



Best Practices Document for the Management of *Clostridium difficile* "*C. diff*" in all Health Care Settings (January 2013)

Abstract

This document was developed by the Provincial Infectious Diseases Advisory Committee (PIDAC). PIDAC is a multidisciplinary scientific advisory body who provide to the Chief Medical Officer of Health in Ontario evidence-based advice regarding multiple aspects of infectious disease identification, prevention and control. PIDAC's work is guided by the best available evidence and updated as required. Best Practice documents and tools produced by PIDAC reflect consensus positions on what the committee deems prudent practice and are made available as a resource to the public health and health care providers.

Background

This document deals with the prevention and control of the transmission of *Clostridium difficile* Associated Disease (CDAD) in acute and non-acute health care settings and sets out the infection prevention and control practices to focus on preventing the transmission of CDAD to other patients, assist health care providers to promptly identify clusters of CDAD as well as to assist health care providers in the management of patients with CDAD and outbreaks related to CDAD. These best practices should be integrated with existing infection prevention and control programs and be a part of a comprehensive organization-wide effort to maintain acceptable standards for infection prevention and control.

Summary of Revisions with Respect to Infection Control

The key areas where revisions have occurred include the following:

1. **Environmental Cleaning:** this section has been expanded to include an explanation of how *C. diff* spores have the ability to remain active and persist in the environment for months even after a hospital-grade disinfectant has been applied. The importance of this inclusion is to emphasize the significance of thorough cleaning and disinfection of the client/patient/resident environment to remove and kill the spores. This section has also been expanded to include cleaning using a sporicidal agent in *C. diff* patient/residential isolated rooms and/or during outbreak situations.
2. **Recurrence of Symptoms:** In the last document revision, the definition of relapse was included to help capture patients that have been symptom-free for a period of time but have relapsed or are showing symptoms of the disease again. In the most recent edition, this section has been expanded to include guidelines for CDAD patients re-starting antibiotics for other suspected infectious processes. The importance of

this inclusion is necessary to control the high risk of *C. diff* relapse.

3. **Outbreak of *C. difficile*:** this section has been expanded to include the reporting from all long-term care homes in Ontario of suspected or confirmed gastrointestinal outbreaks, including CDI outbreaks, to the local medical officer of health. The importance of this inclusion is to allow Infection Control Practitioners the ability to implement additional measures to minimize the risk of further transmission such as increased frequency of patient room cleaning.

Summary of Revisions with Respect to Cleaning and Disinfection

Of primary importance are the changes to the Environmental Cleaning section of this document. The importance of housekeeping in minimizing environmental transmission has been well documented. The previous version published in June 2007 highlighted the need that that all horizontal surfaces in the room and all items within reach of a patient with suspected or confirmed CDAD should be cleaned twice daily with a hospital-grade disinfectant (a disinfectant with a DIN number identifying it has been approved by Health Canada for use in Canadian hospitals). The previous guideline stated that particular attention should be paid to the cleaning of patient-specific items and "high touch" surfaces such as bed side rails, telephones, call bells, door handles, faucets, commodes and toilets etc. The guideline now includes recommendations for cleaning and disinfecting patient rooms, and bathrooms twice daily using a sporicidal agent when there are multiple cases or ongoing transmission of CDAD.

To further highlight the importance of cleaning, the guideline has added significant emphasis on the proper cleaning and disinfecting of patient/resident bathrooms using a sporicidal disinfectant. It is recommended to consider making the routine disinfecting agent for bathrooms a sporicide in ambulatory areas with high turnover where patients with CDAD are likely to be seen. At a minimum, these high-use bathrooms should be cleaned every four hours.

The most exciting change to this guideline is the inclusion of AHP's Rescue™ as an effect sporicide against *C. difficile* spores. Traditionally, in cases where on-going transmission of CDAD was in evidence the recommendation was to use a 5000ppm solution of a Hypochlorite-based product for disinfection after the room had been cleaned with a hospital-grade disinfectant. The recommendation for the use of a Hypochlorite-based disinfectant solution made facilities or public health inspectors hesitant to recommend the use of safer alternative chemistries. **This change to the document will help facilitate the use**

PTSHH0136.0(06/2015)



Best Practices Document for the Management of *Clostridium difficile* "*C. diff*" in all Health Care Settings (January 2013)

of Accelerated Hydrogen Peroxide for cleaning and disinfection of CDAD patient rooms.

Conclusion

With the documented increase in *C. difficile* rates in health care settings across North America as well as the increase cost constraints to the facility and lengthened hospitalization time for patients with CDAD using a daily hospital grade disinfectant with a broad spectrum of efficacy paired with proper protocol compliance will help reduce disease transmission. In outbreak or ongoing transmission situations choosing a disinfectant that has evidence of sporicidal activity will help to minimize environmental contamination and thereby reduce the risk for environmental transmission.

Implications for AHP

AHP was specifically mentioned in this guideline as an effective sporicidal disinfectant technology alternative to bleach. As the healthcare industry continues to push for greener and less toxic cleaners and disinfectants, AHP will continue to be recognized as an industry leader that will be supported by its pillars of strength.

AHP Disinfectants are One-Step Disinfectant Cleaners

- AHP has proven cleaning efficiency resulting in lower costs and faster results as well as added confidence that disinfection can occur
- Virox Technologies has developed the first non-halogen based sporicidal surface disinfectant which achieves full sporicidal activity against *C.diff* spores
- AHP is available in both sporicidal and non-sporicidal formats which have been found to reduce HAIs¹

AHP Disinfectants provide the perfect balance between safety and efficacy

- AHP is designed to be easier on employees and occupants resulting in protocol compliance
- AHP surface products have a HMIS rating of "0", meaning it has been proven to be non-toxic, non-irritating to eyes and skin and non-skin sensitizing and does not require the use of personal protective equipment to handle

AHP Disinfectants are environmentally sustainable

- AHP's active ingredient, hydrogen peroxide, breaks down into water and oxygen leaving no active residues

AHP Disinfectants have realistic contact times

- Contact times ensure surfaces remain wet for the required contact time, providing comfort and confidence that disinfection has occurred
- AHP has been proven through peer reviewed studies to reduce HAIs

AHP Disinfectants are compatible

- AHP formulations are tested to ensure compatibility that preserve your investments in equipment, furniture and building surfaces by reducing corrosion and wear

The full guideline can be downloaded at:

http://www.publichealthontario.ca/en/eRepository/PIDAC-IPC_Annex_C_Testing_SurveillanceManage_C_difficile_2013.pdf

¹ The Oxivir TB Formulation of Accelerated Hydrogen Peroxide (AHP) is Effective for Killing *Clostridium Difficile* Spores on Toilet Seat Surfaces. CJIC Vol 22, No. 1, Spring 2007, pg 49