Prepared in 2008 by the Centre for Disease Control

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Guidelines for Treatment of Trachoma in the Northern Territory

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The Guidelines for Management of Trachoma in the Northern Territory, 2008 are based on the Communicable Disease Network Australia (CDNA), Guidelines for the public health management of trachoma in Australia 2006.¹ The CDNA guidelines provide a minimum best practice framework for the management of trachoma. The Northern Territory trachoma working party adapted the national guidelines to reflect the unique needs of the Northern Territory.

The Northern Territory trachoma management guidelines differ from the CDNA guidelines in the following ways.

1. Azithromycin antibiotic treatment is recommended for all cases and households contacts of trachoma including babies <6 months of age.
2. Children under 6 months of age who receive azithromycin, should be actively followed up at 1 week and 4 weeks to observe for adverse effects.
3. In communities where the rate of trachoma is >20%, re-treatment with azithromycin after 6 months is strongly encouraged.

Trachoma management in the Northern Territory 2008.

What’s new?

1. Trachoma screening should be conducted annually as part of the Healthy School Age Kids screening.
2. Facial cleanliness should be observed and recorded as part of trachoma screening.
3. The recommended antibiotic treatment and trachoma screening frequency has been updated.
4. In areas where trachoma is endemic adults aged 40-54 yrs should be screened every 2 years for trichiasis and those >55 years should be screened annually for trichiasis as part of the adult health check.
5. Azithromycin antibiotic treatment is recommended for all cases and household contacts of trachoma, including babies <6 months of age.
6. In communities where the rate of trachoma is 20% or more, re-treatment with azithromycin after 6 months is recommended.
7. Face washing health promotion programs are a priority.
8. Centre for Disease Control collects and maintains a minimum dataset for trachoma.
9. Health service providers involved in trachoma management should be assessed as competent in the diagnosis and management of trachoma.
1 Background

Trachoma is a contagious infection of the eye, caused by the bacteria *Chlamydia trachomatis*. The serovar of *Chlamydia* that causes trachoma is slightly different from the genital serovar.

Repeated trachoma infection causes scarring of the eyelid and in-turned eyelashes (trichiasis), which lead to blindness if not treated with surgery. Blindness from trachoma is entirely preventable.

Trachoma was eradicated from most parts of Australia by the 1930s. Despite improvements in health service delivery, trachoma remains endemic in many Indigenous communities across the Northern Territory (NT). Australia is the only developed nation where endemic trachoma is found in Indigenous people.

Australia is a signatory to the World Health Organization (WHO) Global Elimination of Trachoma by 2020 and has recently introduced several new strategies to eradicate trachoma. The National Trachoma Surveillance and Reporting Unit was established to monitor the prevalence and effect of trachoma monitoring programs. In 2006, the Communicable Diseases Network Australia (CDNA) published *Guidelines for the public health management of trachoma in Australia*. These guidelines provide recommendations to ensure consistency in trachoma control programs across Australia.

The CDNA national trachoma guidelines recommend that government run regional population health units be responsible for trachoma control. In the NT, the Centre for Disease Control (CDC) provides training, assistance and coordination of trachoma control programs. Government and non-government primary health care services may access advice and assistance in the detection and management of trachoma when required.

Current prevalence data for active trachoma in the NT is incomplete (Figure 1). The extent to which trachoma is both screened and managed varies across the NT. The CDC can assist communities across the NT to coordinate their efforts to eliminate this preventable disease.

To monitor the prevalence and effectiveness of trachoma management in the NT, summary trachoma data is being collected and maintained by CDC. Remote communities will receive timely feedback of data following trachoma screening and treatment programs. This data will assist in the evaluation of trachoma control programs. As the data does not use individual names, confidentially will be maintained.

These guidelines for trachoma management in the NT are adapted from the CDNA *Guidelines for the public health management of trachoma in Australia*, 2006. They do not preclude health services or communities implementing control strategies over and above what is recommended here.
2 Prevalence of trachoma in the NT

Figure 1  Prevalence of active trachoma in Aboriginal children by region in the NT (2007)

3 Natural history of trachoma

Trachoma is a chronic kerato-conjunctivitis caused by infection with specific serovars of the bacteria *Chlamydia trachomatis*. The serovar of *Chlamydia* that causes trachoma differs from the genital serovar. It causes active inflammation of the conjunctiva, usually in childhood, which if persisting or recurring can lead to scarring of the eyelid later in life. In time these scars contract causing the eyelashes to turn inward and rub on the cornea. This often requires surgery and may result in visual impairment. It is usually asymptomatic.
4 Trachoma transmission

The main source of trachoma infection is infected eye secretions in persons with trachoma.

The active infective stages of trachoma (trachomatous inflammation - follicular and intense) are usually found in children.

There is no animal reservoir for trachoma.

Routes of transmission include:

- direct eye to eye spread (eg while playing or sharing a bed)
- fingers
- indirect spread through sharing towels, pillows etc
- eye seeking flies
- coughing and sneezing.

Trachoma prevalence varies between and within communities. Within communities it is strongly clustered by households. Within households, it is clustered by sleeping rooms.

Trachoma occurs more commonly in dry dusty environments. It is associated with overcrowding, reduced availability and use of water, inadequate waste disposal and high number of flies.1

5 Trachoma diagnosis

Trachoma is a clinical diagnosis.

The WHO has developed a simple 5 sign grading system for diagnosis and assessment of trachoma (see Table 1). To ensure consistency, this system should be used in trachoma control programs in the NT.

Table 1 WHO five sign grading system

<table>
<thead>
<tr>
<th>Sign</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TF</td>
<td>5 or more follicles in the upper tarsal conjunctiva. Follicles must be more than 0.5mm in diameter.</td>
</tr>
<tr>
<td>TI</td>
<td>Pronounced inflammatory thickening of the tarsal conjunctiva which obscures more than half of the normal deep tarsal vessels.</td>
</tr>
<tr>
<td>TS</td>
<td>Visible scars in the upper tarsal conjunctiva.</td>
</tr>
<tr>
<td>TT</td>
<td>At least 1 eyelash rubs on the eyeball, or evidence of recent removal of inturned lashes.</td>
</tr>
<tr>
<td>CO</td>
<td>Visible corneal opacity over the pupil which is so dense that at least part of the pupil margin is blurred through the opacity.</td>
</tr>
</tbody>
</table>


Each sign is individually graded as being present or absent. One or more signs can and usually do, occur together. Table 2 provides further description of the signs.
Table 2 WHO Simplified Trachoma Grading Card

<table>
<thead>
<tr>
<th>The normal everted upper lid</th>
<th><img src="image1.png" alt="Image" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>The normal conjunctiva covers the firm part of the upper eyelid, over the central 2/3. It does not include the corners or the rounded edge of the tarsal plate. 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.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TF Trachomatous inflammation-Follicular</th>
<th><img src="image2.png" alt="Image" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>The presence of 5 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 to be considered.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TI Trachomatous inflammation-Intense</th>
<th><img src="image3.png" alt="Image" /></th>
</tr>
</thead>
<tbody>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

**Note:**

**Eye conditions that can be mistaken for follicles**

Small scars can be mistaken for follicles but are sharp edged and not round as with follicles. Degenerative deposits include conjunctival concretions that are yellowish masses with clear cut edges, or cysts that appear as clear bubbles in the conjunctiva. These can be mistaken for follicles.
Table 2 continued. WHO Simplified Trachoma Grading Card

<table>
<thead>
<tr>
<th>TS Trachomatous Scarring</th>
<th>![Image]</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>The presence of scarring in the tarsal conjunctiva.</em></td>
<td></td>
</tr>
<tr>
<td>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.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TT Trachomatous Trichiasis</th>
<th>![Image]</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>At least 1 eyelash rubs on the eyeball.</em></td>
<td></td>
</tr>
<tr>
<td>Evidence of recent removal of inturned eyelashes should also be graded as trichiasis.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CO Corneal Opacity</th>
<th>![Image]</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Easily visible corneal opacity over the pupil.</em></td>
<td></td>
</tr>
<tr>
<td>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 also be measured if possible.</td>
<td></td>
</tr>
</tbody>
</table>

Adapted from The World Health Organization simplified trachoma grading classification system.


6 Trachoma Control Program

6.1 The World Health Organization SAFE Strategy

The World Health Organization’s Global Eradication of Trachoma by 2020 initiative recommends the implementation of the SAFE strategy for the effective control of trachoma. This includes:

- **Surgery** – surgical correction for trichiasis
- **Antibiotics** - antibiotic treatment of cases and contacts of active trachoma
- **Facial Cleanliness** – promote clean faces to reduce spread of infection
- **Environmental Health** – improve water access, toilet hygiene and sanitation, waste and fly control and promote activities that reduce overcrowding.

6.2 Community engagement and consent

Community engagement is an essential part of trachoma management. Consultation with councils, health boards and other key community members regarding trachoma control is a prerequisite to implementing the SAFE strategy. This should occur annually before school screening, to ensure informed consent is obtained. Community assistance should be sought for improved hygiene measures, face-washing programs and with the logistics of azithromycin administration.

A community engagement process is recommended with a holistic approach.

Key steps in the planning process.

1. Consult with key stakeholders.
2. Determine community priorities regarding trachoma.
3. Build relationships.
4. Inform the community of health risks of trachoma and the need for an eradication program.
5. Inform the community about the difference between eradication programs and other health programs.
6. Allow the community to make informed choices.

Key stakeholders may include:

- School
- Community Council
- Childcare Centre
- Community Environmental Health Officers
- Aged Care Facility
- Elders
- Women’s Centre
- Health Advisory Board
- Community Health Centre.
7 Training

The CDNA *Guidelines for the public health management of trachoma in Australia* recommend that all health professionals involved in trachoma control receive ongoing training in the diagnosis and management of trachoma.

CDC conducts training in all aspects of trachoma control.

This includes:
- community consultation and engagement
- recognition of trachoma
- trachoma grading
- eyelid eversion
- obtaining consent
- organising a treatment program
- health promotion activities.

In the NT, CDC recommends that all health professionals involved in trachoma control be assessed as competent in the diagnosis and management of trachoma.

Contact your nearest CDC for information on training options.

8 Surveillance

In the NT, screening for trachoma is conducted annually as part of the Healthy School Age Kids Program (HSAK). For information or assistance with Healthy School Age Kids screening, contact the Maternal, Child and Youth Health team in your region. Screening for trachoma may occur outside the HSAK program, according to community preference.

The prevalence of trachoma in communities is determined by screening all school age children for active trachoma. To ensure the reported prevalence of trachoma is accurate the coverage of screening should be at least 80% of the target group, i.e. 80% of all school age children. The absolute minimum target group for screening for active trachoma is all children aged 5-9 years living in communities/towns where trachoma is endemic.

Ideally, all children aged 1-4 years should also be examined, as the highest prevalence of active trachoma is usually found in the preschool child.

If active trachoma is found during screening, appropriate control measures must be implemented.

Independent primary health care services may have trachoma control programs in place. Check with your organisation’s public health coordinator regarding the trachoma program.

Ideally, trachoma control programs should be conducted on a regional level. Screening and treatment at a population level is the best method to decrease the prevalence of trachoma. Treatment at a population level reduces the pool of infection circulating in the community. Where possible avoid screening and treating isolated, individual cases of trachoma.

CDC is able to assist with the screening and surveillance of trachoma, contact your regional CDC for more information.
9 Screening

9.1 Equipment required

- Binocular loupes, x 2.5 magnification
- Penlight torch
- Orange stick or applicator stick
- Soap and water or alcohol based hand wash
- Rubbish disposal bags
- Data collection form (see Appendix 3 for sample)
- Pens
- WHO simplified trachoma grading chart
- Seating.

9.2 Screening procedure

- Each eye must be assessed separately.
- Binocular loupes (X2.5) and adequate lighting are essential.
- Wash hands with soap and water or alcohol based hand wash, rinse off hand wash.
- Signs must be clearly seen for trachoma to be reported as present.
- Refer to the WHO simplified trachoma grading card for a coloured pictorial guide to trachoma grading.
- Observe and record facial cleanliness (Is there ‘sleep’, dirt or crusting around the eyes?). Clean face is defined as the absence of dirt or crusting on the cheeks and forehead.
- Examine for trichiasis, either in-turned eyelashes or previously removed lashes. To check for this the upper lid needs to be pushed upwards slightly, to expose the lid margins.
- Examine the cornea for opacities (CO).
- Evert the right upper eye lid, examine and record the presence of TF, TI and TS in area shown.
- Evert the left upper eye lid, examine and record the presence of TF, TI and TS in area shown.
9.3 Everting the upper eyelid

- Sit directly in front of the person
- Ask the person to lift their chin and look down
- Hold the eyelashes between thumb and the first finger gently pull the eyelid forward to break the suction and stretch the lid a little

- Place a clean, gentle instrument such as an applicator stick, or the index finger of your other hand above the crease on the upper eyelid. Push down gently, pull the eyelid out and up over the finger or stick

- Steady the everted eyelid, remove stick or finger and examine for TF, TI, TS

- Ask the person to keep looking down
- When you have finished, gently re-evert the eyelid
- Record your findings

10 Trachoma prevalence

Public health activities aimed at assisting communities to eliminate trachoma will vary depending on the prevalence of trachoma in the community. Therefore, it is important to know how much active trachoma there is in the community. We do this by measuring the prevalence of trachoma.

The trachoma prevalence is used to determine the public health response to trachoma in communities.

10.1 Measuring trachoma prevalence to determine public health response

- Following the healthy school age kids screening (or trachoma screening), identify the number of children <10 years screened and the number of children <10 years who have trachoma.
- Calculate prevalence of trachoma by using following formula:

\[
\frac{\text{Number of children <10 years screened who have trachoma}}{\text{Number of children <10 years screened}} \times 100
\]

10.2 Coverage

The coverage is used to measure the true extent of disease in a community. In this instance, it measures how many school age children were screened compared to how many school age children who live in the community.

The coverage is:

\[
\frac{\text{Total number of school age children screened for trachoma}}{\text{Total number of school age children who live in the community}} \times 100
\]

To ensure prevalence of trachoma is accurately reported the coverage of screening should be at least 80% of the target group, i.e. 80% of school age children. The absolute \textit{minimum} target group for active trachoma is all children aged 5-9 years living in communities/towns where trachoma is endemic.

11 Post screening

1. Calculate the trachoma prevalence and coverage.
2. Determine the target group for treatment, this may vary depending on trachoma prevalence (see Table 3).
3. Plot trachoma cases on a community map to determine if clustering is present.
4. Discuss trachoma prevalence with your regional CDC.
5. Liaise with local/community medical officer, and Public Health Coordinator.
6. Provide timely feedback to families and the community.
7. Liaise with the Council, school, preschool, Health centre and childcare centre as well as other important stakeholders in community.
8. All treatment of children must be conducted with parental or guardian consent. If treatment is conducted at school, written parental consent is required.
9. Discuss treatment and health promotion activities with community stakeholders.
10. A regional approach to trachoma control is an effective strategy in highly mobile communities. Liaise with surrounding communities where appropriate.
11. Determine a date to treat target group.
12. Aim to complete the treatment phase over 2 weeks.
13. Order azithromycin (see Table 12.2.7).

12 Management of trachoma

Trachoma management in the Northern Territory is based on the WHO SAFE strategy.¹

12.1 'S' - Surgery and followup

The chronic sequelae of trachoma, trachomatous conjunctival-scarring, trichiasis, corneal opacity and blindness, occurs in adults.

The removal of eyelashes (epilation) is not recommended other than as a temporary measure while waiting for surgery, as eyelashes may cause further damage when they regrow. Epilation should be done carefully using good lighting and magnification loupes. All patients with trichiasis should be referred to an eye specialist as soon as possible.

Surgical intervention of trichiasis stops the eyelashes from rubbing against the cornea, causing corneal opacity and subsequent blindness.

Surgery does not always prevent trichiasis in the future, as the remaining scar tissue may contract and turn other eyelashes inward. Annual review post surgery is recommended to detect further trichiasis.

In areas where trachoma or trichiasis is endemic, adults aged 40-54 years should be screened every 2 years and those 55+ years should be screened annually for trichiasis as a part of a healthy adult check. Health services need to ensure that a process is in place for timely surgical referral and treatment of people with trichiasis.

Adults with trachoma scarring and/or trichiasis should have their eyes examined annually as part of the healthy adult check to detect early changes. They should be offered corrective surgery before they experience corneal opacity. Where practical, they should be placed on the health centre's recall system.

12.2 'A' - Antibiotics

Antibiotic is the 'A' component of the SAFE strategy. The aim of antibiotic therapy is to reduce the prevalence and intensity of active trachoma infection, preventing the development of scarring and blindness.

When the prevalence of trachoma in communities in 1 to 9 year olds is 10% or higher, the WHO recommendation of community-based treatment is easier and more effective.

Therefore if the prevalence of trachoma in children 1-9 years is over 10% community wide treatment is recommended unless strong family clustering is seen when family based treatment of all children and all their household contacts is indicated.
Azithromycin is the recommended treatment for all people diagnosed with trachoma as well as all their household contacts (see Table 3, p13).

*A household contact is anyone who is living and/or sleeping in the house.*

12.2.1. Prevalence ≥10% in children aged <10 years with no obvious clustering

- These communities should be targeted for treatment with single-dose azithromycin.
- The aim is to decrease the reservoir of active trachoma by treating all children in the community up to 14 years of age and all their household contacts.
- Health promotion activities must be included in the public health response.

12.2.2. Prevalence ≥10% in children aged <10 years with strong obvious household clustering

- Cases are obviously clustered within 1 or more households.
- Health staff can easily identify all household contacts of cases.
- Household treatment with single dose azithromycin for all people living and sleeping in the house with a child with trachoma.
- Health promotion activities should be included in the public health response.

12.2.3. Prevalence <10% in children aged <10 years

- Treat all cases and all household contacts with single-dose azithromycin.
- Health promotion activities should be included in the public health response.

See Table 3, p13.

12.2.4. Prevalence 20% or more in children aged <10 years

In communities where trachoma prevalence is 20% or more re-treatment with azithromycin at 6 months is recommended. Re-screening at this stage is not necessary. Contact your regional CDC for assistance.

The National Trachoma Surveillance and Reporting Unit (NTRSU) define hyperendemic trachoma as a prevalence of active trachoma of 20% or more. Current literature suggests the re-treatment of hyperendemic trachoma with azithromycin at 6 months significantly reduces ocular chlamydia infection and the chance of re-infection in a community.
Table 3. Recommended antibiotic treatment and trachoma screening frequency

<table>
<thead>
<tr>
<th>Trachoma prevalence in screened children aged &lt;10 years</th>
<th>Treatment of cases of active trachoma&lt;sup&gt;a&lt;/sup&gt; (TF, TI)</th>
<th>Treatment for household contacts&lt;sup&gt;c&lt;/sup&gt; of cases with active trachoma&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Community treatment&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Screening frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥10% with no obvious clustering</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt; to all household contacts&lt;sup&gt;c&lt;/sup&gt;.</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt; to all children up to 14 years of age.</td>
<td>Annual</td>
</tr>
<tr>
<td>≥10% &lt;sup&gt;And&lt;/sup&gt; cases are obviously clustered within several households &lt;sup&gt;And&lt;/sup&gt; health staff can easily identify all household contacts&lt;sup&gt;c&lt;/sup&gt; of cases</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt; to all household contacts&lt;sup&gt;c&lt;/sup&gt;.</td>
<td>Nil</td>
<td>Annual</td>
</tr>
<tr>
<td>&lt;10%</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt; to all household contacts&lt;sup&gt;c&lt;/sup&gt;.</td>
<td>Nil</td>
<td>Annual</td>
</tr>
<tr>
<td>&lt;5%</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt; to all household contacts&lt;sup&gt;c&lt;/sup&gt;.</td>
<td>Nil</td>
<td>Annual</td>
</tr>
<tr>
<td>&lt;5% for 5 consecutive years</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Single-dose azithromycin&lt;sup&gt;b&lt;/sup&gt; to all household contacts&lt;sup&gt;c&lt;/sup&gt;.</td>
<td>Nil</td>
<td>Cease screening</td>
</tr>
</tbody>
</table>

<sup>a</sup> Antibiotic treatment of cases and community members should be completed within 2 weeks of screening.

<sup>b</sup> Azithromycin dose is 20mg/kg, up to a maximum dose of 1000mg.

<sup>c</sup> A household contact is defined as anyone who is living and sleeping in the house.

Source: Guidelines for Public Health Management of trachoma in Australia CDNA 2006.¹

12.2.5 Azithromycin

- Azithromycin orally as a single dose 20mg/kg (maximum dose 1000mg) is the treatment of choice (Table 4).
- If azithromycin is contraindicated, discuss alternative treatment with your local medical officer.

Preparation: 40mg/ml powder to be reconstituted with water, or 500mg tablet.

Administration: orally as a single dose.
### Table 4 Dose for weight chart

<table>
<thead>
<tr>
<th>Weight</th>
<th>Azithromycin dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>3kg to &lt;6kg</td>
<td>80mg (2ml)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>6kg to &lt;10kg</td>
<td>160mg (4ml)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>10kg to &lt;15kg</td>
<td>240mg (6ml)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>15 kg to &lt;20kg</td>
<td>400mg (10ml)&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>20kg to &lt;30kg</td>
<td>500mg (1 tablet)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>30kg to &lt;40kg</td>
<td>750mg (1 ½ tablets)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>over 40kg adults</td>
<td>1000mg (2 tablets)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup> 200mg/5ml suspension
<sup>b</sup> 500mg tablet

### 12.2.6 Azithromycin for children under 6 months of age

Azithromycin is currently licensed for treatment of trachoma in infants over 12 months. However, the National Health and Medical Research Council recommends its use in all infants for the prevention and treatment of pertussis and suggest that it is the antibiotic of choice in those under one month of age. Therefore staff should feel comfortable recommending azithromycin to infants, but infants under 6 months of age should be reviewed at 1 and 4 weeks after treatment and report any adverse effects to Trachoma Coordinator on 8951 6902 or 8951 6906.

Azithromycin may be used in pregnancy and lactation. It is a category B1 drug - used by a limited number of pregnant women without any increase in harmful effects on the fetus.

The CDNA Guidelines for the public health management of trachoma in Australia recommend the antibiotic treatment program for trachoma be completed within 2-weeks of screening to minimise the likelihood of reinfection and to achieve higher population coverage.

The National Trachoma Surveillance and Reporting Unit monitors and reports on the prevalence of resistance to the antibiotic Azithromycin.

### 12.2.7 How much azithromycin to order

<table>
<thead>
<tr>
<th>Age</th>
<th>Azithromycin Syrup</th>
<th>Azithromycin Tablets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 years</td>
<td>1 bottle for every 2 children requiring treatment.</td>
<td></td>
</tr>
<tr>
<td>5-10 years</td>
<td>1 bottle for every child requiring treatment.</td>
<td></td>
</tr>
<tr>
<td>10 – 12 years</td>
<td>1.5 bottles for every child requiring treatment.</td>
<td></td>
</tr>
<tr>
<td>Over 12 years</td>
<td>1000mg = 2 x 500mg tablets for each person requiring treatment.</td>
<td></td>
</tr>
</tbody>
</table>

Sometimes older children will not swallow tablets even if they are crushed, so it is better to have more syrup.
12.3 ‘F’ - Face washing (clean faces)

It has been observed that children with clean faces are less likely to have active trachoma than those with ocular discharge, nasal discharge or flies on their face. Therefore facial cleanliness in children should be promoted by including regular face washing as part of a holistic personal hygiene program. Children should also be encouraged to brush flies away from their face and eyes to reduce the spread of infection.

Face and hand washing may be incorporated into health promotion activities in schools and childcare centres.

If possible and safe, children should be encouraged to swim in pools, waterholes, rivers and the ocean.

12.4 ‘E’ - Environmental health

Improved environmental health and socio-economic conditions are acknowledged as important factors in preventing trachoma. Environmental health interventions recommended by WHO include:

- Reduce flies in the community through improving waste management activities in the community.
- Instigate appropriate health education and promotion activities, including hand and face washing activities and other associated hygiene training in appropriate community settings eg schools, women’s centres, clinic, store and council office.
- Avoiding overcrowding.
- Seek assistance from Environmental Health, Health Promotion and Centre for Disease Control for a co-ordinated approach of trachoma management.

13 Data management

Information obtained from trachoma screening should be provided to the community in a timely manner. All data obtained from trachoma screening belongs to the individual community. As soon as practical after screening has occurred, families, and other key stakeholders should be informed of the results. In doing so, stakeholders will be engaged in the implementation of the treatment program.

Trachoma prevalence data is reported by community. These data represent public health surveillance and assists in the evaluation of trachoma control programs. The data does not contain personal identifying information. It is recorded in age groups to identify the burden of disease.

Treatment data is also reported in age groups. The National Trachoma Surveillance and Reporting Unit, monitors and reports on azithromycin resistance.

CDC is required to collect and maintain a minimum dataset for trachoma in the NT. The CDNA National Trachoma Guidelines recommend regional population health units collect trachoma data in accordance with the minimum national trachoma dataset. These data are then reported to the national trachoma database. See Appendix 3.

For assistance with community feedback contact your regional CDC for assistance.
14 Useful health promotion resources

- **The trachoma sickness colouring in booklet.** This is about prevention of trachoma and was made by the health promotion unit in Katherine. It is aimed at school children.

- **A video called “Jabby’s friend. A story about trachoma”.** This was made by the Kimberley Public Health Unit in the Health Department of Western Australia, and is aimed specifically at Aboriginal children with Aboriginal cartoon characters used to give culturally appropriate and entertaining information. It includes information about the disease process of trachoma and ways to prevent trachoma.

- **Trachoma eye sickness flipchart.** Contact your regional CDC.

- **Preventing Trachoma Poster.** Produced by Western Australia Health Dept. Contact regional CDC.

- **‘No Germs on Me’ Project.** Contact regional Environmental Health Unit.

References


Appendix 1

Useful resources

- Azithromycin fact sheet. This is useful for providing information to people involved with the trachoma program such as such as health workers, nurses, and the health promotion team. See Appendix 2. Also available from CDC.
- Trachoma Kit. Contact regional CDC.
- Trachoma Grading – self directed learning. A CD produced by the Centre for Eye Research Australia. Contact regional CDC.
Appendix 2

AZITHROMYCIN FOR TRACHOMA

Information for health care providers

The antibiotic of choice for the prevention and treatment of trachoma is azithromycin. It belongs in the family of macrolide antibiotics which includes erythromycin, roxithromycin and clarithromycin. Azithromycin is better absorbed from the gastrointestinal tract, lasts longer in the body and gets into the cells better than the other macrolides.

Trachoma management
The World Health Organization endorsed the SAFE strategy for the effective control of trachoma.

Surgery – surgical correction for trichiasis

Antibiotics - antibiotic treatment of cases and contacts of active trachoma

Facial Cleanliness – promote face and hand washing to reduce spread of infection

Environmental Health – improve water access, toilet hygiene and sanitation, waste and fly control and promote activities that reduce overcrowding.

Antibiotic treatment of trachoma
Antibiotic treatment of trachoma is thought to reduce the prevalence of active trachoma infection and therefore prevent the development of scarring and blindness.

Azithromycin is the recommended treatment for all people diagnosed with trachoma as well as their household contacts. A household contact is anyone who sleeps in the house.

Dosage of azithromycin

Preparation: 40mg/ml powder to be reconstituted with water, or 500mg tablet

Administration: orally as a single dose 20mg/kg (maximum dose 1000mg)

Dose for weight chart

<table>
<thead>
<tr>
<th>Weight</th>
<th>Azithromycin dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>3kg to &lt;6kg</td>
<td>80mg (2ml)\textsuperscript{a}</td>
</tr>
<tr>
<td>6kg to &lt;10kg</td>
<td>160mg (4ml)\textsuperscript{a}</td>
</tr>
<tr>
<td>10kg to &lt;15kg</td>
<td>240mg (6ml)\textsuperscript{a}</td>
</tr>
<tr>
<td>15kg to &lt;20kg</td>
<td>400mg (10ml)\textsuperscript{a}</td>
</tr>
<tr>
<td>20kg to &lt;30kg</td>
<td>500mg (1 tablet)\textsuperscript{b}</td>
</tr>
<tr>
<td>30kg to &lt;40kg</td>
<td>750mg (1½ tablets)\textsuperscript{b}</td>
</tr>
<tr>
<td>over 40kg adults</td>
<td>1000mg (2 tablets)\textsuperscript{b}</td>
</tr>
</tbody>
</table>

\textsuperscript{a}200mg/5ml suspension

\textsuperscript{b}500mg tablet
Azithromycin for children <6 months of age and pregnant women

Azithromycin is currently licensed for treatment of trachoma in infants over 12 months. However, the National Health and Medical Research Council recommends its use in all infants for the prevention and treatment of pertussis and suggest that it is the antibiotic of choice in those under one month of age.¹ Therefore staff should feel comfortable recommending azithromycin to infants, but infants under 6 months of age should be reviewed at 1 and 4 weeks after treatment and report any adverse effects to Trachoma Coordinator on 8951 6902 or 8951 6906.²

Azithromycin may be used in pregnancy and lactation. It is a category B1 drug - used by a limited number of pregnant women without any increase in harmful effects on the fetus.

Side effects
While not frequent some people may experience side effects including: diarrhoea, nausea, or abdominal pain. Headache, shortness of breath, rash or candida infection can occur rarely.

Interactions with other medications
Azithromycin can interfere with the activity of some other important prescription drugs.

It is important to inform the person prescribing you azithromycin of any other medications you are taking.

Trachoma screening
In regions where trachoma is endemic the minimum target group for trachoma screening is children aged 5-9 years. Trachoma screening should be done annually in these communities. Where possible trachoma management programs should be conducted at a regional level.

Screening and treatment at a population level is the best method to decrease the incidence of trachoma.

For more information contact your nearest Centre for Disease Control.

Darwin 89228044
Katherine 89739049
Nhulunbuy 89870359
Tennant Creek 89624259
Alice Springs 89517540

References
### Appendix 3

#### Form 1
COMMUNITY/SCHOOL SUMMARY FORM FOR SCREENING OF CHILDREN FOR ACTIVE TRACHOMA

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Population Health Unit Region</th>
<th>Community/school</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Screening strategy**  
School  □  Community  □

**Date(s) of screening**  
____________________

**Form completed by**  
Name  __________  Date  __________

<table>
<thead>
<tr>
<th>Number of Aboriginal children:</th>
<th>1–4 years</th>
<th>5–9 years</th>
<th>10–14 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number in community/school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total number enrolled in school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Examined for trachoma and clean face*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With TF</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With active trachoma (TF and/or TI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With TS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>With clean face*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Requiring azithromycin for active trachoma (TF and/or TI)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received azithromycin for active trachoma (TF and/or TI) within 2 weeks of screening</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*(defined as absence of dirt, dust or crusting on the cheeks and forehead)*

TF: Trachomatous inflammation - FOLLICULAR
TI: Trachomatous inflammation - INTENSE
TS: Trachomatous SCARRING

## Appendix 4

### FORM 2
COMMUNITY/SCHOOL SUMMARY FORM FOR TREATMENT OF HOUSEHOLD AND COMMUNITY CONTACTS WITH AZITHROMYCIN

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>-population health unit region</th>
<th>Community/school</th>
<th>Date(s) of screening</th>
<th>Form completed by</th>
<th>Date of first treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TREATMENT STRATEGY (Tick 1 box only)**
The treatment strategies are based on CDNA guideline recommendations. (Tick one box only)

**Prevalence ≥10% in children**
- **NO obvious clustering in the community**
  - [ ]
  - **Treatment strategy:** Treat all Aboriginal children in the community aged 6 months-14 years and all household contacts aged 6 months and over
  - [ ]
  - Cases obviously clustered in several households in the community and all household contacts that are easily identified
  - **Treatment strategy:** Treat all household contacts aged 6 months and over (community wide treatment is not required)

**Prevalence <10% in children**
- [ ]
  - **Prevalence <10% but ≥5%**
  - **Treatment strategy:** Treat all household contacts aged 6 months and over
  - [ ]
  - **Prevalence <5%**
  - **Treatment strategy:** Treat all household contacts aged 6 months and over

<table>
<thead>
<tr>
<th>Number of contacts</th>
<th>&lt;1 year</th>
<th>1-4 years</th>
<th>5-9 years</th>
<th>10-14 years</th>
<th>15+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requiring treatment with azithromycin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treated with azithromycin within 2 weeks of starting distribution of treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total treated with azithromycin</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Completion date of last treatment:** / /
Appendix 5

**FORM 3**
COMMUNITY/SCHOOL SUMMARY FORM FOR TRACHOMA CONTROL ACTIVITIES IMPLEMENTED

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Population Health Unit Region</th>
<th>Community/school</th>
<th>Date(s) of screening</th>
<th>Form completed by Name Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Description of activity</th>
<th>Completeness of implementation</th>
<th>Intersectoral partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘S’ Surgery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘A’ Antibiotics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘F’ Facial cleanliness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>‘E’ Environmental conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix 6

**FORM 4**
COMMUNITY/SCHOOL SUMMARY FORM FOR TRICHIASIS IN ABORIGINAL ADULTS

<table>
<thead>
<tr>
<th>State/Territory</th>
<th>Population Health Unit Region</th>
<th>Community</th>
<th>Date(s) of screening</th>
<th>Form completed by</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Aboriginal adults:</th>
<th>&lt;40 years</th>
<th>40-49 years</th>
<th>50+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>male</td>
<td>female</td>
<td>male</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Examined for trichiasis</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>With trichiasis</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>In the screening target group (ie number of Aboriginal adults in the screened age group in communities/towns targeted for screening)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>In the community/school in the screened age group (from census data)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>With trichiasis who were offered an ophthalmological consultation within 6 months of the previous screening</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>&lt;40 years</th>
<th>40-49 years</th>
<th>50+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Pleasereport the number of Aboriginal adults who underwent trichiasis surgery in the previous year</th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
</table>
ANNEX 1

INDIVIDUAL DATA COLLECTION FORM FOR ACTIVE TRACHOMA SCREENING

This form is based on the recommendations of the CDNA Guidelines. It is for community use only and will not be collected by the National Trachoma Surveillance & Reporting Unit (NTSRU). Using this form will aid in the compilation of the data for Forms 1 & 2 that will be collected by the NTSRU.

State
Population Health Unit Region
Community

Screening strategy  School   Community

Date of screening
Name(s) of staff doing trachoma screening

Number of Aboriginal and Torres Strait Islander children in school/community aged 1-4 years
Number of Aboriginal and Torres Strait Islander children in school/community aged 5-9 years
Number of Aboriginal and Torres Strait Islander children in school/community aged 10-14 years

Please use this form as a record for your community screening. This form can also assist you in completing the information on the community summary forms.

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Indigenous Y/N</th>
<th>Sex</th>
<th>TF</th>
<th>TI</th>
<th>TS</th>
<th>TF</th>
<th>TI</th>
<th>TS</th>
<th>Clean/dirty</th>
<th>Date given</th>
<th>Not given</th>
<th>Not required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

* Personal information is collected for community use only

TF: Trachomatous inflammation - FOLLICULAR
TI: Trachomatous inflammation - INTENSE
TS: Trachomatous SCARRING

Based on World Health Organization simplified grading classification system, Source: World Health Organization, 1987
This form is based on the recommendations of the CDNA Guidelines. It is for community use only and will not be collected by the National Trachoma Surveillance & Reporting Unit (NTSRU). Using this form will aid in the compilation of the data for Form 4 that will be collected by the NTSRU.

State
Population Health Unit Region
Community

Date of screening  /  /
Name(s) of staff doing trachoma screening

<table>
<thead>
<tr>
<th>Type of Adult</th>
<th>Number of Adults</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;30 years</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>30-49 years</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
<tr>
<td>50+ years</td>
<td>______</td>
<td>______</td>
<td>______</td>
</tr>
</tbody>
</table>

Please use this form as a record for your community screening.
This form can also assist you in completing the information on the community summary forms.

<table>
<thead>
<tr>
<th>R eye</th>
<th>L eye</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Age</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Personal information is collected for community use only

TS: Trachomatous SCARRING
TT: Trachomatous TRICHIASIS
CO: CORNEAL OPACITY

Based on World Health Organization simplified grading classification system, Source: World Health Organization, 1987