

Infection Control Manual – Long-Term Care

PART 3 – INFECTION PREVENTION AND CONTROL STANDARDS

IC7: CLOSTRIDIODES DIFFICILE

IC7:0400 MANAGEMENT OF CLOSTRIDIODES DIFFICILE ASSOCIATED DIARRHEA

1.0 STANDARD

In addition to Routine Practices, [Contact Precautions Plus](#) are implemented for residents with suspected or confirmed diarrheal *Clostridioides difficile* Infection (CDI). Precautions remain in place until resident has had at least 72 hours without symptoms of loose and/or watery stool.

Residents on [Contact precautions Plus](#) in multibed rooms, must have a dedicated commode or toilet for their use for the duration of precautions.

A single room is recommended if diarrhea cannot be contained, and environmental contamination is likely.

An outbreak is three or more laboratory confirmed or indeterminate cases of *Clostridioides difficile* infection within a seven-day period attributed to the same neighborhood

2.0 DEFINITION

C. difficile is a Gram-positive spore-forming anaerobic bacillus that has been a known cause of healthcare associated diarrhea for over 30 years. Some strains produce toxins (toxin A and toxin B) that cause diarrhea, fever, loss of appetite, nausea and abdominal pain. *C. difficile* produces spores that are resistant to destruction by many interventions including most disinfectants and many treatments.

Risk factors for CDI include:

- Prior antibiotic usage
- Bowel surgery
- Chemotherapy
- Prolonged hospitalization
- Increased age
- Serious underlying illness
- Exposure to GI Drugs (such as proton pump inhibitors)
- Previous episode of CDI

2.1 A diagnosis of CDI applies to a person:

When any one of the following criteria are met:

- a. Laboratory confirmation by positive or indeterminate *C. difficile* and one of the following:
 - i. Acute onset of diarrhea* above what is normal for the individual and cannot be attributed to another cause (e.g. laxatives, medication side effect, diet, or medical condition);

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OR

- ii. Diagnosis of toxic megacolon
- b. Diagnosis of typical pseudo-membranes on sigmoidoscopy, colonoscopy
OR
- c. Histological/pathological diagnosis of CDI

*Defined as three or more unexplained liquid stools (that take the shape of the container or Bristol Stool Chart 6 - 7) that continue for a minimum of 24 hours

Healthcare Associated CDI linked to currently admitted facility:

A CDI case (as defined above) with symptom onset at least 72 hours or more after admission to a health care facility.

Community Associated (CA): A CDI case (as defined above) with symptom onset in the community or 72 hours or less after admission to a healthcare facility, provided that symptom onset was more than 8 weeks after the last discharge from a healthcare facility.

Relapse of CDI: A CDI case (as defined above) with recurrence of diarrhea within 2 to 8 weeks of a previous *C. difficile* episode (as determined by the date of a previous lab test, chart note or diagnosis by endoscopy or pathological specimen) provided that CDI symptoms from the earlier episode resolved with or without treatment.

Note: A case with recurrence of diarrhea less than two weeks from the previous episode is considered to be a continuation of the previous episode and not a relapse.

3.0 TRANSMISSION

C. difficile bacteria and spores are found in feces. Infection can happen when hands have contact with surfaces contaminated with feces that then touch the mouth.

Transmission between residents may be from the hands of health care personnel. Transmission may also happen from contact with the environment or resident care equipment and care supplies.

CDI spores can persist on environmental surfaces for lengthy periods of time. Frequent hand hygiene and meticulous cleaning of surfaces contaminated with feces is important to limit transmission.

Note: It is not uncommon for individuals to experience one or more episodes of symptom relapse in the weeks following initial symptom onset and If this occurs, implement Contact Precautions Plus until 72 hours after symptom resolution and notify the Most Responsible Provider (MRP)

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4.0 Specimen Collection

4.1 Suspected CDI cases

- unexplained liquid stools that take the shape of the container / Bristol Stool Chart 6 - 7 and continue for a minimum of 24 hours, submit an unpreserved stool specimen for *Clostridioides difficile*.
- A stool specimen from all residents with toxic megacolon should be tested for *Clostridioides difficile*.
- Residents with lab confirmed CDI do not require repeat testing (i.e. test for cure).
- If a relapse is suspected following completion of therapy, another stool specimen may be submitted after consultation with the IPC Practitioner

4.2 Additional precautions and Resident accommodation

- When a resident presents with symptoms of gastrointestinal illness including CDI, the resident should be placed on Contact Precautions Plus immediately by the healthcare provider.
- Place a Contact Precautions Plus sign on the door/at the entrance to the resident's room.
- If the resident is in a shared room, place a second Contact Precautions Plus (CPP) sign at the bedside/head of bed/curtain entry, where it is visible to staff and visitors prior to entry to the resident environment.
- Start the [Bowel Movement Record – LTC \(Bristol Stool Chart\)](#)
- Monitor resident for sepsis, abdominal pain, dehydration, and skin breakdown for duration of illness
- Monitor resident for return of symptoms following resolution which could indicate a relapse
- Receiving unit must be notified prior to resident transfer for either tests or relocation
- CPP requires dedicated toileting facilities (e.g. bathroom or dedicated commode). The dedicated bathroom requires a dedicated toilet brush for the duration of precautions. Toilet brush should not travel outside of designated bathroom. The toilet brush must be discarded weekly and when additional precautions are discontinued (e.g. discharge, transfer, removal of isolation precautions).
- Prioritize resident's personal hygiene by increasing frequency of linen change, clothing change and bathing or showering to daily, if possible

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4.3 Resident Care Equipment and Supplies

- Ensure the resident environment contains minimal supplies.
- Dedicate medical equipment until resolution of symptoms whenever possible (e.g. bedpans, thermometers, stethoscopes); dedicated equipment must be kept in the patient's room.
- If dedicated equipment is not available, clean and disinfect equipment between residents with Health Canada approved sporicidal products (e.g. bleach > 5000ppm) unless contraindicated by manufacturers' instructions.
- Equipment and supplies that cannot be cleaned and disinfected must be dedicated and then disposed of upon discharge.
- Equipment that has been cleaned and disinfected should be identified with appropriate signage (e.g. I am clean sticker) and stored in a designated clean holding area.
- A dedicated linen bag must be placed inside the resident's room, not in the hallway.
- Reserve all personal hygiene products and any creams, ointments etc., for the resident's exclusive use, these are to be kept in their room

4.4 Meal Tray Delivery

- Any staff member delivering and collecting meal trays from the room of a resident on CPP must don the appropriate PPE prior to entry and doff prior to leaving the room.

4.5 Environmental Cleaning

- Housekeeping staff: Use >5000ppm bleach products (e.g., PCS5000, Clorox bleach wipes) with a Health Canada Drug Identification Number [DIN] for disinfecting surfaces in the room of a resident on CPP.
- Healthcare providers: Use >5000ppm bleach products (e.g., PCS5000, Clorox bleach wipes) with a Health Canada Drug Identification Number [DIN] for disinfecting equipment and surfaces in the room of a resident on CPP (check manufacturer's instructions for compatibility).
- In addition to regular daily cleaning and disinfection, a second enhanced clean of high-touch surfaces and the resident bathroom is required 6-8 hours after the first clean/disinfection.
- Horizontal surfaces should be kept free of clutter to facilitate environmental cleaning activities.
- Staff are to notify Housekeeping Services to perform an Isolation Discharge Clean when the resident is discharged or upon resolution or symptoms. Housekeeping staff are responsible for removing the CPP sign once the isolation discharge clean is complete
- The details of environmental cleaning requirements for residents requiring CPP are provided in the [Viral Gastrointestinal Illness Toolkit](#) Tool 15: Enhanced **Cleaning and Disinfection** resource.

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4.6 Director of Care/manager/CNE or designate:

- Provide staff education regarding infection prevention and control measures as required.

5.0 PROCEDURE FOR CDI OUTBREAK

5.1 In addition to the above control measures, initiate additional control measures:

- Enhanced environmental cleaning including increased cleaning and disinfection for washrooms, common areas, soiled utility rooms, and all frequently touched surfaces.
- Start a line list as soon as a single case of CDI is identified.
- Perform hand hygiene audits daily
- Healthcare providers must be cohorted (i.e. the same healthcare provider(s) should care for residents who are exhibiting like symptoms only and should be restricted from caring for asymptomatic residents).
- Housekeeping staff should be dedicated to the outbreak unit and work from unaffected rooms to rooms on CPP. Staff members whose work requires that they move from unit to unit during the course of their day (e.g. physiotherapists, porters, Spiritual Care, dietary services) should be reminded to be vigilant about their infection prevention and control practices, including strict adherence to hand hygiene practices and the use of appropriate PPE. If possible, outbreak units should be visited at the end of the shift.
- Visitors will be alerted to the outbreak by outbreak signage posted at all entrances to the unit.
- Site Director of Operations or designate are accountable to ensure correct signage is posted at entrance to the unit.

5.2 All staff:

- Follow Contact Precautions Plus and maintain Routine Practices.
- Ensure the resident environment contains minimal supplies
- Perform hand hygiene with soap and water when caring for residents with diarrhea or their environment. If soap and water is not readily available, use alcohol-based hand rub and then wash hands with soap and water as soon as possible.
- Complete daily care and dress the resident in clean clothes. Belted trousers are useful when there is a risk of fecal contamination from manipulating the incontinence device. Other strategies may be developed if fecal contamination remains a problem.
- Assist resident to wash hands with soap and water before and after eating, and after using the toilet or commode.
- Follow regular practices for laundry and garbage disposal
- Regular trays service to be used
- All shared resident equipment to be dedicated or cleaned between residents using a hospital

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grade disinfectant with sporicidal products (e.g. bleach > 5000ppm) unless contraindicated by manufacturers' instructions.

- When using bedpans a closed system is to be used, avoid emptying of bedpans in toilets or hoppers. A washer disinfectant, macerator or disposable hygienic bags should be considered for disposing bodily excretions.

5.3 Director of Care/manager or designate:

- Provide staff education regarding infection prevention and control measures as required
- Communicate with housekeeping enhanced cleaning requirements Environmental cleaning agent to be changed to a sporicidal agent and a second clean/disinfect is to be completed 6-8 hours following the initial clean/disinfect (include the document of surfaces that require the second clean/ disinfection).
 - Bleach at 1:10 or 5000 ppm is sporicidal with a contact time of 10 minutes. Cleaning first using a hospital grade detergent is required.
 - Accelerated hydrogen peroxide at 4.5% is sporicidal. Contact time based on manufacturer's instructions must be followed

5.4 Discontinuation of precautions

- Consult with IPC Practitioner prior to discontinuing CPP
- Once a resident is eligible for discontinuation of CPP, healthcare provider must contact housekeeping to request an isolation discharge clean.
- Environmental Services are responsible for removing the CPP sign once the isolation discharge clean is complete
- Upon discontinuation of precautions a terminal clean using either of the disinfectants listed above, of the room is to be done as well as
 - Take down privacy curtains and launder
 - Discard disposable items in bathroom, toilet paper and paper towels
- The resident must receive a shower, bath or a bed bath along with clean clothing upon discontinuing CPP

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6.0 Essential Care Partners and Visitors

- If essential care partners and/or visitors are providing direct resident care, they are required to don and doff appropriate PPE. Examples of direct care include assisting with bathing, toileting, changing incontinent products.
- Essential care partners and visitors must report to the nursing station before entering the room of a resident on CPP.
- Staff must educate essential care partners and visitors of the importance and technique of hand hygiene and provide the hand hygiene pamphlet to visitors.
- Staff must educate essential care partners and visitors on the importance and the technique of donning and doffing, as well as when they are required to wear PPE.
- Once the visit is over essential care partners and visitors must perform hand hygiene and leave the site.
- Advise visitor not to use the resident's bathroom and not visit other residents or other areas

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7.0 REFERENCES

Provincial Infection Control Network (2013). Residential Infection Prevention and control Manual.

<http://www.picnet.ca/practice-guidelines>

Public Health Agency of Canada, CDI Infection Prevention and Control Guidance for Long Term Care Facilities 2012.

<http://www.phac-aspc.gc.ca/nois-sinp/guide/c-dif-ltc-sld/index-eng.php>