Clostridioides difficile Infection Prevention and Control

Queensland Health Guideline – May 2024

Key Messages

- *Clostridioides difficile* infection is a serious gastrointestinal disease caused by toxins which produce spore-forming bacterium *Clostridioides difficile (C. difficile).*
- *C. difficile* infection usually occurs in the context of risk factors, such as repeated hospitalisation, extensive antibiotic use, multiple co-morbidities, including primary or secondary immunodeficiency, Hirschsprung disease, inflammatory bowel disease, cystic fibrosis proton inhibitor use, presence of a gastrostomy tube, and structural or postoperative intestinal disorders.
- *C. difficile* infection is easily spread via the faecal–oral route or via direct and indirect contact by hands, devices, fomites, or the environment. Robust Infection prevention and control practices should be in place to limit spread.
- Timely treatment is required to reduce the risk of complications of severe disease which may give rise to clinical symptoms such as ileus, toxic megacolon, or pseudomembranous colitis.
- Suspected and confirmed cases should be isolated in a single room with standard and contact precautions until 48 hours after symptoms have ceased.[1–3]

Purpose

This guideline provides recommendations for best practice in the management of adult and paediatric patients with *C. difficile* infection.

Scope

This guideline provides IPC advice for all Queensland Health Hospital and Health Service (HHS) employees (permanent, temporary, and casual) and all organisations and individuals acting as its agents (including Visiting Medical Officers and other partners, contractors, consultants, students, and volunteers). This includes acute care, aged care, offender health and disability services that are managed by Queensland Health. Queensland-licensed private health facilities may choose to use this guideline. This guideline does not include clinical treatment advice, as this is managed by a treating doctor or Infectious Diseases specialist.

Related documents

- Australian Guidelines for the Prevention and Control of Infection in Healthcare
- Health Facilities Communicable Disease Outbreak Preparedness, Readiness, Response and Recovery

***Clostridioides difficile* - Queensland Health Guideline - May 2024**

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For more information contact:

Queensland Infection Prevention and Control Unit
Queensland Health, GPO Box 48, Brisbane QLD 4001,
email QIPCU@health.qld.gov.au

An electronic version of this document is available at https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/infection-prevention/management-advice/

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1 Quick reference guide for clinicians

Appendix 1: *Clostridioides difficile* infection - Quick reference guide summarises key IPC guidance for use by healthcare workers at the point of care.

2 Prepare

Consistent with the Health facility's communicable disease outbreak preparedness, readiness, response and recovery guideline, it is recommended that health facilities develop an outbreak control plan. In the event of 2 or more cases of *C. difficile* infection in the same clinical area, 2 cases that can be linked to time, place and person, or an increase number of patients with *C. difficile* infection above the usual number, should prompt an outbreak management team to be convened, and the outbreak control plan activated. [4,5] Smaller facilities where *C. difficile* infection is uncommon should consider one case significant.

3 Readiness

3.1 *C. difficile* infection and mode of transmission

C. difficile infection is a gastrointestinal disease with a clinical spectrum ranging from asymptomatic colonisation, mild and self-limiting disease, to a severe life-threatening pseudomembranous colitis (PMC), toxic megacolon, sepsis syndrome and death. [12] Disease-causing *C. difficile* infection produces exotoxins, toxin A and toxin B. These toxins may cause colitis, diarrhoea (sometimes bloody), mucosal damage, loss of intestinal barrier function, colonocyte death and neutrophilic colitis.[6] Complications such as ileus, hyper-inflammation, peritonitis, bowel perforation, or necrosis of the gut lining may also occur. Recurrence of infection is possible within 8 weeks of initial resolution of symptoms and infection.[1,2]

C. difficile infection usually occurs in the context of risk factors, such as repeated hospitalisation, extensive antibiotic use, older age, or multiple co-morbidities: including primary or secondary immunodeficiency, Hirschsprung disease, solid organ transplantation, inflammatory bowel disease, cystic fibrosis, proton inhibitor use, presence of a gastrostomy tube and structural or postoperative intestinal disorders.[1–3]

Asymptomatic colonisation in children <1 year is common, with *C. difficile* colonisation rates as high as 50% in neonates, and 70% in infants <1 year of age. By the age of 2 years, reported colonisation rates decrease to 35–46%. Acquisition of *C. difficile* in patients <2 appears to be from the environment rather than maternal sources. *C. difficile* infection is rare in children <2 years.[1,2]

Transmission of *C. difficile* infection in the healthcare setting is most likely a result of person-to-person spread through ingestion of spores through the faecal–oral route. Direct and indirect contact, where hands, devices, fomites, or the environment may become contaminated and serve as a reservoir for *C. difficile* spores, are implicated in transmission.

A prior room occupant with *C. difficile* infection is a significant risk factor for transmission and acquisition for a subsequent patient if the risk is not identified and the room is adequately cleaned in between.[4,6,7]

The period between initial colonisation with *C. difficile* organism and the occurrence of *C. difficile* infection (known as the incubation period) is estimated to be a median of 2–3 days however this timeframe can be longer. *C. difficile* exists in a spore form in the environment and enters a vegetative state in the intestine. It is only in the vegetative state that *C. difficile* can produce toxins.[6]

The formation of spores poses unique challenges for hand hygiene and environmental disinfection practices. This is because *C. difficile* spores are resistant to the bactericidal effects of alcohol and commonly used hospital disinfectants, and may live on surfaces for months.[3,7]

C. difficile spores are not killed by alcohol-based hand rub. There is evidence to suggest that alcohol-based hand rubs (ABHR) have activity against vegetative forms of *C. difficile*. Vegetative forms of *C. difficile* are found in greater numbers than spores in stools. The mechanical action of washing and scrubbing with soap and water will not kill *C. difficile* spores but will physically assist in the removal of spores from the hands, reducing the risk of transmission. If gloves are worn, and there is no breach of glove integrity and hands are not visibly soiled, a lower density of contamination of the hands is expected and ABHR may be used for hand hygiene.[4–6]

3.2 Early detection and SIGHT protocol

Clinicians suspecting *C. difficile* infection should isolate and test any hospitalised patient who develops diarrhoea where there is no clear alternative cause for diarrhoea (particularly those on antibiotics or immunosuppressive therapy). [1–4,6,7] Consideration should also be given to testing for other diarrhoeal-causing pathogens. Where *C. difficile* infection is suspected, the SIGHT protocol should be initiated. See Table 1.[8,9]

Diarrhoea is defined as the passage of three or more loose or liquid stools in 24 hours (or more frequent passage than is normal for the individual and taking into consideration loose stools caused by laxatives and/or stool softeners/antibiotics/total parenteral nutrition (TPN).

C. difficile infection should also be suspected, the patient isolated, and testing undertaken when:

- pseudomembranous colitis is seen during endoscopic examination or surgery;

or

- pseudomembranous colitis is seen during colonic histopathological examination;

or

- when unexplained large intestine distension, colonic wall thickening, fat stranding, or ascites are apparent on imaging.[1]

S	Suspect *C. difficile* infection for any patient who develops diarrhoea with no clear cause, particularly those who have been prescribed antibiotic or immunosuppressive therapy in the last 12 weeks
I	Isolate the patient/resident in a single room with its own bathroom. Consult with the infection prevention and control team where available while determining the cause of the diarrhoea
G	Apply standard and contact precautions. Gloves and aprons must be used for all contacts with the patient/resident and their environment
H	Hand hygiene with alcohol-based hand rub (ABHR) following glove removal, or soap and water if hands are visibly soiled or when there is a breach in glove integrity, should be carried out as per the 5 Moments of Hand hygiene
T	Test the stool for *Clostridium difficile* toxin, by sending a specimen immediately

Table 1: Department of Health Ireland

3.3 Diagnosis and Testing

Laboratory detection of *C.* difficile A and/or B toxins in faeces, rectal swabs, or bowel contents by enzyme immunoassay (EIA), PCR (polymerase chain reaction) or other laboratory means performed on an unformed stool specimen.[10] If there is high clinical suspicion that the patient has an ileus and faeces are not available for testing, discussion with the clinical microbiologist is required to determine whether PCR and/or culture testing on a rectal swab is appropriate.[2]

A diagnosis of *C. difficile* infection requires A + (B or C).

A. Clinical features suggestive of *C. difficile* infection (diarrhoea, ileus, toxic megacolon);

and

B. Microbiological evidence of toxin-producing *C. difficile*;

or

C. Pseudomembranous colitis demonstrated on colonoscopy.[1]

3.3.1 Testing considerations

- The stool sample taken should conform to the specimen container. (Type 6-7 Bristol stool chart).[4]
- Stool specimens should be obtained from patients in, or admitted to, healthcare settings as soon as possible after the onset of diarrhoea.
- All specimens should be kept refrigerated, below 4C but not frozen, until testing can be done. *C. difficile* toxin is unstable and the toxin degrades at room temperature.[11] Specimens kept unrefrigerated for periods greater than 2 hours should be discarded and a new specimen collected.
- If the first test is negative, but there is a strong suspicion of *C. difficile* infection, consult with infectious diseases clinician or microbiologist as further testing may be necessary. Other pathogens should also be considered during this time if not already tested (for example Norovirus).

- Notify the laboratory of any wards/units that are experiencing a period of increased number of patients with diarrhoea.
- It is not recommended to test for *C. difficile* infection in children under 2 years of age. Children are commonly asymptomatic carriers of the C. *difficile* organism. Only test in this age group if significant clinical suspicion of C. *difficile* infection. Testing should only be performed in consultation with a paediatrician.
- Routine screening of patients and testing of stool specimens from asymptomatic patients is not recommended.[3]
- Repeat testing for *C. difficile* infection to determine clearance before removing patients from isolation is not recommended.[1,2,4,10]

For further information refer to The Public Health Laboratory Network (PHLN) Clostridiodes difficile infection (Clostridioides difficile) Laboratory case definition

4 Response

4.1 Care of patient with suspected/confirmed *C. difficile* infection

Risk mitigation strategies include standard and contact precautions, environmental cleaning to reduce horizontal transmission, and judicious antimicrobial stewardship.[4]

	Management of a patient with confirmed *C. difficile infection*
Patient accommodation	Single room with unshared ensuite Ensure appropriate precautions signage and PPE are available outside of the room. Unnecessary stock should be removed from the room before patient placement. If there are a limited number of single rooms, it is recommended that patients with faecal incontinence be prioritised to reduce the likelihood of transmission to other patients, and the individual should not share a room or bay with an immunocompromised individual and must have a dedicated toilet/commode.

	Management of a patient with confirmed *C. difficile infection*
Personal protective equipment	Apply standard and contact precautions PPE required: Apron/gown and gloves. Apply PPE on entry to patient rooms and remove on exiting room. Change gloves and perform hand hygiene as per the 5 Moments of Hand hygiene. These precautions apply to all HCWs who enter the room and the patient, or the environment has been touched. Contact precautions should remain in place until at least 48 hours after diarrhoea has ceased and the patient is passing formed stools. Staff performing patient-care activities involving extensive patient contact should wear a single-use long-sleeved gown. Contact precautions should be re-instituted if diarrhoea reoccurs.
Hand hygiene	Hand hygiene with alcohol-based hand rub (ABHR) following glove removal, or soap and water if hands are visibly soiled or when there is a breach in glove integrity, should be carried out after each contact with the patient/resident and the patient/resident's environment as per the 5 Moments of Hand hygiene. HCW should be bare below the elbows. Wearing gloves to reduce hand contamination remains important to prevent *C. difficile* transmission via the hands of HCW.[4,6]
Cohorting	Confirmed cases (based on microbiological results) may cohort with other *C. difficile* infection patients. If cohorting is necessary, consideration should be given to whether the patient has any other isolation requirements (for example multi-resistant organism alerts).
Patient equipment	Dedicated patient equipment. Single-use items are encouraged as much as possible. If equipment is returning to communal use, clean it with combined detergent/disinfectant or sporicidal wipes. Bedpans should be single-use or reprocessed in a pan sanitiser using thermal disinfection if reusable. Refer to section 4.4 Cleaning of patient equipment and 4.5 Bedpans
Cleaning (environmental)	Product selection: suitable detergent and disinfectant (e.g., 1000ppm chlorine. Refer to 4.2 Environmental cleaning Frequency: Daily cleaning of the patient environment. Discharge clean: Refer to section 4.3 Discharge cleaning
Alerts	Alerts (if used) may be placed in the ieMR and HBCIS. Given *C. difficile* infection is a transitory condition, the notation of organism with Infection control precautions in clinical notes is sufficient. It should be identified whether the *C. difficile* infection is hospital or community-acquired for coding purposes. Please ensure receiving areas are notified of confirmed *C. difficile* infection status.

	Management of a patient with confirmed *C. difficile infection*
Waste and linen	Hospitals and Health Services should follow their current waste and linen management policies as for any other multi-resistant organism. Linen should be placed into a skip at the point of use, and not carried against the uniform. Heavily soiled or wet linen should be placed into a red alginate bag within the linen skip.
Antimicrobial stewardship	Ceasing antibiotics which may be associated with the onset of *C. difficile* infection can be an important management strategy. The mainstay of *C. difficile* infection treatment is to provide the patient with another type of antibiotic which specifically targets the *C. difficile* infection. The treating team or Infectious Diseases physician should follow Antimicrobial Stewardship guidelines for prudent antibiotic prescribing to ensure the appropriate use of antibiotics is adhered to.
Visitors	**PPE:** Visitors of patients under contact precautions are not required to wear PPE providing they are not directly involved in patient care. Where there is prolonged contact or likely contact with faeces, gloves as a minimum are recommended in conjunction with strict adherence to hand hygiene. Visitors should be educated by nursing staff on the use of PPE if required.[12] **HH:** Educate visitors on the importance of hand hygiene. Visitors should be instructed not to use the patient's ensuite/toilet facilities. **Other:** Visitors should not visit other areas of the hospital after visiting a person with *C. difficile* infection. Family members and visitors of residents should not visit if they are unwell or displaying symptoms of fever, diarrhoea or vomiting.
Patient Education	Educate patients on the importance of hand hygiene. Patients and their significant others should be provided with information about testing, diagnosis and treatment of *C. difficile* infection. The factsheet is available from the ACSQHC Infection prevention and control resources for consumers. [1,2,4–7,7,9–11,13]

4.2 Environmental cleaning

The healthcare environment is a high-risk reservoir for the C. *difficile* organism. C. *difficile* forms spores that can remain viable on surfaces for months. Frequently touched objects in the patient environment such as toilets, bedrails and door handles can be heavily contaminated.

Clean and disinfect rooms and patient care equipment of suspected and confirmed cases using:

- a physical clean using an ARTG-listed combined detergent and 1000 ppm available chlorine solution or sporicidal-impregnated wipe that makes specific claims for use against *C. difficile* (2-in-1 clean),

or

- a physical clean using detergent, then clean with ARTG-listed disinfectant such as 1000 ppm available chlorine solution or sporicidal impregnated wipe that makes specific claims for use against *C. difficile* (2-step clean).[3,4,9]

Sporicidal agent contact times recommended by the manufacturer/supplier need to be practical for healthcare settings. Long contact times (the time the surface needs to remain wet) of 10–30 min may become a work health and safety hazard when used in patient care areas and are unlikely to be achieved or complied with. A risk assessment should be made to ensure the sporicidal agent's practical use.[4]

Cleaning products containing quaternary ammonium compounds have poor activity against *C. difficile* spores and therefore are not indicated for use in *C. difficile* infection.[14]

All patient surrounds and frequently touched surfaces (such as bedrails, trolleys, bedside commodes, doorknobs, light switches, tap handles, and ensuite facilities) should be cleaned daily as a minimum.[4,5,9,13]

After the floor of the room has been mopped, the mop head should be changed, and the bucket cleaned and disinfected before use in any other area as per local processes. Equipment that is unable to be dedicated to single patient use should be cleaned and disinfected after use, allowed to dry, and stored clean.[3,4,9]

Daily cleaning of patient's room minimum frequencies for routine cleaning are outlined in the Queensland Health—Cleaning Services Operational Guidelines

4.3 Discharge cleaning

Thorough cleaning and disinfection of the entire patient care environment upon discharge is required as per Queensland Health guideline: Queensland Health—Cleaning Services Operational Guidelines. Prior to commencing cleaning, ensure disposal of stocks of single-use items in the immediate patient environment that are difficult to clean or disinfect. All furniture, patient equipment items, horizontal surfaces, frequently touched surfaces (for example, light switches and call buttons), and bathroom/toilet/shower area should be thoroughly cleaned and disinfected with chlorine solution.

Disposable privacy curtains should be changed, and reusable privacy curtains changed and laundered after each patient is discharged. Refer to the manufacturer's instructions if antimicrobial curtains are used and change as per advice for pathogens such as *C. difficile*. If blinds are in place clean as per manufacturer's instructions. Cleaning should be monitored and audited regularly to ensure standards are maintained.[4,5,9]

4.4 Cleaning of patient equipment

It is recommended that all cleaning and disinfection of rooms and equipment (for example, electronic thermometers, sphygmomanometers, glucometers, hoists, pat slides) of patients with *C. difficile* is undertaken using detergent/disinfectant wipes, or 1000 ppm available chlorine solution or impregnated sporicidal wipe. [4,6,9] Please refer to the manufacturer's instructions on cleaning to ensure they are compatible with the cleaning product.

All consumables that are unable to be cleaned should be discarded.

4.5 Bedpans

Facilities should select one of the following options for the management of bed pans based on risk assessment and available resources:

1. Single-use bed pans can be utilised. If a macerator is not available in the clinical area, the bedpan and contents should be disposed of into an appropriate waste receptacle.

2. Re-useable bed pans should be reprocessed in the ward washer/disinfector* between uses and loaded as per the manufacturer's instructions. Items should not be loaded with items from other patients.

*NB: washer disinfector must have manufacturer claims of efficacy against *C. difficile.*

4.6 Considerations for rehabilitation and outpatient settings

If residents with *C. difficile* infection receive allied health services or diversional therapy (for example, physio/occupational therapy equipment, recreational resources), staff should work with the patient individually and contact precautions should be maintained for the duration of the therapy. Gym or therapy equipment should be cleaned in between patient use as per 4.2 Environmental Cleaning and 4.4 Cleaning of patient equipment and manufacturer instructions. Hydrotherapy should be ceased for duration of precautions.

4.7 Considerations for paediatric settings

There is no difference in management for confirmed paediatric cases of *C. difficile* infection parents should be encouraged to perform hand hygiene. PPE is not generally necessary for parents within these settings. Where there is prolonged contact or likely contact with faeces, gloves as a minimum are recommended in conjunction with strict adherence to hand hygiene. Visitors should be educated by nursing staff on the use of PPE if required.

4.8 Considerations for residential long-term care facilities

People living in a long-term care facility or residential aged care facility are at high risk of *C. difficile* infection due to chronic disease, increased age, and co-morbidities. Additionally, higher rates of antibiotic usage in long-term care facilities increase the risk for residents to acquire *C. difficile* infection.

Residents with suspected or confirmed *C. difficile* infection should be isolated in a single room and placed on contact precautions. If a single room is not available, the individual should not share a room or bay with an immunocompromised individual and should have a dedicated toilet/commode.

Contact precautions should remain in place until at least 48 hours after diarrhoea has ceased and the patient is passing formed stools. Communal activities should be ceased while the patient is symptomatic and may resume when the resident has passed formed stools for 48 hours.

If residents with *C. difficile* infection receive allied health services or diversional therapy (for example, physio/occupational therapy equipment, recreational resources), staff should work with the patient individually and contact precautions should be maintained for the duration of the therapy. Gym or therapy equipment should be cleaned in between patient use as per 4.2 Environmental Cleaning and 4.4 Cleaning of patient equipment and manufacturer instructions. Family members and visitors of residents should not visit if they are unwell or displaying symptoms of fever, diarrhoea or vomiting.

Residents who have been asymptomatic and passing formed stools in the last 48 hours can be managed without any additional infection control precautions.

4.9 Surveillance

Healthcare facilities should have a reliable surveillance program in place to detect/identify patients with suspected or confirmed *C. difficile* infection. Surveillance will allow for outbreak identification, trend monitoring, and evaluation of actions to reduce incidence and spread.[2,8]

Surveillance of *C. difficile* infection in facilities should be undertaken as per the Australian Commission on Safety and Quality in Healthcare: Implementation Guide for Surveillance of *C. difficile*. It is recommended that all hospitals review surveillance data regularly to monitor for an increase in newly diagnosed cases of *C. difficile* infection or if any transmission has occurred between cases.

Smaller facilities where *C. difficile* infection is uncommon should consider one case significant. It is recommended that a clinical response plan be developed to review surveillance and identify investigation processes when there is an increase in cases (including smaller facilities who find a single case where this is deemed to be a significant finding) and implement appropriate interventions to ensure patient safety. An assessment of the risk should be performed. For additional information refer to Queensland Health Guideline Health Facilities Communicable Disease Outbreak Preparedness, Readiness, Response and Recovery for guidance on the management of transmission of *C. difficile* infection.

4.10 Antimicrobial stewardship

C. difficile infection and colonisation are almost always associated with the use of antibiotics, especially excessive or prolonged. However, cases have been associated with the appropriate use of a single perioperative antibiotic dose for surgical prophylaxis.

Antimicrobial stewardship guidelines for prudent antibiotic prescribing to ensure appropriate use of antibiotics should be adhered to. In general, beta-lactams (for example, cephalosporins or amoxicillin), lincosamides (clindamycin or lincomycin), and fluoroquinolones are regarded as antibiotics that provide the highest risk for *C. difficile* infection. However, all antibiotic types have been implicated.[1]

5 Recovery

5.1 Outbreak cessation

There is little information pertaining to when an outbreak should be declared over. An outbreak should be declared over when there is no further transmission, and there has been a return to the organisation's baseline *C. difficile* infection rate.[4]

5.2 Debrief and evaluation

Evaluation of the effectiveness of management of cases and outbreaks provides important opportunities to improve practices. Please refer to Health Facilities Communicable Disease Outbreak Preparedness, Readiness, Response and Recovery Guideline for information about outbreak evaluation.

6 Further information

The *C. difficile* organism can exist, and persist, in various environmental reservoirs such as water courses, swimming pools, soil, and in a range of animals including dogs, sheep and pigs. *C. difficile* has been found on culture from items and inert surfaces in patients' rooms. The risk of colonisation for inpatients increases with hospitalisation and the median time from exposure to *C. difficile* to infection is short (2–3 days) which supports the importance of rapid isolation of patients with *C. difficile* infection.[5] Asymptomatic colonisation is possible, with healthy adult studies demonstrating carriage rates of up to 18% of hospitalised patients colonized. These patients will still shed *C. difficile* in stool, and therefore potentially contaminate their surroundings, but do not have diarrhoea. A small number of *C. difficile* clinical isolates are also non-toxigenic.[6]

Transmission of *C. difficile* to other patients in the environment can occur from those with active *C. difficile* infection and those with asymptomatic colonization.[6]

Since 2000, there has been an increase in the rates of *C. difficile* infection in some overseas healthcare facilities associated with an epidemic strain of *C. difficile* known as BI/NAP1/027, toxin type III or PCR ribotype 027. Other types of *C. difficile* that have been imported from overseas, and considered hypervirulent, are the 078 and 023 strains. The most common types in Australia include the 014/020, 002, 056 and 070 strains. Small numbers of virulent ribotypes 078 and 244 have been found. Few isolates of ribotype 027 have been identified in some Australian states.[6]

Risk factors for community-acquired *C. difficile* infection (CA- *C. difficile* infection) include antimicrobial exposure, with the strongest associations found with prior use of clindamycin, fluoroquinolones and cephalosporins.[4] The available evidence regarding CA- *C. difficile* infection transmission suggests close contacts (including children <2 years old), the environment, animals (particularly production animals), and food are potential sources of infection in the community. *C. difficile* infection can occur in younger patients without any evidence of recent hospitalisation or antibiotic use.[1,4,6]

Guidance on best practices in regard to whether alcohol-based hand rub (ABHR) or soap and water is preferred varies throughout the literature. Limitations of disinfection hand with ABHR are well described, as they are non–sporicidal and do not remove *C. difficile* spores from contaminated hands. It is therefore important to raise awareness about the limitations of ABHRs. Additional studies are necessary to further clarify the effects of the use of ABHR on *C. difficile* infection and make a more robust conclusion.[15]

Evidence suggests that modern washer-disinfectors can be used for disinfection of reusable bedpans in between use, however staff must be trained in their use, and manufacturers' specifications correctly followed.[16,17]

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Appendix 1 – *Clostridioides difficile* Quick Reference Guide

<table>
<tr><th>Term</th><th>Definition</th></tr>
<tr><td>C. difficile basics</td><td>Gram-positive, anaerobic, spore-forming, potentially toxigenic bacterium that is the most common infectious cause of diarrhoea.</td></tr>
<tr><td>C. difficile infection</td><td>Clostridioides difficile infection - A patient who has clinical features suggestive of C. difficile infection (diarrhoea, ileus, toxic megacolon), plus Microbiological evidence of toxin (A and/or B) producing C. difficile or Pseudomembranous colitis demonstrated on colonoscopy.</td></tr>
<tr><td>Risk groups</td><td>Factors associated with people at high risk of C. difficile infection include hospitalisation, extensive antibiotic use, multiple co-morbidities, including primary or secondary immunodeficiency, Hirschsprung disease, solid organ transplantation, inflammatory bowel disease, cystic fibrosis proton inhibitor use, presence of a gastrostomy tube and structural or postoperative intestinal disorders.</td></tr>
<tr><td>C. difficile transmission</td><td>Person-to-person spread through the faecal–oral route. Direct and indirect contact where hands, devices, fomites, or the environment may become contaminated also serve as a reservoir for C. difficile spores.</td></tr>
<tr><td>C. difficile treatment</td><td>C. difficile infection is usually treated as per therapeutic guidelines, such as oral metronidazole or oral vancomycin. Alternative treatments are also available for recurrent infection and for children.</td></tr>
<tr><td>C. difficile testing</td><td>Collection of stool specimen which meets the criteria of diarrhoea and takes the shape of the container. Refrigerate if left out for >2.</td></tr>
<tr><td>C. difficile IPC</td><td>PREPARE
Have OMP and convene outbreak control team in an outbreak.</td></tr>
<tr><td></td><td>READINESS
SIGHT protocol on immediate suspicion
<table>
<tr><td>S</td><td>Suspect C. difficile infection for any adult patient who develops diarrhoea with no clear cause, particularly in those who have been prescribed antibiotic or immunosuppressive therapy in the last 12 weeks</td></tr>
<tr><td>I</td><td>Isolate the patient/resident. Consult with the infection prevention and control team where available while determining the cause of the diarrhoea</td></tr>
<tr><td>G</td><td>Apply standard and contact precautions
Gloves and aprons must be used for all contacts with the patient/resident and their environment</td></tr>
<tr><td>H</td><td>Hand hygiene with alcohol-based hand rub (ABHR) following glove removal, or soap and water if hands are visibly soiled or when there is a breach in glove integrity, should be carried out as per the Hygiene.
HCW should be bare below the elbows.</td></tr>
<tr><td>T</td><td>Test the stool for Clostridium difficile toxin, by sending a specimen immediately</td></tr>
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Term	Definition
	RESPONSE • isolation of cases in a single room with an unshared ensuite • cohort with other *C. difficile* infection patients based on microbiological confirmation of the cause of diarrhoea • continue standard and contact precautions with strict adherence to the 5 moments of hand hygiene until diarrhoea has ceased for 48 hours • dedicated patient equipment or clean and disinfect equipment and environment between each patient use or encounter • enhanced environmental cleaning and disinfection (daily and on discharge from any clinical zone) • undertake thorough discharge cleaning and disinfection • use ARTG-listed combined detergent and disinfectant products (2-in-1 clean), or ARTG-listed chemical disinfectant that makes specific claims for use against *C. difficile* (as part of a 2-step clean) • single-use bed pans can be utilised where possible • patient dedicated re-useable bed pans should be reprocessed in the ward washer/disinfector between uses by themselves and cannot be washed with items from other patients. • waste should be discarded as per local procedures • provide information to patients ACSQHC Infection prevention and control resources for consumers • visitors do not need to wear gown and gloves but must perform hand hygiene. Where there is prolonged contact or likely contact with faeces, gloves as a minimum are recommended in conjunction with strict adherence to hand hygiene. Visitors should not visit anyone else in the facility immediately after visiting someone with *C. difficile.* • alerts will be placed in the ieMR and HBCIS. • surveillance of *C. difficile* infection in facilities should be undertaken as per the Australian Commission on Safety and Quality in Healthcare: Implementation Guide for Surveillance of *C. difficile* and the Queensland Health Guideline for Surveillance of Healthcare Associated Infection. Investigate and manage any outbreaks.
	RECOVERY • an outbreak should be declared over when there is no further transmission, and there has been a return to the organisation's baseline *C. difficile* infection rate • debrief and evaluate the effectiveness of measures in the event of an outbreak or case of *C. difficile* infection

Document approval details

Document custodian

Queensland Infection Prevention and Control Unit (QIPCU), Communicable Diseases Branch, Queensland Public Health and Scientific Services.

Approval officer

Belinda Henderson, Chief Infection Control Nurse QIPCU

Version control

Version	Date	Prepared by	Comments / Reason for update
1.0	23/01/2014	CHRISP	
2.0	05/11/2014	CDMU	Full revision
3.0	21/05/2019	CDMU	Full revision
4.0	30/04/2024	QIPCU	Prepared by QIPCU A major review of the evidence base and restructure of guidelines, key changes include: - NEW: Key Messages section - NEW: Quick reference guide for clinicians Restructured according to Outbreak Preparedness, Readiness, Response and Recovery model