



NOROVIRUS OUTBREAKS- LTCF TOOLKIT

Norovirus is the most common cause of sporadic gastroenteritis as well as gastroenteritis outbreaks. The elderly (≥ 65 years of age) are more susceptible to gastrointestinal infections than younger individuals. This population is at increased risk for gastroenteritis due to the age-related decrease in secretions of gastric acid, as well as a higher prevalence of incontinence (where the risk for fecal-oral transmission due to cross-contamination is substantial). In long term care facilities (LTCFs), it is important to prevent gastrointestinal outbreaks by implementing and sustaining appropriate food handling procedures and strict adherence to infection control measures.

DIAGNOSIS

In the absence of clinical laboratory diagnostics or in the case of delay in obtaining laboratory results, use Kaplan's clinical and epidemiologic criteria to identify a norovirus gastroenteritis outbreak.

Kaplan's Criteria:

1. Vomiting in more than half of symptomatic cases, and
2. Mean (or median) incubation period of 24 to 48 hours, and
3. Mean (or median) duration of illness of 12 to 60 hours, and
4. No bacterial pathogen isolated from stool culture

Consider submitting stool specimens as early as possible during a suspected norovirus gastroenteritis outbreak and ideally from individuals during the acute phase of illness (within 2-3 days of onset). Southwest District health can provide assistance with collection and submission of the samples.

TRANSMISSION

Person to person

- Direct fecal-oral
- Ingestion of aerosolized vomitus
- Indirect via fomites or contaminated environment

Food

- Contamination by infected food handlers
- Point of service or source (e.g., raspberries, oysters)

Recreational and Drinking Water

- Well contamination from septic tank
- Chlorination system breakdown

In healthcare, the most likely and common modes of transmission are through direct contact with infected persons or contaminated equipment

AT A GLANCE

Incubation period	12 – 48 hours
Infectious dose	18 – 1000 viral particles
Period of communicability	<ul style="list-style-type: none"> • You are most contagious when you have symptoms of norovirus illness and during the first few days after you recover from norovirus illness. • However, studies have shown that you can still spread norovirus for two weeks or more after you feel better.
Symptoms	<ul style="list-style-type: none"> • Acute onset vomiting and/or diarrhea • Abdominal cramps • Low grade fever • 30% infections can be asymptomatic • Most recover after 12 – 72 hours without intervention • Up to 10% seek medical attention; some require hospitalization and fluid therapy • More severe illness and death possible in elderly and those with other illnesses
Additional resources	<ul style="list-style-type: none"> • Norovirus Outbreak Management and Disease prevention guidelines • General information on Norovirus: https://www.cdc.gov/norovirus/index.html • Norovirus in healthcare settings: https://www.cdc.gov/HAI/organisms/norovirus.html
Summary – Outbreak Management	<ul style="list-style-type: none"> • Create awareness of concurrent norovirus outbreaks in the community/ other local healthcare facilities • Detect and confirm suspected norovirus cases rapidly • During outbreaks, implement <ul style="list-style-type: none"> ○ Contact Precautions, ○ enhanced hand hygiene, ○ environmental infection control measures, ○ exclusion of ill staff from work for a minimum of 48 hours after symptom resolution ○ surveillance for new and resolving cases, • Develop a communication plan during outbreaks to include key departments and services • Consult with and report outbreak to Southwest District health
Contact SWDH Epidemiology program	Phone – 208 455 5442 Fax – 208 455 5350 Website - https://swdh.id.gov/healthy-living/epidemiology/

Key Infection Control Recommendations

Patient Cohorting and Isolation Precautions

- Place patients with norovirus gastroenteritis on Contact Precautions for a minimum of 48 hours after the resolution of symptoms
- When symptomatic patients cannot be accommodated in single occupancy rooms, efforts should be made to separate them from asymptomatic patients. These efforts may include cohorting patients in multi-occupancy rooms or designating patient care areas or contiguous sections within a facility for patient cohorts.
- Staff who have recovered from recent suspected norovirus infection associated with an outbreak may be best suited to care for symptomatic patients until the outbreak resolves.
- Consider the following precautions:
 - Minimize patient movements within a ward or unit during norovirus outbreaks
 - Restrict symptomatic and recovering patients from leaving the patient-care area unless it is for essential care or treatment
 - Suspend group activities (e.g., dining events) for the duration of a norovirus outbreak.

Hand Hygiene

- Actively promote adherence to hand hygiene among healthcare personnel, patients, and visitors in patient care areas affected by outbreaks of norovirus gastroenteritis
- During outbreaks, use soap and water for hand hygiene after providing care or having contact with patients suspected or confirmed with norovirus gastroenteritis.
 - *For all other hand hygiene indications (e.g., when hands are not visibly soiled and have not been in contact with diarrheal patients, contaminated surfaces, or other body fluids) refer to the 2002 HICPAC [Guideline for Hand Hygiene in Health-Care Settings](https://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf) (<https://www.cdc.gov/mmwr/PDF/rr/rr5116.pdf>), which includes the indications for use of FDA-compliant alcohol-based hand sanitizer.

Personal Protective Equipment (PPE)

- If norovirus infection is suspected, adherence to PPE use according to Contact and Standard Precautions is recommended for individuals entering the patient care area (i.e., gowns and gloves upon entry).

Patient Transfer and Ward Closure

- Consider the closure of wards to new admissions or transfers as a measure to attenuate the magnitude of a norovirus outbreak.
- Consider limiting transfers to those for which the receiving facility is able to maintain Contact Precautions; otherwise, it may be prudent to postpone transfers until patients no longer require Contact Precautions.
- During outbreaks, medically suitable individuals recovering from norovirus gastroenteritis can be discharged to their place of residence.

Environmental Cleaning

- Perform routine cleaning and disinfection of frequently touched environmental surfaces and equipment in isolation and cohorted areas, as well as high traffic clinical areas. Frequently touched surfaces include, but are not limited to, commodes, toilets, faucets, hand/bed railing, telephones, door handles,

computer equipment, and kitchen preparation surfaces.

- Increase the frequency of cleaning and disinfection of patient care areas and frequently touched surfaces during outbreaks of norovirus gastroenteritis (e.g., increase ward/unit level cleaning twice daily to maintain cleanliness, with frequently touched surfaces cleaned and disinfected three times daily using EPA-approved products for healthcare settings).
- Clean and disinfect surfaces 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). Change mop heads when new solutions are prepared, or after cleaning large spills of emesis or fecal material.
- EPA-registered products with label claims for use in healthcare. Follow the manufacturer's recommendations for application and contact times. The EPA lists products with activity against norovirus on their website: <https://www.epa.gov/pesticide-registration/list-g-epas-registered-antimicrobial-products-effective-against-norovirus>
- No additional provisions for using disposable patient service items such as utensils or dishware are suggested for patients with symptoms of norovirus infection. Silverware and dishware may undergo normal processing and cleaning using standard procedures.
- Use Standard Precautions for handling soiled patient-service items or linens, which includes the appropriate use of PPE.
- Consider changing privacy curtains routinely and upon patient discharge or transfer.

Staff Leave and Policy

- Exclude ill personnel from work for a minimum of 48 hours after the resolution of symptoms. Once personnel return to work, the importance of performing frequent hand hygiene should be reinforced.
- Establish protocols for staff cohorting in the event of an outbreak of norovirus. Ensure staff care for one patient cohort on their ward and do not move between patient cohorts (e.g., patient cohorts may include symptomatic, asymptomatic exposed, or asymptomatic unexposed patient groups).
- Exclude non-essential staff, students, and volunteers from working in areas experiencing outbreaks of norovirus.

Education

- Provide education to staff, patients, and visitors, including recognition of norovirus symptoms, preventing infection, and modes of transmission upon the recognition and throughout the duration of a norovirus gastroenteritis outbreak.
- Consider providing educational sessions and making resources available on the prevention and management of norovirus before outbreaks occur, as part of annual trainings, and when sporadic cases are detected.

Communication and Notification

- Notify Southwest District Health if an outbreak of norovirus gastroenteritis is suspected.
- Use the worksheet (line list) available from CDC to report cases- <https://www.cdc.gov/long-term-care-facilities/media/excel/LTC-AcuteGastro-Outbreak-LineList-508.xlsx>