



## Driving the *C. difficile* Infection Rate in Hospitals to Zero

By Barbara M. Soule, RN, MPA, CIC, FSHEA, FAPIC

### What is *C. diff*?

*Clostridium difficile* bacteria, aka “*C. diff*,” is one of the notorious antibiotic resistant “superbugs” that afflict modern healthcare facilities. Nearly half a million *C. diff* infections (CDI) were reported in 2011, according to the [US Centers for Disease Control and Prevention](#) (CDC). Of those, 29,000 patients died within 30 days of the initial diagnosis. Elderly patients who take antibiotics and get medical care are particularly vulnerable to CDI. Between 2011 and 2014, there was an 8% decline in *C. diff* infections traced to hospital stays, [according to CDC](#). That’s a step in the right direction.

Now there is some encouraging news from a small, 100-bed, Ohio community hospital: Using a multi-component strategy, infection preventionist Lisa Beauch and her team *eliminated* all CDIs in Mercy Health—St. Anne Hospital in Toledo between July 2016 and July 2017. Ms. Beauch describes her team’s successful strategy in a recent [CDC Safe Healthcare Blog](#).

### *First: Bringing C. diff Infection to the Forefront of Attention*

Ms. Beauch writes that the first step in eliminating *C. diff* infections was raising awareness among the hospital staff. CDI surveillance included each clinical unit reporting the number of days since the last incident associated CDI. In addition, daily safety calls entailed sharing CDI information including: the number of patients on the unit with known or suspected CDI, the number awaiting specimen collection or results, and the date of hospitalization on which CDI was confirmed.

### *C. diff Precautions: Bleach and UV Disinfection*

When the team tracked *C. diff* infections by their location in the hospital, they found nearly all infected patients spent time in the Intensive Care Unit (ICU). This prompted additional “terminal cleaning” steps in the ICU using bleach and UV light. Routine bleach use on frequently touched surfaces within the ICU, such as the nurses’ station, hallway handrails and door handles, was emphasized. All rooms occupied by patients with suspected or confirmed CDI were subjected to bleach disinfection, exchanging privacy curtains, and disinfecting with UV light at every transfer or discharge.



Medical illustration of *Clostridium difficile*  
Image from [CDC website](#)

### *Patient Screening upon Admission*

Patients were asked upon admission to the hospital about *C. diff* risk factors, including recent antibiotic use, healthcare visits and diarrhea. “Finding patients with diarrhea and at least one other risk factor would prompt the nurse to immediately isolate the patient and obtain an order for a stool specimen,” notes Ms. Beauch. Isolation continued until either *C. diff* went undetected in the stool sample or the patient did not have watery stool in a 24-hour period.

### *Antimicrobial Stewardship Program*

Along with other measures, the hospital’s Infection Prevention and Pharmacy departments implemented a comprehensive antimicrobial stewardship program. Staff of those departments reviewed charts for “duplication of antimicrobials and de-escalation when appropriate.”

### *C. diff Contact Precaution Signs*

New contact precaution signs outside the rooms of *C. diff*-infected patients “emphasized strict adherence to the use of gowns and gloves, hand hygiene, and bleach disinfection of shared patient care items before use by another patient.”



*Lisa Beauch BSN, RN, CAPA, CPAN, CIC*

*Photo from [CDC Safe Healthcare Blog website](https://www.cdc.gov/safepatientcare/blog/)*

### *Uplifting News*

We applaud the impressive work of Ms. Beauch and her team in eliminating *C. diff* from Mercy Health—St. Anne’s Hospital for an entire year. But change did not come overnight: efforts began years before the successful period of July 2016 to July 2017. Beginning with an infection rate 40% higher than baseline prior to 2015, the team was determined to improve. Further progress was noted when in 2016, the hospital’s expected number of CDIs was reduced to 55% less than predicted.

Although it hails from a small hospital, this shining example demonstrates that acute awareness and diligence in using the known strategies of *C. diff* infection prevention can work!

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