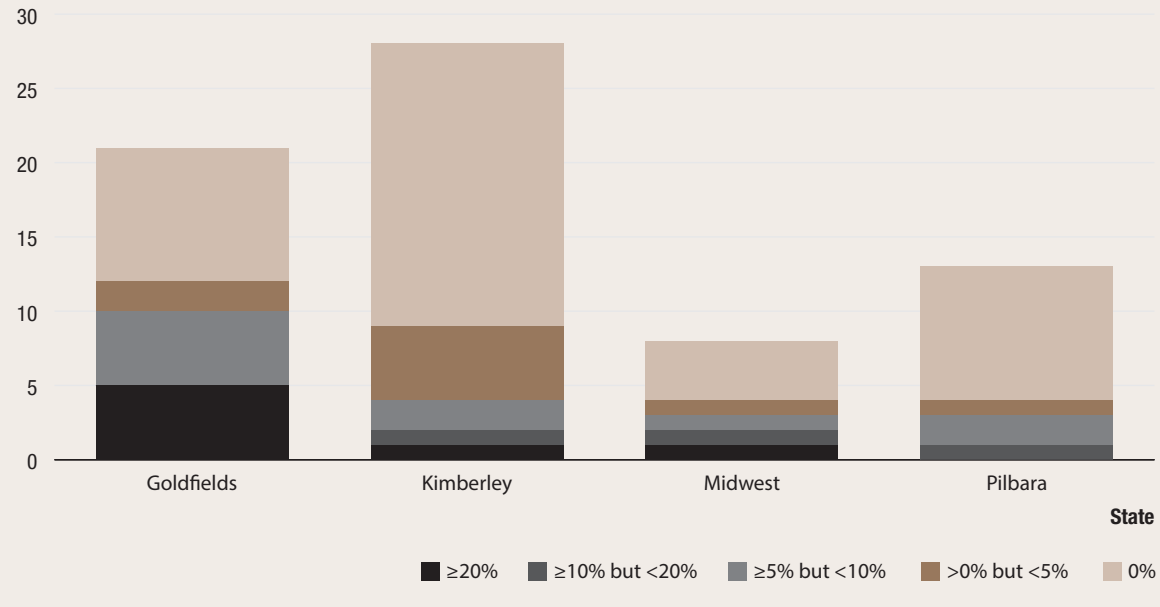
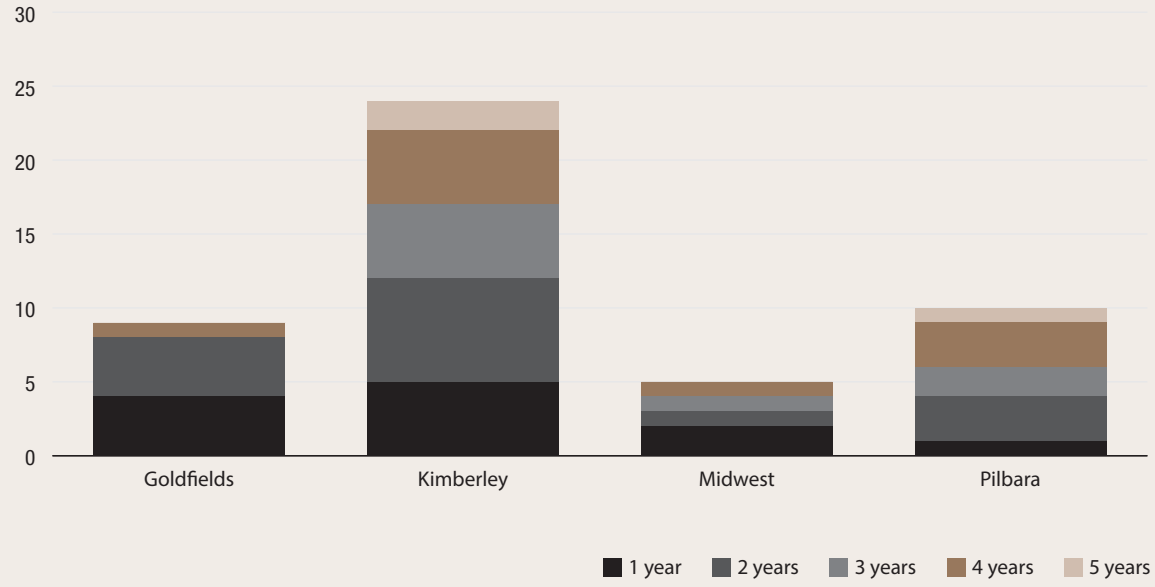
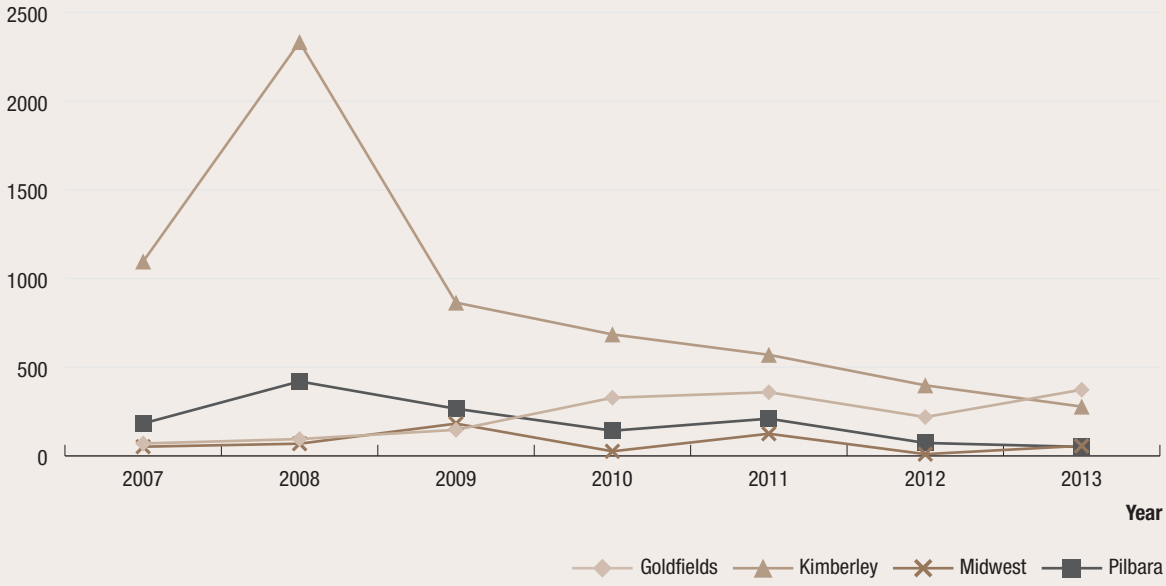


Figure 4.8 **Communities according to number of years* of trachoma prevalence under 5% by region, in Western Australia, 2013**



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

Figure 4.9 **Number of doses of azithromycin administered for the treatment of trachoma by Western Australia region, 2007 – 2013**



* 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 in Western Australia in 2013

Number of communities	Goldfields	Kimberley	Midwest	Pilbara	Total	Not at-risk
At risk (A)	21	28	8	14	71	
Requiring screening for trachoma (B)	21	28	8	14	71	
Screened for trachoma (C)	21	28	8	14	71	2
Requiring treatment only (D)	N/A	N/A	N/A	N/A	N/A	N/A
Treated* (E)	N/A	N/A	N/A	N/A	N/A	N/A
Screened and/or treated for trachoma (F = C+E)	21	28	8	14	71	2
Requiring neither screening or treatment for trachoma (G=A-B-D)	N/A	N/A	N/A	N/A	N/A	N/A

* Communities treated without screening in 2013 as per guideline instructions

Table 4.2 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children (0-14 years old), by region, in Western Australia in 2013

	Goldfields				Kimberley				Midwest				Pilbara				Total				Not at-risk			
Number of communities screened	**21**				**28**				**8**				**14**				**71**				**2**			
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	94	364	259	717	77	825	264	1,166	29	129	126	284	53	192	162	407	253	1,510	811	2,574	3	36	13	52
Children with clean face	38	231	233	502	33	607	243	883	20	117	124	261	32	157	149	338	123	1,112	749	1,984	3	29	13	45
Clean face prevalence (%)	40	63	90	70	43	74	92	76	69	91	98	92	60	82	92	83	49	74	92	77	100	81	100	87
Estimated number* of Aboriginal children in communities	105	418	334	857	102	932	369	1,403	37	137	132	306	57	197	178	432	301	1,684	1,013	2,998	5	62	42	109
Children examined for trachoma	94	364	259	717	75	823	270	1,168	29	129	126	284	53	192	162	407	251	1,508	817	2,576	3	35	12	50
Trachoma screening coverage (%)	90	87	78	84	74	88	73	83	78	94	95	93	93	97	91	94	83	90	81	86	60	56	29	46
Children with active trachoma	9	25	15	49	1	20	4	25	2	6	3	11	3	6	0	9	15	57	22	94	0	0	0	0
Active trachoma prevalence (%)	10	6.9	5.8	6.8	1.3	2.4	1.5	2.1	6.9	4.7	2.4	3.9	5.7	3.1	0.0	2.2	6.0	3.8	2.7	3.6	0.0	0.0	0.0	0.0

* Jurisdictional estimate

Table 4.3 Treatment strategies, by region, in Western Australia in 2013

Number of communities	Goldfields	Kimberley	Midwest	Pilbara	Total
At risk	21	28	8	14	71
Treated for trachoma	14	10	6	4	34
Screened and treated	14	10	6	4	34
Received treatment only	N/A	N/A	N/A	N/A	N/A
Received 6-monthly treatment	N/A	N/A	N/A	N/A	N/A
Did not require treatment	7	18	2	10	37
Treated active cases and households	9	8	6	4	27
Treated the whole of community	5	2	0	0	7
Not treated according to CDNA guidelines	0	0	0	0	0

* Communicable Diseases Network Australia. Guidelines for the public health management of trachoma in Australia. March 2006

† Three communities in both Goldfield and Midwest regions did not provide estimates for contacts requiring treatment, and active cases only were treated

Table 4.4 Trachoma treatment coverage in Western Australia in 2013

	Goldfields					Kimberley					Midwest					Pilbara					Total				
Age group (years)	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*	*0-4*	*5-9*	*10-14*	*15+*	*All*
Active cases requiring treatment	9	25	15		49	1	20	4		25	2	6	3		11	3	6	0		9	15	57	22		94
Active cases who received treatment	9	24	15		48	1	20	4		25	2	6	3		11	3	6	0		9	15	56	22		93
Active cases who received treatment (%)	100	96	100		98	100	100	100		100	100	100	100		100	100	100	N/A		100	100	98	100		99
Estimated contacts requiring treatment	34	60	49	183	326	62	79	73	89	303	2	9	9	26	46	4	10	9	19	42	102	158	140	317	717
Number of contacts who received treatment	34	60	49	182	325	41	63	61	88	253	2	9	9	26	46	4	10	9	19	42	81	142	128	315	666
Estimated contacts who received treatment (%)	100	100	100	99	100	66	80	84	99	83	100	100	100	100	100	100	100	100	100	100	79	90	91	99	93
Total number of doses of azithromycin delivered	43	84	64	182	373	42	83	65	88	278	4	15	12	26	57	7	16	9	19	51	96	198	150	315	759
Estimated overall treatment coverage (%)	100	99	100	99	99	67	84	84	99	85	100	100	100	100	100	100	100	100	100	100	82	92	93	99	94

Table 4.5 Trichiasis screening coverage, prevalence and treatment among Aboriginal adults, by region, in Western Australia in 2013

	Goldfields		Kimberley		Midwest		Pilbara		Total		
Number of communities screened for trichiasis	**19**		**25**		**6**		**14**		**64**		
Age group (years)	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15-39*	*40+*	*15+*
Estimated population in region	1,243	803	2,906	1,639	356	274	1,393	734	5,898	3,450	9,348
Adults examined†	149	289		1,010	12	92		265	161	1,656	1,817
With trichiasis (% of adults examined)	0	1 (0.3%)		7 (0.7%)	0	0		0	0	8 (0.5%)	8 (0.4%)
Offered ophthalmic consultation	0	1		6	0	0		0	0	7	7
Declined ophthalmic consultation	0	1		0	0	0		0	0	1	1
Surgery in past 12 months	0	0		6	0	0		0	0	6	6

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

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

Table 4.6 Health promotion activities, by region, in Western Australia in 2013

	Goldfields	Kimberley	Midwest	Pilbara	Total
Number of communities at risk	21	28	8	14	71
Number of communities who reported health promotion activities	21	28	8	14	71
Total number of programs	68	59	8	34	169
Methods of Health Promotion					
One-on-one discussion	17	6		14	37
Presentation to group	21	29	8	1	59
Interactive group session	18	18	8	9	53
Social marketing		5			5
Print material/mass media	20	24	8	10	62
Sporting/community events	1				1
Other	5	1			6
Target audience					
Health professionals/staff	20			4	24
Children	22	30	8	12	72
Youth	2	5		8	15
Teachers/childcare/preschool staff	18	19	8	10	55
Caregivers/parents	3	9	7	11	30
Community members	2	14	8	9	33
Community educators/health promoters	1	1	1	1	4
Interagency members				1	1
Frequency of health promotion activities					
Once	41	9	8	11	69
Occasional*	11	38		1	50
Regular†		6		5	11
Ongoing/routine	18	6		17	41

* 2 -4 times per year

† 5-12 times per year

Health promotion summary

The promotion of facial cleanliness was the key strategy for health promotion activity across the endemic regions. Numerous school education sessions were conducted using the 'No Germs on Me' trachoma resources, the 'Clean Faces, Strong Eyes' story kits and interactive displays to demonstrate trachoma transmission and the importance of clean faces and hands in preventing trachoma infection. Puppet shows were developed to illustrate transmission vectors and were used in education sessions. The school sessions incorporated community education in a number of communities to further reinforce the prevention messages.

Considerable work has been undertaken in the Pilbara to increase the levels of health promotion around facial cleanliness and hygiene. This approach has included working with Aboriginal Medical Services, schools and communities across the region to ensure that consistent messaging about facial cleanliness was available all year round. Education sessions with mums and families took place at Football Carnivals three times per year and resources were left with different stakeholders to be used at different times. Desert sinks were used to encourage children to wash their hands and faces and clown doctors used clown humour to communicate the message. Following screening, community level results were presented to communities in a visual way to encourage ownership of health outcomes

Work with schools in ensuring adequate facilities for hand washing was an important strategy for the Health Promotion Officer in the Goldfields. Advocating for the installation of hand-washing stations, provision of disposable paper towels and soap-making activities were seen as particularly successful. The provision of face packs (containing a face washer, tissues and soap) for each child screened in the Goldfields encouraged greater levels of facial cleanliness and an increased awareness in education staff about the importance of personal hygiene.

In addition to school education sessions, local media in the Kimberley were used to promote the trachoma prevention message. Community service announcements in local languages were developed for radio to reinforce messages about trachoma prevention, transmission and treatment, as well as raise awareness about upcoming screening in communities. Pamphlets were also produced with key messages and local contact information for distribution across the region. Additionally, sponsorship of events such as the King of the Kimberley basketball carnival and a Clean Yard Competition provided further opportunities for promotion of the trachoma prevention message.

Community barbeques were held in Halls Creek Shire communities to give communities the screening results, further increasing the engagement of these communities with the program messages.

New South Wales results 2013

Trachoma program coverage

- NSW undertook a mapping exercise in the Western NSW region.
- Ten communities were identified by expert advice and local knowledge as being potentially at risk of trachoma and therefore screened (Table 5.1).

Screening coverage

- Population screening coverage for trachoma in the 5-9 year-old age group was 72% (Table 5.1)

Clean face prevalence

- Clean face prevalence was assessed in all communities that were screened.
- The overall prevalence of clean faces among 5-9-year-old children in the screened communities was 96% (Table 5.1).

Trachoma prevalence

- The prevalence of trachoma in children aged 5-9 years screened was 0.5% (Table 5.1)
- Trachoma was found in only one community in the Western NSW region, at a prevalence of 6%.

Treatment delivery and coverage

- Trachoma treatment strategies were applied in one community (Table 5.2).
- The treatment strategy applied to this community was the treatment of active cases and all household contacts (Table 5.2).
- The overall treatment coverage in all regions was 100% with 25 doses of azithromycin delivered.

Trichiasis

- Trichiasis screening was not required to be undertaken in 2013.

Health Promotion

- Health promotion activities were not provided in 2013 as part of the NSW trachoma mapping exercise.

Figure 5.1 Trachoma prevalence in children aged 5-9 years, number of communities that were screened treated or both for trachoma and number of potentially at-risk communities in NSW, 2013

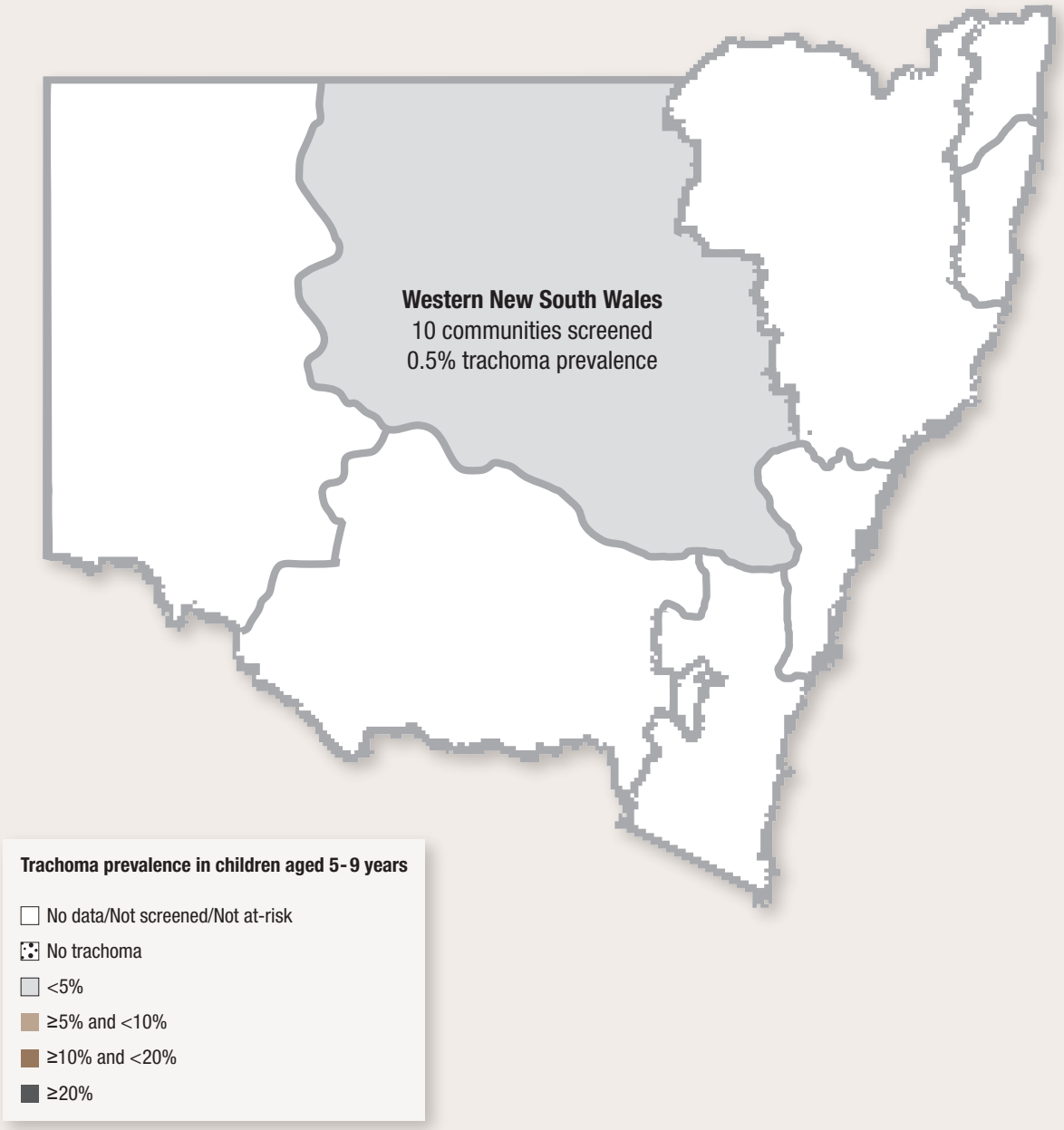


Table 5.1 Trachoma screening coverage, trachoma prevalence and clean face prevalence in children (5-14 years old) in Western New South Wales in 2013

	Western NSW			
Number of communities screened	**10**			
Age group (years)	***0-4***	***5-9***	***10-14***	***5-14***
Children examined for clean face		608	81	689
Children with clean face		581	80	661
Clean face prevalence (%)		96	99	96
Estimated number* of Aboriginal children in communities		795	130	925
Children examined for trachoma		575	77	652
Trachoma screening coverage (%)		72	59	70
Children with active trachoma		3	0	3
Active trachoma prevalence (%)		0.5	0	0.5

* Jurisdictional estimate

Table 5.2 Trachoma treatment coverage in New South Wales in 2013

	Western NSW				
Number of communities screened	**10**				
Treatment strategy	**Active cases and all household contacts**				
Age group (years)	***0-4***	***5-9***	***10-14***	***15+***	***All***
Active cases requiring treatment	0	3	0		3
Active cases received treatment		3			3
Active case treatment coverage (%)		100			
Contacts requiring treatment	2	3	1	16	22
Contacts received treatment	2	3	1	16	22
Contacts treatment coverage (%)	100	100	100	100	100
Doses of azithromycin delivered	2	6	1	16	25
Overall treatment coverage (%)	100	100	100	100	100

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Discussion

Screening coverage

Screening coverage was measured as both the proportion of at-risk communities screened and the proportion of 5-9-year-old children screened in at-risk communities, predominantly through primary school-based initiatives. Screening of older (10-14 years) and younger (0-4 years) children also takes place, but less consistently, and in 2013 all regions chose to focus screening exercises solely on the 5-9-year age group. In 2013, population estimates provided by jurisdictions were used to calculate proportions. The manner in which the populations were calculated differed among jurisdictions, with some jurisdictions using school enrolment lists, Health Information population lists, or a combination of both and local knowledge, or from the 2011 Australian Bureau of Statistics (ABS) census. In 2013, all regions increased trachoma screening coverage of 5-9-year-old children in communities that were screened except East Arnhem region in the NT and APY Lands region in SA, compared to 2012. A higher screening coverage provides confidence that those screened are representative of the community at risk, and results are therefore a more accurate reflection of the prevalence of disease within the community.

The number of at-risk communities screened has plateaued in the NT, decreased slightly in WA and decreased substantially in SA. Figure 1.8 illustrates that some communities in all jurisdictions will not be considered at risk from 2014. It is expected that this decreasing trend will continue in future years. A number of communities screened for the first time in 2013 did not have trachoma, and therefore do not qualify as being at risk for future years.

The *Guidelines for the public health management of trachoma in Australia* has recently undergone a review and has been revised.[1,2] The new guidelines will direct communities to focus resources on treatment without annual screening where trachoma prevalence is already well established. Communities with non-endemic levels of trachoma will not be required to screen annually. These guidelines have been implemented in the NT in 2013, and will be implemented nationwide in 2014. This strategy has affected the number of communities screened in the NT and will have a similar effect in other jurisdictions in future years. Community and child population screening coverage have been used as an indication of the level of program delivery in previous annual trachoma reports. In response to the revised guidelines, the annual report has shifted focus from screening coverage to the extent of implementation of the guidelines with respect to screening, treatment and health promotion activities.

Trachoma prevalence

Endemic trachoma is defined by WHO as a prevalence of active trachoma of 5% or greater in children aged 1-9 years. In past years, the National Trachoma Surveillance and Reporting Unit (NTSRU) had been able to estimate the prevalence using population weights. Due to the poor screening coverage of the 0-4-year age group, it was considered that the results reported were not representative of that age group. In Australia, the prevalence in the 5-9-year age group is accepted as a sufficient measure of the prevalence of trachoma within at-risk communities.

Across all four jurisdictions in 2013, the prevalence of trachoma in 5-9-year-old children was 4%, which includes data projected forward in communities that did not screen due to implementation of the revised guidelines in the NT (see methodology, data analysis). This rate is consistent with the 2012 national prevalence of trachoma in 5-9-year old children of 4%. The observed trachoma prevalence in communities that were screened in 2013 was 3%. At a regional level in 2013, the prevalence of trachoma in children aged 5-9 years ranged from 0.3% in Western NSW to 11% in the APY Lands SA.

NSW detected trachoma in one of the ten communities screened. This community is now considered at risk and will continue to be monitored.

Trachoma prevalence in 2013 has slightly increased in SA and the NT but plateaued in WA, after a decreasing trend from 2009 to 2012 in all jurisdictions. Increasing and plateauing trends are most likely due to the decrease in at-risk communities in SA and WA. This trend may continue in future years due to implementation of the revised guidelines where communities not at risk cease undergoing screening and the at-risk population becomes more concentrated.

The target set by WHO for the elimination of blinding trachoma is defined as a community prevalence of trachoma in children aged 1-9 years of less than 5% over a period of 5 years; in Australia, the Communicable Diseases Network Australia (CDNA) target is defined as a community prevalence in children aged 5-9 years of less than 5% over a period of 5 years. Several communities designated as at risk have reported a prevalence of less than 5% over the past 5 years, or have a baseline prevalence of 0% and are therefore designated not at risk. The NTSRU will be working closely with jurisdictions to appropriately designate at-risk status for communities for future program delivery.

Trachoma treatment

The 2006 CDNA guidelines recommend the treatment of active cases and their household contacts. When prevalence is greater than 10% and cases are not clustered within a few households, community-wide treatment is suggested. This

treatment approach was adopted by SA and WA. The 2014 revised CDNA guidelines recommend treatment to all people living in households with children younger than 15 years of age annually for a period of 3 years, when the community prevalence is greater than 5%, and cases are not clustered within a few households. The guidelines also recommend 6-monthly treatments over a period of 3 years for all people living in households with children younger than 15 years of age in hyperendemic communities with a prevalence of at least 20%. This approach was implemented in the NT in 2013.

Nationally, 99% of active cases that were identified in 2013 were treated for trachoma. Contact and community-treatment coverage was 81%. Total doses of azithromycin administered in 74 communities was 10,219. The majority of these were in the NT.

Trichiasis

Previous annual trachoma reports have reported on trichiasis screening coverage. The previous at-risk population was estimated using the current year's trachoma at-risk community adult population, which does not account for changing endemic areas that have occurred over time, and transiency into non-endemic regions. It was therefore decided that estimating an at-risk population for trichiasis is not feasible.

The number of adults aged 40 years and older screened for trichiasis decreased in 2013 with 3,856 screened in 2013, and 4,468 screened in 2012. Some regions also reported screening undertaken in adults aged older than 15 - 30 years.

Of the adults aged older than 40 years who were screened, 1% (49/3,856) prevalence levels of trichiasis were reported.

In 2013, 31 cases of trichiasis surgery were reported in NT (23), SA (2) and WA (6). These cases may have been identified from previous years screening activities. The reporting of trichiasis data regarding referral and surgery undertaken is limited due to incomplete data collection and compilation.

Facial cleanliness

Promoting facial cleanliness is a major component of the SAFE strategy, recognising that the presence of nasal and ocular discharge is significantly associated with the risk for both acquiring and transmitting trachoma. The proportion of 5-9-year-old children screened who had clean faces increased slightly in the NT, and decreased slightly in SA and WA. NSW had the highest prevalence of facial cleanliness at 96% of all children screened. The NT did not report levels of facial cleanliness in communities that did not screen for trachoma due to implementation of the revised guidelines. It is recommended that jurisdictions implementing the new guidelines continue to screen for facial cleanliness in communities where treatment and health promotion activities are undertaken.

Program delivery and monitoring

Improvements in program delivery have been reported in 2013 with increased coverage of screening and treatment delivery and health promotion activities in WA. However, although treatment coverage in the NT and SA were high, these jurisdictions did not reach their community screening goals due to funding issues with service providers. Data quality also improved in all jurisdictions; however, as many regions chose to focus on the 5-9-year age group, data pertaining to the 0-4 and 10-14-year age groups were not comprehensive.

The newly endorsed CDNA guidelines will strengthen trachoma control programs in all jurisdictions by reducing ambiguity experienced in previous guidelines and provide clear guidance on screening and treatment methods. The impact of the new strategies, in particular treatment and screening schedules, may not be evident for several years.

Progress towards Australia's elimination target

The Australian government's commitment to the WHO Alliance of the Global Elimination of Blinding Trachoma by the year 2020 (GET 2020), of which Australia is a signatory, continues with further funding committed to ensuring that trachoma programs are increased and strengthened.

Discussions and plans are required for the next phase of monitoring communities no longer considered at risk, and planning for monitoring trichiasis once blinding trachoma has been eliminated from Australia.

With the implementation of new guidelines in 2014 and improved efforts, as reported in 2013, and decreasing numbers of at-risk communities leading to a greater target on focused endemic areas, Australia will stay on track to eliminate trachoma by 2020.

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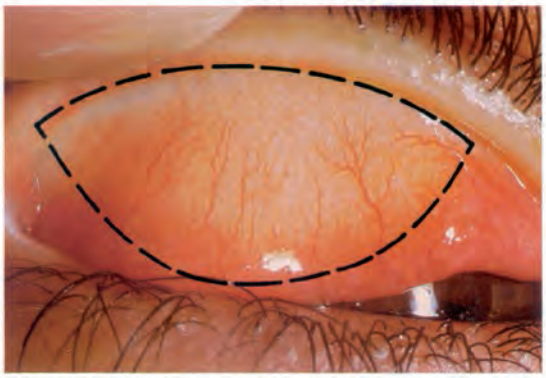
Appendix 1: World Health Organization Trachoma Grading Card

TRACHOMA GRADING CARD

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

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

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



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

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

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

Trachomatous inflammation – follicular (TF).

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

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

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

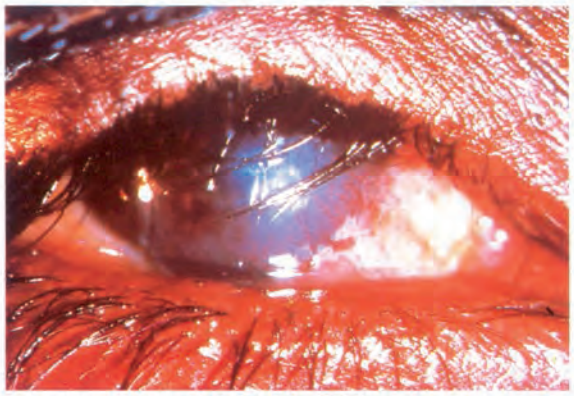
***TRACHOMATOUS SCARRING (TS)**: the presence of scarring in the tarsal conjunctiva.*

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

Trachomatous scarring (TS)

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

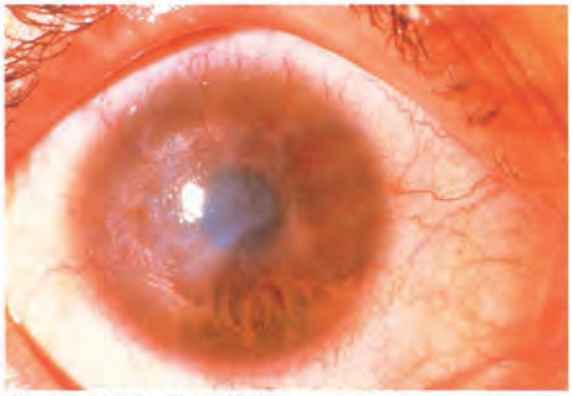
Evidence of recent removal of inturned eyelashes should also be graded as trichiasis.



Trachomatous trichiasis (TT)

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

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



Corneal opacity (CO)

TF:– give topical treatment (e.g. tetracycline 1%).
TI:– give topical and consider systemic treatment.
TT:– refer for eyelid surgery.

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

Appendix 2: Data Collection Forms

Summary form 1: Active cases of trachoma

State/Territory	
Region:	
Community:	
School:	
Date of screening:	

Children screened for trachoma	**Age (in years)**		
	1-4	**5-9**	**10-14**
Number of Aboriginal children in the community			
Number of children examined for trachoma			
Number of children with TI			
Number of children with TF			
Number of children with TF / TI			
Number of children with TS			
Number of children screened for clean face			
Number of children with clean face			
Number of children requiring treatment with azithromycin			
Number of active cases who received treatment with azithromycin			
Trachoma prevalence			

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

Summary form 2: Treatment of household contacts

State/Territory	
Region:	
Community:	

Trachoma prevalence	
Treatment strategy	
Date treatment started	
Date treatment completed	
Number of households requiring treatment	
Number of households that received treatment	
Comments	

	Age (years)					
	<1 (>3kg)	**1-4**	**5-9**	**10-14**	**15+**	**Total**
Number of household contacts requiring treatment with azithromycin						
Number of household contacts who received treatment with azithromycin						
Number of household who received treatment with azithromycin within 2 weeks of commencement of treatment distribution						
Treatment coverage (%)						

Summary Form 3: Trichiasis

State/Territory	
Region:	
Community:	
Date/Year of screening	

Age group	**Age (in years)**									
	15-29		**30-39**		**40-49**		**50+**		**Total**	
	M	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
Number of Aboriginal people in age group										
Number of Aboriginal people examined for trichiasis										
Number of Aboriginal people with trichiasis										
Number of Aboriginal people with trichiasis who were offered ophthalmological consultation within 6 months of the previous screening										
Number of Aboriginal adults with trichiasis who declined ophthalmological consultation within 6 months of the previous screening										
Number of Aboriginal adults who underwent trichiasis surgery in the last year										

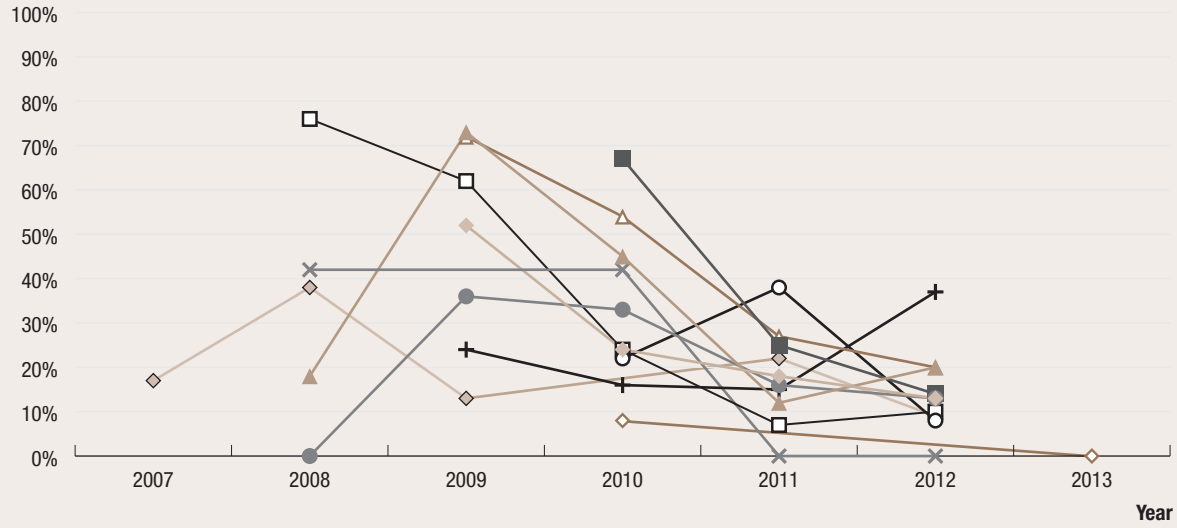
Summary Form 4: Health Promotion

State/Territory		Community:	
Region:		School:	

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

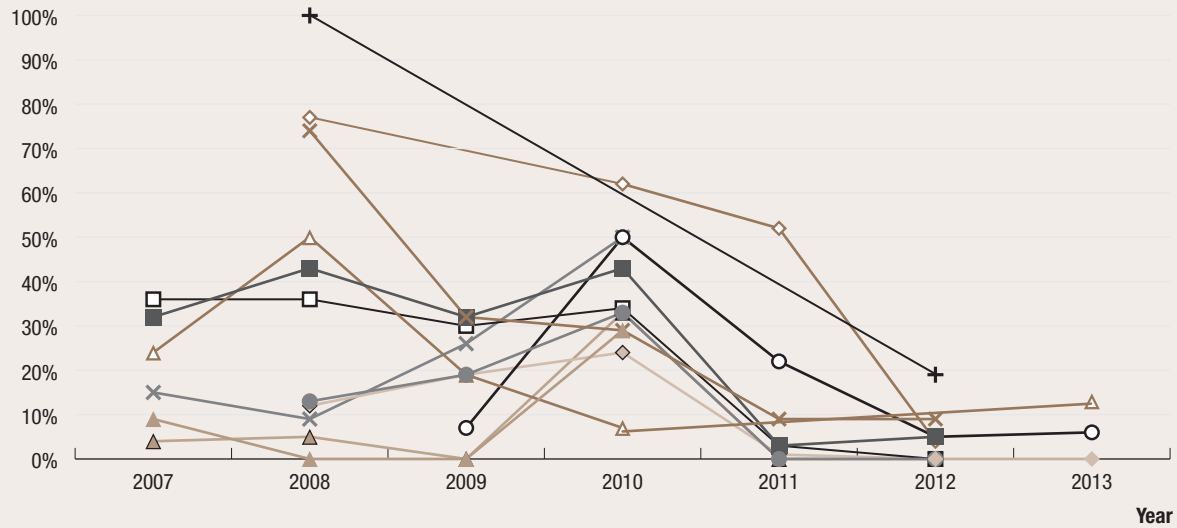
Appendix 3: De-identified community trachoma prevalence trends by regions, Australia, 2007 – 2013

Figure A.1 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in North Alice Springs Remote region, Northern Territory, 2007 – 2013



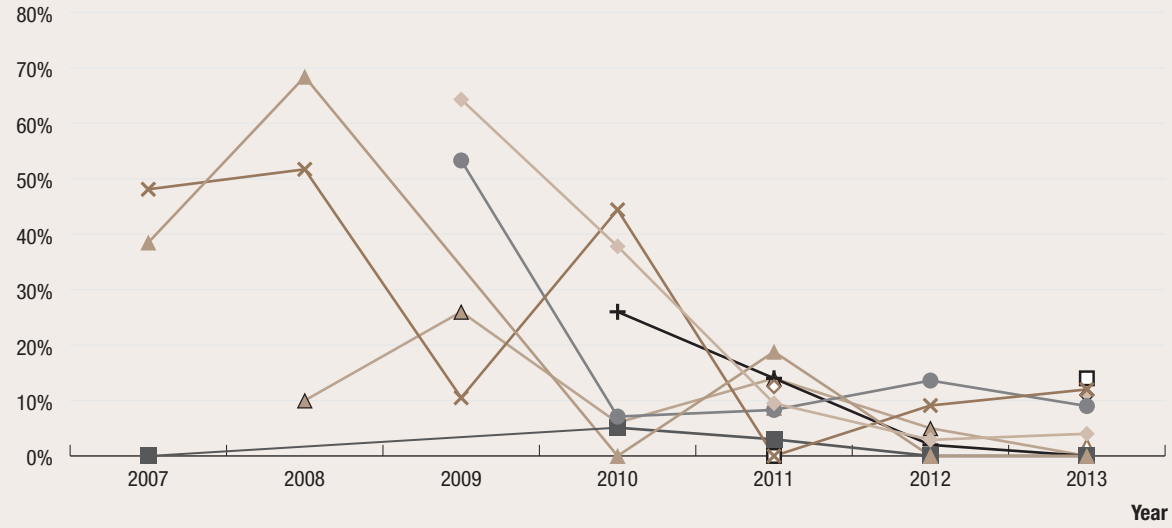
* Where more than 10 children were screened

Figure A.2 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in South Alice Springs Remote region, Northern Territory, 2007 – 2013



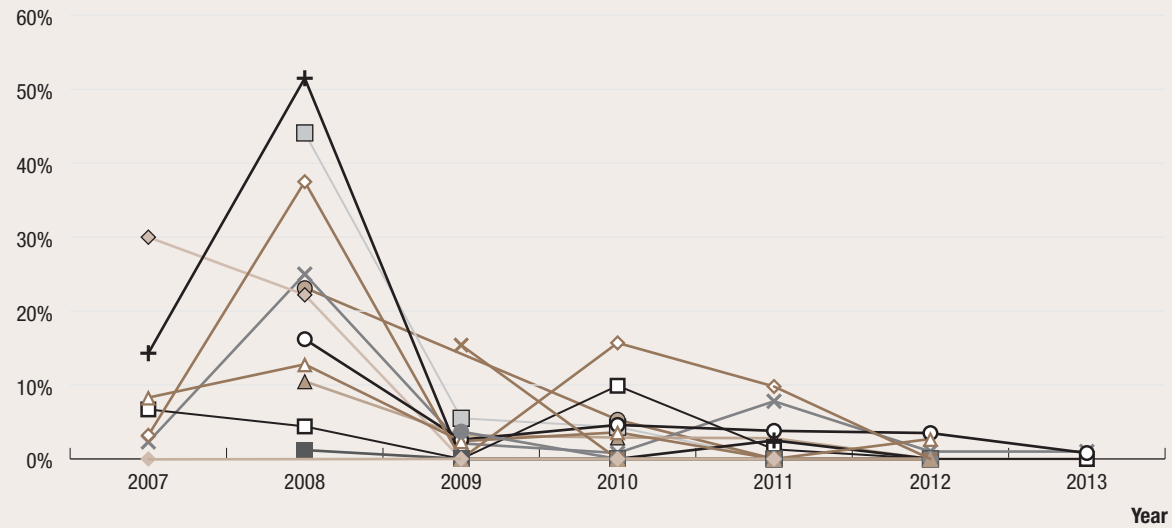
* Where more than 10 children were screened

Figure A.3 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Barkly region, Northern Territory, 2007 – 2013



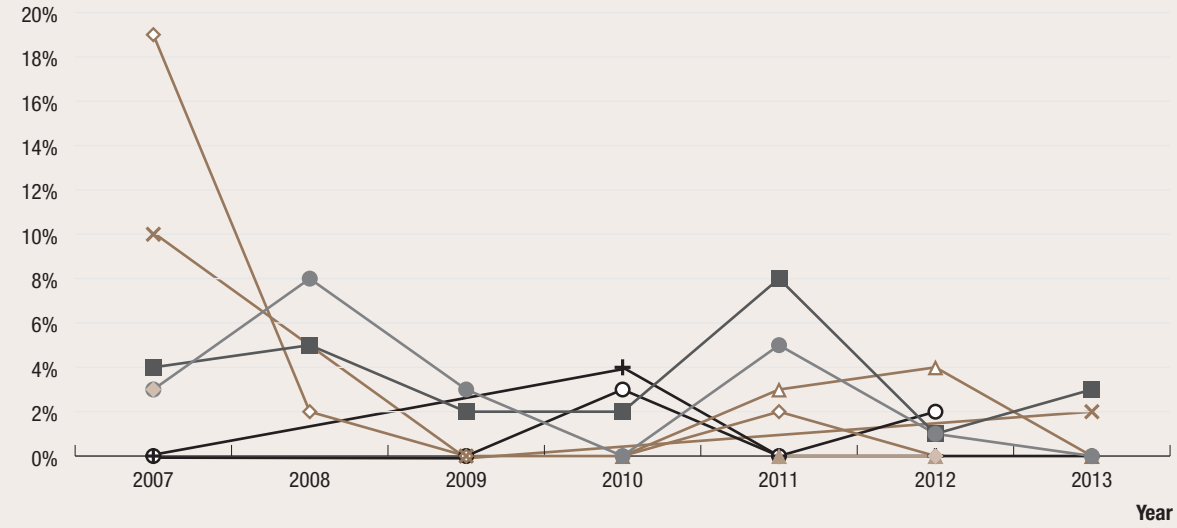
* Where more than 10 children were screened

Figure A.4 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Darwin Rural region, Northern Territory, 2007 – 2013



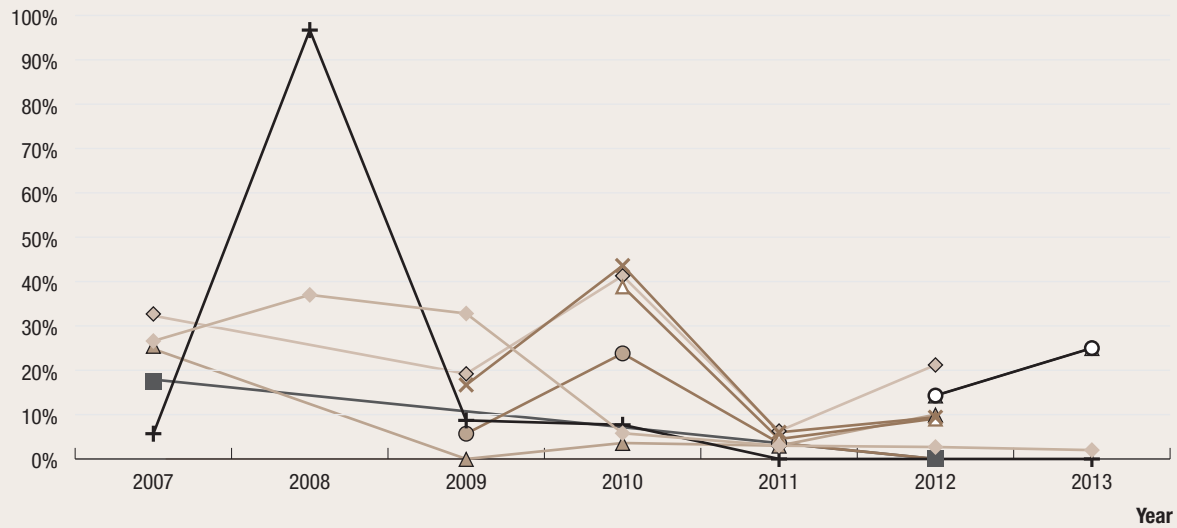
* Where more than 10 children were screened

Figure A.5 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in East Arnhem region, Northern Territory, 2007 – 2013



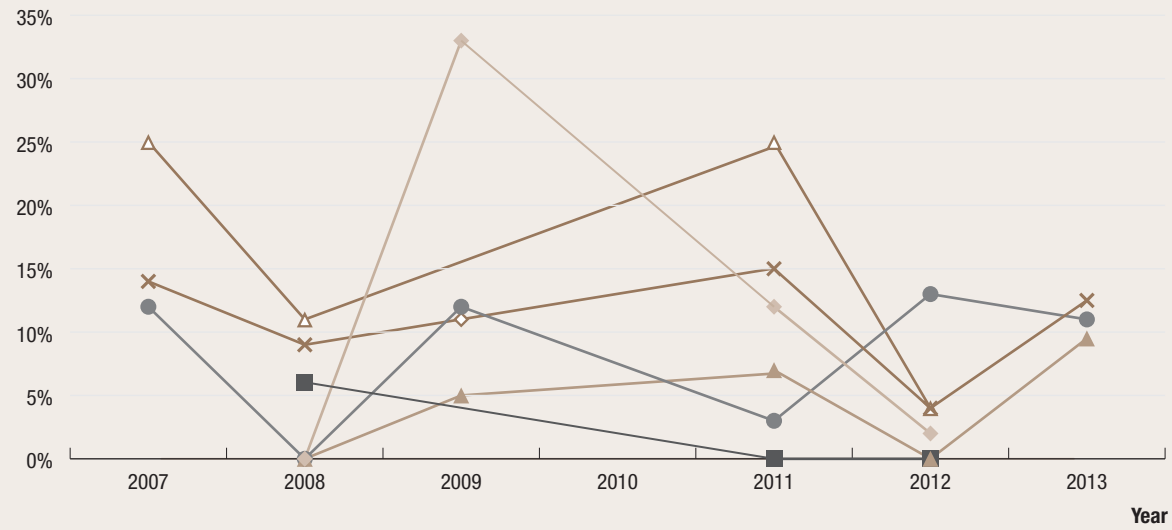
* Where more than 10 children were screened

Figure A.6 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Katherine region, Northern Territory, 2007 – 2013



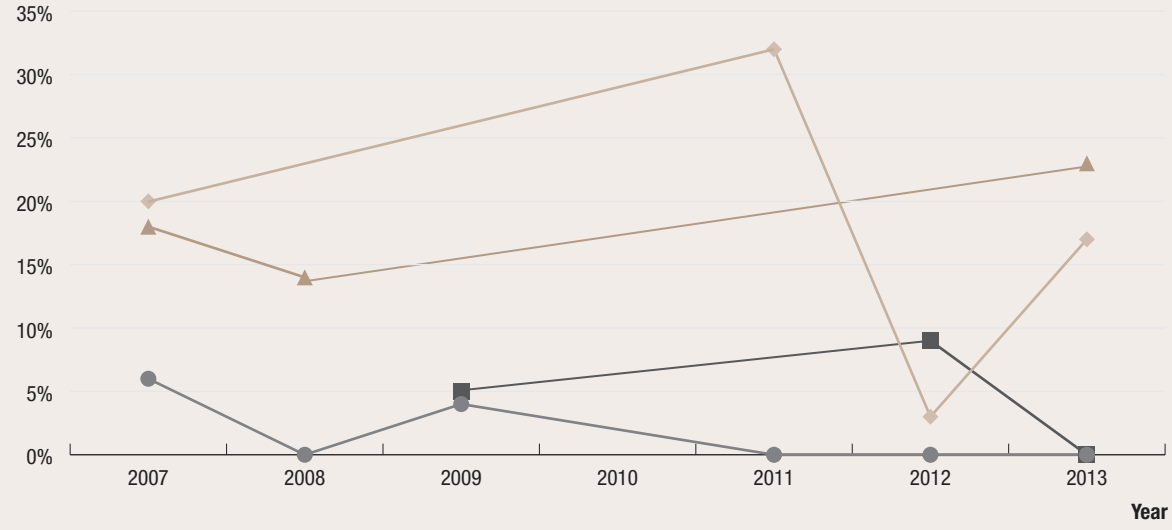
* Where more than 10 children were screened

Figure A.7 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Anangu Pitjantjatjara Yankunytjatjara (APY) Lands region, South Australia, 2007 – 2013



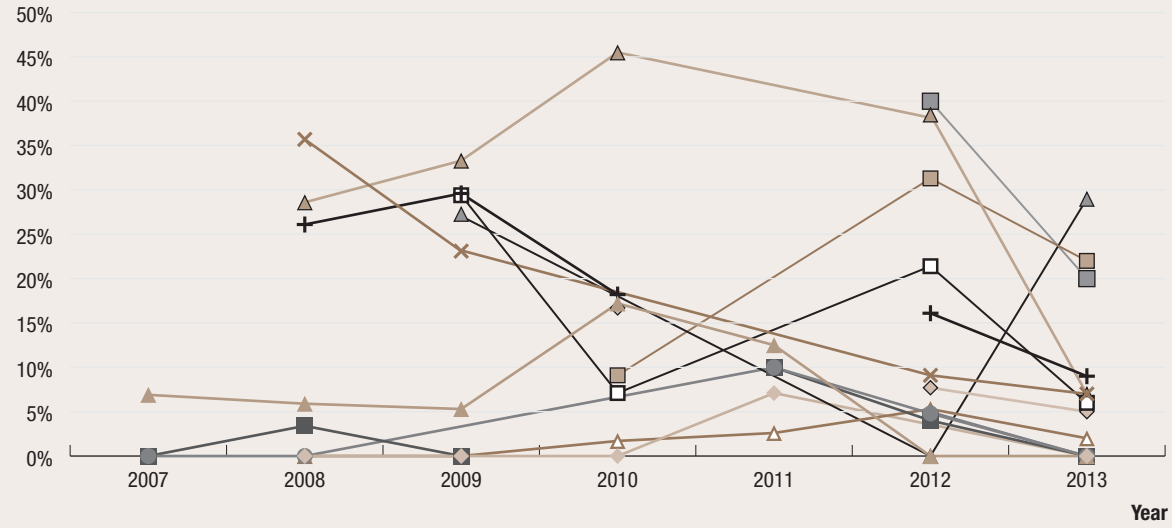
* Where more than 10 children were screened

Figure A.8 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Eyre and Western region, South Australia, 2007 – 2013



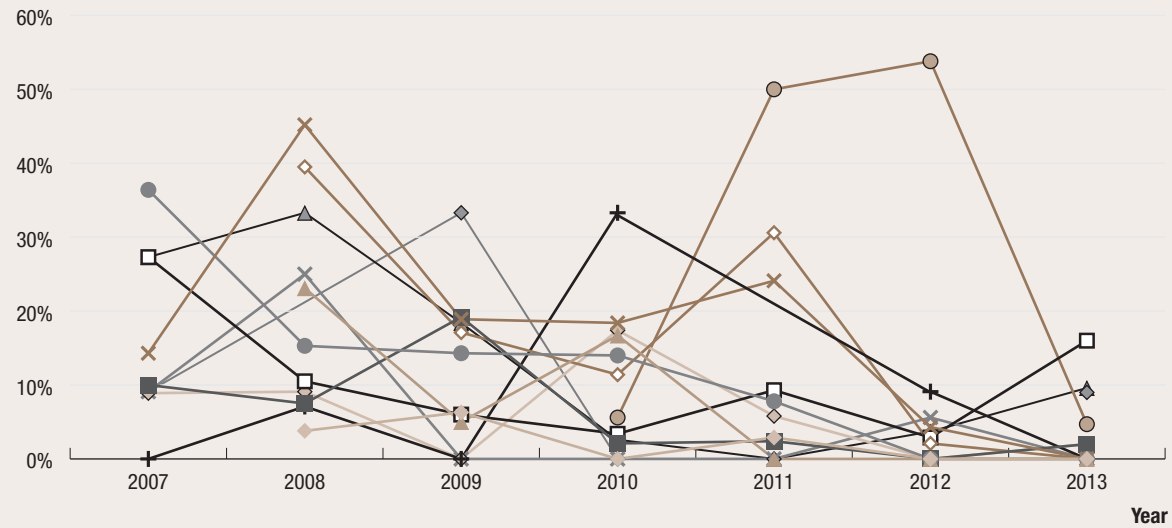
* Where more than 10 children were screened

Figure A.9 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Goldfields region, Western Australia, 2013



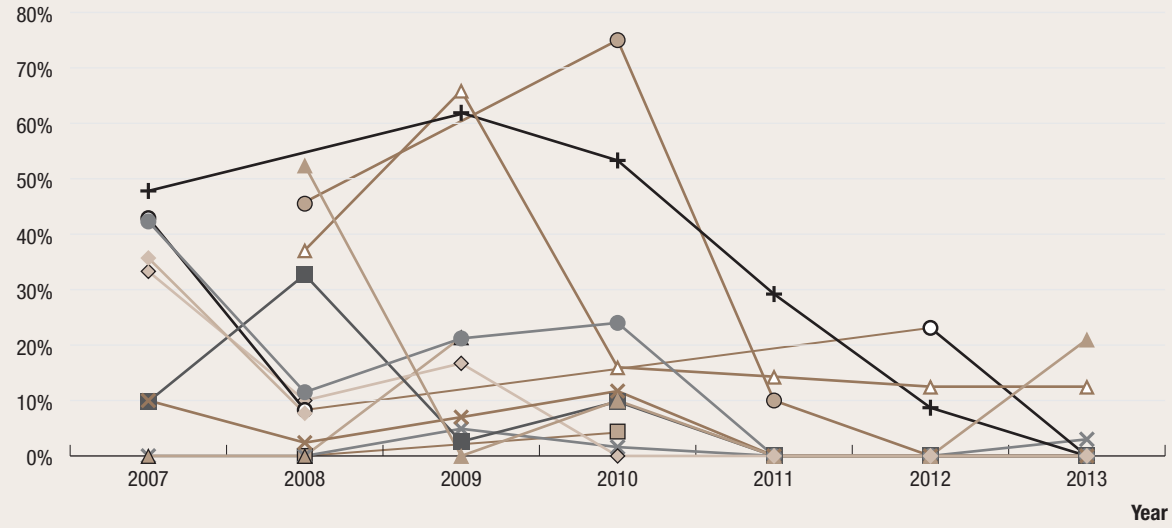
* Where more than 10 children were screened

Figure A.10 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in West Kimberly region, Western Australia, 2013



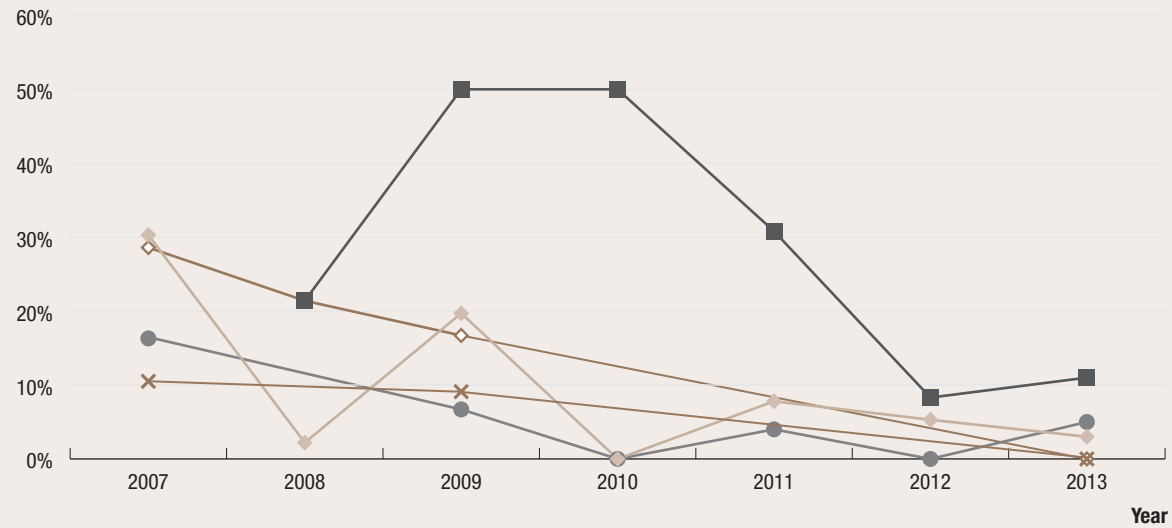
* Where more than 10 children were screened

Figure A.11 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in East Kimberly region, Western Australia, 2013



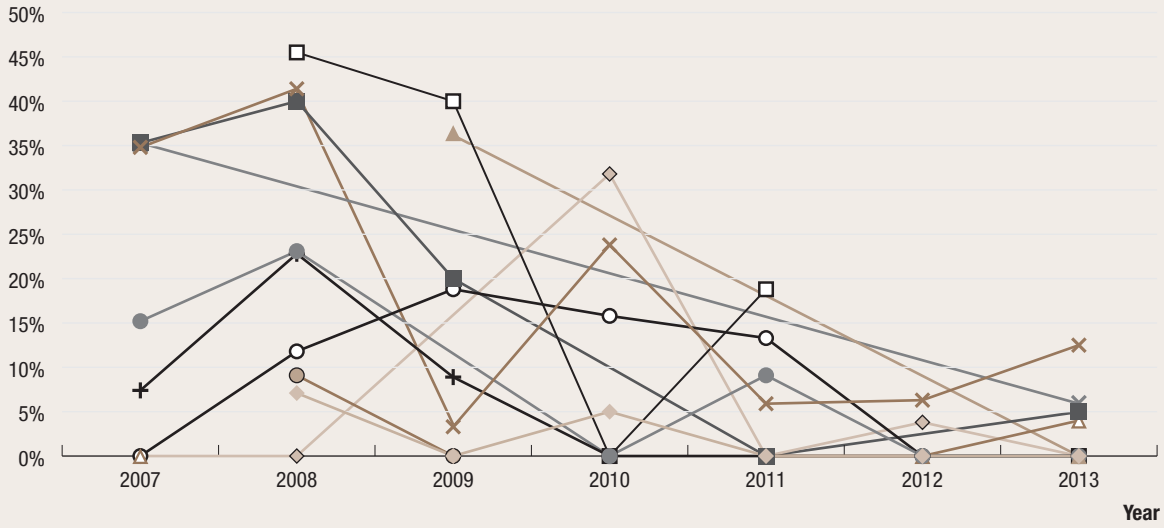
* Where more than 10 children were screened

Figure A.12 Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Midwest region, Western Australia, 2013



* Where more than 10 children were screened

Figure A.13 **Trachoma prevalence of screened children aged 5-9 years by year and de-identified community* in Pilbara region, Western Australia, 2007 – 2013**



* Where more than 10 children were screened

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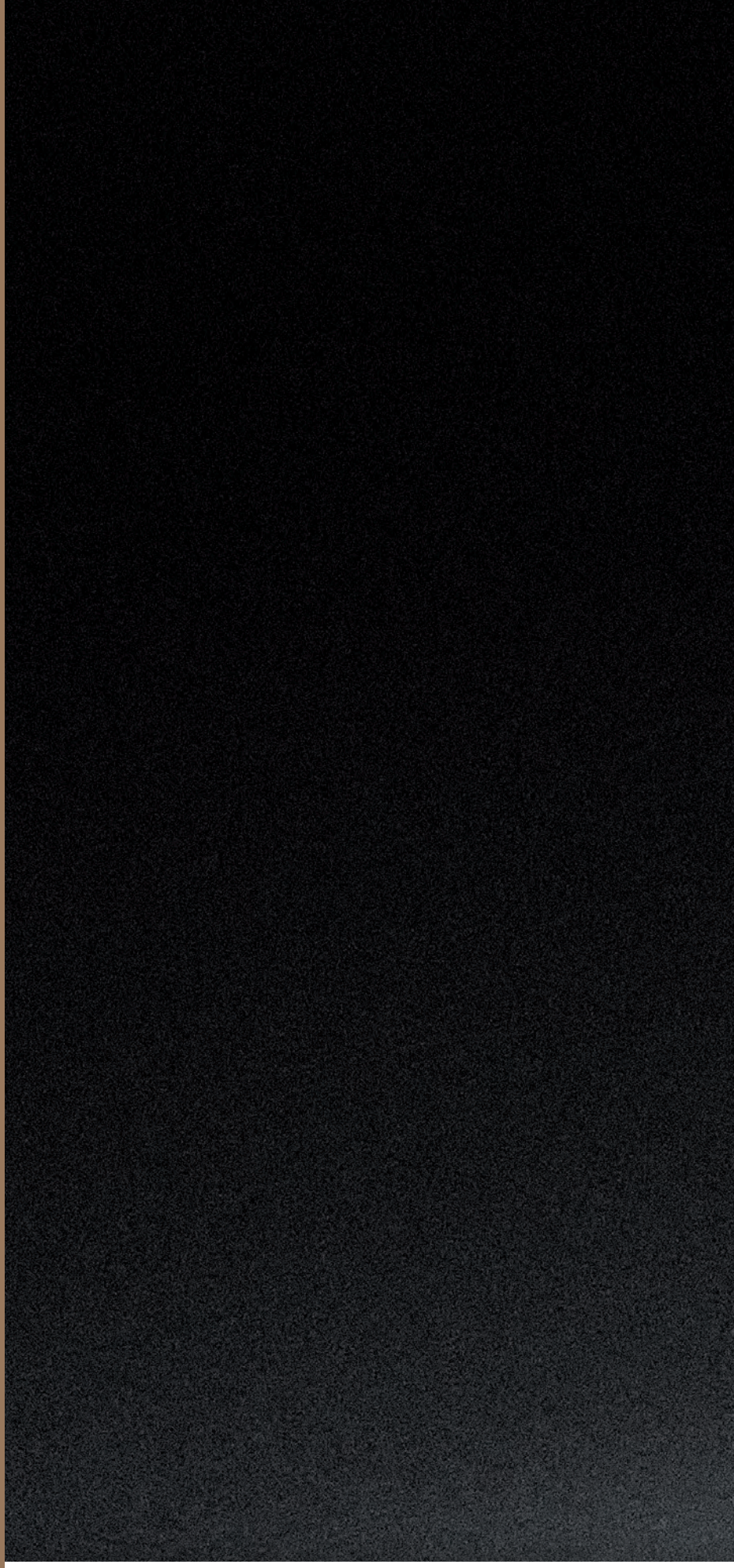

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All information in this publication is correct as at December 2014

11057 February 2015