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## Hospitals battling dangerous C. diff bacteria

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Cheryl Keplinger nearly lost her life to a germ some doctors are calling the next big bacterial threat — *Clostridium difficile*.

The 54-year-old Simpsonville, Ky. nurse suffered diarrhea for 19 days before being told she might need to have her appendix, gall bladder and part of her colon removed after she contracted the dangerous infection caused by bacteria known as C. diff.

Though she avoided surgery, she spent 10 days at Jewish Hospital downtown before being released last week.

"I never want to go through this again," Keplinger said.

Typically tied to hospitalization or antibiotic use, the infection is rising dramatically. As many as 3 million Americans a year suffer diarrhea, inflammation of the colon and other problems because of C. diff, which some doctors say is beginning to rival the staph infection MRSA as a deadly superbug.

"It's a huge problem in most hospitals in the country, and it has increased exponentially in recent years," said Lisa McGiffert, who runs the Safe Patient Project at the Consumers Union, the nonprofit group that publishes Consumer Reports. "For patients, it's a horrible, deadly condition that is more and more resistant to the treatments that we have."

Kentucky is particularly hard-hit.

A study in the May issue of the *American Journal of Infection Control* showed the state had the sixth-highest rate in the nation among hospitalized patients, with 21.8 per 1,000, compared with 10.7 per 1,000 in Indiana and 13 per 1,000 nationwide.

Doctors link Kentucky's high rates to its unhealthy population, with some of the nation's highest rates of cardiovascular disease, diabetes, cancer and other conditions that make people more vulnerable to infection.

Research shows that about three-quarters of patients nationally who pick up the bug got it in healthcare settings, and local hospital officials say they are working hard to control the infection through cleanliness and hand-washing.

But doctors say some healthy people are carriers, and the overuse of antibiotics, or ongoing use by the chronically ill, can kill beneficial bacteria in the colon, allowing C. diff to thrive.

Keplinger traces her infection to two rounds of antibiotics prescribed for an allergy-induced chest infection earlier this year. Although she works at University Hospital, she said she doesn't think she contracted the bacteria there.

Whatever the cause, experts and health advocates say there are known ways to prevent the spread.

Health-care facilities "really have to step up the cleaning to eradicate it," McGiffert said. "And the whole antibiotic stewardship issue is an important one. We need to use them less and more carefully."

McGiffert said mandatory public reporting of C. diff to government health agencies — which isn't required in Kentucky, Indiana or most other states — would prompt hospitals to work harder to eradicate the bacteria.

The Kentucky Hospital association and local hospital officials disagree, partly because they say they are already doing all they can to fight it.

## **C. diff cases on the rise**

While doctors have known about C. diff for decades, recent research shows that rates are up to 20 times higher than previously thought, and more people are getting strains resistant to antibiotics.

On any given day in the United States, 7,178 hospitalized patients contract C. diff, and up to 438 patients die, according to a report last year by the Association for Professionals in Infection Control and Epidemiology.

The bacteria is released through feces, often getting onto surfaces and objects such as stethoscopes and blood-pressure cuffs, and can be spread through contact with surfaces or hands. One study found C. diff on the hands of almost 60 percent of doctors and nurses caring for infected patients.

Officials at Norton Healthcare and Jewish Hospital and St. Mary's HealthCare said they haven't seen a recent increase in cases, but other local providers said they have.

Linda Goss, infection-control director at University Hospital, said they saw a temporary spike in March. Dr. Matthew Zahn, medical director of the Louisville Metro Department of Public Health, said he's seen the infection in dozens of children taking antibiotics, adding that "there's a lot of C. difficile out there" in the region.

And Pam Brown, an infection-control nurse at Baptist Hospital East, said "we have seen higher numbers than we use to," calling C. diff "of great concern."

Keplinger wasn't very worried when she first got sick because her diarrhea alternately got better and worse. She saw her family doctor after eight days, was prescribed an antibiotic that didn't help, then came back for more testing less than a week later.

But before the results came in, she ended up in the emergency room at Jewish Hospital in Shelbyville — so weak and dehydrated she couldn't sit in a chair. An ambulance rushed her to Jewish downtown, where she received antibiotics that knocked out the infection.

## **Extra steps needed for cleanup**

While the Kentucky hospital association doesn't have initiatives targeting the bug, all of the state's roughly 100 acute-care hospitals have adopted infection-control procedures that should reduce bacterial threats, said Elizabeth Cobb, the association's vice president for health policy.

But reducing C. diff requires special steps. Federal health officials recommend soap and water be used, rather than alcohol-based sanitizers. And they recommend using bleach cleaning solutions for outbreaks.

At Baptist Hospital East, staff members are required to wear gloves and gowns while caring for a patient they even suspect has C. diff, then take them off before seeing other patients. They are also required to wash hands frequently and clean with bleach during outbreaks. Officials at Jewish and Norton said they take similar steps, and Goss said they use bleached-based cleaners during and after all C. diff cases, not just outbreaks.

Officials said they also continually educate staff about C. diff, particularly the need for hand-washing and closely using antibiotics only when medically necessary.

Doctors said patients also bear responsibility for prevention. They should feel free to remind health-care workers to wash their hands, doctors said, and shouldn't ask for antibiotics for colds or other viral illnesses.

Keplinger agreed, adding that people need to take persistent diarrhea seriously.

"Go to the doctor," she said. "Don't wait."

Reporter Laura Ungar can be reached at (502) 582-7190.

## Additional Facts

*C. diff*

**What is it?** Clostridium difficile is a potentially deadly bacteria associated with diseases ranging from severe diarrhea to colitis and sepsis.

**Symptoms:** For mild to moderate disease, watery diarrhea three or more times a day for two or more days; mild abdominal cramping and tenderness. For severe disease, watery diarrhea 10 to 15 times a day, severe abdominal cramping and pain, fever, blood or pus in the stool, nausea, dehydration, loss of appetite and weight loss.

**Causes:** The bacteria is passed in feces and spread to food, surfaces and objects. The majority of cases occur in health-care settings.

**Risk factors:** Taking antibiotics; being 65 or older; being hospitalized recently; living in a nursing home; having a serious underlying illness or weakened immune system; having recent abdominal surgery or a gastrointestinal procedure; having a colon disease.

**Treatment:** Certain antibiotics, usually metronidazole or vancomycin; probiotics to restore a healthy balance to the intestinal tract; removal of the diseased portion of the colon in severe cases. Sources: Mayo Foundation for Medical Education and Research; Association for Professionals in Infection Control and Epidemiology

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