

## Deadly stomach infection rising in community settings, study finds

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Mayo Clinic researchers have found that a sometimes deadly stomach bug, *Clostridium difficile*, is on the rise in outpatient settings. *Clostridium difficile* is a serious bacteria that can cause symptoms ranging from diarrhea to life-threatening inflammation of the colon. These findings were presented today at the 2009 American College of Gastroenterology (ACG) Annual Meeting in San Diego.

*Clostridium difficile*, often called *C. difficile* or "*C. diff*", is a [bacterium](#) that is resistant to some antibiotics and is most often contracted by the elderly in hospitals and nursing homes.

"Recent reports have shown increasing incidence and severity of *C. difficile* infection — especially in the older population," says Darrell Pardi, M.D., Mayo Clinic gastroenterologist and senior author on the study. "Our study examines why the cases are on the rise and who is getting the infection."

In this population-based study, researchers studied 385 cases of *C. difficile* [bacterial infection](#) from 1991-2005 to determine how many cases were hospital-acquired versus community-acquired infections. Of the cases, 192 were hospital-acquired and 35 were residents of nursing homes. Of these hospital-acquired cases, the median age of infection was 72 years; in contrast, 158 cases were community-acquired and the median age was 50 years. Thirty-five percent of the hospital infections had a severe illness compared to 22 percent of community infections who had a severe illness.

The patients with community-acquired infection were also less likely than the hospital-acquired group to have been exposed to antibiotics before their infection. Thus, many of the community-acquired infections lacked the traditional risk factors for infection, namely recent hospitalization and exposure to antibiotics.

There were no differences between community- and hospital-acquired infections in terms of what patients were treated with (primarily metronidazole), response rates, or recurrence rates after treatment.

"We are seeing more cases of *C. difficile* in the community, but they tend to be less severe and in a younger population," says Dr. Pardi. "The growing incidence of *C. difficile* infection in both inpatient and outpatient settings could be linked to the increasing usage of antibiotics and to the possibility that *C. difficile* may be getting resistant to some of our newer antibiotics."

There are hundreds of kinds of bacteria found normally in the intestines. Many play beneficial roles in the body. When a patient takes an antibiotic to treat an infection, it often destroys beneficial bacteria as well as the bacteria that are causing the illness. Without enough healthy bacteria, dangerous pathogens such as *C. difficile* can quickly grow out of control. Once it takes hold, *C. difficile* can produce two virulent toxins that attack the lining of the intestine.

"Doctors have gotten better at spotting *C. difficile* in hospitals and [nursing homes](#); however, now doctors and patients need to be more aware that you can get this [infection](#) as an outpatient and that a case of diarrhea or abdominal cramps at home could become serious," says Dr. Pardi.

According to the Centers for Disease Control and Prevention, each year in the United States, *C. difficile* is responsible for tens of thousands of

diarrhea cases and at least 5,000 deaths.

Source: Mayo Clinic ([news](#) : [web](#))

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