

**Tiered Management of *Clostridium difficile* Infection (CDI) in Acute Care- Adult**

Tier 1	Infection Control Measures	Screening and Specimen Collection
<b>Presence of any CDI cases on a unit</b>	<ol style="list-style-type: none"> <li>1. Place suspect or confirmed CDI patients on <b>Contact Precautions</b> with appropriate signage posted. A single room with a dedicated bathroom is preferred. If a dedicated bathroom is not possible, use a dedicated commode and follow appropriate human waste handling precautions.</li> <li>2. Use single-use equipment wherever possible. Dedicate patient equipment (BP cuffs, stethoscopes, etc.) to CDI patients and ensure cleaning of equipment between <b>all</b> patients.</li> <li>3. Consult IPC prior to discontinuation of Contact Precautions for suspect and confirmed CDI cases. Precautions are to be maintained until no diarrhea for 48 hours and at least one normal or formed bowel movement. A Discharge/Transfer Isolation clean is required when Contact Precautions discontinued or a suspect or confirmed CDI patient is discharged/transferred.</li> </ol>	<ol style="list-style-type: none"> <li>1. Obtain stool specimen for all suspect CDI cases. Do not send formed stool as it will not be processed by the lab.</li> <li>2. A negative <i>C. difficile</i> test is <b>not</b> required to discontinue Contact Precautions.</li> <li>3. The lab will not process repeat specimens within 7 days unless there is a consultation with the microbiologist on-call.</li> </ol>
Communications and Responsibilities for Tier 1		
<b>Lab</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Notify Unit of CDI positive result.</li> <li><input type="checkbox"/> Notify IPC of CDI positive result.</li> </ul>	
<b>Infection Prevention &amp; Control (IPC)</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Reinforce Tier 1 Measures.</li> <li><input type="checkbox"/> Contact Unit Manager or designate and provide direction for patient management.</li> <li><input type="checkbox"/> Communicate Hospital Acquired CDI cases with site and/or unit manager.</li> </ul>	
<b>Environmental Services (ES)</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Clean and then disinfect occupied isolation patient rooms following the Occupied Patient Room (Isolation) cleaning protocol using 5000 ppm sodium hypochlorite. (<a href="http://insite.albertahealthservices.ca/les">http&gt;insite&gt;albertahealthservices.ca&gt;les</a>)</li> <li><input type="checkbox"/> Clean and then disinfect rooms of discharged/transferred isolation patients following the Discharge/Transfer (Isolation) cleaning protocol using 5000 ppm sodium hypochlorite. (<a href="http://insite.albertahealthservices.ca/les">http&gt;insite&gt;albertahealthservices.ca&gt;les</a>)</li> </ul>	
<b>Unit Manager or Designate</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Review IPC best practices (e.g. Routine Practices which includes Hand Hygiene, equipment cleaning and PPE use) at shift report daily.</li> <li><input type="checkbox"/> Review patient status and treatment with medical staff daily.</li> <li><input type="checkbox"/> Ensure CDI Pre-Printed Care Order (PPCO) (forms # 19718 (adult)) is on the chart and has been completed by the attending physician.</li> <li><input type="checkbox"/> Ensure Personal Protective Equipment (PPE) is available and used appropriately by all health care workers on entry/exit to patient room.</li> <li><input type="checkbox"/> Establish/review cleaning schedule and accountability for patient care equipment and frequently used items (e.g. supply cart, rounds cart, blanket warmer, etc.). Refer to sample cleaning checklist in CDI toolkit.</li> <li><input type="checkbox"/> Ensure ES aware which rooms require cleaning with 5000 ppm sodium hypochlorite.</li> <li><input type="checkbox"/> Ensure ES is contacted when a CDI patient is transferred or discharged.</li> <li><input type="checkbox"/> Post all Hospital Acquired CDI cases in a public place.</li> </ul>	

### Communications and Responsibilities for Tier 1- Continued

#### Health Care Worker

#### Infection Control Measures

- Place patients with suspect or confirmed CDI on **Contact Precautions**. A single room is preferred if available.
- Ensure supply cart with PPE is easily accessible at entrance to room.
- Dedicate equipment to CDI patients when possible. Clean and then disinfect all shared patient equipment between each use with 5000 ppm sodium hypochlorite.
- Ensure patient equipment and furniture is in good repair with intact and cleanable surfaces. Promptly remove items in disrepair and repair/replace.
- Minimize supplies and equipment brought into patient room.

#### Case Management

- Use diarrhea algorithm for management of suspect or confirmed CDI patients.
- Initiate Bristol Stool Charting (forms # 20404) for patients having diarrhea. Diarrhea is considered to be Type 6 or 7 on the Bristol Stool Chart.
- If patient has 3 or more episodes of diarrhea within 24 hours that is new AND unusual for the patient:
  - Start CDI PPCO (forms # 19718) and put in patient's chart.
  - Place patient on Contact Precautions.
  - Obtain physician order for stool specimen for *C. difficile* toxin test.
  - Educate patient, family and visitors regarding CDI transmission and prevention and ensure education is documented.

#### Discontinuing Precautions, Discharges or Transfers

- Contact Precautions are discontinued based on symptoms, **not** on a negative lab result.
- Contact Precautions are to be maintained until patient has no diarrhea for 48 hours and at least one normal or formed bowel movement.
- Discontinuation of Contact Precautions should be discussed with IPC and documented.
- Contact ES to request a Discharge/Transfer Isolation clean when Contact Precautions discontinued or a suspect or confirmed CDI patient is discharged/transferred.

#### Hand Hygiene

- Perform Hand Hygiene
  - Soap and water is the preferred method of hand hygiene when caring for patients with suspect or confirmed CDI. If access to hand hygiene sink is not immediately available, clean hands with Alcohol Based Hand Rub (ABHR).
  - Hand hygiene should not be performed in a patient sink as this may re-contaminate health care worker's hands.
- Perform Hand Hygiene after glove removal.
- Access clean supplies with clean, ungloved hands.
- Provide patient with opportunity to wash hands at meal times, after toileting and before exiting the room to prevent environmental contamination; assist if necessary.
- Ensure patient dons a clean housecoat or outer clothing when leaving room and ensure diarrhea is contained.

#### Human Waste Handling Precautions

- Ensure suspect or confirmed CDI patients have a dedicated bathroom. If unavailable, use a dedicated bedpan or commode and disinfect after each use.
- Do not empty bedpans into toilet or sink. Do not use spray wand to rinse out bedpan.
- Handle waste carefully using PPE. Change PPE, or ask for assistance for transport to dirty utility room.
- Cover bedpan and transport to dirty utility room to discard waste in hopper.
- After patient discharge, reusable bedpans/commode hats must be reprocessed.
- Consider using disposal options such as bedpan washer/disinfectors, macerators or hygienic bag/pad systems.

Tier 2	Infection Control Measures	Screening and Specimen Collection								
<p><b>CDI Clusters</b> (Hospital acquired case count identified as higher than what would normally be anticipated)</p> <p><b>Note that all measures and accountabilities from Tier 1 remain in place or are enhanced.</b></p>	<ol style="list-style-type: none"> <li>1. Maintain all measures in Tier 1.</li> <li>2. IPC review of unit practices (e.g. storage and handling of waste, linen and supplies; adherence to hand hygiene and routine practices)</li> <li>3. Minimize patient transfers unless medically necessary. Ensure receiving facility/area is aware of patient status.</li> <li>4. Cohort staff to CDI and non-CDI patients wherever possible.</li> <li>5. Restrict access to communal nutrition centers to staff only. Ensure that hand hygiene is performed by staff accessing the nutrition center.</li> <li>6. Discontinue use of full capacity or over capacity bed spaces.</li> </ol>	<ol style="list-style-type: none"> <li>1. Strain typing of <i>C. difficile</i> isolates may be considered under guidance of IPC medical director and/or laboratory.</li> </ol>								
Communications and Responsibilities for Tier 2										
<b>Lab</b>	<i>Responsibilities as outlined in Tier 1, and:</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> May be required to type <i>C. difficile</i> isolates upon request.</li> </ul>									
<b>Infection Prevention &amp; Control (IPC)</b>	<i>Responsibilities as outlined in Tier 1, and:</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Implement Tier 2 measures and notify:               <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">○ Administration</td> <td style="width: 50%;">○ Physician Group (as appropriate)</td> </tr> <tr> <td>○ IPC Director</td> <td>○ WHS</td> </tr> <tr> <td>○ ES Management</td> <td>○ Bed Management Team</td> </tr> <tr> <td>○ Pharmacy</td> <td>○ Support Services (e.g. Respiratory, Lab, DI, FNS)</td> </tr> </table> </li> <li><input type="checkbox"/> Assists with appropriate patient placement and provides guidance on patient cohorting.</li> <li><input type="checkbox"/> Consider <i>C. difficile</i> strain typing.</li> </ul>		○ Administration	○ Physician Group (as appropriate)	○ IPC Director	○ WHS	○ ES Management	○ Bed Management Team	○ Pharmacy	○ Support Services (e.g. Respiratory, Lab, DI, FNS)
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<b>Environmental Services (ES)</b>	<i>Responsibilities as outlined in Tier 1, and:</i> <ul style="list-style-type: none"> <li><input type="checkbox"/> Implement twice daily cleaning of high touch surfaces in common/shared areas within the unit using 5000 ppm sodium hypochlorite.</li> </ul>									

Communications and Responsibilities for Tier 2- Continued	
<b>Unit Manager or Designate</b>	<p><i>Responsibilities as outlined in Tier 1, and:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Notify:               <ul style="list-style-type: none"> <li>○ Front-line Staff</li> <li>○ Unit ES staff</li> </ul> </li> <li><input type="checkbox"/> Ensure that daily use carts are emptied daily, cleaned, and restocked with fresh supplies.</li> <li><input type="checkbox"/> When possible, ensure that there is adequate staffing to cohort staff to CDI and non-CDI patients on all shifts.</li> <li><input type="checkbox"/> Place suspect or confirmed CDI patients into single rooms.</li> <li><input type="checkbox"/> Obtain disposable single patient use equipment and ensure it is used.</li> </ul> <p><u>Quality Review</u></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Initiate review of Hand Hygiene (HH) and Personal Protective Equipment (PPE) practices.</li> <li><input type="checkbox"/> Continue Hand Hygiene audits.</li> <li><input type="checkbox"/> Have staff complete Human Waste Management Questionnaire.</li> <li><input type="checkbox"/> Request a Quality Assurance Audit from ES Management.</li> </ul>
<b>Health Care Worker</b>	<p><i>Responsibilities as outlined in Tier 1, and:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Restrict symptomatic patients to their rooms/bed spaces when possible; patients may leave their rooms for medically necessary testing.</li> <li><input type="checkbox"/> Use disposable single patient use equipment if available.</li> <li><input type="checkbox"/> If available, issue each patient a package on admission containing disposable patient care equipment (e.g. BP cuff, Oxygen saturation probe, thermometers, tourniquet, vacutainer holders).</li> </ul>

Tier 3	Infection Control Measures	Screening and Specimen Collection
<p><b>CDI Outbreak</b> (Hospital acquired case count continues to escalate despite Tier 1 and 2 measures)</p> <p><b>Note that all measures and accountabilities from Tier 1 &amp; 2 remain in place or are enhanced.</b></p>	<ol style="list-style-type: none"> <li>1. Maintain Tier 1 &amp; 2 Measures.</li> <li>2. Close unit to admission and transfers.  <b>Exception to unit closure: units with a specialized focus of care may continue to admit patients requiring this type of care.</b></li> <li>3. Strict cohorting of staff to CDI and non-CDI patients on all shifts on outbreak units with &gt;1 CDI patient.</li> <li>4. Consider placing all patients on <b>Contact Precautions</b> <i>particularly if prevalence is high.</i></li> </ol> <p>In consultation with IPC and Public Health, consider reopening unit when:</p> <ul style="list-style-type: none"> <li>• There are no new cases and it is deemed acceptable to reopen in consultation with the IPC physicians.</li> </ul>	<p><i>No additional processes beyond Tier 2.</i></p>
Communications and Responsibilities for Tier 3		
Responsibilities remain the same as outlined in Tier 1 & 2 for: <ul style="list-style-type: none"> <li style="margin-right: 20px;">• Lab</li> <li style="margin-right: 20px;">• Health Care Worker</li> <li style="margin-right: 20px;">• ES</li> </ul>		
IPC	<p><i>Responsibilities as outlined in Tier 1 &amp; 2, and:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> <b>IPC DIRECTOR</b> notifies (via urgent issues form):                             <ul style="list-style-type: none"> <li><input type="checkbox"/> Zone Leadership</li> <li><input type="checkbox"/> MOH</li> </ul> </li> <li><input type="checkbox"/> <b>MOH/PUBLIC HEALTH</b> notifies Alberta Health.</li> </ul>	
Unit Manager or Designate	<p><i>Responsibilities as outlined in Tier 1 &amp; 2, and:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Ensure rooms emptied and supplies disposed of in consultation with IPC.</li> <li><input type="checkbox"/> Consider decanting all remaining patients to an empty unit for a deep clean if possible.</li> </ul>	