



May 2023

Update: Two laboratory-confirmed cases of toxigenic *Corynebacterium diphtheriae* disease were identified in April 2023. One was in the Western Cape in a child and the other in an adult in KwaZulu-Natal. These cases are a reminder that a drop in vaccine coverage (likely due to the pandemic) may lead to more cases and that *C. diphtheriae* may be circulating undetected in other provinces. Diphtheria antitoxin is in short supply globally; the World Health Organization is working to secure additional supplies of antitoxin. Treatment in the absence of anti-toxin is appropriate antibiotics and supportive care.

Alert: All clinicians throughout the country are urged to have a high index of suspicion for diphtheria, to notify suspected cases and to send specimens to the laboratory for testing.

Guidelines for diagnosis, testing, and treatment on <https://www.nicd.ac.za/diseases-a-z-index/diphtheria/>

Suspected case definition:

Any person who presents with an upper-respiratory tract illness characterised by a sore throat, low-grade fever and an adherent membrane of the nose, pharynx, tonsils, or larynx.

An example of the adherent membrane of diphtheria is shown in the photograph on the right

Photo courtesy <https://www.bestonlinemd.com/how-to-avoid-getting-diphtheria/>



Specimen collection and transport

A **throat swab** should be collected (ideally from below the membrane) using a Dacron, Rayon or nylon-flocked swab and placed in Amies or modified Stuart's transport medium with charcoal. This can be obtained from your local laboratory. The specimen should immediately be transported on ice to the laboratory for testing. The specimen should be clearly labelled: "**Suspected diphtheria.**"

For laboratory staff:

All laboratories are encouraged to screen throat and nose swabs for *C. diphtheriae*

Please send any suspected/confirmed isolates of *Corynebacterium* spp. to CRDM/NICD for identification/confirmation and further characterisation. Please **INCLUDE** the original specimen/s (swab or tissue) for PCR testing.

Case notification

All suspected cases should be notified urgently to district or provincial communicable disease coordinators (CDCCs) as per notifiable medical condition notification procedures. In the event of a confirmed case, CDCCs will conduct contact tracing. This includes collection of throat swabs and administration of prophylactic antibiotics, with or without catch-up vaccination. <https://www.nicd.ac.za/nmc-overview/notification-process/>

Contact details

If any additional laboratory support is needed, please contact Linda de Gouveia on 011 555 0327 or lindad@nicd.ac.za, or Mignon du Plessis on 011 555 0387 or mignond@nicd.ac.za at the Centre for Respiratory Diseases and Meningitis, NICD.

Treatment of a case of diphtheria:

Treatment should be started prior to laboratory confirmation

- **Isolate:** prevent transmission of *C. diphtheriae* by practicing contact and droplet precautions.
- **Provide supportive care:** Provide oxygen, monitor with ECG and intubate or perform a tracheostomy if necessary.
- **Provide diphtheria antitoxin:** Dosage is according to severity of illness and weight of patient.
- **Treat with appropriate antibiotics.**

Advice regarding the clinical management of suspected cases, and preventive interventions including contact tracing may be directed to the NICD doctor-on-call on 080 021 2552 after hours. The NICD guidelines for diphtheria management and laboratory detection can be found at:

<https://www.nicd.ac.za/diseases-a-z-index/diphtheria/>