

'Cruise ship virus' also sickens one million US kids yearly

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Norovirus has overtaken rotavirus in causing gastric illness, CDC study finds.

(HealthDay)—Norovirus, the infamous stomach bug that's sickened countless cruise ship passengers, also wreaks havoc on land.

Each year, many [children](#) visit their doctor or an emergency room due to severe vomiting and diarrhea caused by norovirus, according to new research from the U.S. [Centers for Disease Control and Prevention](#). The CDC report estimated the cost of those illnesses at more than \$273 million annually.

"The main point we found was that the [health care](#) burden in children under 5 years old from norovirus was surprisingly great, causing nearly 1 million medical visits per year," said the study's lead author, Daniel Payne, an epidemiologist with the CDC. "The second point was that, for the first time, norovirus health care visits have exceeded those for rotavirus."

Rotavirus is a common gastrointestinal illness for which there is now a vaccine.

It's important to note that the rate of norovirus hasn't been increasing in young children, Payne said. The reason norovirus is now responsible for more health care visits than rotavirus is that the incidence of rotavirus infection is dropping because the [rotavirus vaccine](#) is working well.

Results of the study are published in the March 21 issue of the *New England Journal of Medicine*.

Norovirus is a viral illness that can affect anyone, according to the CDC. It commonly causes nausea, diarrhea, vomiting and [stomach cramps](#). Most people recover from a norovirus infection in a day or two, but the very young and the very old—as well as those with underlying medical conditions—have a greater risk of becoming dehydrated when they're sick with norovirus.

The [virus](#) is very contagious. Payne said it takes as few as 18 norovirus particles to infect someone. By comparison, a [flu virus](#) may take between 100 and 1,000 [virus particles](#) to cause infection. Payne said people who have been infected can also keep spreading the virus even after they feel better.

Norovirus is difficult to diagnose definitively. The test that can confirm the virus is costly and time consuming, Payne said, so there have not been good data on how many children are affected by it each year.

To get a better idea of how prevalent this infection really is, the researchers collected samples from hospitals, emergency departments and outpatient clinics from children under 5 years old who had acute gastrointestinal symptoms. The children were from three U.S. counties: Monroe County, N.Y.; Davidson County, Tenn.; and Hamilton County,

Ohio. The samples were collected in 2009 and 2010, and were tested for both norovirus and rotavirus.

Norovirus was detected in 21 percent of children under 5 in 2009 and 2010. Rotavirus was found in 12 percent of children in the same age group. Norovirus was also found in 4 percent of healthy children tested in 2009 .

The study authors estimated that nationally, these data would mean that 14,000 youngsters under 5 would be hospitalized each year because of norovirus, and another 281,000 would visit the emergency room. About 627,000 young children would visit their doctor due to norovirus, according to the study. The cost of all of this medical care would exceed \$273 million a year.

"This study doesn't mean that norovirus is increasing, only that proportionately, norovirus is responsible for more of the gastrointestinal illnesses out there," said Dr. Kenneth Bromberg, chairman of pediatrics and director of the Vaccine Research Center at Brooklyn Hospital Center, in New York City.

"This is the virus that's so contagious that when you flush your toilet, it flies all over the room," said Bromberg, who said these findings may even be an underrepresentation of the actual number of children sickened by this virus. He said because norovirus is so contagious, it's likely many of their parents were sickened as well.

It could be possible to develop a vaccine for norovirus, and Payne said researchers are already working on a vaccine. Both Payne and Bromberg said, however, that any vaccine would have to offer broad coverage because the type of norovirus infecting people can change over time. In this study, they saw two different types of norovirus.

Both experts said that for right now, thorough hand-washing and good hygiene habits remain the primary defense against norovirus. That means washing down surfaces, and, when you're preparing food, making sure you thoroughly wash fruits and vegetables. If someone who is infected touches the food, the infection can be passed on through the food. Payne also recommended not preparing food when you're sick with a [gastrointestinal illness](#).

More information: Learn more about preventing norovirus infection from the [U.S. Centers for Disease Control and Prevention](#).

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