

# Combating the *C. diff* terrorists on the loose in hospitals

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Just like intelligence agents watching for the real terrorists threatening to attack, monitoring healthcare worker adherence to mandatory hand-washing protocols via hand-washing squads in hospitals can go a long way to stop outbreaks of the opportunistic *C. diff* bacteria, says Irena Kenneley, an infection prevention and control expert and assistant professor of nursing from the Frances Payne Bolton School of Nursing at Case Western Reserve University.

Kenneley consulted on an analysis of a national hospital practices survey for the Association for Professionals in Infection Control (APIC).

She stated that the survey pointed to the need for mandatory standards for hand-washing monitoring, antimicrobial stewardship committees to oversee use of [broad-spectrum antibiotics](#) that wipe out the good bacteria along with the bad, and new technologies that can detect the presence of the bacteria after rooms have been thoroughly cleaned.

Currently, Goal 7 of The Joint Commission on Accreditation of Healthcare Organizations' National Patient Safety Guidelines encourages hospitals to set a baseline for hand-washing practices and then goals to improve. At one point, the JCAHO's goal was 90 percent, but organizations now must improve over past performance.

Kenneley said that this target is not enough and that quick isolation and mandatory hand-washing need to be in place.

Washing hands is one of the simplest ways to stop infections from *Clostridium difficile*, which is commonly called *C. diff*.

The benefits of hand-washing are known but not always practiced to the extent needed to get rid of the bacteria that can cling to surfaces for months and cause abdominal pain, ulcers in the colon and

diarrhea in infected patients. The severity of the *C. diff* infection can lead to removal of the colon.

Some healthcare workers may not see why they have to go through cleansing, gowning and gloving up to deliver just an aspirin. Kenneley said that unwashed hands could contaminate the environment, or the *C. diff* spores may even be brought to the next patient's room.

Kenneley suggested that monitoring hand-washing practices during patient care activities when healthcare workers are not aware that they are in fact being monitored will tell us if hand-washing is being appropriately practiced.

"If there is an outbreak on a floor, it clearly points to the fact that healthcare workers are not washing their hands at appropriate times that are critical for [infection prevention](#)," she said.

Kenneley supports the recommendation of the Center for Disease Control and Prevention to vigorously wash the hands with soap for 15 seconds before leaving the patient's room. She also encourages the use of the World Health Organization's published standardized guidelines for monitoring hand-washing of healthcare workers in the clinical setting.

"Alcohol wipes do not work with this bacteria," she said. Workers should also gown and glove up and remove the protection before leaving the infected patient's room to prevent the spores from clinging to clothing.

The ideal scenario to prevent the spread of further infection involves hospital workers generally springing into action when patients get diarrhea and isolate the patient while they are tested for the presence of the bacteria.

"The only way a patient is sprung from isolation is to have the tests come back negative for the

bacteria," said Kenneley.

If a patient is infected, then the room needs to be cleaned with the use of bleach-based institutional cleaners.

Visual inspection of cleanliness for these bacteria is not enough. While new fluorescent light detection technologies are under development to test surface cleanliness, they still are not widely used, Kenneley said.

Better detection of cleanliness is needed, she said.

*C. diff* can naturally live with normal gut flora that aid in digestion and the production of vitamin K in the intestines.

But after a dose of broad-spectrum antibiotics that can destroy the good along with the bad bacteria in the intestines, *C. diff* has an opportunity to latch on to the walls of the gastrointestinal tract and start reproducing and releasing toxins.

As *C. diff* becomes heartier in its evolution, it has two particularly virulent toxins, known as A and B, which can cause bloating and severe diarrhea.

Many hospitals have antibiotic review boards to monitor antibiotic use to prevent over prescribing the drugs where not needed or to make recommendations to give an antibiotic that targets a specific bacteria instead of all [bacteria](#).

Kenneley calls for these monitoring committees to become standard for all hospitals.

Instituting standard practices for all hospitals can be one way to stop this opportunistic infection from spreading to uninfected patients, she said.

Provided by Case Western Reserve University

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