

<b>Best Practice Guideline</b>	<b>Care and Management of <i>Clostridioides difficile</i> Infection (CDI) in Long-Term Care (LTC)</b>
<b>Date</b>	26 April 2024
<b>Reviewed Date</b>	
<b>Revised Date</b>	

A printed version of this guideline may not be the most recent version. The OFFICIAL version is located at [www.ipac.vch.ca](http://www.ipac.vch.ca).

## Site Applicability

All Vancouver Coastal Health Owned, Operated and Contracted LTC homes.

## Scope of Practice

All healthcare providers, contractors, residents and visitors are responsible to follow these guidelines for management of residents with *Clostridioides difficile* (CDI) in Long-Term Care Homes.

## Purpose

To provide guidelines for direct care staff for Infection prevention and control and operational measures to decrease cases of healthcare associated *CDI*. To outline Infection Control responsibilities.

## Background

*CDI* is a common hospital acquired infection causing mild to severe diarrhea and inflammation of the colon. Infection is associated with the widespread use of antibiotics. If certain antibiotics are used in high doses or over a prolonged period, they can interfere with the normal flora of the bowel that can result in the growth of *CDI* bacteria. *CDI* bacteria produce toxins that damage the bowel and cause diarrhea, however, in some circumstances a person can have *CDI* bacteria present in their bowel and remain asymptomatic. Residents who are elderly and people treated with antibiotics and certain other stomach medications are at the greatest risk of developing a *CDI* infection.

## Transmission

*CDI* bacteria and spores are found in feces. Infection can happen when hands have contact with surfaces contaminated with feces that then touch the mouth (fecal-oral). Transmission can also occur indirectly through contaminated healthcare worker hands or from contact with the resident environment, care equipment or supplies. *CDI* spores can live on environmental surfaces for long periods of time, thus diligent hand hygiene and cleaning and disinfection are paramount to reducing transmission.

## Incubation Period



The incubation period of *CDI* following acquisition has not been clearly defined. Studies have determined that onset of infection can occur within 48 hours after exposure and up to 3 months post exposure.

## Period of Communicability

The period of communicability is unknown; it may vary depending on the amount of toxin in the stool, which can vary. Spores are resistant to many disinfectants and are very difficult to eliminate from surfaces and objects.

## Procedure

Staff to consider the resident's clinical baseline and assess the resident suspected of having *CDI* by clinical symptoms, characteristics of the stool and the number of stools. Rule out other possibilities such as recent laxative use or other causes of infectious diarrhea. MRP may consider sending stool for microbiology testing if appropriate.

## Case Definitions

### **CDI Case:**

Acute onset of diarrhea (3 or more unexplained loose or liquid stools in a 24-hour period) above what is normal for the individual and not attributed to another cause (e.g., laxatives, medication side effect, diet, prior medical condition).

And one or more of the following:

- Laboratory confirmation (positive toxin or culture with evidence of toxin production)
- Diagnosis of typical pseudomembranes on sigmoidoscopy, colonoscopy or histological/pathological diagnosis of *CDI*
- Diagnosis of toxic mega colon.

**Community-associated *CDI*** – A confirmed case of *CDI* that meets all 3 of the following criteria:

- Symptom onset in the community or 3 calendar days or less after admission to an acute care facility
- Symptom onset was more than four weeks after the last discharge from a healthcare facility (Acute and/or Long-Term Care)
- The case has no history of *CDI* in the previous 8 weeks.

**Health Care Associated/Nosocomial case of *CDI*** – A confirmed case of *CDI* that has no history of *CDI* for a period of 8 weeks prior to diagnosis who meets one of the following three criteria:

- Symptom onset occurring more than three calendar days after admission to an acute care facility.  
or
- Symptom onset in the community less than four weeks after discharge from an acute care facility  
or



- Symptom onset occurring less than three calendar days after admission to an acute care facility if the new admission occurred within 4 weeks of discharge from an acute care hospital.

**CDI Reinfection** (counted as new case) – A confirmed case whose symptoms started greater than 8 weeks from a previous *CDI* infection (as determined by the date of a previous positive lab test, chart note, or diagnosis by endoscopy or pathological specimen).

**CDI Relapse** – a confirmed case with recurrence of diarrhea within 2 to 8 weeks of a previous *CDI* infection (as determined by the date of a previous lab test, chart notes or diagnosis by endoscopy or pathological specimen) if *CDI* symptoms from the earlier episode resolved with or without treatment.

**Nosocomial to Unit** The unit from which the case most likely contracted the causative organism. In the case of *CDI*, the most likely unit is the one where the resident spent 72hrs or longer or where the resident had a previous recent admission (within 4 weeks) prior to symptom onset. If the resident spent 72 hours or longer on more than one unit within this period, select the most recent or longest stay.

**Resolved case of *CDI*** – Confirmed *CDI* case (as defined above), but the bowel habits of the *CDI* case have returned to normal patterns for that resident for a period of at least 72 hours.

## Assessment

### **CDI Symptoms:**

- Watery diarrhea
- Fever
- Loss of appetite
- Nausea
- Abdominal pain and tenderness, cramping.

### **Risk factors for *CDI***

- A history of antibiotic usage, particularly broad-spectrum antibiotics that affect the normal gut bacterial flora, such as fluoroquinolones.
- Immunosuppressive therapy post-transplant
- Use of proton pump inhibitors
- Bowel disease and bowel surgery
- Chemotherapy; and/or hospitalization
- History of *CDI*
- Increased age
- Immunosuppressive therapy
- Recent surgery



## Testing/Sample Collection

- Collect a stool sample when a resident has 3 episodes of diarrhea, [Bristol stool chart 6 or 7](#), within a 24 hour period.
- Inform the MRP regarding resident's clinical status to request order when case definition met.
  - If collecting a stool sample, send the sample to your regular lab through your established courier service.
  - Stool samples can be stored in the fridge for up to 3 days.
  - Indicate *CDI* on lab requisition.
- There is no requirement to test asymptomatic residents.

## Management of suspected or confirmed residents

- Maintain [Contact Plus Precautions](#) until 72 hours after symptoms have resolved. Continue using Point of Care Risk Assessment (PCRA) when performing tasks with a risk of splashes and sprays.
- For residents that test indeterminate, MRP to assess the resident to identify the need to continue Contact plus precautions.
- For residents that test negative, assess alternate diagnosis, and maintain Contact Plus precautions for 48 hours after resolution of symptoms.
- For treatment, refer to [Clostridioides difficile Infection](#) document.
- Initiate a [paper line list](#) on the unit to document the number of loose stools using the Bristol stool chart.
- **Soap and water is the preferred method for hand hygiene.**
  - C. difficile spore are not inactivated by alcohol based hand rub (ABHR)
  - When soap and water are not available, use ABHR then wash with soap and water as soon as possible.
- Dedicate toileting facility/commode for residents where possible.
  - Use [disposable hygienic products](#) for symptomatic residents for the duration of the illness when unable to dedicate toilet.
- Dedicate shared equipment where possible.
  - Clean and disinfect equipment using the 2-step process after each use.
  - When unable to dedicate, clean and disinfect all shared items using a Health Canada approved sporicidal agent effective against *CDI* spores. [See Commonly used Disinfectants Table](#).
- Identify close contacts and assess risk. Consult with ICP if requiring more guidance.
  - Close contacts are residents sharing a room including toileting facilities.
- Close privacy curtains for residents in shared rooms.
- Take daily vital signs (temperature, heart rate, and blood pressure).
- Assess and ensure adequate nutrition and hydration see [Hypodermoclysis](#). Refer to a dietician, if necessary.



- No special handling of linen required; routine practice is sufficient, have an in room linen hamper for hospital linen and personal laundry and garbage.
- No special handling of dishes and cutlery required, routine practice is sufficient.

## Outbreak Definition

Medical Health Officer (MHO) may call an outbreak following discussion with the medical microbiologist, Communicable Disease Environmental Health Officer and IPAC when there are two or more Healthcare associated CDI cases in a 4-week period on the same unit.

## Admissions/Transfers

- There are no halts to admissions or transfers for residents with *CDI*.
- When transferring a resident, notify the transferring service, receiving unit, or facility/home care agency of the necessary requirements in advance.

## Enhanced cleaning

ICP will ask for enhanced cleaning when there is a positive *CDI* case on the unit. Environmental services should use a Health Canada approved sporicidal agent effective against *CDI* to clean and disinfect the environment. Use a cleaning agent followed by a disinfectant with sporicidal activity. See [Commonly Used Disinfectant Table](#).

For owned and operated sites:

- ICP to request enhanced cleaning.

Contracted and private sites:

- Leadership to coordinate enhanced cleaning.

## Discontinuation of Precautions

- Continue [Contact Plus Precautions](#) until bowel habits have returned to normal patterns for 72 hours.
  - Maintain resident on Contact Plus Precautions until Isolation discharge clean of the room is complete along with a resident bath/shower.
  - Discard toilet brush.
- If ongoing transmission is occurring and if there is suspicion for viral GI, consult with IPAC team for further guidance.



## References

1. Canadian Centre for Occupation Health and Safety, (2018). Fact Sheet
2. Ontario Public Health Standards, (2022). Disease: Clostridium difficile Infection (CDI) outbreaks in public hospitals
3. PICNet BC, (2018). Toolkit for Management of CDI in Acute care settings
4. PHAC, (2012). C. difficile (Clostridium difficile)
5. PHAC, (2014). Fact Sheet - Clostridium difficile (C. difficile)
6. CLOSTRIDIUM DIFFICILE INFECTION TREATMENT ORDERS
7. Canadian Standards Association Group. (2018). CSA Z8000-11: Canadian Health Care Facilities- Planning, Design and Construction (second edition).

