

## Authors and Disclosures

### Journalist

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#### Charlene Laino

Freelance writer for Medscape.

**WebMD**

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## Study Shows Cases of *C. Diff* Increased 12-Fold Among Children

Charlene Laino

May 21, 2012 — The potentially deadly diarrhea bug *Clostridium difficile*, or *C. diff*, is spreading among children in the community, a new study shows.

"The typical person with *C. difficile* is thought of as being older, taking antibiotics, and in the hospital. For the first time, we are describing a substantial rise in new cases in children outside the hospital," says researcher Sahil Khanna, MBBS, a gastroenterologist at the Mayo Clinic in Rochester, Minn.

"Our most striking observation is that three-quarters of cases in children are being contracted in the community, not in the hospital," he tells WebMD. "That's huge compared to the past."

Based on the findings, parents whose child comes down with persistent diarrhea may want to consult a doctor to make sure it's not *C. diff*, he says.

Khanna presented the study today at Digestive Disease Week 2012 in San Diego.

### Diarrhea Is Cardinal Symptom

*C. diff* are bacteria that produce toxins that damage the lining of the gut. There are about 337,000 hospital stays due to *C. diff* infection reported each year, resulting in 14,000 deaths, according to the CDC.

Common symptoms of a mild infection include watery diarrhea two or more times a day for two or more days and mild abdominal cramping and tenderness. In severe cases, the bug can lead to inflammation of the colon, resulting in fever, blood, or pus in the stool, nausea, dehydration, loss of appetite, and substantial weight loss.

For the study, researchers examined the medical records of people in Olmsted County, Minn., to identify children and teens 18 and under with *C. diff* infections from 1991-2009. The county's records are ideal for such a study, as every person seen in any health care facility or who fills a prescription is tracked, Khanna says.

A total of 92 children, whose average age was about 2 years, were identified. Nearly half were babies less than a year old.

Other findings:

- The number of infections in children was more than 12 times higher in the 2004-2009 time period, compared to the 1991-1997 time period (32.6 cases per 100,000 vs. 2.6 cases per 100,000).
- A total of 75% of cases were "community-acquired," meaning that the patients had not been recently hospitalized prior to contracting *C. diff*.
- Nine percent of cases were severe, and 1% died; 20% developed recurrent infections.
- A total of 76% of cases occurred in children that had recently been prescribed antibiotics, which can kill "good" bacteria in the gut that keep *C. diff* at bay. Also, 20% had taken stomach acid-reducing drugs linked to risk for *C. diff* infection.

David Bernstein, MD, a gastroenterologist at North Shore University Hospital in Manhasset, N.Y., tells WebMD the findings are concerning.

### **Avoiding *C. Diff***

So, what should parents do to keep their children safe from *C. diff*?

First and foremost, don't demand antibiotics if your doctor says your child doesn't need them, Bernstein tells WebMD. Nearly 50% of antibiotics are inappropriately prescribed, according to Jan E. Patterson, MD, president of the Society for Healthcare Epidemiology of America.

Studies also suggest the majority of people who take the popular class of stomach acid-reducing drugs known as proton pump inhibitors (PPIs) -- including Aciphex, Dexilant, Nexium, Prevacid, Prilosec, and Protonix -- don't need them. The FDA issued a statement in February 2012 that use of PPIs may be linked to an increased risk of *C. diff* diarrhea. The FDA advises that patients taking PPIs should contact their health care provider and seek care if they take PPIs and develop diarrhea that doesn't improve.

Other steps for prevention, according to Khanna:

- Make sure your children wash their hands with soap and water.
- Clean suspected contaminated surfaces like countertops with bleach-based solutions.
- Avoid contact with people who are known to have *C. diff*.

*These findings were presented at a medical conference. They should be considered preliminary, as they have not yet undergone the "peer review" process, in which outside experts scrutinize the data prior to publication in a medical journal.*

### SOURCES

Digestive Disease Week, San Diego, May 19-22, 2012.

Sahil Khanna, MBBS, division of gastroenterology and hepatology, Mayo Clinic, Rochester, Minn.

David Bernstein, MD, chief of hepatology, North Shore University Hospital, Manhasset, N.Y.

FDA: "FDA Drug Safety Communication: *Clostridium difficile*-associated diarrhea can be associated with stomach acid drugs known as proton pump inhibitors (PPIs)."

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