



Nebraska Department of Health and Human Services

HEALTH ALERT NETWORK Advisory



TO: Long Term Care Facilities and Nursing Homes; Primary Care Providers; Hospitals, and Public Health

FROM: Thomas J. Safranek, M.D. Thomas Williams, M.D.
State Epidemiologist Chief Medical Officer
402-471-2937 PHONE Director, Division of Public Health
402-471-3601 FAX Department of Health and Human Services

RE: Norovirus Outbreaks

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Norovirus Outbreaks

Since late November 2016, the Nebraska Department of Health and Human Services Office of Epidemiology has received reports of 20 confirmed or suspected norovirus outbreaks among long term care centers, assisted living facilities, and nursing homes. These findings conform to the known epidemiology of norovirus, with increased occurrence during the winter months. Due to the ability of norovirus to spread rapidly among susceptible populations, we urge all health care providers to review the document below, and to focus on PREVENTING and CONTAINING norovirus in Nebraska. Our goal in sharing this is to forewarn and forearm the healthcare providers in these settings, and to prevent these outbreaks. Healthcare providers can assist by educating their patients regarding the highly contagious nature of this virus and its various transmission routes. Any facility with three or more cases within 72 hours should report the problem to their local health department (see links for map and contacts provided below). In outbreak settings, up to five specimens should be submitted to the Nebraska Public Health Laboratory for testing at public health expense.

Clinical Presentation

Norovirus is the most common cause of acute gastrointestinal disease in the United States. It is a single-stranded RNA virus that is responsible for as many as 21 million cases of acute gastroenteritis each year. It is very contagious and can be contracted from an infected person, contaminated water or food, or even a contaminated surface.

Incubation period: Approximately 12 to 48 hours (median in outbreaks 33 to 36 hours);
can be as short as 12 hours

Duration of illness: Typically 12 to 60 hours

Symptoms:	Vomiting, non-bloody diarrhea, abdominal cramps, nausea, low grade fever (if present)
Complications:	Dehydration is the most common complication
Sequelae:	None known

Virus Transmission

Noroviruses are transmitted primarily through the fecal-oral route, either by consumption of contaminated food or water or by direct person-to-person spread. Environmental and fomite contamination may also spread infection. Good evidence exists for transmission due to aerosolization of vomitus with either droplet-contamination of surfaces or direct spread to the hands and mouth of another person.

Noroviruses are highly contagious; as few as 10 viral particles may be sufficient to infect an individual. Although pre-symptomatic viral shedding may occur, shedding usually begins with onset of symptoms and may continue for 2 weeks or more after recovery. A person's infectious risk beyond 72 hours after recovery is unclear.

Prevention

The most important means of preventing norovirus transmission and infection is appropriate isolation of symptomatic patients and/or staff, and utilization of frequent and appropriate hand washing. Alcohol-based hand sanitizers ($\geq 62\%$ ethanol) may be helpful as an adjunct method of hand hygiene, but should not replace hand washing with soap and water, as **some strains of norovirus are resistant to alcohol-based sanitizers.**

Long term care facilities, assisted living, and nursing homes should confine ill residents to their room until 24 hours after their symptoms resolve to reduce the risk of further spread. If enough residents are ill, group activities might need to be suspended. Excluding ill staff, especially those with patient care and food handling responsibilities, until 24 hours after symptoms resolve will also reduce further spread. Staff who work at multiple healthcare facilities should eliminate or minimize inter-facility movement during the time period that their workplace is experiencing an outbreak. Additionally, enforcing exclusion policies for visitors will help prevent further spread.

Environmental surfaces can be disinfected using a chlorine bleach solution with a concentration of 1000-5000 ppm (5-25 tablespoons of household bleach [5.25%] per gallon of water) or other disinfectants effective against norovirus (<https://www.epa.gov/pesticide-registration/list-g-epa-registered-hospital-disinfectants-effective-against-norovirus>).

The following general recommendations from the Centers for Disease Control and Prevention (CDC) can help prevent outbreaks from occurring:

- Practice proper hand hygiene: wash hands carefully with soap and water especially after using the toilet and changing diapers, and always before eating, preparing, or

handling food. After throwing up or having diarrhea, immediately clean and disinfect contaminated surfaces. Immediately remove and wash clothes or linens.

- Noroviruses may be present in stool even before onset of symptoms and may persist in stool for 2 weeks or more after symptoms resolve.
- **Alcohol-based hand sanitizers may be used in addition to hand washing, but should not be used as a substitute for hand washing with soap and water, as some strains are resistant to sanitizers. Use of alcohol-based hand sanitizer in place of soap and water in nursing homes could increase the risk for the spread of noroviruses.**
- Keep sick infants and children out of areas where food is being handled and prepared. Persons with norovirus should avoid food preparation and serving while you are sick and for at least 2 days following resolution of symptoms.

Reporting Norovirus Outbreaks

Facilities with three or more cases of gastrointestinal illness within 72 hours should report the problem to their local health department – Map of local health departments by county (<http://dhhs.ne.gov/publichealth/Documents/LHDMMap.pdf>) and List of local health department contacts (<http://dhhs.ne.gov/publichealth/Documents/contacts.pdf>)

Please report the following information:

- a. Name of the facility
- b. First date of onset of symptoms
- c. Symptoms
- d. Number of people showing symptoms
- e. Total number of residents/staff in the facility
- f. Any special event that occurred previous to illness onset

In outbreak settings, up to five specimens should be submitted to the Nebraska Public Health Laboratory for testing at public health expense. Please contact your local health department regarding how to submit specimens for norovirus testing.

- On the **SIDE** of the stool container please write: patient full name, patient date of birth, and the date and time the specimen was collected.

Useful References/Fact Sheets

GUIDELINE FOR THE PREVENTION AND CONTROL OF NOROVIRUS GASTROENTERITIS OUTBREAKS IN HEALTHCARE SETTINGS

- *Overview: A Norovirus Outbreak Control Resource Toolkit for Healthcare Settings*
 - <https://www.cdc.gov/hai/pdfs/norovirus/229110-ANorovirusIntroLetter508.pdf>
- *Poster: What Healthcare Providers Should Know*

- <https://www.cdc.gov/hai/pdfs/norovirus/229110-A-SampleNorovirusPoster508.pdf>
- *Fact Sheet: Norovirus in Healthcare Facilities*
 - <https://www.cdc.gov/hai/pdfs/norovirus/229110-ANoroCaseFactSheet508.pdf>
- *Key Infection Control Recommendations*
 - <https://www.cdc.gov/hai/pdfs/norovirus/229110A-NorovirusControlRecomm508A.pdf>
- *Slide set: Norovirus Gastroenteritis Management of Outbreaks in Healthcare Settings*
 - <https://www.cdc.gov/hai/pdfs/norovirus/NoroVirus-Gen508.pdf>