

June 2010

Norovirus Information for Long-Term Care Facilities (LTCF's)

Norovirus Quick Tips:

- Keep ill employees out of facility until 3 days (72 hours) after symptoms leave
- Wash hands regularly
- Keep ill food service workers or servers from preparing or handling food

Table of Contents/Checklist:

- [Norovirus Fact Sheet](#)
p. 2
- [Precautions: Standard and Contact](#)
p. 3
- [Hand Washing](#) p. 3
- [Food Preparation](#) p. 4
- [Staffing](#) p. 5
- [Cleaning](#) p. 6, 7
- [Social Distancing](#) p. 8
- [Prevention and Other Control Measures](#) p. 5
- [Alternatives to Bleach](#)
p. 9
- [Line List and Stool Specimens](#) p. 9
- [Declaring an Outbreak Over](#) p. 9

We have prepared a package of information for you to help you and your staff address and meet the challenges an outbreak of Norovirus can cause in your facility.

Norovirus is a highly contagious virus causing vomiting and diarrhea. In care facilities and retirement homes such as your own, it can endanger the health of the residents and staff, and exacerbate staffing shortages at a time when increased staffing can actually help to control and shorten the duration of the outbreak.

Rapidly identifying an outbreak and quickly implementing effective infection control measures is crucial to preventing the further spread of Norovirus. If you have not already done so at your facility, establish a way to detect when cases of diarrhea and vomiting exceed the norm or baseline for your residents.

The moment an outbreak is suspected, report your suspicion to the Marion County Health Department immediately, (503) 588-5621, and implement the infection control measures recommended in this package.

Reporting a suspected outbreak immediately can help you access resources designed to help stop the spread of Norovirus and ultimately protect the health of those living and working in your facility.

The Marion County Health Department epidemiology team, consisting of public health nurses, a public health officer, and environmental health specialists, is trained to help you respond and institute infection control measures.

Some important staffing measures include:

- Keep ill food service workers or servers from preparing or handling food;
- Keep ill employees home for 3 days (72 hours) after vomiting and diarrhea stop;
- Pair employees who have recovered from the illness with currently ill residents.

We hope this information will help you if and when a Norovirus outbreak occurs in your facility. If you have any questions, please feel free to contact us at (503) 588-5621. Thank you.

Sincerely,

Karen Landers, MD, MPH
Public Health Officer
Marion County Health Department

*Marion County Health Department
3180 Center St. NE
Salem, Oregon 97301
(503) 588-5621
<http://www.co.marion.or.us/hlt/>*

Norovirus Fact Sheet

What is Norovirus?

Norovirus or Norwalk-like viruses cause vomiting and diarrhea (gastroenteritis), which is sometimes called the “stomach flu.” During an outbreak, this illness can lead to staff missing work, increased demands on nursing staff due to many ill residents and staff, visiting restrictions, and other problems.

What are the symptoms?

Symptoms often begin 24-48 hours after being exposed, but can occur before then.

- Nausea
- Vomiting
- Diarrhea
- Abdominal Cramps
- Possibly headache, low-grade fever, and chills

How is Norovirus diagnosed and treated?

It is diagnosed by looking at symptoms (vomiting and diarrhea) and the time they start. Testing for Norovirus can only be done at the Oregon State Public Health Lab through your local health department. There is no medicine for Norovirus, but patients need to be watched for dehydration and fluid imbalances. People do not build good defenses against Norovirus, so it is possible to get it again if exposed at a later time.

How is it spread?

Ill people can spread Norovirus to others while they have vomiting and diarrhea and may spread the disease for as long as a week after symptoms leave. Vomit and diarrhea of ill people are very infectious. This makes proper cleanup and keeping ill people from well people very important.

Who can get it?

Anyone who has not been recently infected can get Norovirus, but the elderly are at increased risk of becoming very ill and possibly dying.

What are some things you can do to keep it from spreading?

- Frequent and thorough hand washing, especially after going to the bathroom, as well as before and after patient care, and before handling food.
- Keep ill employees home for 3 days (72 hours) after vomiting and diarrhea stop.
 - Employees returning after a gastrointestinal illness should be restricted from handling kitchenware or ready-to-eat food for an additional 3 days (72 hours).
- Proper food storage and preparation
- Disinfect contaminated surfaces with a freshly-made (daily) bleach solution*. The bleach solution should contain at least 1,000 ppm. The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water.
- Prompt washing of soiled linens and clothing
- Restrict visitors, especially children
- Restrooms used during or after a vomiting incident should be closed immediately until they are cleaned and disinfected with bleach solution*.
- If vomiting occurs in the kitchen or dining area, any exposed food or single-service articles (e.g., drinking straws, takeout containers, and paper napkins) should be discarded, and all surface areas within at least a 25-foot radius of the vomiting site should be disinfected with a bleach solution*.

Who to call?

If you think you may have an outbreak of Norovirus, tell the Nursing Supervisor at your facility, then call Marion County Health Department at (503) 588-5621.

*Virkon may also be used to disinfect. If you have a question about the efficacy of any other disinfectant against Norovirus, please contact our Environmental Health Staff at (503) 588-5346.



“Ill people can spread Norovirus to others while they have vomiting and diarrhea and ... for as long as a week after symptoms leave.”



Standard and Contact Precautions

- ❑ Wash hands thoroughly and frequently.*
- ❑ Place residents with vomiting or diarrhea on contact precautions, which includes:
 1. Wearing gloves and gown when with ill residents,
 2. Changing gloves and gown between ill and well residents,
 3. Wearing surgical masks, gown, and gloves while cleaning up after an ill person.

*Handwashing

Taken from www.cdc.gov/cleanhands/

Keeping hands clean is one of the most important steps we can take to avoid getting sick and spreading germs to others. It is best to wash your hands with soap and clean running water for 20 seconds. However, if soap and clean water are not available, **and hands are not visibly soiled**, use an alcohol-based product to clean your hands. Alcohol-based hand rubs significantly reduce the number of germs on skin and are fast acting.

When washing hands with soap and water:

- ❑ Wet your hands with clean running water and apply soap. Rub hands together to make a lather and scrub all surfaces.
- ❑ Continue rubbing hands for 20 seconds. Rinse hands well under running water.
- ❑ Dry your hands using a paper towel or air dryer. If possible, use your paper towel to turn off the faucet.

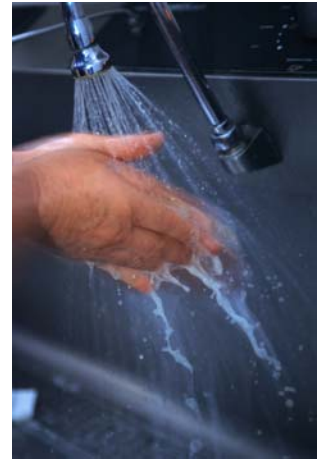
Remember: If soap and water are not available, use alcohol-based gel to clean hands.

When using an alcohol-based sanitizer:

- ❑ Apply product to the palm of one hand.
- ❑ Rub hands together.
- ❑ Rub the product over all surfaces of hands and fingers until hands are dry.

When should you wash your hands?

- ❑ Before preparing or eating food.
- ❑ After going to the bathroom.
- ❑ After changing diapers or cleaning up a child who has gone to the bathroom.
- ❑ Before and after tending to someone who is sick.
- ❑ After blowing your nose, coughing, or sneezing.
- ❑ After handling an animal or animal waste.
- ❑ After handling garbage.
- ❑ Before and after treating a cut or wound.



“Improved adherence to hand hygiene (i.e. hand washing or use of alcohol-based hand rubs) has been shown to terminate outbreaks in health care facilities, to reduce transmission of antimicrobial resistant organisms (e.g. methicillin resistant staphylococcus aureus) and reduce overall infection rates.” ~CDC

Food Preparation

- Have at least one manager certified in food safety and sanitation in kitchen.
- Train all foodservice staff in basic food safety practices, including cooking foods to proper temperatures, upon employment and periodically thereafter.
- Keep hot foods hot (140 degrees F or above) and cold foods cold (41 degrees F or below).
- Reheat food to 165 degrees F and verify temperatures with a food thermometer.
- Prevent cross-contamination (i.e. keep foods apart to avoid the transmission of pathogens from one food item to another).
- Wash your hands at appropriate times.
- Establish appropriate procedures and documentation for the control and safe handling of food.
- Develop and distribute clear guidelines for foodservice managers in the event of a suspected food borne illness outbreak.
- Encourage self-inspections of food safety practices and facilities where food is stored, prepared, held, or served.
- Ensure foodservice equipment is working properly and, if necessary, see that it is repaired, replaced, or taken out of service.
- Provide a reliable communication system from food source to foodservice and vice versa to deal with food recalls.
- If vomiting occurs in the kitchen or dining area:
 - ❑ **Carefully** remove all vomit and clean the area using the general cleaning principles described on page 6.
 - ❑ **Food preparation area (including vertical surfaces):** Disinfect with a freshly prepared hypochlorite-based cleaner that releases 1,000 ppm of available chlorine**. The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water. Because thorough disinfection might be necessary, partial or complete closure of the food establishment should be considered after a vomiting incident.
 - ❑ **Food:** Any exposed food or single-service articles (e.g., drinking straws, takeout containers, and paper napkins) should be discarded, and all surface areas within at least a 25-foot radius of the vomiting site should be disinfected with a bleach solution**. The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water. Also, destroy food that was handled by an infected person.
 - If the contaminated area is a food contact surface, decontamination must be followed by a clear-water rinse and a final wipe down with 200 ppm sanitizing bleach solution (1 tablespoon of bleach to one gallon of water)
 - ❑ **Work restrictions:** Ill employees should be excluded from work for at least 3 days (72 hours) after symptoms subside, and employees returning after a gastrointestinal illness should be restricted from handling kitchenware or ready-to-eat food for an additional 72 hours.
 - Report any incident of vomiting to the infection control team and appropriate managers.

***Virkon may also be used to disinfect. If you have a question about the efficacy of any other disinfectant against Norovirus, please contact our Environmental Health Staff at (503) 588-5346.**

Information adapted from <http://www.foodsafeschools.org/foodservice.php>,
<http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5646a2.htm>, and <http://oregon.gov/DHS/ph/acd/outbreak/cleanup.pdf>.



Staffing

- ❑ Keep ill employees home for 3 days (72 hours) after vomiting and diarrhea stop. Virus shedding occurs an average of 48-72 hours after symptoms stop.
 - Employees returning after a gastrointestinal illness should be restricted from handling kitchenware or ready-to-eat food for an additional 72 hours.
- ❑ Inform agency staff not to work at this facility or other facilities until 3 days (72 hours) after symptoms leave.
- ❑ Keep ill food service workers or servers from preparing or handling food.
- ❑ Pair employees who have recovered from the illness with currently ill residents.
- ❑ Maintain same staff-to-resident assignments.
- ❑ If using agency staff, keep list of agency staff used during outbreak.
- ❑ Discontinue floating staff from the outbreak-affected to unaffected wards.
- ❑ Exclude non-essential personnel from outbreak-affected wards.
- ❑ Wear gloves, surgical masks, and possibly a disposable gown when caring for a patient after a vomiting or diarrhea accident. Remove before leaving the room and wash hands immediately.
- ❑ Clean up vomiting and diarrhea accidents promptly and follow cleaning instruction included in this handout.

Prevention

- ❑ After the outbreak is over, consider screening new admissions for signs and symptoms of gastroenteritis. If present, isolate and place on standard and contact precautions immediately.

Other Control Measures

- ❑ Consider giving anti-emetics to patients with vomiting.

General Cleaning Principles



*Resources for ordering chlorine test strips as of March 2007:

- ❑ <http://www.rpc-rabrenco.com/PI/ChlorineHR&OzoneStrips.pdf>
- ❑ <http://www.indigo.com/science-supplies/chlorine-test-strip.html>
- ❑ <http://www.sensafe.com/480024.php>

Always add bleach to water; never add water to bleach

- ❑ Increase routine cleaning. Remember to include frequently touched surfaces such as handrails, doorknobs, computer keyboards and mice, etc.
- ❑ Clean up fecal and vomit accidents promptly, including prompt washing of soiled linens and clothing.
- ❑ Anything soaked with norovirus-laden vomit and diarrhea should be carefully handled to prevent transmission to handlers by direct contact or airborne particles, and the surrounding area should be cleaned and disinfected.
- ❑ Careful handling includes:
 - Using personal protective equipment (gloves, surgical masks, and gowns)
 - Soaking up vomit and diarrhea with paper towels or disposable cloths
 - Handling contaminated material as little as possible and with minimal agitation to reduce aerosols (don't shake soiled linen or don't spray contaminated surfaces off with a high-powered spray, for example)
 - Removing contaminated material from the contaminated area in impervious bags
- ❑ Clean soiled areas with detergent and hot water.
- ❑ Always clean with paper towels or disposable cloths.
- ❑ After cleaning soiled areas with detergent and hot water, disinfect contaminated surfaces using a freshly-made (daily) bleach solution**. The bleach solution should contain at least 1,000 parts per million. The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water.
- ❑ Wash hands well using soap and water and dry them just as well.
- ❑ **Bed linens, curtains, pillows & non-disposable mop heads:** Place contaminated, washable objects directly into washing machines without mixing with other objects and launder with water temperature 140 – 160 degrees Fahrenheit; clean and disinfect pillows with impermeable covers with a freshly-made bleach solution**. The bleach solution should contain at least 1,000 parts per million (ppm). The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water.
- ❑ **Carpets and upholstery:** Carefully remove vomit and diarrhea; clean contaminated carpet or upholstery with detergent and hot water; steam clean at 158 degrees Fahrenheit for 5 minutes or 212 degrees Fahrenheit for 1 minute. Do not vacuum.
- ❑ **Furniture, floors, and other vertical & horizontal hard, non-porous surfaces (in the vicinity of the contaminated area):** Carefully remove vomit and diarrhea; clean contaminated furniture and other hard surfaces with detergent and hot water; decontaminate with a freshly-made bleach solution**. The bleach solution should contain at least 1,000 parts per million (ppm). The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water.
- ❑ **Fixtures and fittings in toilet areas:** Carefully remove vomit and diarrhea; clean contaminated fixtures and fittings with detergent and hot water; decontaminate with a freshly-made bleach solution**. The bleach solution should contain at least 1,000 parts per million (ppm). The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water.

**Virkon may also be used to disinfect. If you have a question about the efficacy of any type of disinfectant against norovirus, please contact our Environmental Health Staff at (503) 588-5346.

Cleaning up Vomit in the Kitchen

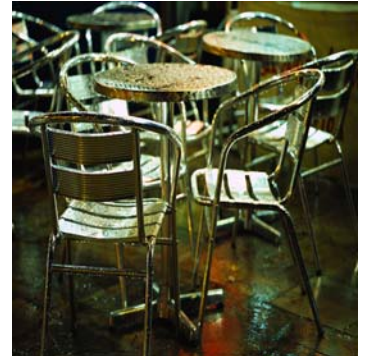
- ❑ **Carefully** remove all vomit and clean the area using the general cleaning principles described on page 6.
- ❑ **Food preparation area (including vertical surfaces):** Disinfect with a freshly prepared hypochlorite-based cleaner that releases 1,000 ppm of available chlorine**. The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water. Because thorough disinfection might be necessary, partial or complete closure of the food establishment should be considered after a vomiting incident.
- ❑ **Food:** Any exposed food or single-service articles (e.g., drinking straws, takeout containers, and paper napkins) should be discarded, and all surface areas within at least a 25-foot radius of the vomiting site should be disinfected with a bleach solution**. The easiest way to achieve at least 1,000 ppm is to put ½ cup bleach to a gallon of water. Also, destroy food that was handled by an infected person.
 - If the contaminated area is a food contact surface, disinfection must be followed by a clear-water rinse and a final wipe down with 200 ppm sanitizing bleach solution (1 tablespoon of bleach to one gallon of water)
- ❑ **Work restrictions:** Ill employees should be excluded from work for at least 3 days (72 hours) after symptoms subside, and employees returning after a gastrointestinal illness should be restricted from handling kitchenware or ready-to-eat food for an additional 72 hours.
- ❑ Report any incident of vomiting to the infection control team and appropriate managers.

****Virkon may also be used to disinfect. If you have a question about the efficacy of any other disinfectant against Norovirus, please contact our Environmental Health Staff at (503) 588-5346.**



New Admission/Visitors

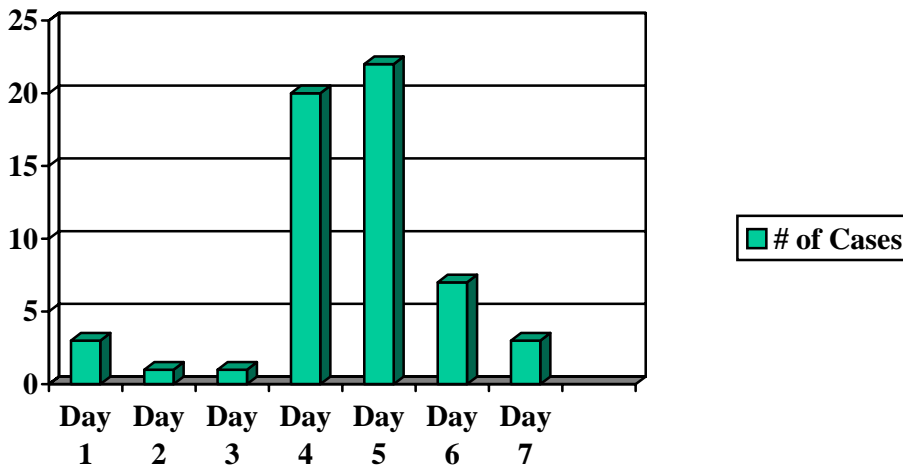
- ❑ Discontinue new admissions to the facility until seven days after the onset date of the last case. This can help keep the illness from re-entering your facility. The seven-day restriction is based on the usual duration of vomiting and diarrhea (2 days) plus the usual duration of viral shedding (3 days) plus the usual incubation period (2 days).
- ❑ Restrict visitors, especially children, until outbreak is over. Ask family members and visitors with vomiting and/or diarrhea to stay home until symptom-free for 72 hours or more.



No group activities

Group Activities

- ❑ Close common dining room(s). The graph below shows how allowing common dining during an outbreak can exponentially increase the spread of illness. On Days 1 and 2, a resident (a different resident on each day) vomited while in the common dining area. Approximately 30 hours later, residents sitting around the ill person became ill (days 4 and 5). Closing the common dining area can help avoid this dramatic increase in the number of cases in your facility.
- ❑ Cancel group activities until outbreak is over.



Separating Ill from Well

- ❑ Confine sick residents to their rooms until symptom free 3 days (72 hours) or more
- ❑ If possible, move residents with vomiting or diarrhea to private rooms or to rooms with other patients with vomiting or diarrhea (cohorting).
- ❑ Do not transfer residents (symptomatic or not) from outbreak-affected wards to unaffected wards.
- ❑ Dedicate the use of patient-care equipment to a single resident or among similarly symptomatic residents. If the use of common equipment or items is unavoidable, clean and disinfect before another resident uses it.

Discontinue new admissions to the facility until the outbreak is over. This can help keep the illness from re-entering your facility.



Marion County Health Department

3180 Center Street NE
Salem, Oregon 97301

COMMUNICABLE
DISEASE/EPIDEMIOLOGY
PHONE:
(503) 588-5621

FAX:
(503) 566-2920

ENVIRONMENTAL HEALTH
(503) 588-5346

WEBSITE
<http://www.co.marion.or.us/HLT/PH>

Alternatives to Bleach

Consult Marion County Environmental Health Services for information on Virkon/RelyOn and other disinfectants as a disinfecting alternative to bleach, (503) 588-5346.

Line List and Stool Specimens

- ❑ Complete a line list (attached) for all cases until directed otherwise by MCHD staff. A case for Norovirus is defined as a person having three or more loose stools within a 24 hour period and/or more than one episode of vomiting.
- ❑ Collect between 4 and 6 stool specimens from ill residents and employees:
 - A person does not have to be currently symptomatic to submit a stool specimen, just recently symptomatic.
 - Containers should be half full of specimen (about the size of a walnut if stool is formed; a couple of tablespoons if stool is loose).
 - Caps should be secured tightly.
 - Secure cap to container with tape.
 - Fill out label with name of client, date of birth, date of collection and attach to container.
 - Double bag container in zip lock bags.
 - Refrigerate container until delivery to Marion County Health Department or until picked up by Marion County personnel. Specimen must be transported on ice.
- ❑ Please call if you have questions, (503) 588-5621.

Declaring an Outbreak Over

It is recommended that the infection control activities mentioned throughout this document remain in place throughout the outbreak. The Marion County Health Department Health Officer will declare an outbreak over when seven days pass without new cases.

About Our Organization...

In order to help maintain the health of our community, the Marion County Health Department epidemiology and environmental health teams investigate outbreaks of reported communicable diseases. We work to control and contain the spread of diseases that can threaten public health.