Combating Clostridium Difficile Infection

Alberta Health Services
Infection Prevention & Control

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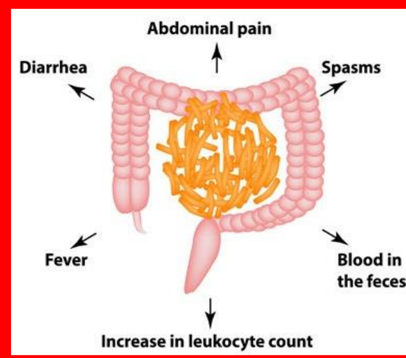
Introduction

- ***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

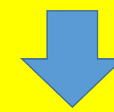
63
Hospital Acquired C. *difficile* **cases**
from July 2015- June 2016

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

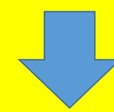
METHODS

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



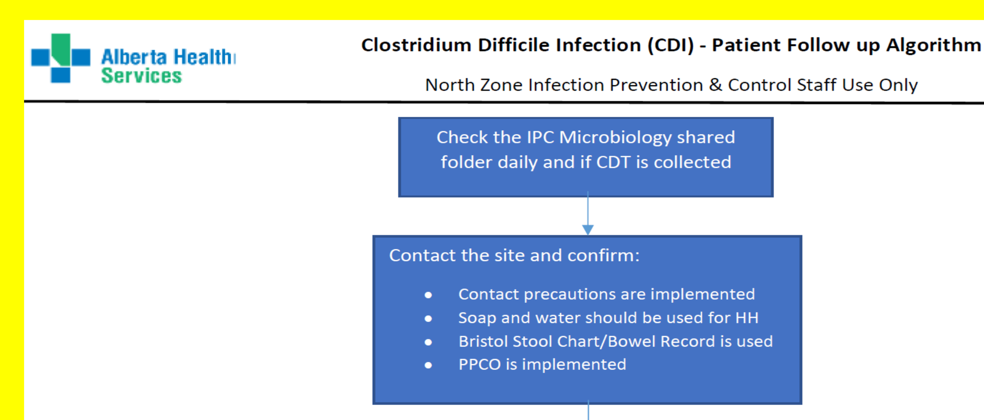
The Infection Prevention and Control program developed the following

Tools and Strategies

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

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

- **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