

Clostridium bacteria infecting increasing numbers of hospitalized children

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Hospitalized children in the United States are more frequently becoming infected with the bacteria *Clostridium difficile*, according to a report posted online today that will appear in the May print issue of *Archives of Pediatrics & Adolescent Medicine*, one of the JAMA/Archives journals.

C. difficile can colonize the gastrointestinal tract and lead to infection, according to background information in the article. While some infected patients have no symptoms, others develop diarrhea, toxic megacolon (extreme inflammation and distention of the large intestine), perforated bowels or other potentially fatal complications. "In recent years, the incidence of *C. difficile* infection, number of hospitalizations, associated deaths and severity in adults have been increasing," the authors write.

To evaluate the trends of *C. difficile* infection in children, Cade M. Nylund, M.D., of Uniformed Services University of the Health Sciences, Bethesda, Md., and colleagues analyzed records of hospitalized children in a national database of patients discharged from the hospital in 1997, 2000, 2003 and 2006. The database included about 10.5 million patients, of whom 21,274 (0.2 percent) had *C. difficile* infection.

The number of cases increased about 15 percent each year, from 3,565 in 1997 to 7,779 in 2006. Children with *C. difficile* infection had an increased risk of death or colectomy (surgery to remove all or part of the colon), longer hospital stays and higher hospitalization charges.

Some children appeared more likely to become infected, including those

who were white, lived in the West or in urban areas, had private insurance or had other co-occurring diseases, such as inflammatory bowel disease. The risk of infection was lower among black or Hispanic children, those who lived in the South, those admitted to rural hospitals, those with Medicaid/Medicare insurance and those who had self-pay or no-pay insurance status.

Unlike recent trends in adults, however, the authors did not observe an increase in severity over time among children infected with *C. difficile*.

The increased risk of *C. difficile* infection may be due to a widespread dissemination of a more virulent strain of the bacteria, the authors note. "There may also be increasing awareness among health care providers, leading to increased testing in symptomatic patients," they write.

"The population-based data in our study provide additional evidence that *C. difficile* infection cases have a significant effect on the pediatric population," the authors conclude. "Our study supports previous reports that *C. difficile* infection is increasing among hospitalized children and provides a background for understanding changing trends and risk factors of *C. difficile* infection in children. Increasing awareness of these risk factors and of an upward trend in hospitalized children with *C. difficile* infection is the first step in controlling this important [infection](#)."

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