Guidelines for the Control of a Suspected or Confirmed Outbreak of Gastroenteritis Caused by Norovirus in a Long-Term Care Facility

The following is a summary of guidelines developed to help facilities control suspected or confirmed outbreaks of viral gastroenteritis. Such outbreaks are most often caused by norovirus.

PLEASE CONTACT YOUR LOCAL HEALTH DEPARTMENT FOR ASSISTANCE AS SOON AS AN OUTBREAK IS SUSPECTED.

Background

Symptoms of norovirus typically begin 12-48 hours after exposure and usually include nausea, vomiting, diarrhea, and stomach cramping. Sometimes, people also develop a low-grade fever, chills, headache, muscle aches, and/or a general sense of tiredness. The illness is usually brief, with symptoms lasting one to two days. A more prolonged course of illness may last four to six days in elderly persons or those who have been hospitalized. There is no cure and no vaccine for norovirus. Treatment is supportive and involves ensuring that ill persons are adequately hydrated.

Laboratory testing and confirmation can provide important information about the organism causing disease. However, the cause of an outbreak is likely to be due to norovirus when:

- Stools are negative for bacterial pathogens
- The average incubation period is 12-48 hours
- The average duration of illness is one to three days
- Vomiting occurs in at least 50% of cases

The virus is found in the vomit and stool of infected people. A person can become infected with norovirus by touching contaminated surfaces or objects and then touching his/her mouth before hand washing, by having direct contact with a person who is ill and then touching his/her mouth before hand washing, or by eating food or drinking liquids that have been contaminated by ill food handlers. Hand washing and appropriate environmental cleaning are *essential* to prevent the spread of this disease.

In general, an outbreak is defined as the presence of more sickness than would usually be expected in the facility, or in a particular unit, for that time of year. A basic threshold for a suspected norovirus outbreak might be three or more cases of illness (vomiting and/or diarrhea with no other apparent cause) among residents and/or staff within a 72-hour period.

Your facility is required to report any suspected outbreak to your local health department. The health department will provide assistance by helping identify potential sources of the outbreak and making recommendations to stop the spread of disease. Stool specimens may be collected and transported to the state laboratory for testing.

Prevention/Management

Norovirus is **highly contagious and very hardy** [can survive freezing and heating to 60°C (140°F)], so strict adherence to control measures is necessary. The preventive measures listed below should be continued for at least four days after the outbreak appears over because infected persons continue to shed the virus after they have recovered. Although peak viral shedding occurs two to five days after infection, the virus can be detected in an individual's stool for up to four weeks following infection. While viral shedding is occurring, the virus can be spread to others.

1) **Isolation Precautions and Personal Protective Equipment**
   a) Adhere to Contact and Standard Precautions when entering the resident care area for a resident with suspected or confirmed norovirus.
      i) Staff should wear a gown and gloves when caring for ill residents or when touching potentially contaminated surfaces.
      ii) Use a surgical or procedure mask and eye protection or a full face shield if there is an anticipated risk of splash to the face, particularly for residents who are vomiting.
      iii) Remove gloves, gown, and mask (in that order) and wash hands when finished providing care to a resident before assisting another resident, including the roommate of an ill individual.
   b) Isolate ill residents from others by keeping them in their rooms, including serving meals in their rooms while symptomatic and for at least 48 hours after symptoms resolve.
      i) Place residents with symptoms consistent with norovirus in a single occupancy room if available.
         (1) If a single occupancy room is not available, make efforts to separate ill residents from well residents.
      ii) Consider discontinuing activities where ill and well residents would be together; this includes congregating in communal areas like TV rooms and snack break areas. Group activities should be kept to a minimum or postponed until the outbreak is over. Residents should not be moved from an affected to an unaffected unit.
      iii) Asymptomatic individuals, especially those with cognitive impairment or those who might not reliably report illness or tend to their hygiene, may also need to be confined to their rooms to control the spread of illness.

2) **Hand Hygiene**
   a) Use soap and water for hand hygiene after providing care or having contact with a resident with suspected or confirmed norovirus. If soap and water are not available and hands are not visibly soiled, alcohol-based hand rubs/gels may be used (60-95% ethanol-based hand sanitizer).
   b) Actively promote adherence to hand hygiene among healthcare personnel, residents, and visitors in resident care areas.

3) **Environmental Cleaning and Disinfection, Linen Management**
   a) Increase frequency of cleaning and disinfection of resident care areas and frequently touched surfaces
      i) Frequently touched surfaces include, but are not limited to, commodes, toilets, faucets, hand/bed railing, telephones, door handles, computer equipment, and kitchen preparation surfaces.

ii) During outbreaks, unit level cleaning should be done **twice daily** and frequently touched surfaces should be cleaned and disinfected **three times daily** using EPA-approved products for healthcare settings with claims against norovirus.
   (1) A list of EPA-approved products is available at: https://www.epa.gov/pesticide-registration/list-g-antimicrobial-products-registered-epa-claims-against-norovirus-feline
   (2) Surfaces should be cleaned then disinfected starting from the areas with a lower likelihood of norovirus contamination (e.g., tray tables, counter tops) to areas with highly contaminated surfaces (e.g., toilets, bathroom fixtures). Mop heads should be changed when a new bucket of cleaning solution is prepared, or after cleaning large spills of emesis or fecal material.
   (3) Avoiding the use of upholstered furniture and rugs or carpets in resident care areas should be considered, as these objects are difficult to clean and disinfect completely.
      (a) Soilage (e.g., emesis or fecal material) should be immediately cleaned, using a manufacturer-approved cleaning agent or detergent.
      (b) Upholstered furniture in resident rooms should be steam cleaned upon discharge according to manufacturer's recommendations for cleaning and disinfection of these items. Consider discarding items that cannot be appropriately cleaned/disinfected.

iii) Vomit should be considered as potentially infectious material and should be **immediately** covered with a disposable cloth or paper towels. The cloth should be saturated with a disinfectant to reduce potential airborne contamination. Cleaning staff should use a gown, gloves, mask, and eye protection or a full face shield when cleaning up after a vomiting incident. Paper toweling or other toweling used to clean-up liquid vomit should be immediately placed in a sealed trash bag and properly disposed.

b) Avoid cleaning procedures that might result in aerosolization of norovirus (e.g., dry vacuuming carpets, dry dusting, or buffing hard surface floors). Cleaning with detergent and hot water, followed by disinfection with hypochlorite (if a bleach-resistant surface) or steam cleaning (5-minute contact time at a minimum temperature of 170°F) is preferred.

c) Contaminated linens and bed curtains should be carefully placed into laundry bags (to prevent generating aerosols) and washed separately in hot water for a complete wash cycle – ideally as a half load for best dilution. Wear gloves and gown when handling soiled laundry.

4) Staff Leave and Policy

a) Exclude any staff with vomiting and/or diarrhea from work. Staff who develop symptoms at work should tell their supervisor(s) about the illness and go home immediately.
   i) Those who do not have food handling or resident care duties may return to work after 24 hours have passed with no diarrhea and/or vomiting.
   ii) Those with food handling or residents care duties are recommended by VDH and CDC to refrain from preparing food for others or providing healthcare while ill and for at least two to three days after symptoms have resolved and, required by the Virginia Food Code to be excluded from work while ill and for at least 24 hours following cessation of diarrhea and/or vomiting **and** until at least 48 hours have passed since the employee became symptomatic.
   iii) For all, review and enforce hand hygiene and safe food handling practices upon return to work.

iv) The health department may advise different exclusion criteria if evidence suggests the illness is caused by an agent other than norovirus.

b) Minimize the flow of staff between sick and well residents. Staff should be consistently assigned to work with either well residents ***or*** sick residents, but should not care for both groups. Staff working with ill and well residents can spread the virus from resident to resident.

5) Air Handling

a) Minimize air currents generated by open windows, fans, or air conditioning because they may disperse aerosols widely.

6) Visitation

a) Per CMS regulations, visitation in nursing homes must be allowed at all times. During an outbreak, visitors should be educated about recommended infection prevention measures during their visit including: (1) Not visiting if they are sick and refraining from visiting until **three days** after their symptoms resolve; (2) Washing their hands upon entering and leaving the resident's room; and (3) Going directly to the person they are visiting and not spending time with anyone else.

7) New Admissions

a) As part of the overall strategy for outbreak control, the local health department may recommend that a facility consider *voluntary temporary closure* of a facility or unit to new admissions via its own policy decision. If employed, this type of closure should be done at the lowest facility unit possible, based upon the epidemiology (e.g., recommended closure of a unit, affected floor, or building).

8) Communication

a) If your facility plans to discharge a resident during a norovirus outbreak, your facility has the responsibility to notify the receiving facility that an outbreak is going on, even if that resident is not symptomatic. The receiving facility has the right to decline an admission during a known communicable disease outbreak.

References:

CDC Norovirus Guidelines for Healthcare Settings:
https://www.cdc.gov/infectioncontrol/guidelines/norovirus/index.html (accessed 1/27/2023)

INFECTION PREVENTION MEASURES: CHECK SHEET

HAVE YOU…?

_ Informed all **staff, visitors, and residents** of the situation and what they need to do to protect themselves and others?

_ Ensured **all staff with symptoms** are **excluded from work** for the appropriate amount of time?

_ Allocated **dedicated staff** to care for ill residents, whenever possible?

_ Provided all staff with **information and training** in infection control precautions?

_ Ensured that all **residents** have their **hands washed** after going to the toilet, before meals, and after any episode of diarrhea or vomiting?

_ **Separated ill residents** from well residents, wherever possible, for at least 48 hours after resolution of symptoms?

_ **Avoided transferring** residents to other institutions while cases of gastrointestinal illness are occurring, or, if a transfer is necessary, ensured receiving institution has been **notified** of the outbreak?

_ Considered **voluntary temporary closure** of a facility or unit to new admissions until cases of gastrointestinal illness have resolved?

_ Considered **posting signs** at appropriate locations throughout the facility?

_ Asked **visitors who report any symptoms** to avoid visiting until three days after symptoms cease?

_ Ensured all **staff and visitors wash their hands with soap and water** after providing care for or having contact with an ill resident?

_ Ensured **sufficient soap and/or alcohol-based hand rubs or gels**, and hand-drying facilities are available?

_ Provided sufficient **gloves, gowns, masks, goggles, face shields** and ensured that they are easily accessible?

_ Ensured **environmental services and other relevant staff** are aware of the correct **cleaning and disinfection procedures** and the importance of hand washing?

_ **Increased** the **frequency of cleaning and disinfection** of resident care areas and frequently touched surfaces?

_ Ensured **dietary staff** are aware of the precautions required in **food service** area and the importance of hand washing?

_ Ensured all staff are aware of the precautions required when handling **soiled linen**?

_ Ensured **laundry staff** are aware of the correct **laundering procedures** and the importance of hand washing?