Start of Norovirus Season in New Hampshire

Key Points and Recommendations

1. Healthcare providers should have increased awareness and vigilance for outbreaks of gastroenteritis in healthcare facilities, schools, and childcare settings, which may be caused by norovirus.
2. Institutions should strictly adhere to infection control practices during a suspected outbreak.
3. Resources are available for institutional settings experiencing a gastrointestinal outbreak.
4. Facilities should report all suspected outbreaks to the NH DHHS Bureau of Infectious Disease Control at 603-271-4496 (after hours 603-271-5300).
5. Stool specimens can be submitted to the NH Public Health Laboratory for norovirus testing during a suspected norovirus outbreak.

Background

Every year, NH DPHS receives between 60-70 reports of gastroenteritis outbreaks in institutional settings. More than 80% of these outbreaks occur from December to March, and most of these outbreaks have norovirus confirmed as an etiology. Noroviruses are a group, single-stranded RNA, non-enveloped viruses that are a common cause of acute gastroenteritis in humans. Currently, there are at least five norovirus genogroups, three of which can infect humans (GI, GII, GIV). Noroviruses identified in New Hampshire over the last several years are predominantly genogroup II (GII).

Noroviruses are highly infectious and can be transmitted in a number of ways including through person-to-person contact, consumption of contaminated food and water, airborne droplets of vomit, and contact with contaminated surfaces. Primary symptoms include nausea, vomiting and diarrhea and may be accompanied by abdominal cramps, fever and headache. Treatment consists of supportive care, and symptoms usually resolve within 48-72 hours.

Infection Control Recommendations during an Outbreak

Recommendations for All Institutional Settings (Healthcare, Schools, Childcare, etc.)

1. Practice frequent hand washing by all staff, patients, residents, or students. Proper hand washing with soap and running water for at least 20 seconds is the most effective way to reduce norovirus contamination on the hands. Hand washing is particularly important after contact with infected individuals, on leaving affected areas, and before handling food or drinks.
2. Use gloves and aprons whenever contact with an infected individual or contaminated environment is anticipated. A surgical or procedure mask and eye protection or a full face shield should be used if there is an anticipated risk of splashes to the face during the care of ill persons, particularly among those who are vomiting.
3. Increase the frequency of cleaning and disinfection of frequently-touched surfaces such as water taps, door handles, and toilet or bath rails.

4. Promptly clean areas contaminated with vomit and feces and then disinfect using freshly prepared sodium hypochlorite with a concentration of 1,000-5,000 ppm (5-25 tablespoons household bleach [5.25%] per gallon of water). Whenever possible, this chlorine bleach solution should be used, however, a commercial product registered with EPA as effective against norovirus may be used alternatively. A list of EPA-approved products is available at http://www.epa.gov/oppad001/list_g_norovirus.pdf.

5. Clean soiled carpets and soft furnishings with hot water and detergent or steam clean; avoid vacuum cleaning.

6. Review kitchen practices and ensure that gloves are worn by all food service workers when handling ready-to-eat foods. Assess health status of food service workers and exclude symptomatic individuals from work until 48 hours after resolution of symptoms.

7. In schools and childcare facilities, assess health status of students and staff and exclude all symptomatic individuals from school or work until full recovery.

8. In healthcare facilities, assess health status of all healthcare workers and exclude symptomatic individuals from direct patient care until 48 hours after the resolution of symptoms.

Additional Recommendations for Healthcare Facilities

9. Restrict or defer admissions to affected units and wards.

10. Stop all group activities temporarily.

11. Exclude non-essential staff from affected areas and interrupt the movement of inter-departmental staff.

12. Notify visitors and provide instructions regarding hand washing.

13. Conduct terminal cleaning 72 hours after resolution of the last case.

These recommendations are discussed in greater detail in the Centers for Disease Control and Prevention’s Norovirus Outbreak Management and Disease Prevention Guidelines available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6003a1.htm?s_cid=rr6003a1_e.


Additionally, a toolkit for healthcare facilities experiencing a norovirus outbreak is available at: http://www.cdc.gov/hicpac/pubs.html.

Laboratory Testing for Norovirus

Stool testing for norovirus is available at some commercial laboratories and the New Hampshire Public Health Laboratories (NH PHL). Available tests use real time reverse transcriptase polymerase chain reaction (Real Time RT-PCR) methods to detect the virus in stool specimens.

While virus can sometimes be found in stool samples taken as late as two weeks after recovery, identification of the virus is best made from stool taken within 48 to 72 hours after onset of symptoms with good results obtained on samples taken as long as five days after onset. NH DHHS recommends norovirus testing for suspected outbreaks of norovirus and requests that stool specimens get sent to the NH PHL after consultation with the NH DHHS Bureau of Infectious Disease Control (see reporting information below).
Specimen testing at the NH PHL for non-outbreak specimens is also available at a cost. Whole stool specimens should be collected in a sterile container, labeled with patient identifiers and placed in a plastic bag.

Specimens must be refrigerated and delivered to the NH PHL as soon as possible for best testing results. Each specimen must be accompanied by a completed PHL requisition form: http://www.dhhs.state.nh.us/dphs/lab/documents/labrequisition.pdf

**Reporting of Suspected Outbreaks**

Individual cases of norovirus are not reportable in New Hampshire unless suspected to be part of an outbreak. To report suspected outbreaks, call the Bureau of Infectious Disease Control at 603-271-4496 (toll free at 800-852-3345, ext. 4496). After hours, call 1-603-271-5300, and ask for the public health professional on call. The public health professional will discuss appropriate management of the suspected outbreak including laboratory testing. To discuss specific questions about laboratory testing and specimen submission you may also contact the NH Public Health Laboratories at 603-271-4620.

- For any questions regarding the contents of this message, please contact NH DHHS, DPHS, Bureau of Infectious Disease Control at 603-271-4496 (after hours 1-800-852-3345 ext. 5300).
- To change your contact information in the NH Health Alert Network, contact Denise Krol at 603-271-4596 or email Denise.Krol@dhhs.state.nh.us

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From: Benjamin P. Chan, MD, MPH  State Epidemiologist  
Originating Agency: NH Department of Health and Human Services, Division of Public Health Services  

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Norovirus

What is norovirus?
Noroviruses are a group of viruses that cause the “stomach flu,” or gastrointestinal (stomach and digestive) illness. Norovirus infection occurs occasionally in only one or a few people or it can be responsible for large outbreaks, such as in long-term care facilities.

Who gets norovirus?
Norovirus infects people of all ages worldwide. It may, however, be more common in adults and older children.

How does someone get norovirus?
Norovirus is spread from person to person via feces, but some evidence suggests that the virus is spread through the air during vomiting. Good hand washing is the most important way to prevent the transmission of norovirus. Outbreaks have been linked to sick food handlers, ill health care workers, cases in facilities such as nursing homes spreading to other residents, contaminated shellfish, and water contaminated with sewage.

What are the symptoms of norovirus?
Serious illness rarely occurs. The most common symptoms include nausea, vomiting, and stomach cramps. Diarrhea may occasionally accompany vomiting. Fever is usually low grade or absent. Infected people generally recover in 1-2 days.

How soon after exposure do symptoms appear?
The incubation period for norovirus is 1-2 days.

How is norovirus infection diagnosed?
Laboratory diagnosis is difficult but there are tests that can be performed in the New Hampshire Public Health Lab in situations where there are multiple cases. Diagnosis is often based on the combination of symptoms and the short time of the illness.

What is the treatment for norovirus infection?
No specific treatment is available. People who become dehydrated might need to be rehydrated by taking liquids by mouth. Occasionally patients may need to be hospitalized to receive intravenous fluids.

How can norovirus be prevented?
While there is no vaccine for norovirus, there are precautions people should take:
- Wash hands with soap and warm water after using the bathroom and after changing diapers
- Wash hands with soap and warm water before preparing or eating any food
- Cook all shellfish thoroughly before eating
- Wash raw vegetables before eating
- Dispose of sewage in a sanitary manner
- Food handlers with symptoms of Norovirus should not prepare or touch food
- Health care workers should stay home if they have symptoms of norovirus.
For specific concerns about norovirus, call the New Hampshire Department of Health and Human Services, Bureau of Infectious Disease Control at 603-271-4496 or 800-852-3345 x4496. For further information, refer to the Centers for Disease Control and Prevention website at www.cdc.gov or the NH Department of Health and Human Services website at www.dhhs.nh.gov.