



ALERT FOR CLINICIANS

Outbreak of diphtheria in regional WA

KEY POINTS

- There have been 148 diphtheria cases in the [regional WA outbreak](#), mostly among Aboriginal people; this includes two severe respiratory infections, 55 mild respiratory infections and 91 cutaneous infections.
- Cases have occurred in the Kimberley (120 cases), Pilbara (25 cases) and Goldfields (3 cases) regions.
- **Consider** and **test** for diphtheria in patients from the Kimberley, Pilbara, Goldfields and Midwest with suspicious skin lesions/wounds or pharyngitis/tonsillitis, particularly those with epidemiological risk factors (e.g. contact with a case) or clinical features raising greater suspicion (e.g. pharyngeal/tonsillar exudate).
- **Notify** suspected or confirmed cases to your local [Public Health Unit](#) or call **1800 434 122** if after hours.

Signs and symptoms

- Diphtheria in the current outbreak is caused by toxigenic *Corynebacterium diphtheriae*:
 - **cutaneous diphtheria**: usually presents on exposed limbs as secondary infection of skin lesions or wounds, or punched-out ulcers with well-defined edges and grey necrotic slough; rarely associated with systemic toxicity, but plays a role in transmission and may lead to respiratory disease in contacts
 - **respiratory diphtheria**: typically presents with fever and sore throat, ranging from mild pharyngitis to severe disease with discoloured pharyngeal exudate that may form an obstructive and life-threatening pseudomembrane and/or clinical signs of systemic toxicity.

Case management

- Collect high-quality throat and/or skin lesion/wound swabs:
 - semi-solid (Amies) transport medium swab with or without charcoal for **diphtheria culture**
 - paired dry throat and/or skin lesion swab for **direct PCR toxin testing**
 - label both swabs, specify collection sites and mark **culture and PCR for diphtheria** on the request form
 - ensure standard, contact and droplet precautions are used when performing all swabs.
- Azithromycin 500mg (10mg/kg up to 500mg in children) orally once daily for 7 days, is recommended as empiric treatment for suspected **cutaneous** or **mild respiratory** diphtheria, unless contraindicated.
- See **updated** [WA diphtheria outbreak interim guidance](#) and [Diphtheria – Therapeutic Guidelines](#) for alternative options, including where there are significant barriers to adherence with oral antibiotics.
- For suspected **severe respiratory** diphtheria, start treatment as below, if no contraindications:
 - azithromycin 500 mg (10mg/kg up to 500mg in children) intravenously daily **and**
 - benzylpenicillin 1.2g (50mg/kg up to 1.2g in children) intravenously 6 hourly.
- Suspected **severe respiratory** diphtheria requires **urgent** discussion with an infectious disease physician; consideration of [diphtheria antitoxin \(DAT\)](#) must **also** be discussed with a public health physician.
- Contact tracing is required for all confirmed cases, with contact management (e.g. testing, antibiotic prophylaxis and vaccination) to be coordinated by [Public Health](#) in liaison with local clinical services.

Infection prevention and control in healthcare settings

- Suspected or confirmed **cutaneous** cases: cover wounds with an occlusive waterproof dressing; droplet precautions until screening throat swabs are negative **or** after 72 hours of antibiotics; contact precautions until wounds are healed or clinically improving **and** antibiotics are completed for 72 hours.
- Suspected or confirmed **respiratory** cases: contact and droplet precautions until two negative throat swabs are taken at least 24 hours apart and more than 24 hours after completing antibiotics.

Vaccination

- Vaccination mainly protects against severe toxin-mediated disease, not colonisation or transmission.
- **Ensure** children, adolescents and adults are up-to-date with scheduled diphtheria-containing vaccines.
- **Catch-up** under- or unvaccinated patients as per [Australian Immunisation Handbook](#) recommendations.
- **Promote** vaccination to Aboriginal people living in the Kimberley, Pilbara and Goldfields, and patient-facing healthcare workers in these regions, who have not received a diphtheria vaccination in the last 5 years.

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