

Tech Guide

Healthcare Training Series

Clostridium difficile (C. diff.): Prevention and Control

Background

Clostridium Difficile* Associated Diseases (CDAD) are a set of illnesses caused by the C. difficile bacteria. People in good health usually don't get C. difficile disease. People who have other illnesses or conditions requiring prolonged use of antibiotics and elderly people are at greater risk of acquiring this disease.

C. difficile bacteria are everywhere — in soil, air, water, human or animal feces. The bacteria doesn't create problems until they grow in abnormally large numbers in the intestinal tract of people taking antibiotics or other antimicrobial drugs. Then, C. difficile can cause symptoms ranging from diarrhea to life-threatening inflammations of the colon.

The Problem

C. difficile can exist and be transmitted in a “spore” form. The bacteria go into a spore (dormant state) when conditions for growth are unfavorable. The spore is highly resistant and not normally killed with chemical disinfection methods.

C. difficile is shed in feces as spores. Any surface, device, or material (e.g., commodes, bathing tubs, and electronic rectal thermometers) that becomes contaminated with feces may serve as a reservoir for the C. difficile spores. C. difficile spores are transferred to patients mainly via the hands of healthcare personnel who have touched a contaminated surface or item.



Facts and Figures

FACT: There are no low or intermediate disinfectants that have a claim for killing C. difficile spores. This includes EPA registered hypochlorite based disinfectants.

The CDC (Center for Disease Control) suggests that bleach may have some efficacy toward spores, but it acknowledges the lack of scientific proof and validation. The mechanical action of cleaning may still be just as effective for removing spores from environmental surfaces.

There are disinfectants currently in the marketplace that have claims for: “Clostridium difficile, vegetative form”. Unfortunately, most of these products are not effective against the C. difficile spores, which is what are being transmitted via the fecal material.

EPA has just recently decided that all pesticide products registered for use against C. difficile must demonstrate efficacy against the spore form of the organism. Further, the EPA believes efficacy claims against the “Clostridium difficile vegetative form” of the organism are “false and misleading” because the vegetative form is not the organism of concern in infection control processes. Therefore, EPA will not continue to allow a C. difficile vegetative claim on a pesticide label and all registered products currently making claims against the vegetative form must remove the claim.

Multi-Clean has already complied with this directive.

Link to CDC Fact Sheet [HERE](#).

* Pronounced Klo-STRID-ee-um dif-uh-SEEL

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Q & A

What Does the CDC Recommend?

For general cleaning and disinfection of environmental surfaces: The CDC recommends the use of EPA registered hospital grade disinfectants for general use whenever possible in patient care areas.

Controlling established C. difficile Disease Outbreaks: “Because no EPA-registered products are specific for inactivating C. difficile spores, the CDC recommends the use of hypochlorite-based products for disinfection of environmental surfaces in those patient-care areas where surveillance and epidemiology indicate ongoing transmission of C. difficile.” (Note: alcohol-based disinfectants are not effective against C. difficile and should not be used to disinfect environmental surfaces.)

Follow the manufacturer’s instructions for disinfection of endoscopes and other devices. Infection control practices in long term care and home health settings are similar to those practices taken in traditional health-care settings.

“Transfer of the pathogen to the patient via the hands of health-care workers is thought to be the most likely mechanism of exposure. Standard isolation techniques intended to minimize enteric contamination of patients, health-care workers’ hands, patient-care items, and environmental surfaces have been published. Hand washing remains the most effective means of reducing hand contamination. Proper use of gloves is an ancillary measure that helps to further minimize transfer of these pathogens from one surface to another”.



For additional questions, please contact Multi-Clean at 651-481-1900 and ask for Technical Support.

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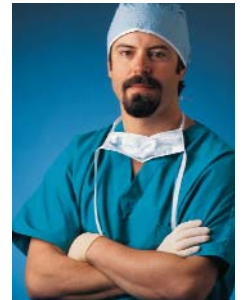
What does Multi-Clean Recommend?

Although it is up to each institution to decide what is best, we strongly believe that the universal use of bleach is counter productive and will NOT solve the problem. Bleach solutions should only be used in areas where patients have been isolated and exhibit C. difficile disease symptoms.

- ☞ bleach solutions destroy fabrics, are harsh toward many hard surfaces.
- ☞ Bleach fumes can be irritating to patients.
- ☞ Bleach solutions are unstable and degrade quickly.
- ☞ Mixing bleach with other compounds can produce disastrous results.

Guidelines for the Health Care Industry

- Use antibiotics judiciously
- Use Contact Precautions: place patients with known or suspected C. difficile associated disease in private rooms or in rooms (cohorted) with other patients with c. difficile - associated disease.
- Hospital staff must wear disposable gloves and disposable gowns if soiling of clothes is likely when treating people with C. difficile infections.
- Wash hands thoroughly with soap and warm water before and after treating each patient, after removing gloves, and after touching surfaces that might be contaminated.
- Perform Hand Hygiene using either an alcohol-based hand rub or soap and water.
- If your institution experiences an outbreak, consider using only soap and water for hand hygiene when caring for patients with C. difficile - associated disease; alcohol-based hand rubs may not be as effective against spore-forming bacteria.
- Dedicate equipment whenever possible.
- CONTINUE THESE PRECAUTIONS UNTIL DIARRHEA CEASES
- Implement an environmental cleaning and disinfection strategy.
- Ensure adequate cleaning and disinfection of environmental surfaces and reusable devices, especially items likely to be contaminated with feces and surfaces that are touched frequently.



Use Multi-Clean Century Q 256 for general cleaning and disinfection of Environmental Surfaces. This broad spectrum disinfectant will not harm finished floor or other surfaces.



Conclusion

C. difficile and the illnesses it causes is a serious problem in healthcare institutions. Prevention and control of C. difficile outbreaks requires a common sense approach that combines infection control strategies with appropriate precautions. The role of the Environmental Services department is to understand specialized procedures to be undertaken as part of an effective strategy of prevention and control.