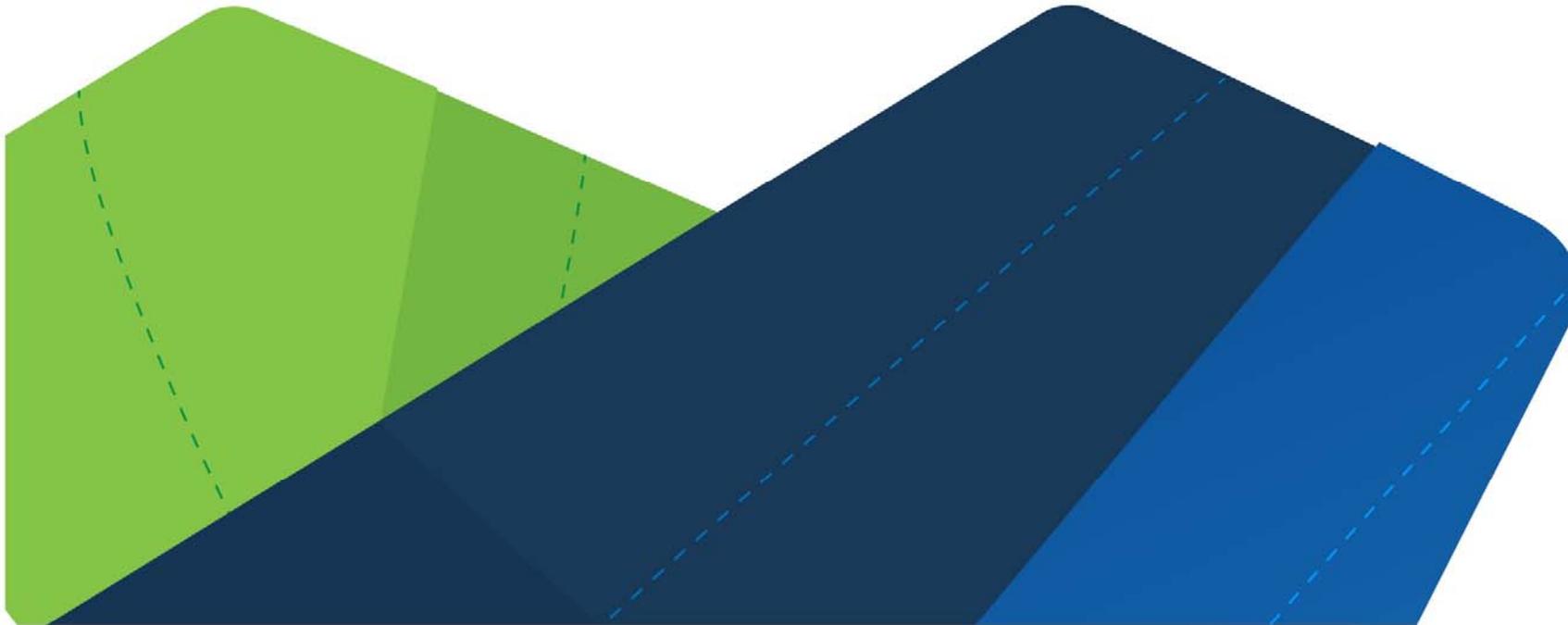


Clostridioides (Clostridium) difficile infection (CDI)

TRIGGER RESPONSE



A CDI trigger is the number of new CDI cases, in a given time period and location, that warrants investigation by the Infection Control Committee (ICC). A trigger is not synonymous with an outbreak. Some triggers may be a variation in the incidence of CDI while some may be classified as an outbreak depending on the definition that the facility has adopted as their trigger point. A trigger is a sensitive point at which the infection control team becomes concerned that there may be the possibility of deterioration in systems causing an increase in cases and decides that intervention is necessary to ensure patient safety. The trigger response strategies should be implemented if a facility detects an increase in cases of diarrhoea from surveillance data, or suspects that transmission has occurred between patients. The trigger in a small multipurpose facility may be a single case, whilst in a larger facility the trigger may be two or more cases.

A trigger phase requires a heightened awareness of infection control strategies and increased communication between departments and individuals within the facility. Prior to implementing a trigger response, the facility needs to establish thorough investigation of all cases to determine if there is evidence of transmission or if the situation is a natural variation. Facilities should utilise the Queensland Health Implementation Standard for the Risk Analysis Matrix.

Objectives of the CDI Trigger Tool:

- To enable the ICP to determine if the CDI trigger represents an infection control issue.
- To enable ICPs to promptly identify any areas for improvement in the care of patients, the environment or antimicrobial prescribing that are making patients more vulnerable to CDI or increasing the risk of CDI cross-transmission.
- To create a culture and system that minimises the risk of patient susceptibility to CDI and cross-transmission.

A trigger for investigation of possible CDI outbreak is defined as when a facility detects an increase in cases from surveillance data or transmission has occurred between cases. CDI cannot be distinguished clinically from other causes of acute diarrhoea without laboratory testing. Asymptomatic carriage of toxigenic CDI is not infrequent and patients continue to excrete CDI in their faeces for weeks after recovery.

For further information, please see [Clostridioides \(Clostridium\) difficile infection and multi-resistant organisms Trigger response flow chart](#).

CDI TRIGGER RESPONSE

These measures are to be used in conjunction with the strategies detailed in the [Guideline for the Management of Outbreaks of Communicable Disease in healthcare facilities.](#)

| REQUIREMENT | STRATEGY | AVAILABLE RESOURCE |
|-----------------|--|---|
| Cleaning | <p>Review standard of environmental cleaning to ensure high quality and frequency of decontamination.</p> <p>Ensure that cleaning staff are aware of items and surfaces that require specific attention such as high-touch surfaces.</p> <p>The mophead must be changed after each room.¹</p> <p>Appropriate cleaning equipment, which includes mops with detachable heads, laundered or single-use cloths and vacuums fitted with appropriate filters should be available.¹</p> <p>A thorough discharge clean requiring transmission based contact precautions will need to be undertaken of a patient's room when the patient has their accommodation changed or is discharged from a room.</p> <p>Consider performing all cleaning using a 1000 ppm available chlorine solution or other product with proven sporicidal action impregnated wipe or solution. The process should involve either:</p> <ul style="list-style-type: none"> • a physical clean using combined detergent and 1000ppm available chlorine solution or sporicidal solution or impregnated wipe (2-in-1 clean) • a physical clean using detergent flowed by a chemical disinfectant (2-step clean) <p>Facilities should consider implementing specialised cleaning teams.</p> | <p>Discharge checklist</p> <p>ACSQHC, Australian Guidelines for the Prevention and Control of Infection in Healthcare: 2010</p> <p>Queensland Health Cleaning Services policies, standards and operational guidelines</p> |

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| Isolation | <p>Patients with confirmed CDI should remain under transmission-based contact precautions until at least 48 hours after diarrhoea has ceased and the patient is passing formed stools. Retesting is not necessary to determine the end of isolation.</p> <p>Retesting the patient is not necessary to determine the end of isolation.</p> | <p>Queensland Health Guidelines: Management for patients with <i>Clostridioides (Clostridium) difficile</i> infection (CDI)</p> |
| Education | <p>Education sessions are to be arranged for all staff who work in the ward/unit. These will need to reinforce all infection prevention and control measures for staff including routine practices, transmission based precautions, hand hygiene, and cleaning practices.</p> <p>Information on CDI and preventative strategies will need to be readily available for all staff on all shifts.</p> <p>Patients and visitors are to be provided with educational material about CDI.</p> | <p>CDI resources online:</p> |
| Hand Hygiene | <p>Increase awareness of the need to perform hand hygiene after having contact with the patient and their surroundings⁴ in accordance with the Hand Hygiene Australia ⁵ Moments for Hand Hygiene.</p> <p>Hand hygiene should be performed with liquid soap and water after having contact with the patient or the environment.</p> <p><i>Clostridioides difficile</i> spores are not killed by alcohol-based hand rub.</p> <p>Encourage hand hygiene by patients and visitors.</p> <p>Attention to the “5th moment” to prevent environmental cross-contamination of patient zones is essential.</p> <p>Active observation through increased auditing can also increase hand hygiene compliance.</p> | <p>Hand Hygiene Australia</p> |

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| Monitoring and Reporting | <p>Each new case of CDI in the ward/unit is to be thoroughly investigated.</p> <p>A log should be kept of patients within the environment of a CDI patient before they were isolated.</p> <p>Wards/units may consider using transmission-based contact precautions on patient/s who have moved to another ward/unit after being in an area that is in a trigger response situation.</p> | <p>Daily situation report</p> <p>Case Investigation Report</p> |
| Communication | <p>Ensure all stakeholders of the ward/unit are informed regularly of the situation.</p> <p>Ensure all staff including volunteers that enter the ward/unit for any purpose are informed of the trigger management strategies for the CDI.</p> <p>Advise all patients in the ward/unit and their visitors of the situation and how they can assist in minimising CDI transmission.</p> <p>The laboratory should be advised that the ward/unit has reached a CDI trigger.</p> <p>All wards/units and departments that are likely to receive or treat patients from the affected ward/unit need to be aware that a trigger response is in place.</p> <p>Facilities receiving patients from the affected ward/unit must be advised that a CDI trigger response is in place.</p> | <p>Daily situation report</p> <p>Case Investigation report</p> |
| Consultation | <p>Facilities may seek the expert advice of an infectious diseases physician.</p> | |
| Ward/Unit Closures | <p>If all control measures are in place and new cases of CDI continue to be detected, the facility may want to consider closing the affected ward/unit to admissions until there are no new cases.</p> | |

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| Visitors | <p>Depending on the size of the situation facilities should give consideration to restricting the number of visitors.</p> <p>Ensure educational material on the CDI is available in the ward/unit.</p> | |
| Phase Change | <p>Ongoing assessment of the risk shall be undertaken by local Hospital Health Service (HHS) using the local HHS Risk analysis matrix.</p> <p>Trigger response shall be escalated to Outbreak Management strategies as appropriate.</p> | |
| Review | <p>A review of the situation is to be undertaken to determine if practices could be improved to prevent such occurrences.</p> <p>An investigation needs to be initiated including assessment of patients and their management, infection control and antimicrobial prescribing to establish the cause.</p> | |
| Outbreak Management | <p>If an outbreak is detected, please refer to: <i>The Queensland Health Guideline for the Management of outbreaks of communicable disease in healthcare facilities.</i></p> | <p>Guideline for the Management of outbreaks of communicable disease in healthcare facilities</p> |

Glossary:

Antimicrobial: A substance that kills or inhibits the growth of micro-organisms such as bacteria, viruses, fungi, or protozoans. This includes antibiotics, antivirals, antifungals and antiparasitics.

Antimicrobial Stewardship: A systematic approach to optimising the use of antimicrobials. It is used by healthcare institutions to reduce inappropriate antimicrobial use, improve patient outcomes and reduce adverse consequences of antimicrobial use (including antimicrobial resistance, toxicity and unnecessary costs).²

Clostridioides (Clostridium) difficile infection (CDI): Infection occurs when there is significant colonisation of *Clostridioides difficile* which is a gram-positive spore-forming bacterium widely distributed in the environment faecal flora and gastrointestinal tract of humans and animals which has been shown to be the cause of morbid pseudomembranous colitis.

Cohort: A group of individuals with some characteristics in common (in this case confirmed or suspected CDI).

High touch surfaces: Bed rails, telephone, call bells, light switches, door handles, faucets, commodes and toilets.

Outbreak: A classification used in epidemiology to describe a small, localised group of people infected with a disease.³

Strain: A strain is a genetic variant or subtype of a micro-organism (e.g. a virus, bacterium or fungus). Some strains may be more dangerous or difficult to treat than others.³

References:

1. Queensland Health, Cleaning Services Policies, Standards and Operational Guidelines. 2011.
2. MacDougall C, Polk R. Antimicrobial stewardship programs in health care systems. *Clinical Microbiology Reviews* 2005; 18:638-656.
3. Australian Commission on Safety and Quality in Health Care. Antimicrobial Stewardship in Australian Hospitals. 2011. National Health and Medical Research Council, accessed at <https://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/antimicrobial-stewardship/>
4. Australian Commission on Safety and Quality in Healthcare, Australian Guidelines for the Prevention and Control of Infection in Healthcare: 2010. National Health and Medical Research Council, Canberra.