



Strategies to Prevent *Clostridium difficile* Infections in Acute Care Hospitals: 2014 Update

(Infection control and Hospital Epidemiology, June 2014, Vol. 35, No.6)

Abstract

Clostridium difficile now rivals methicillin-resistant *Staphylococcus aureus* (MRSA) as the most common organism to cause hospital associated infections (HAIs) in the United States. These historically high levels of CDI are estimated to cost US hospitals \$1.0-4.9 billion per year and is responsible for an estimated 14,000-29,000¹ deaths annually. Therefore, measures must be taken to actively prevent cases of CDI.

Background

The intent of this document is to highlight practical recommendations as put forth by the Society for Healthcare Epidemiology of America (SHEA), in a concise format designed to assist acute care hospitals in implementing and prioritizing their *C.difficile* infection (CDI) prevention efforts. This document will highlight prevention strategies related to environmental surface cleaning and disinfection as environmental surfaces act as a reservoir for CDI transmissions.

Recommendations

Recommended Strategies for CDI Prevention

1. Ensure cleaning and disinfection of equipment and the environment

- C. difficile* spores contaminate the environment in which patients and the equipment used to care for them are housed. These contaminated surfaces and equipment are potential reservoirs for transmission of CDI and therefore facilities should assess adherence to protocols and the adequacy of cleaning and disinfection on a routine basis and should be conducted before changing to a new cleaning product.

- Ensure patient care equipment and electronic equipment that remain in the patients room are thoroughly cleaned and disinfected.

- Because of high turnover of environmental service personnel, staff should be educated on proper cleaning and disinfection techniques frequently

- Non-critical patient care items such as blood pressure cuffs, stethoscopes and thermometers should be dedicated to a single patient with *C. difficile*. If this is not possible, ensure adequate cleaning and disinfection of shared items between patient encounters. Ensure the manufacturers' recommendations for contact time of disinfectants are followed

2. Educate healthcare providers, environmental service personnel and hospital administration about CDI

- Including risk factors, routes of transmission, local CDI epidemiology, patient outcomes and treatment, and prevention measures.

3. Approaches to minimize *C.difficile* transmission from the environment

- Assess the adequacy of room cleaning. If room cleaning and disinfection practices are deemed to be inadequate, focus on the reviewing and improving cleaning and disinfection techniques.

- Important issues to address include proper dilution of cleaning products, adequacy of cleaning and disinfection techniques, cleaning high-touch surfaces, frequency of changing rags/mop water and moving from clean areas to dirty areas

- Consider environmental decontamination with an EPA approved sporicidal agent if room cleaning and disinfection is deemed to be adequate but there is ongoing CDI transmission

4. No-touch disinfection technologies

- These no-touch devices kill *C. difficile* spores, and several studies have found them to be effective at reducing cultivatable *C. difficile* from patient rooms. Although sporicidal activity can be achieved without requiring a person to wipe down a surface, the use of these devices does not preclude the need to manually clean soiled surfaces. Data are currently too limited to draw any conclusions as to whether or when these devices should be a component of a CDI prevention program. In addition, excellent results can be achieved with manual cleaning with a sporicidal disinfectant.

Conclusion

Prevention of CDI through effective surface disinfection protocols is an essential aspect of CDI control strategies. 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 CDI using a disinfectant product that has evidence of sporicidal activity on a daily basis will help to minimize environmental contamination and thereby reduce the risk for environmental transmission.

Implications for AHP

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.



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AHP Disinfectants are One-Step Disinfectant Cleaners

- AHP has proven cleaning efficiency resulting in added confidence that disinfection can occur
- AHP formulations have been proven through peer reviewed clinical studies to decrease MRSA, VRE and *C.difficile* by 20%ⁱⁱ

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 provides 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 is formulated to ensure that it will not negatively impact indoor air quality and has been approved as an asthma-safe product

AHP Disinfectants have realistic contact times

- Short 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

ⁱ Centers for Disease Control and Prevention (2015).
Healthcare-associated Infections (HAIs).

http://www.cdc.gov/HAI/organisms/cdiff/Cdiff_infect.html

ⁱⁱ Alfa, J. et al. (2015). Use of a daily disinfectant cleaner instead of a daily cleaner reduced hospital-acquired infection rates. American Journal of Infection Control 43 (2015) 141-6.