

NOROVIRUS (VIRAL GASTROENTERITIS) CONTROL MEASURES FOR SKILLED NURSING FACILITIES

- Nursing units should immediately report any residents or staff members with symptoms of viral gastroenteritis to the appropriate administrator
- Notify LAC Public Health at (888) 397-3993 and LAC Health Facilities at (323) 869-8500
- New cases should be recorded daily using a case log, which will help with the investigation of the outbreak (name, age, room #, onset date, symptoms, duration of illness – see Appendix 1).

CLEANING

- Frequently wash hands vigorously with soap and water especially:

<u>After:</u> toilet visits	<u>Before:</u> eating
cleaning up vomitus or diarrhea	preparing food
changing diapers	serving food to patients
handling soiled clothes or linens	
contact with a symptomatic person	

- Clean up vomit and fecal spillages promptly and consider wearing a mask, gown and gloves.
- Flush any vomitus and/or stool in the toilet and disinfect the surrounding area.
- Use an Environmental Protection Agency approved disinfectant or a freshly prepared sodium hypochlorite solution (e.g., 1 part household bleach to 10 parts water solution) to clean environmental surfaces (see Appendix 2).
- Increase frequency of routine ward, bathroom and toilet cleaning. Give special attention to frequently touched objects such as doorknobs, faucets, toilet rails and bath rails.
- Immediately wash clothing or linens that may be contaminated with the virus, especially after an episode of illness. Handle them as little as possible and with minimal agitation. Launder with hot water and detergent on the maximum cycle length and machine dry.
- Clean carpets and soft furnishings with hot water and detergent or steam clean, dry vacuuming is not recommended since the viruses may become airborne.
- Wear gloves, gown, and surgical or procedural mask when cleaning a room of a symptomatic patient (keep protective equipment available in rooms).
- Dispose of any food that may have been contaminated by an ill kitchen employee.

PATIENT CARE / STAFF PRECAUTIONS

- Educate staff, residents and visitors about methods of transmission.
- Wear gloves, gown, and surgical or procedural mask when in contact with a symptomatic resident. Remove protective equipment and wash hands after contact with an ill resident and before contact with an unaffected resident.
- Confine symptomatic residents to their rooms (cohort ill patients together if possible) and minimize movement of all residents.
- Require all symptomatic staff (including kitchen staff), visitors and volunteers to stay home until symptom free for 48 hours.
- Limit staff from moving between affected and unaffected units, and exclude any non-essential personnel from affected units.
- Maintain the same staff-to-resident assignments.
- Cancel group activities until ill individuals are asymptomatic for at least 48 hours.
- Limit new admissions until the facility is symptom free for 48 hours.
- Consider use of antiemetics for patients with vomiting and maintain hydration.
- Discontinue self-service in the cafeteria/dining room to minimize food handling by residents.

Norovirus Fact Sheet

What are noroviruses? Noroviruses are a group of viruses that cause gastroenteritis (GAS-tro-en-ter-i-tis) in people. The term norovirus was recently approved as the official name for this group of viruses. Several other names have been used for noroviruses, including:

- Norwalk-like viruses (NLVs)
- caliciviruses (because they belong to the virus family *Caliciviridae*)
- small round structured viruses

What is the name of the illness caused by noroviruses? Illness caused by norovirus infection has several names, including:

- stomach flu – this “stomach flu” is **not** related to the flu (or influenza), which is a respiratory illness caused by influenza virus
- viral gastroenteritis – the most common name for illness caused by norovirus, gastroenteritis refers to an inflammation of the stomach and intestines
- acute gastroenteritis
- non-bacterial gastroenteritis
- food poisoning (although there are many other causes of food poisoning)

What are the symptoms of illness caused by noroviruses? The symptoms of norovirus illness usually include nausea, vomiting, diarrhea, and some stomach cramping. Sometimes people additionally have a low-grade fever, chills, headache, muscle aches, and a general sense of tiredness. The illness often begins suddenly, and the infected person may feel very sick. In general, children experience more vomiting than adults. Most people with norovirus illness have both diarrhea and vomiting.

How long does the illness last (Duration)? The illness is usually brief, with symptoms lasting only about 1 or 2 days.

How do people become infected with noroviruses (Transmission)? Noroviruses are found in the stool (feces/poop) or vomit of infected people. People can become infected with the virus in several ways, including:

- eating food or drinking liquids that are contaminated with norovirus
- touching surfaces or objects contaminated with norovirus, and then placing their hand in their mouth
- having direct contact with another person who is infected and showing symptoms (for example, when caring for someone with illness, or sharing foods or eating utensils with someone who is ill)

Persons working in day-care centers or nursing homes should pay special attention to children or residents who have norovirus illness. This virus is very contagious and can spread rapidly throughout such environments.

When do symptoms appear (Incubation period)? Symptoms of norovirus illness usually begin about 24 to 48 hours after ingestion of the virus, but they can appear as early as 12 hours after exposure.

How serious is norovirus gastroenteritis? Norovirus disease is usually not serious, although people may feel very sick and vomit many times a day. Most people get better within 1 or 2 days, and they have no long-term health effects related to their illness. However, sometimes people are unable to drink enough liquids to replace the liquids they lost because of vomiting and diarrhea. These persons can become dehydrated and may need special medical attention. This problem with dehydration is usually only seen among the very young, the elderly, and persons with weakened immune systems. There is no evidence to suggest that an infected person can become a long-term carrier of norovirus.

How is norovirus diagnosed? In special cases, when there is an outbreak of gastroenteritis, stool (feces/poop) samples of infected persons will be tested by the health department. A special test is required and most laboratories do not test for this virus. An outbreak must be diagnosed by the LA County Public Health Laboratory.

What treatment is available for people with norovirus infection? Currently, there is no antiviral medication that works against norovirus and there is no vaccine to prevent infection. **Norovirus infection cannot be treated with antibiotics.** This is because antibiotics work to fight bacteria and not viruses.

Norovirus illness is usually brief in healthy individuals. When people are ill with vomiting and diarrhea, they should drink plenty of fluids to prevent dehydration. Dehydration among young children, the elderly and the sick, can be common, and it is the most serious health effect that can result from norovirus infection. By drinking oral rehydration fluids (ORF), juice, or water, people can reduce their chance of becoming dehydrated. Sports drinks do not replace the nutrients and minerals lost during this illness.

Are noroviruses contagious? Yes, noroviruses are very contagious and can spread easily from person to person. Both stool (feces/poop) and vomit are infectious. Particular care should be taken with young children in diapers who may have diarrhea.

How long are people contagious? People infected with norovirus are contagious from the moment they begin feeling ill to at least 3 days after recovery. Some people may be contagious for as long as 2 weeks after recovery. Therefore, it is particularly important for people to use good handwashing and other hygienic practices after they have recently recovered from norovirus illness.

Who gets norovirus infection (Immunity)? Anyone can become infected with these viruses. There are many different strains of norovirus, which makes it difficult for a person's body to develop long-lasting immunity. Therefore, norovirus illness can recur throughout a person's lifetime. In addition, because of differences in genetic factors, some people are more likely to become infected and develop more severe illness than others.

Can norovirus infections be prevented? Yes, you can decrease your chance of coming in contact with noroviruses by following these preventive steps:

- Frequently wash your hands (vigorously, with soap and warm water), especially after toilet visits and changing diapers and before eating or preparing food.
- Carefully wash fruits and vegetables, and thoroughly cook shellfish (the virus is killed above 60°C /140°F, freezing does not kill it)
- Thoroughly clean and disinfect contaminated surfaces immediately after an episode of illness by using a bleach-based household cleaner.
- Immediately remove and wash clothing or linens that may be contaminated with virus after an episode of illness (use hot water and soap).

- Flush or discard any vomitus and/or stool in the toilet (with the lid down) and make sure that the surrounding area is kept clean.
- Persons who are infected with norovirus should not prepare food while they have symptoms and for 3 days after they recover from their illness.
- Food that may have been contaminated by an ill person should be disposed of properly.

Why is norovirus infection important for food handlers? People working with food who are sick with norovirus gastroenteritis are a particular risk to others, because they handle the food and drink many other people will consume. Since the virus is so small, a sick food handler can easily – without meaning to – contaminate the food he or she is handling. Many of those eating the contaminated food may become ill, causing an outbreak.

Many local and state health departments require that food handlers and preparers with gastroenteritis not work until 2 or 3 days after they feel better. In addition, because the virus continues to be present in the stool for as long as 2 to 3 weeks after the person feels better, strict hand washing after using the bathroom and before handling food items is important in preventing the spread of this virus. Food handlers who were recently sick can be given different duties in the restaurant so that they do not have to handle food (for example, working the cash register or hostessing).

Outbreaks of norovirus gastroenteritis have taken place in restaurants, cruise ships, nursing homes, hospitals, schools, banquet halls, summer camps, and family dinners – in other words, places where often people have consumed water and/or food prepared or handled by others. It is estimated that as many as half of all food-related outbreaks of illness may be caused by norovirus. In many of these cases, sick food handlers were thought to be the cause/source.

References

1. California Department of Health Services Division of Communicable Disease Control, In Consultation with Licensing and Certification Program. Recommendations for the Prevention and Control of Viral Gastroenteritis Outbreaks in California Long-term Care Facilities 2006.
<http://www.dhs.ca.gov/ps/dcdc/disb/pdf/Prevention%20and%20Control%20of%20Viral%20Gastroenteritis%20Outbreaks%20%E2%80%A6.pdf>
2. CDC. Norovirus in Health Care Facilities.
http://www.cdc.gov/ncidod/dhqp/id_norovirusFS.html
3. CDC. Norwalk-like Viruses – Public Health Consequences and Outbreak Management.
<http://www.cdc.gov/ncidod/dvrd/revb/gastro/rr5009.pdf>

Appendix 1

Sample Case Log of Residents and Staff with Acute Gastrointestinal Illness

Resident/Staff identification			Resident/Staff location			Illness description								Laboratory test date and results (optional)		Antiemetic	Antibiotic	Illness outcomes					
Name	Age	Sex (M/F)	Building	Unit	Room #, Bed designation	Date onset illness	Highest temperature	Vomiting (Y/N) (Projectile (Y/N)	Nausea (Y/N)	Diarrhea (Watery (Y/N) Bloody (Y/N)	Abdominal cramps (Y/N)	Chills (Y/N)	Date illness stopped	Stool PCR for NLV	Stool bacteria; culture	Stool O&P	Other	Date started/Date ended	Date started/Date ended	Tx for dehydration (Y/N)	Hospitalized (Y/N)	Days hospitalized	Died (Y/N, if yes, date)

Source: California Department of Health Services report "Recommendations for the Prevention and Control of Viral Gastroenteritis Outbreaks in California Long-term Care Facilities 2006" (Reference 1)

Appendix 2

Preparation of Chlorine Solutions

		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 ½ 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 cup) 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 cup) 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.

Source: California Department of Health Services report “Recommendations for the Prevention and Control of Viral Gastroenteritis Outbreaks in California Long-term Care Facilities 2006” (Reference 1)