

Norovirus in Skilled Nursing Facilities in Nevada

2012 Update

Office of Public Health Informatics and Epidemiology

According to the Centers for Disease Control and Prevention (CDC), norovirus causes more than 201 million gastrointestinal illness cases annually in the United States. It contributes to about 70,000 hospitalizations and 800 deaths, mostly among young children and older adults. Skilled nursing facilities (SNFS) in the United States account for 59% of all norovirus outbreaks.

The goal of this report is to assist in SNFS the prevention of norovirus cases in SNFS in Nevada by increasing staff understanding of norovirus prevention and detection and what to do if there is a suspected outbreak.

Norovirus

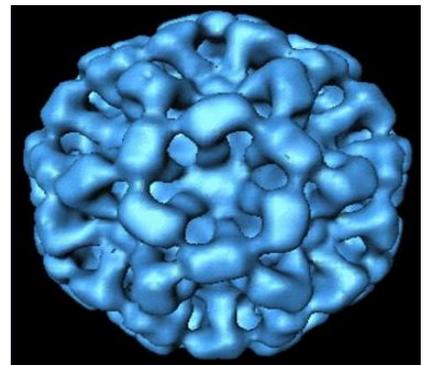
Norovirus is the leading cause of disease from contaminated foods in the United States; it is responsible for more illness than all other viruses, bacteria, and parasites combined (CDC). Norovirus causes severe diarrhea and vomiting in humans lasting 1 to 2 days. More than half of food poisoning outbreaks are caused by noroviruses. The time between exposure to the virus and symptoms can be 12 to 48 hours. It takes a very few viral particles for a person to become infected. The virus is highly contagious and one infected person can infect thousands of others. Both stool and vomit are infectious and are used by the laboratory to isolate and identify the virus.

Infection results from consuming food or drinks contaminated with norovirus. It can occur from touching surfaces or objects contaminated with norovirus, and then placing hands in the mouth; or from having direct contact with a person who is infected. Infected person may carry the virus for weeks after symptoms stop, but no permanent carriers of the virus have been described. Previous exposure may protect against an old strain of norovirus and last for a few months. However, the CDC reports, a large number of norovirus cases caused by a new strain called “New Orleans,” a virus with the ability to change easily to a new strain making previous immunity ineffective.

Infection usually begins with a rapid onset of vomiting, and watery (non-bloody) diarrhea with abdominal cramps and nausea. Loss of fluid is a serious risk, especially among the young and elderly. Dehydration can lead to serious problems, and severe dehydration may require hospitalization for treatment with intravenous or IV fluids.

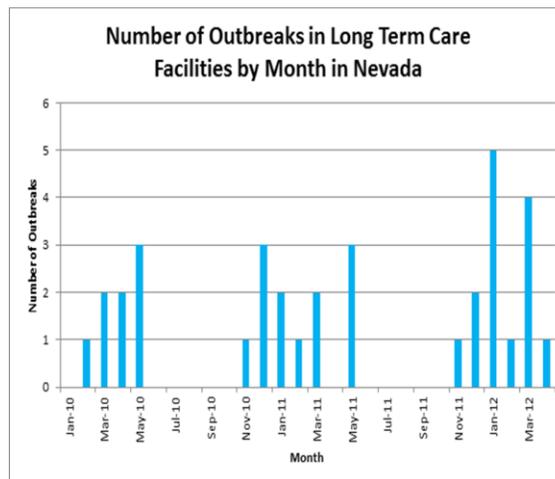
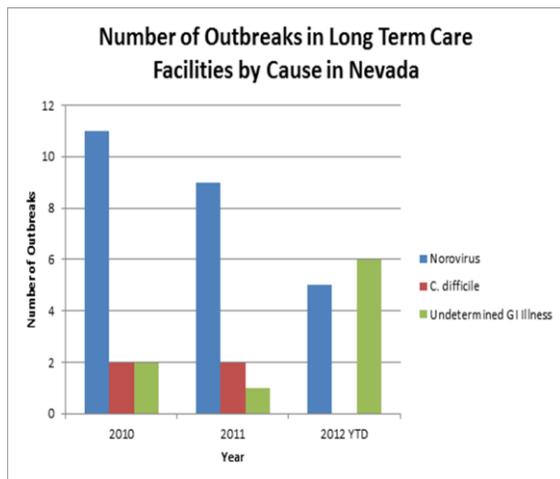
Symptoms of Norovirus

Vomiting
Nausea
Abdominal Cramping
Diarrhea
Chills
Headache
Muscle Aches
Fatigue
Low-grade Fever



Norovirus Surveillance

In April 2010, the Nevada State Health Division (NSHD) tracked norovirus outbreaks in SNFs across the state. The graph below on the left represents the number of outbreaks of gastrointestinal illnesses that occurred between April 2010 and March 2012, and the infectious agent of each outbreak. Norovirus was the leading cause of these outbreaks. The graph below on the right shows the months in which outbreaks occurred between January, 2010 and March, 2012. Norovirus traditionally peaks in winter months.



On average, the delay in reporting an outbreak in a SNF to the NSHD was nine days. The longer the delay, the more people affected. Among the 34 outbreaks, five were outside complaints as opposed to self-reporting by the SNF.

Infection Prevention and Control Outbreak Support

Norovirus should be reported to the NSHD immediately upon any suspicion. When the SNF contacts the NSHD the health division provides education and assistance to support the efforts of the SNF to control the spread of the outbreak. It is imperative that the SNF report all suspected cases without trepidation, and send stool sample for further investigation.

Outbreak support provided by the NSHD includes:

- Site visits and assessment of infection control at the facility
- Review of patient line listings and support for surveillance activities
- Targeted interventions to address control outbreak and reduce spread of infection
- Onsite training for staff and residents

Ongoing education and consultation support includes:

- Infection Control Initiative that includes onsite infection control assessments
- Ongoing education through presentations, conference calls, and individual consultation

General Recommendations for Skilled Nursing Facilities

1. Identify symptomatic cases early and immediately implement infection control transmission-based precautions: confine symptomatic residents to their rooms until 72 hours after symptoms cease; exclude non-essential staff from entering room where symptomatic residents are placed.
2. Identify residents/patients believed to have been exposed and apply infection control transmission based precautions with close monitoring for potential signs and symptoms.
3. Educate facility staff and residents regarding the modes of infection (e.g. person-to-person, hand-mouth, environmental contamination, etc.); signs/symptoms; individual and group risk of contracting the infection; and measures for self-protection and risk reduction.
4. Temporarily exclude all symptomatic staff, visitors and volunteers. Request symptomatic staff, visitors and volunteers to stay home until they are symptom- free for at least 72 hours. Advise/ encourage ill persons to self-isolate at home while applying maximum personal and environmental hygienic precautions to protect other household members from contracting the infection.
5. Temporarily suspend/restrict all activities conducted by volunteers who will be advised to avoid the facility until complete containment and control of the outbreaks are achieved.
6. Provide a clear warning sign outside each entry to the facility informing visitors or other individuals about the outbreak, alerting them regarding the risks of contracting the infection, and advising them to postpone all non-essential business/activities in the facilities.
7. Report - without delay - all new cases to Nevada State Health Division Office of Public Health Informatics and Epidemiology Outbreak Manager at 775-684-5918.
8. Suspend all new admissions until the outbreak is over.
9. Except for residents who require medical attention, suspend/restrict, to the extent possible, patient transfers to other facilities. If a transfer is necessary, notify the receiving facility of the outbreak .
10. Enforce social distancing measures and cancel or restrict group activities within the facility.
11. Restrict staff activities to no more than one area. Discontinue “floating” staff from the affected unit to non-affected units.
12. Because environmental hygiene measures and general cleaning are extremely important, pay particular attention to cleaning the rooms containing ill residents and to cleaning objects that are frequently handled such as door handles and toilet or bath rails, telephones, hand rails and banisters. Cleaning should be performed with chlorine bleach solution applied to hard, nonporous, environmental surfaces at a concentration of 1,000-5,000ppm (5-25 tablespoons household bleach [5.24%] per gallon of water). Following the Centers for Disease Control and Prevention (CDC) Updated Norovirus Outbreak Management and Disease Prevention Guidelines, dated March 4, 2011.
13. Immediately identify and appropriately clean and disinfect contaminated areas (e.g. carpet, seats, bathroom, etc.) in the facility.
14. Encourage staff, residents, volunteers, and visitors to hand-wash frequently with soap and water.
15. Sanitize ice coolers and scoops daily. Date the scoops and cooler daily to warrant proper sanitization.
16. Encourage environmental services to empty trash cans in isolation rooms more often to prevent overfilling.
17. Review the resources in this report to improve the infection control standard of practice in your facility.

Contact Information

To request assistance or consultation from the Infection Control Team in the Office of Public Health Informatics and Epidemiology at the Nevada State Health Division, contact:

Moises Gomez at (702) 486-0799

To report an outbreak, please contact the Outbreak Manager:

Michelle Urrutia at (775) 684-5918

Additional Resources

Reports on related topics can be obtained from the Nevada State Health Division Website at:

[HTTP://HEALTH.NV.GOV/FP_PUBLICATIONS.HTM](http://HEALTH.NV.GOV/FP_PUBLICATIONS.HTM)

[CDC GUIDELINES FOR ENVIRONMENTAL INFECTION CONTROL IN HEALTH-CARE FACILITIES](#)

[CDC GUIDELINE FOR THE PREVENTION AND CONTROL OF NOROVIRUS GASTROENTERITIS OUTBREAKS IN HEALTHCARE SETTINGS](#)

[2007 GUIDELINE FOR ISOLATION PRECAUTIONS: PREVENTING TRANSMISSION OF INFECTIOUS AGENTS IN HEALTHCARE SETTINGS](#)

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