

Deadly Hospital Germ Is Spreading in U.S.

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A new, more dangerous strain of a germ that has long caused diarrhea in hospital patients is now widespread in the United States, causing severe, sometimes deadly outbreaks around the country, researchers reported yesterday.

Strains of the germ have been detected among people who have not been in a hospital, raising alarm that the infection may be emerging more widely and posing a broader public health threat, the researchers said.

While the infection does not pose a public health emergency, doctors and patients need to be aware of the risk so cases can be identified and treated quickly, and measures can be taken to limit its spread, experts said. They do not yet have good estimates for how many people have been infected.

The germ may have emerged in part from the overuse of antibiotics, the experts added, and its emergence provides another reason to use antibiotics as judiciously as possible.

"We are very concerned about this," said L. Clifford McDonald of the federal Centers for Disease Control and Prevention. "It's still probably an unusual occurrence in healthy people, but we're concerned enough that we want to alert people."

The bacterium is known as *Clostridium difficile*. It has long been known in hospitals to cause diarrhea, particularly in patients who are taking antibiotics for other reasons. The antibiotics kill other microbes that keep *C. difficile* in check, allowing it to grow and cause illness. Such infections, however, had usually been easily treatable with other antibiotics.

In recent years, though, unusually severe outbreaks have been reported around the world. In 2003, a particularly severe outbreak among hospital patients in Quebec may have killed more than 200 people.

In three new reports released yesterday by the CDC and the New England Journal of Medicine, researchers identified the strain responsible for the Quebec cases, determined that the same strain is present throughout the United States, and described other cases outside of hospitals.

Taken together, the research indicates that the bacteria poses a widening health problem, researchers said.

"There is a new strain of *Clostridium difficile* that is causing epidemics in many hospitals in the United States," said John G. Bartlett of Johns Hopkins University School of Medicine in Baltimore, who co-wrote an editorial in the journal. It was released early, along with two research papers because of their public health importance. "It's a bad bug," Bartlett said.

In the first paper, Vivian G. Loo of McGill University reported that the strain of bacteria responsible for the Quebec outbreak had mutated to be more resistant to a widely used class of antibiotics known as fluoroquinolones. The infection killed 6.9 percent of infected patients, a far higher mortality rate than usually associated with the infection.

One of the reasons for the high mortality rate is probably that the Quebec strain produces much higher levels of toxins than most common strains of the bacterium, the researchers said.

In an accompanying paper, McDonald and his colleagues analyzed 187 samples collected at eight health care facilities in six states -- Georgia, Illinois, Maine, New Jersey, Oregon and Pennsylvania -- and found the same, previously uncommon strain of the bacteria was at every site.

The severity of illness varied around the country, but in some outbreaks patients died or needed to have their colons removed.

In another report published in the CDC's Morbidity and Mortality Weekly Report, McDonald and his colleagues reported that at least 33 cases have been reported since 2003 in four states -- New Hampshire, New Jersey, Ohio and Pennsylvania. Twenty-three involved otherwise healthy people, and 10 were in healthy pregnant women who had had brief hospital stays. One died, and many developed chronic, debilitating infections.

Only two samples of bacteria involved in those cases had been analyzed, and neither matched the one causing outbreaks in hospitals in Quebec and the United States, McDonald said.

Those backing more public accountability from hospitals say that there are simple ways to combat this and other infections. Studies have shown that infections can be cut in half if health care workers take simple precautions such as washing their hands regularly.