Information for Pathology Services on Diphtheria (*Corynebacterium diphtheriae*)

There is an ongoing outbreak of cutaneous toxigenic diphtheria, with some cases of respiratory diphtheria. This has primarily occurred in northern and central Australia. This public health message is intended for clinical microbiology laboratories and pathology services processing wound and respiratory specimens.

Request to laboratories

- Clinical microbiology professionals should consider identifying and isolating *Corynebacterium diphtheriae* from wound and respiratory specimens, where appropriate.
- Where *C. diphtheriae* is identified and isolated, further testing to determine the presence of the diphtheria toxin gene (*tox*) is required. This may require referring the isolate to a laboratory with *tox* gene detection within its scope of accreditation and where capacity is enabled.
- While the presence of the *tox* gene does not necessarily indicate that the bacteria is producing diphtheria toxin, the epidemiology of the current outbreak suggests it is a reliable surrogate for toxin-producing *C. diphtheriae*.

Please ensure timely communication of suspected or confirmed *C. diphtheriae* isolates (particularly those with the *tox* gene detected) to relevant local public health and reference laboratory pathways, in accordance with jurisdictional requirements.

The Public Health Laboratory Network (PHLN) provides laboratory case definitions for diagnosing diphtheria in Australia. This document is under revision, with updates anticipated to address testing recommendations for diphtheria, microbial genomics, and antimicrobial susceptibility testing to ensure testing approaches for Australia are consistent and in line with best practice. Please refer to the following link for further information Diphtheria – Laboratory case definition | Australian Centre for Disease Control.