



District Health Department #10



REPORT TO THE BOARDS OF HEALTH

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Norovirus

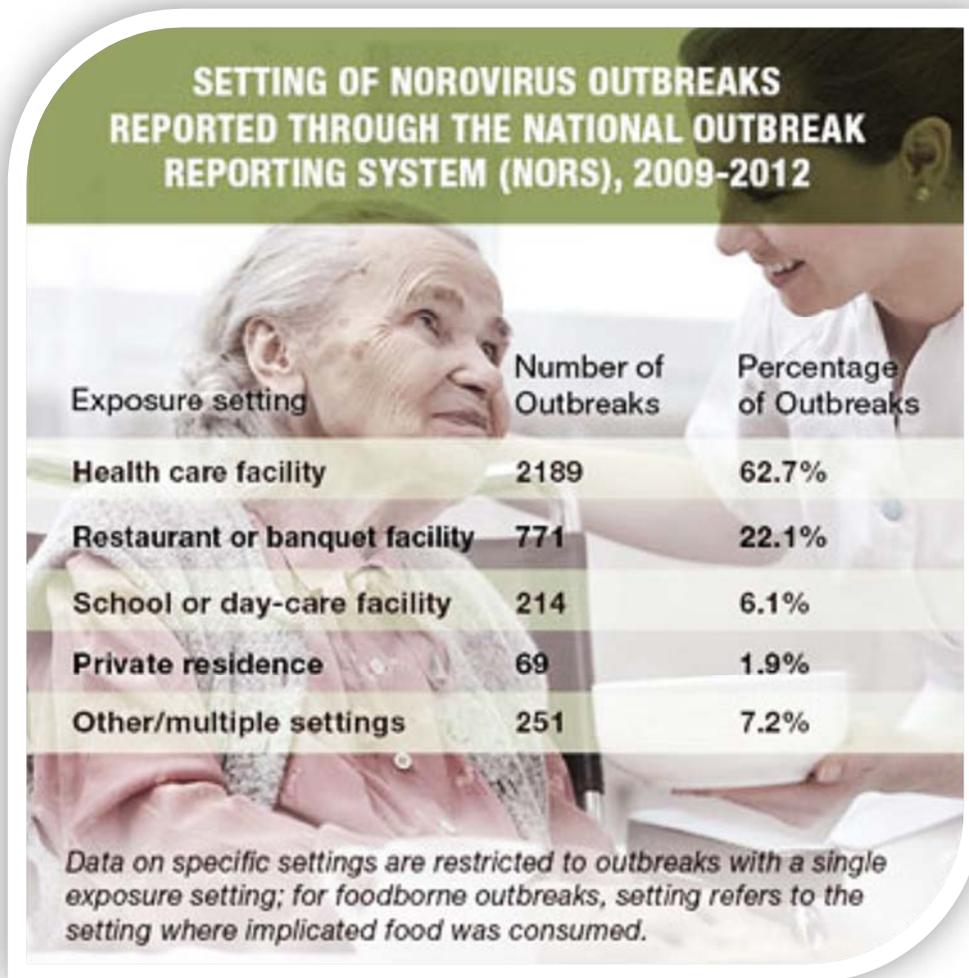
Gastroenteritis, characterized by diarrhea along with possible vomiting, nausea, fever, or abdominal pain, is most commonly called the “stomach flu.” There are numerous different infectious agents that can cause gastroenteritis, including viruses, bacteria, and parasites. Noroviruses, a group of related viruses, are the most common cause of gastroenteritis in the United States, causing over 23 million cases of illness, 64 thousand hospitalizations, and 700 deaths every year. Norovirus infections are most common between November and April.

Norovirus is very contagious. Infected individuals are contagious from the time they start to feel sick and continue to be contagious through the first few days after they recover. Infectious viral particles are found in both the vomit and the stool. Infection can be caused by as few as 10 to 100 viral particles. It is spread by the fecal-oral route, which can occur easily by eating food or drinking beverages that have become contaminated with norovirus, touching surfaces or objects with norovirus and then touching the mouth, or having direct contact with an infected person.

Once infected, it typically takes 24 to 48 hours (one to two days) for symptoms to start, though symptoms can start as early as 12 hours or as late as 72 hours after infection. The illness usually lasts 48 to 72 hours (two to three days) and recovery is quick. Most people suffer from vomiting and/or diarrhea, though vomiting is typically more prominent in norovirus than in other forms of viral gastroenteritis. About one-half of cases will have a fever, and most will have aches and pains, headache and generally feel ill. Dehydration can occur and infants, older adults, and people with underlying illness may suffer more severe symptoms. These higher-risk individuals are more likely to have a fever and typically have much longer courses of illness.

Noroviruses are very hardy. The virus can be detected on computer keyboards and mice, as well as telephone components up to 72 hours after initially contaminating these surfaces. Contaminated carpet may contain viable virus for a minimum of 12 days, even after routine dry vacuuming. Handwashing with soap and water is the best method to prevent transmission of norovirus infections. Using alcohol-based hand sanitizers may also reduce the risks of norovirus infection. Steam cleaning carpets once an outbreak is over can better remove virus from contaminated carpets. Cleaning with a detergent or using a disinfectant alone typically will not eliminate the virus. Chlorine bleach solution or a cleaning product EPA-registered to be effective against norovirus should be used. A chlorine solution at a concentration of 6000 ppm should be applied and left in contact with contaminated surfaces for 15 minutes in order to best eliminate norovirus. To make this type of solution, add 1¼-cup bleach to 1 gallon of water, or ¾-cup bleach to 2 quarts of water (64 oz.)

Because noroviruses are so contagious, spread so quickly, and are so difficult to decontaminate, they are often responsible for outbreaks in places like nursing homes, hospitals, daycare centers, schools, and cruise ships. Outbreaks also occur at restaurants and catered meals if food becomes contaminated. Some of these facilities house the highest risk groups and these outbreaks can be devastating.



Recommendations:

1. Practice good hand hygiene and teach children the same (<http://www.cdc.gov/handwashing/>.)
2. Prevent outbreaks by staying home from work and cruises when ill and recovering, not preparing food for others while ill and for a few days after you recover, and not visiting the very young/old/ill while ill or recovering.
 - <http://www.cdc.gov/norovirus/food-handlers/work-with-food.html>,
 - <http://www.cdc.gov/HAI/organisms/norovirus.html>
 - <http://www.cdc.gov/nceh/vsp/pub/CruisingTips/healthycruising.htm>.)
3. Disinfect contaminated areas properly (<http://www.disinfect-for-health.org/resources>.)

References:

- Centers for Disease Control and Prevention (August, 2016). Norovirus. Accessed at <https://www.cdc.gov/norovirus/index.html> on December, 2016.
- MacCannell, T., Umscheid, C. A., Agarwal, R. K., Lee, I., Kuntz, G., & Stevenson, K. B. (2011). Guideline for the prevention and control of norovirus gastroenteritis outbreaks in healthcare settings. *Infection Control & Hospital Epidemiology*, 32(10), 939-969.