

Diarrheal Illness

[Announcer] This program is presented by the Centers for Disease Control and Prevention.

[Karen Hunter] Hi, I'm Karen Hunter and today I'm talking with Dr. Steve Monroe, director of CDC's Division of High-Consequence Pathogens and Pathology. Our conversation is based on his paper about viral gastroenteritis, which appears in CDC's journal, Emerging Infectious Diseases. Welcome Dr. Monroe.

[Steve Monroe] Thank you Karen, it's a pleasure to be here.

[Karen Hunter] Dr. Monroe, what is viral gastroenteritis?

[Steve Monroe] Gastroenteritis is an irritation of the stomach or intestinal tract. Most people experience this as severe diarrhea, vomiting, and stomach pain. For this reason, it is often referred to as stomach flu, even though it is not caused by a flu virus. The more general term is "diarrheal illness." When caused by a virus, it is known as viral gastroenteritis. There are several viruses that can cause this illness.

[Karen Hunter] Your paper focuses on two of these viruses – norovirus and rotavirus. What are the main differences between the two of them?

[Steve Monroe] The main differences between norovirus and rotavirus are in the age of people most affected and in the approaches we use for control and prevention. Norovirus can infect people of all ages, while rotavirus is most commonly found in young children. And, while there's an effective vaccine to prevent rotavirus infection, current efforts to control norovirus illness rely primarily on emphasizing good personal hygiene and infection control practices.

[Karen Hunter] We'd like to hear about both of these viruses. First, tell us about norovirus.

[Steve Monroe] Among adults, norovirus is the leading cause of diarrheal illness in the US. Every year, there are about 21 million instances caused by norovirus. This is because there are many ways that people get the virus. They can get it from another person, by touching a surface where the virus is present, or from contaminated food or water. In fact, norovirus is the leading cause of foodborne illness in the US.

[Karen Hunter] What about rotavirus? Is the spread of this virus similar to norovirus?

[Steve Monroe] Yes. Just like norovirus, people can get rotavirus through direct contact with an infected person, touching surfaces where the virus is present, or from contaminated food or water. However, foodborne transmission of rotavirus is thought to be quite rare.

Worldwide, rotavirus is the leading cause of severe diarrhea in infants and young children. It causes more than a half a million deaths each year in children younger than five years of age. Even though it's not as common, adults can also get rotavirus.

[Karen Hunter] How common is it in the United States?

[Steve Monroe] Until recently, almost all children in the US were infected with rotavirus before their fifth birthday. But, in 2006, the rotavirus vaccine for children was introduced. Since then, we've seen fewer hospitalizations and fewer doctor and emergency room visits due to rotavirus.

In the US and countries around the world, vaccination to protect against rotavirus is a real success story. The next step is to get more countries on board, which will save a lot of lives. The World Health Organization has called on all countries to help make rotavirus vaccines widely available.

[Karen Hunter] Is there also a norovirus vaccine?

[Steve Monroe] Unfortunately, there is no norovirus vaccine currently available, although there is some promising research underway. Our public health efforts have focused on early detection of outbreaks of norovirus illness. Recently, a tool known as CaliciNet has been developed. It allows for better and more rapid identification of norovirus outbreaks. Right now, we can identify different instances of norovirus. But, sometimes, it can be hard to tell whether or not these instances are all caused by the same or a similar source. This is where CaliciNet comes in – it gives us a system to identify and compare the unique “fingerprint” of norovirus strains in different outbreaks. This can be especially helpful when it comes to identifying foods that may be making people sick in different locations.

[Karen Hunter] In addition to food, are there other places people can catch these viruses?

[Steve Monroe] Cruise ships and health care settings are two prime examples. People are often confined in these settings. This can make it easier for diarrheal illness to spread from one person to another. People can avoid getting sick, though. The way to do that is through proper hand hygiene. Washing hands with soap and water, or using hand sanitizer when recommended, can make a big difference. This is true for people who work in these settings, such as nurses and attendants on ships. It's also true for the average person, whether they're in a health care setting or on a cruise.

[Karen Hunter] Is there anything else you would like people to know?

[Steve Monroe] In addition to norovirus and rotavirus, there are other viruses that can cause diarrheal illness. While these viruses are not as common as norovirus and rotavirus, we must remain vigilant. Much work has been done in the areas of rotavirus vaccination and norovirus outbreak detection and we look forward to continued progress in these areas.

[Karen Hunter] Thanks, Dr. Monroe. I've been talking with Dr. Steve Monroe about a paper that appears in the August 2011 issue of CDC's journal, Emerging Infectious Diseases. You can see the entire article online at www.cdc.gov/eid. If you'd like to comment on this podcast, send an email to eideditor@cdc.gov. That's e-i-d-editor - one word - at c-d-c-dot-gov. I'm Karen Hunter, for Emerging Infectious Diseases.

[Announcer] For the most accurate health information, visit www.cdc.gov or call 1-800-CDC-INFO.