

# *Clostridium difficile*-Associated Diseases (CDAD) Infection Control Guidelines

COMMUNICABLE DISEASE CONTROL

## Introduction

*Clostridium difficile* is an infectious gram positive spore-forming bacillus microorganism of the gastrointestinal tract, and its toxin expression causes gastrointestinal illness for people in hospitals, personal care homes and in the community. These illnesses include diarrhea, colitis, toxic megacolon, sepsis-like picture and death, and are called *C. difficile*-Associated Diseases (CDAD). When caring for a person with CDAD, Contact Precautions in addition to Routine Practices must be used.

In this document, the term “patient” refers to all patients, residents and clients with CDAD.

## Health Care Facilities

### Accommodation

#### 1. *Single Room:*

- A single room is preferred. This is especially important if the patient is incontinent (i.e., feces that cannot be contained) or the patient has poor hygiene that might lead to contamination of the surrounding environment.
- Door may remain open.
- Room should have toilet and handwashing facilities; otherwise, an individual commode dedicated for the use of that patient.

#### 2. *Shared Room:*

- Maintain spatial separation of at least one metre between infected patients and other patients and their visitors.

- Roommates and all visitors should be made aware of, and comply with any precautions that are being taken.
- Roommates should be selected for their ability, and that of their visitors, to comply with these precautions.
- Roommates to be selected should not have serious medical conditions such as end-stage renal disease, cancer or immunodeficiency, that would put them at risk of CDAD if transmission of *C. difficile* occurred.
- Single room is indicated if the above conditions cannot be met.

#### 3. *Cohort:*

- Patients known to be infected with the same strain of *C. difficile* can be grouped together as infection with different strains is a concern.
- Infection Prevention and Control must be involved in a decision to cohort.

## Gloves

Gloves should be worn when:

- entering the patient’s single room or designated bed space in a shared room;
- contact with infected material or contaminated environment surfaces or equipment is anticipated. As *C. difficile* or its spores are ubiquitous (and can survive for months in the environment), health care workers should anticipate that contact with any object in a room of a patient with CDAD may result in contamination with *C. difficile* or its

spores. Consequently, gloves should be worn if contact with any object in the patient room of a patient with CDAD is expected.

Gloves should be removed before leaving the patient's room when tasks are completed.

- Perform hand hygiene immediately after gloves are removed.

### **Gowns (long-sleeved)**

Gowns should be worn if:

- clothing or forearms will have direct contact with the patient;
- it is anticipated that clothing or forearms will be in direct contact with frequently touched environmental surfaces, objects or infectious material;
- there is increased risk of environmental contamination (i.e., incontinent patient, diarrhea or drainage from a colostomy or ileostomy that cannot be contained).

Gowns should be removed before leaving the patient's room.

### **Hand Hygiene (as outlined in Routine Practices and Additional Practices as required)**

- Remove gown and gloves, and wash hands with soap and water before leaving the room
- After hand hygiene, take care not to contaminate hands before leaving the room.
- **Note:** Alcohol hand rubs do not inactivate the spores of *C. difficile* (3).

### **Equipment**

- All equipment used for patient care (e.g., thermometers, commodes, etc.) must be dedicated for the use of the individual patient; or must be cleaned and disinfected with facility-approved disinfectant immediately after each use.

- All equipment/supplies designated for use by infected patients should be identified and stored in a manner that prevents use by, or for, other patients.

### **Environment Cleaning**

- All horizontal surfaces in the room and all items within reach of patients with suspected or confirmed CDAD should be cleaned twice daily with a hospital grade disinfectant.
- Particular attention should be paid to the cleaning of patient-specific items and "high touch" surfaces including bed side rails, telephone call bells, light cords, switches, door handles, faucets, commodes and toilets etc.
- Cleaning must be thorough, taking into account the following principles:
  - Work from clean items and surfaces to dirty ones.
  - Do not spray or squirt disinfectant solution onto the surfaces to be cleaned. Apply disinfectant solution directly to all cleaning cloths and ensure they are fully saturated prior to cleaning surfaces.
  - Change cleaning cloths and mop heads frequently. Reduce contamination of disinfection solution and recontamination of cloths (e.g., avoid "re-entry" of used cloth into disinfectant solution).
  - Disposable toilet brushes should be used in the rooms of all patients with CDAD.

### **Discharge/transfer cleaning must occur upon resolution of CDAD symptoms or when a CDAD patient has their accommodation changed or is discharged from a room.**

- Prior to initiating discharge/transfer cleaning, all privacy and shower curtains must be taken down and sent for laundering.

- Window coverings, including pull cords, should be wiped down with a hospital grade disinfectant; if visibly soiled they must be taken down and laundered.
- All disposable items including paper towels and toilet paper must be thrown away.
- Toilet brushes must be discarded as part of the discharge/transfer cleaning process.
- Until proper discharge/transfer cleaning has taken place, contact precautions should remain in effect.
- In patient-care areas where there is evidence of *ongoing transmission of C. difficile*, use of hypochlorite-based products for disinfection after the room is cleaned with hospital-grade disinfectant may be considered. This should be done in consultation with Infection Prevention and Control and Health and Safety.
- Ensure clear communication with housekeeping/environmental services with respect to:
  - Cleaning protocols for *C. difficile*. Consider developing a checklist for housekeeping/environmental services staff that can be posted on the back of signage that indicates precautions to be used. The checklist can also be posted in a housekeeping closet.
  - Notification and scheduling of *C. difficile* cleaning of a specific patient room/isolation area is required.
- Floor surfaces are not a significant source of transmission of *C. difficile* and do not require special cleaning procedures.

## Activities

In health care facilities, the participation of an infected patient in group activities should be discussed with Infection Prevention and Control and usually restricted until the patient has been treated and symptoms have resolved.

## Discontinuation of Precautions

- Contact precautions may be discontinued when the patient has had at least 48 hours without symptoms of diarrhea (e.g., formed or normal stool for the individual).
- Contact precautions should be discontinued only under the direction of Infection Prevention and Control.
- Retesting for *C. difficile* toxins (enterotoxin and cytotoxin) is not necessary to determine the end of isolation and should not be done.

## Recurrence of Symptoms

- Recurrence of CDAD is common and occurs in about 30% of cases. If diarrhea recurs, the patient should be immediately placed on Contact Precautions, stool should be sent for *C. difficile* toxin (enterotoxin and cytotoxin) testing and re-initiation of therapy should be considered, while awaiting the test result.
- If a patient has recurrent CDAD consideration may be given to leaving the patient in single room accommodation even after resolution of symptoms.

## Reporting Requirements

- All positive laboratory tests for *C. difficile* toxin are reportable by the laboratory to the Director, Communicable Diseases Control (CDC), Manitoba Health.
- CDAD diagnoses based on endoscopy and other imaging techniques are reportable by the ordering practitioner to the Director, Communicable Diseases Control, Manitoba Health.
- Infection Prevention and Control Practitioners or designated individuals in health care facilities are required to complete the Manitoba Health Communicable Disease Control Unit Investigation Form for *Clostridium difficile*-Associated Diseases (CDAD) for

each confirmed case of CDAD infection diagnosed at their facility including recurrent cases. Outcomes must be reviewed at 30 days post-diagnosis and the investigation form returned to the CDC Unit of Manitoba Health.

- Outbreaks require individuals responsible for infection control and infectious disease to provide notice to the CDC Unit, Public Health Branch, Manitoba Health.

### Transfer Between Facilities

The diagnosis of CDAD does not preclude transferring patients between facilities or movement to and from Long Term Care Facilities. Patients with CDAD, should have their status noted on their health record. Patients with CDAD should have this clearly documented on the Regional Health Authorities of Manitoba Transfer Referral Form. Negative culture/toxin results are not required for transfer. Agencies responsible for transferring patients with positive CDAD diagnoses require notification that Contact Precautions should be used during the transfer if the patient is considered infectious.

### Community Care

If providing community care to an individual with *C. difficile* diarrhea, follow Manitoba Health's *Infection Control Guidelines for Health Care Workers in the Community*. *C. difficile* infection control precautions that are in place in the institutional setting are not necessary once the patient is discharged to the community. However, good hygiene and handwashing with soap and water is recommended for both patients and their caregivers during the patient's illness with diarrhea.

### Resources:

1. Routine Practices and Additional Precautions for Preventing the Transmission of Infection in Health Care, Public Health Agency of Canada, Laboratory Centre for Disease Control. July 1999. [http://www.phac-aspc.cc.ca/new\\_e.html](http://www.phac-aspc.cc.ca/new_e.html)
2. Infection Control Guidelines for Health Care Workers in the Community, Manitoba Health. January 2005. <http://www.gov.mb.ca/health/publichealth/cdc>
3. Boyce, J. and Pittet, D. (2002). Guideline for Hand Hygiene in Health-care Settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA. *Infection Control and Hospital Epidemiology* 23 (12): S3-S40.
4. *Best Practices Document for the Management of Clostridium difficile in all health care settings*, Ontario Ministry of Health and Long-Term Care, December 2004.