

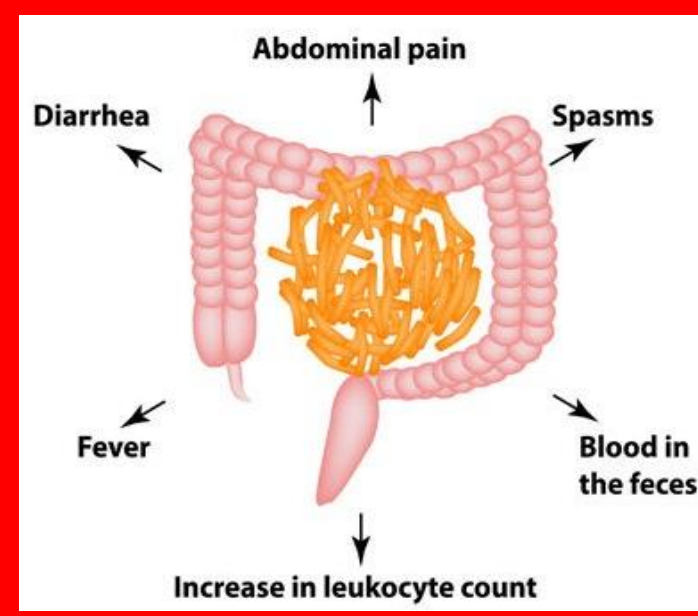
# Combating Clostridium Difficile Infection

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## Introduction

- **Clostridium difficile** (*C. difficile*) is a bacterium that causes inflammation of the colon, known as colitis
- *C. difficile* is shed in feces. It is transferred to patients mainly via the hands of healthcare personnel who have touched a contaminated surface or item. *C. difficile* can live for long periods on surfaces



## PROBLEM

### Concerning Increase in hospital acquired *C. difficile* infection

Infection rate: 2.6 /10,000 inpatient days



**63**  
Hospital Acquired  
*C. difficile* cases  
from July 2015- June 2016



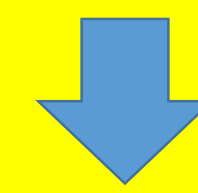
**6**  
Deaths related to  
*C. difficile*  
from July 2015- June 2016

The North Zone of Alberta Health Services experienced an increase in the rate of Hospital Acquired *C. difficile* infection (CDI) in the fall of 2015. Furthermore, unusually high rates of CDI attributable mortality were noted

## METHODS

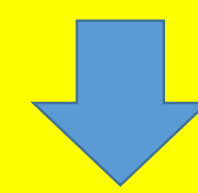


A **Patient Safety Review** was completed using a systems analysis methodology to identify factors and processes that may have contributed to the adverse event



Following **System Issues** were identified:

- Environmental Services Processes
- Commode cleaning
- Antimicrobial stewardship
- Outbreak management
- Facility communication
- Cleaning and disinfection of reusable equipment
- Management of patients with CDI
- Communication with patients and family members



The Infection Prevention and Control program developed the following **Tools and Strategies**

- **Tiered Management Documents** clearly identified the best practice measures to be taken by each member of the healthcare team

Infection Prevention Control			Tier 1
Tiered Management of Clostridium difficile (CDI) in Acute Care			
Tier 1: Sporadic CDI Cases (1 or 2 confirmed cases)			
Roles and Responsibilities Checklist			
Infection Control Professional (ICP)	Unit Manager/Designate	Environmental Services (ES)	Patient Nurse
<input type="checkbox"/> Notify site manager and unit manager or designate <input type="checkbox"/> Implement Tier 1 Measures	<input type="checkbox"/> Implement Tier 1 Measures (see Contact Precautions on back of page) <input type="checkbox"/> Notify ES of suspect and/or confirmed CDI patients on the unit.	<input type="checkbox"/> Clean and disinfect occupied isolation patient rooms following the Occupied Patient	<input type="checkbox"/> Identify suspect cases and notify ICP immediately (see Symptoms on back of page) <input type="checkbox"/> Initiate CDI Pre-Printed Patient Care Order and apply to chart.

- **The Pre-Printed Care Order Set** provided evidence based guidelines to the prescriber regarding case severity classification, antimicrobial stewardship and treatment

Alberta Health Services

Possible or Proven *Clostridium difficile* Infection (CDI) Order (Adult)

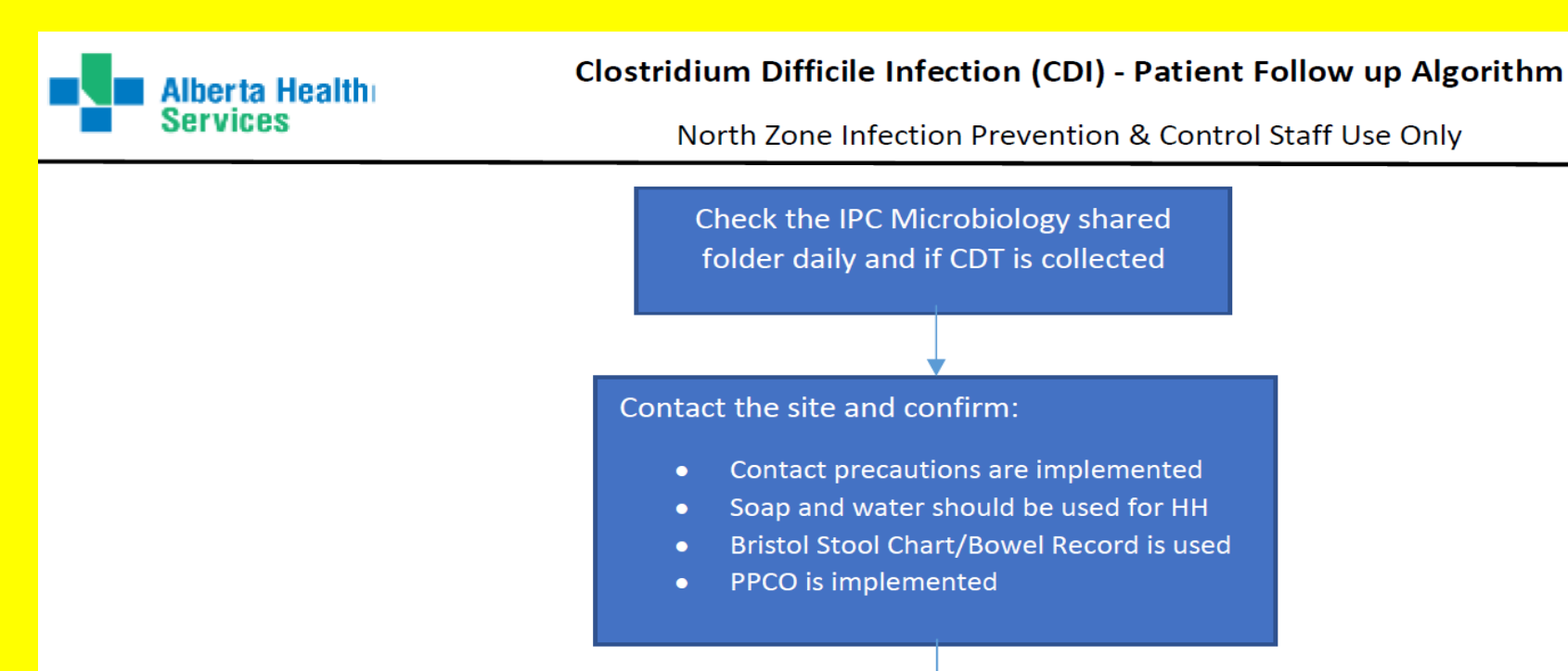
1. All orders must be completed and signed by the prescriber.  
 2. All co-signatures must be timed and dated within 24 hours.  
 3. Orders may be deleted by stroking the order out and initialing the entry or by leaving prompts blank (boxes).

Date/Time: \_\_\_\_\_

Initiate Contact Precautions for confirmed or suspected *C. difficile*.  
 Notify site Infection Prevention & Control: Date \_\_\_\_\_ Time \_\_\_\_\_

Affix patient label within this box

- **The Patient Follow up Algorithm** outlines the process used by Infection Control Practitioners (ICPs) to engage with the care team and to provide guidance on patient management



## ACHIEVEMENT



### Significant Decrease in hospital acquired *C. difficile* infection

Infection rate: 1.5/10,000 inpatient days, observed during the first year of implementing the new tools and strategies

**39**

Hospital Acquired *C. difficile*  
cases from July 2016- June 2017

**1**

Death related to *C. difficile*  
from July 2016- June 2017

## Lessons Learned

- Adopting an **Interactive Approach** with best practice guidelines and clearly identified responsibilities reduced transmission, promoted patient safety and improved outcome
- The implementation of the new tools required the involvement of all **Stake Holders**, including Site Leadership, Environmental Services, Frontline Staff, Pharmacists, Physicians and ICPs
- Regular **Interaction** and **Follow up** by ICPs was essential to ensure the effective implementation of the new tools.
- Providing **Timely Surveillance** reports to site leadership and frontline staff was crucial in order to obtain a sustained improvement