

Norovirus in Long Term Care Facilities in Nevada

Norovirus is the leading cause of disease from contaminated foods in the United States; it is responsible for more illnesses than all other viruses, bacteria, and parasites combined.

-Centers for Disease Control and Prevention

Background

According to the Centers for Disease Control and Prevention (CDC), norovirus causes more than 20 million gastrointestinal illness cases annually in the United States.

Noroviruses cause severe diarrhea and vomiting in humans lasting 1 to 2 days. More than half of food poisoning outbreaks are caused by noroviruses. Time between exposure to the virus and symptoms can be anywhere between 12 and 48 hours. It only takes a few viral particles to cause infection and an infected individual can infect thousands of others. Infection results from eating food and drinks contaminated with norovirus. It also occurs when touching surfaces or objects contaminated with norovirus, and then placing hands in mouth or by having direct contact with another person who is infected. Both stool and vomit are infectious and are used by the laboratory to isolate and identify the virus. Infected subjects may carry the virus for weeks after symptoms stop but no permanent carriers of the virus have been described.

Infection usually begins with rapid onset of vomiting, watery (non-bloody) diarrhea with abdominal cramps and nausea. Loss of fluids is the most common risk, especially among the young and elderly. Previous exposure may only protect against an old strain of virus and last for a few months. Recently, a large number of cases caused by a new norovirus called "New Orleans" demonstrated the virus's ability to change easily to a new strain making previous immunity ineffective.

Norovirus Surveillance

In April of 2010, the Nevada State Health Division (NSHD) actively began tracking norovirus outbreaks in state-licensed long term care facilities across the state. Since April 6, 2010 to date, there have been 15 long term care facilities that have reported norovirus outbreaks and a total of 17 outbreaks reported (2 long term care facilities had 2 outbreaks each during that period). As a result of those outbreaks, 255 residents and 126 staff were suspected to have or were confirmed to have norovirus. At least 5 staff at those facilities worked in the kitchen and directly handled the food served to the residents. The outbreaks occurred in the following counties: Washoe (2 outbreaks); Clark (9 outbreaks); Carson City (3 outbreaks, with one facility having 2 of those outbreaks); and, rural/frontier counties (2 outbreaks, but the same facility reporting both outbreaks). Of the 17 outbreaks, 14 affected both staff and residents, 2 affected only residents, and 1 affected only staff.

All facilities that reported a suspected norovirus outbreak received either site visits or phone consultations by the local health district staff or NSHD Epidemiology staff. Facilities were provided written infection control procedures and line listing forms to report to the local health jurisdictions or NSHD until no new cases were identified during the specified incubation period for the outbreak.

To provide more general resources for facilities, a technical bulletin was issued by the NSHD Office of Epidemiology in March 2010 as well as December 2010 during periods of high outbreak activity in long term care facilities. In addition, in December 2010, a News Alert bulletin developed by NSHD Office of Epidemiology on norovirus was mailed to each facility.

Infection Control Initiative

The NSHD Office of Epidemiology Infection Control Team provides both outbreak support and ongoing educational opportunities for facilities.

Outbreak Support

- Site visit 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

SYMPTOMS OF NOROVIRUS

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

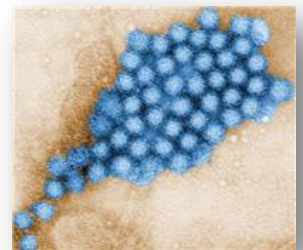
Education and Consultation

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

To request assistance or consultation from the Infection Control Team in the Office of Epidemiology, please contact Francine Lincer at 702-486-6515 ext 233.

General Recommendations for Long Term Care Facilities

1. Early identification of symptomatic cases and immediate implementation of elementary principles of case “isolation” and containment - (confine symptomatic residents to their rooms until 72 hours after symptoms cease. Exclude non-essential staff from entering room).
2. Identification of residents/patients that are believed to have been exposed and apply the elementary principles of “quarantine” with close monitoring for potential signs and symptoms.
3. Educate facility staff and residents regarding the “mode of transmission” 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. Temporary exclusion of all symptomatic staff, volunteers, and visitors – (request symptomatic staff, visitors and volunteers to stay home until 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. Temporary suspension/restriction of all activities conducted by volunteers who will be advised not to come to 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 the visitors (or any other individuals) about the outbreak, alerting them regarding 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 the local/state health authorities.
8. Suspend all new admissions until this outbreak is over in non-hospital settings.
9. Except for residents/patients who require medical attention, suspend/restrict - to the extent possible - all patient transfer to other facilities.
10. To the extent possible, enforce social distancing measures and cancel/restrict all group activities within the facility.
11. Restrict staff activities to no more than one facility. Discontinue "floating" staff from the affected unit to non-affected units.
12. Environmental hygiene measures and general cleaning are extremely important - Particular attention should be given to the cleaning of rooms containing ill residents and to cleaning objects that are frequently handled such as door handles and toilet or bath rails, telephones, banisters to stairs/passageways and rails to balconies. Cleaning should be with a solution containing an approved EPA disinfectant and using separate disposable cloths for toilet areas.
13. Immediately identify and appropriately clean and disinfect contaminated areas (e.g. carpet, seats, bathroom, etc.) in the facility.
14. Use to the extent possible single-use cups, plates and eating utensils.
15. Encourage staff, residents, volunteers, and visitors to hand-wash frequently and thoroughly and provide - when feasible- alcohol based sanitizers in the facility.



To Report a Suspected Outbreak of Norovirus

To report a suspected or confirmed outbreak of norovirus in a healthcare facility, please contact the NSHD Outbreak Manager at:

Michelle R. Urrutia, M.Ed, Outbreak Manager, Office of Epidemiology, Nevada State Health Division, 4150 Technology Way, Suite 211, Carson City, NV 89706
775-684-5918 (office); 775-230-1408 (cell); 775-684-5999 (fax); murrutia@health.nv.gov (email)

Additional Resources

- Centers for Disease Control and Prevention – Prevention of Norovirus in Healthcare Facilities: <http://www.cdc.gov/HAI/organisms/norovirus.html#a4>

Handwashing is the single most effective measure for preventing the spread of infection between healthcare providers, patients, and the community.