

C. difficile epidemic should concern not only hospital patients but people at home

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Without proper infection prevention in hospitals, and now homes, the *Clostridium difficile* bacteria poses a major health threat, cautions a Case Western Reserve University infection control researcher.

While mainly a concern in hospitals, cases of the *C. difficile* infection (or *C. diff*) are on the rise in the community, according to the Centers for Disease Control and Prevention that has seen increased reports of the infected people who have had no contact with hospital patients with the infection. The CDC reported 7.6 people out of 100,000 who had no contact with people with *C. diff* were getting sick with the illness.

It particularly infects healthy people, and particularly pregnant women, said Irena Kenneley, a Case Western Reserve clinical nurse specialist in [infection control](#) and associate professor at the Frances Payne Bolton School of Nursing.

Symptoms of *C. diff* include continual bouts of diarrhea, severe cramps, swollen stomach and intestinal irritation.

Potentially, the bacteria's toxins can cause ulcers and eventually eat through intestine walls, which allows infection to enter the blood.

Kenneley's *American Journal of Nursing* article, "*Clostridium difficile* Infection Is on the Rise," focuses on evidence-based steps recommended by the CDC that nurses and other [health care workers](#), including those who prepare and deliver food, clean facilities or make deliveries, can

take to confine the bacteria in hospitals and other settings where someone shows symptoms of the infection. And similar precautions apply at home.

"The article delivers practical advice to nurses and nurse practitioners on [infection prevention](#) and control activities in any setting," Kenneley said.

Based on CDC guidelines, she recommends:

- Isolating the patient (or, if possible, the person at home) when symptoms appear;
- Appropriate and timely lab testing to determine the type of bacteria present;
- Treating with appropriate antibiotics;
- Cleaning thoroughly (using bleach is best);
- Washing hands to stop the spread of further infections.

That last step, washing hands, is critical for hospital workers, family members and other visitors who have encountered someone with *C. diff* or is suspected to have contracted the bacteria. It can take up to 96 hours to confirm a *C. diff* diagnosis. Because of the wait for a diagnosis, isolation of the patient is key—a practice similar to hospital protocol for patients with suspected tuberculosis.

Kenneley said these bacteria that can live as hibernating spores up to 100 years on surfaces until conditions are right to proliferate. The stomach and intestines offer that environment, once ingested.

Particularly at risk are people with compromised immune systems (HIV and transplant patients), those who are aging, recovering from gastrointestinal surgeries or are on antibiotics for more than three days to treat other illnesses.

C. diff has proliferated through use of broad-spectrum antibiotics that wipe out the healthy bacteria. A few antibiotics, such as vancomycin and metronidazole, have some success treating the [infection](#), she said.

Poor hand-washing practices allow spores to travel between patients and other surfaces. Hand-washing must occur multiple times during patient care.

Kenneley recommends washing hands before entering a room, any time the hands touch a new surface in the room, and when exiting. And soap is more effective than alcohol-based hand sanitizers or wipes that do not destroy spores, she said.

Although hospitals clean rooms daily and after a patient leaves, some spores may still survive, Kenneley said, which is why the key to prevention is hand-washing.

Provided by Case Western Reserve University

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