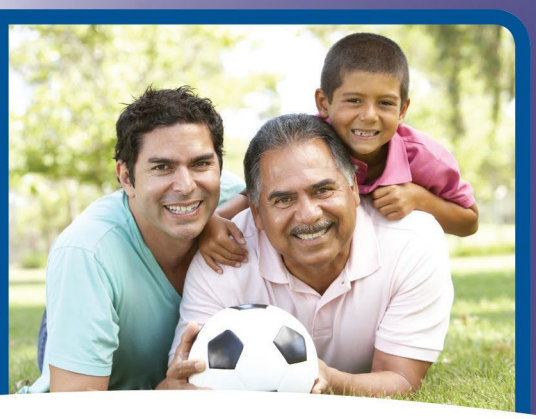
Clostridioides difficile infection (CDI)

Surveillance protocol version 7







Department of Health

Tasmanian Government

***Clostridioides difficile* infection (CDI) surveillance protocol V7**

Public Health Services

Department of Health, Tasmania

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Contents

Background

Clostridioides difficile (CD) is a Gram-positive, spore forming bacterium. *C. difficile* infection (CDI) is a gastrointestinal disease caused by toxins produced by *C. difficile*. *C. difficile* infection may present with a spectrum of severity, ranging from mild diarrhoea to fulminant colitis and is associated with broad spectrum antimicrobial use, hospitalisation, advanced age and underlying morbidity.

C. difficile is transmissible via the faecal-oral route by the ingestion of spores and, in a healthcare setting, can be transmitted between individuals via direct and indirect contact.

The Tasmanian Infection Prevention and Control Unit (TIPCU) monitors and reports on CDI identified within the four larger acute Tasmanian public hospitals - Royal Hobart Hospital (RHH), Launceston General Hospital (LGH), Mersey Community Hospital (MCH), and the North West Regional Hospital (NWRH) - in accordance with the surveillance methods outlined in this protocol.

Surveillance objectives

1. To monitor CDI cases, clusters and trends with CDI with respect to person, place and time.
2. To provide surveillance data to local stakeholders.
3. To inform the planning and implementation of evidence-based policy, service provision, prevention strategies and other public health interventions.

Definitions

Inpatient – a person who has been admitted to one of the four larger acute Tasmanian public hospitals for an episode of care and has at least one overnight stay in the facility.

Unformed stool - stool that takes the shape of a specimen container.

Diarrhoea - three or more unformed stools in a 24-hour period

Relevant personnel – person/s external to Public Health Services who cross checks CDI data; this is usually infection prevention and control personnel or healthcare workers in residential aged care facilities (RACF).

Case definition

***Clostridioides difficile* infection** - must fulfill criterion A **and** at least one of criterion B1, B2 or C.

> **Criterion A**: Diarrhoea or, ileus, toxic megacolon or pseudomembranous colitis (identified via colonoscopy);
>
> **AND EITHER**
>
> Microbiological evidence of toxin-producing *C. difficile* from at least one of the following criteria:
>
> **Criterion B1**: A positive laboratory test result for *C. difficile* toxin A and/or B gene and/or gene product from an unformed stool specimen
>
> **OR**
>
> **Criterion B2**: A toxin-producing *C. difficile* organism detected by culture or other laboratory means performed on an unformed stool specimen;
>
> **OR**
>
> **Criterion C**: The person has evidence of pseudomembranous colitis on gross anatomic (includes endoscopic exams) or histopathologic examination.

Hospital-identified CDI (HI-CDI) – CDI identified in a patient attending and/or admitted to a hospital.

Inclusions

- Repeat positive faecal specimen from the same patient/client and at least 12 weeks or more have passed since the previous positive specimen.

Exclusions

- Cases where a known previous positive test has been obtained within the last eight weeks.
- Patients less than two years old.
- CDI cases identified at healthcare facilities other than RHH, LGH, MCH and NWRH.

Classification of cases

All HI-CDI must be classified as to the likely place of acquisition.

Table 1 – CDI classification criteria

CDI case exposure classifications	**Description**
A. Healthcare Associated - Healthcare facility (HCA-HCF) onset	A patient with CDI symptom onset (or date and time of stool specimen collection if a laboratory system is used) >48 hours after admission to a health care facility
B. Healthcare Associated - Community onset (HCA-CO)	A patient with CDI symptom onset (or date and time of stool specimen collection if a laboratory system is used) in the community or within 48 hours (2 days) of admission to a healthcare facility, provided that symptom onset was less than four weeks after the last discharge from a healthcare facility and the patient was an inpatient of that healthcare facility for more than 48 hours.
C. Community-associated	A patient with CDI symptom onset (or date and time of stool specimen collection if a laboratory system is used) in the community OR within 48 hours of admission to a healthcare facility, provided that symptom onset was more than 12 weeks after the last discharge from a healthcare facility providing the patient was an inpatient of that healthcare facility for more than 48 hours.
D. Indeterminate onset	A CDI case that does not fit any of the above criteria for exposure setting (e.g. onset in community but within four and 12 weeks of discharge from a healthcare facility providing the patient was an inpatient of that healthcare facility for more than 48 hours.
E. Unknown exposure	Exposure setting cannot be determined because of a lack of data
Recurrent CDI case	An episode of CDI that occurs within eight weeks or less after the onset of a previous CDI episode, regardless of whether the initial CDI symptoms from the earlier episode resolved with or without therapy. A recurrent case is not included in the hospital identified CDI case definition and calculation; only the initial episode is reported.

HCA-CO cases are attributed to the healthcare facility from which the patient was last discharged, providing the patient was an inpatient of that healthcare facility for more than 48 hours.

Data collection process

- Identifying laboratories perform at a minimum, a quarterly data extraction of all CDI identified at the RHH, LGH, MCH, and NWRH, and securely transmit the extracted data to TIPCU.
- TIPCU remove exclusions, apply the case definition, and classify each case according to the CDI case exposure definition (Table 1) .
- The CDI data is sent to the relevant personnel quarterly for cross checking against their own data set and then returned to TIPCU.
- TIPCU make any changes or additions to the final version of the data.

Data collection responsibilities

	Notification	**Data**
Laboratory	Notifies results to TIPCU.	• Hospital identification number where available. • Date of birth. • Sex. • Specimen date. • Specimen laboratory number. • Name of organism. • Other testing results – culture GDH, toxin, PCR.
TIPCU	Identifies if the CDI meets the case definition. Enters patient data. Applies CDI case exposure definition. Sends data to relevant. personnel to cross check the notification with their own data and to confirm CDI case exposure classification. Enters returned data and makes any changes.	• Hospital identification number when not provided by laboratory. • Surname – first two initials. • First name – first two initials. • Indigenous status. • Postcode. • Hospital code. • Laboratory code. • Hospital admission date if patient/client was an inpatient at time of specimen. • Days between admission and specimen collection. • CDI case exposure classification.
Relevant personnel	Cross-checks data and CDI case exposure definitions.	• Enters missing data. • Corrects erroneous data.

Reporting

TIPCU produce publicly available, annual surveillance reports that are available online and on request to TIPCU.

Information management

All information held by TIPCU is in accordance with the information privacy principles as set out in the *Personal Information Privacy Act 2004*.

Information shared by laboratories (public and private) pursuant to the *Public Health Act 1997* is held in accordance with the *Personal Information Privacy Act 2004*.

Refer data or information requests to the Director of Public Health or delegate.

References

- Australian Commission on Safety and Quality in Health Care, 2023. Implementation Guide for the Surveillance of *Clostridiodes difficile* infection, Sydney: ACSQHC. Available at: https://www.safetyandquality.gov.au/sites/default/files/2023-09/surveillance_guide_cdi_august_2023.pdf