

VIRAL GASTROENTERITIS (OR “STOMACH FLU”) CAUSED BY NOROVIRUS: Controlling Transmission in Licensed Residential Community Care Facilities (2006)

The following is adapted from recommendations prepared by the California Department of Public Health (CDPH). For the full text of the CDPH recommendations, please see <http://www.dhs.ca.gov/ps/dccdc/dccdcindex.htm> under Control of Viral Gastroenteritis Outbreaks in Long-Term Care Facilities (October 2006).

Viral gastroenteritis is an infection that results in vomiting and/or diarrhea. It is usually caused by a group of viruses called noroviruses. When viral gastroenteritis occurs in the winter, it is sometimes called the “**stomach flu**,” although it has no relationship to respiratory infections caused by the influenza virus. Outbreaks of viral gastroenteritis are sometimes referred to as “**norovirus outbreaks**.”

Incubation Period, Diagnosis/Symptoms and Immunity

- After initial (first) exposure, a person will usually get viral gastroenteritis within 12-48 hours.
- Viral gastroenteritis is diagnosed based mostly on symptoms, including nausea, vomiting, diarrhea, muscle aches, abdominal cramps, and no fever or a low-grade fever. Vomiting and diarrhea can occur separately or together. Symptoms usually last 24-60 hours, but the virus may be present in a person’s stool for up to two weeks longer. Complications, including death, are rare. They usually occur in elderly persons with underlying chronic diseases—and most often are due to dehydration. Lab results aren’t very useful in diagnosing viral gastroenteritis, and decisions about what to do to control an outbreak must be made before lab results are available.
- People who have had viral gastroenteritis can get it again after only a few months.

Transmission

Cases of viral gastroenteritis are more common in the winter, but outbreaks can occur at any time of the year. The viruses (norovirus specifically) that cause viral gastroenteritis are very contagious because they are present in very high amounts in the stool and vomit of ill persons. Norovirus is spread primarily by touching the mouth with contaminated hands. In a facility, norovirus is spread primarily when ill persons contaminate their hands with stool or vomit containing particles of the virus. It only takes a few particles of the virus to cause illness in a susceptible person. Norovirus can be spread by touching contaminated surfaces or objects and having skin-to-skin or hand-to-hand contact with an infected person, although contaminated food and water may also be a source of illness. Another way to catch viral gastroenteritis is by breathing in airborne viruses after an ill person vomits. If the illness is not quickly recognized and steps immediately taken to control it, the infection will spread rapidly from person to person.

Treatment

There is no specific treatment for viral gastroenteritis, but it is wise to check with the client’s or resident’s physician for guidance. It is extremely important for ill persons to drink plenty of liquids so that they do not become dehydrated. Rarely, intravenous fluids may be required.

Reporting an Outbreak

The most common definition of **an outbreak of viral gastroenteritis (or norovirus outbreak)** is two or more persons (clients/residents or staff) who develop vomiting and/or diarrhea within a two-day period. Promptly report all outbreaks or suspected outbreaks to your local health department and licensing office.

Controlling Transmission

Little can be done to prevent viruses that cause viral gastroenteritis from being introduced into a facility by staff, clients/residents who participate in community activities, or visitors. However, please see the next page for a list of infection-control measures that may help limit the spread of viral gastroenteritis (norovirus).

VIRAL GASTROENTERITIS (OR “STOMACH FLU”) CAUSED BY NOROVIRUS

Guidelines to Controlling Transmission in Residential Community Care Facilities (October 2006)

The California Department of Public Health (CDPH) recommends that licensed residential community care facilities use the following “best practices” to control the spread of viral gastroenteritis (norovirus):

- Remind clients/residents and staff of these guidelines at least once a year in the fall.
- Educate staff, clients/residents, and others to always wash their hands with soap and water immediately after using the toilet.
- In general, encourage frequent handwashing with soap and water. (Waterless hand-hygiene products containing alcohol should not be used during an outbreak—they aren’t effective against norovirus.)
- Inform staff and clients/residents that they can become ill and vomit with little or no warning.
- Require the use of disposable gloves (latex or vinyl) when in contact with vomit or fecal matter. After removing the gloves, staff should immediately—without touching surfaces or objects—wash their hands with soap and water. Used gloves should be put in a trash bin (disposable gloves should never be washed and reused).
- Encourage staff to wear a surgical mask over the nose/mouth and a disposable gown (or to change their clothes) when cleaning surfaces or objects soiled with vomit or fecal matter.
- Put linens soiled with vomit or fecal matter in a plastic bag before sending them to the laundry. Encourage staff working in the laundry to wear gloves, a mask, and a disposable gown (or to change their clothes) when physical contact with soiled linens is necessary.
- Wash soiled clothing in hot water using any commercial laundry detergent. Dry clothes in a dryer.
- Use an Environmental Protection Agency (EPA)-approved disinfectant or a freshly prepared sodium hypochlorite solution (e.g., household chlorine bleach in a 1:100 {500 ppm} to 1:10 {5,000 ppm} dilution) to disinfect surfaces contaminated with feces or vomit (**see attached bleach solutions**). The reliability of disinfectants other than those containing chlorine to kill norovirus is uncertain, even with EPA approval, so the use of chlorine-containing (hypochlorite) solutions is recommended whenever possible.
- Clean carpets and soft furnishings with hot water and detergent, or steam clean. Dry vacuuming is not recommended.
- Recognize a developing outbreak of viral gastroenteritis (norovirus) by requesting clients/residents and staff to report a sudden onset of two or more episodes of vomiting and/or diarrhea occurring within a 12-hour period. Promptly report an outbreak or a suspected outbreak to the local health department.

If an outbreak of viral gastroenteritis is recognized or suspected, the following steps are recommended:

- Request clients/residents with symptoms to remain in their apartments or rooms until their symptoms have resolved. Provide clear liquid fluids and monitor clients/residents for dehydration.
- Request staff members to remain at home for at least 48-72 hours after their symptoms subside.
- Limit visitors—especially if they have symptoms—to the extent possible.
- Limit group social activities.

Questions regarding outbreak control should be directed to your local health department, or to Jon Rosenberg, M.D., at 510-620-3427, or Jon.Rosenberg@cdph.ca.gov.

ATTACHMENT (Preparation of Chlorine Solutions)

Preparation of Chlorine Solutions:*

Attachment to Viral Gastroenteritis (or “Stomach Flu”) Caused by Norovirus: Guidelines to Controlling Transmission in Residential Community Care Facilities (October 2006)

		Desired Chlorine Concentration		
		500 ppm (0.05%)	1,000 ppm (0.1%)	5,000 ppm (0.5%)
Dilution of standard (5.25%) bleach prepared fresh for use within 24 hours	Bleach/water	1:100	1:50	1:10
	Preparation	2 1/2 tablespoons (1/6 cup) bleach in a gallon of water	5 tablespoons (1/3 cup) bleach in a gallon of water	25 tablespoons (1 2/3 cups) bleach in a gallon of water
Dilution of standard (5.25%) bleach prepared fresh and used for 1-30 days	Bleach/water	1:50	1:25	1:5
	Preparation	5 tablespoons (1/3 cup) bleach in a gallon of water	10 tablespoons (2/3 cup) bleach in a gallon of water	50 tablespoons (3 1/3 cups) bleach in a gallon of water

"Ultra" concentrations of bleach contain 6-7.35% hypochlorite and are not recommended to avoid producing higher than intended concentrations of chlorine.

*The information in this chart is from Appendix 2 of the California Department of Health Services' (now the California Department of Public Health) document, Recommendations for the Prevention and Control of Viral Gastroenteritis Outbreaks in California Long-Term Care Facilities, October 2006.