Introduction

Noroviruses are a group of related, single-stranded RNA, non-enveloped viruses that cause acute gastroenteritis in humans. Illness is characterized by acute-onset vomiting, watery non-bloody diarrhea, abdominal cramps and nausea. In addition, myalgia, malaise, and headache are commonly reported. Low-grade fever is present in about half of cases.

The incubation period for norovirus-associated gastroenteritis is 12 – 48 hours. Symptoms usually last 12-48 hours. Viral shedding begins prior to onset of the illness, may occur without symptoms, and may last for up to 14 days after the end of symptoms.

Noroviruses are highly contagious. Less than 100 viral particles are required to transmit infection. They are transmitted primarily through the fecal-oral route, either by direct person-to-person contact or fecally contaminated food or water. Transmission can occur through indirect contact with surfaces, materials or fomites contaminated with feces or vomitus. Aerosolization of the organism can also occur with vomitus or feces.

Confirmed case of Norovirus

Laboratory confirmation of infection:
- Detection of viral RNA in the stools of affected persons by PCR.
- Identification of the virus can be best made from stool specimens taken within 48 – 72 hours after onset of symptoms.

Policy

1. In addition to Standard Precautions, use Contact Precautions for patients known, or suspected to be infected with Norovirus.
2. Persons cleaning areas heavily contaminated with vomitus or feces, or assisting vomiting patients, should also wear a mask.

Purpose

1. To prevent or minimize the transmission of Norovirus to other patients and staff in the facility through the appropriate management of Norovirus infected patients.
**Procedure**

1. Post Contact Precaution Sign (SHR Printing Services # 102106) on door of patient’s room. Write on Contact Precaution Sign: Wear regular mask when assisting or cleaning of vomitus or feces.

2. Implement Contact Precautions at the first point of contact in persons with suspected or confirmed norovirus infection.

3. Specimen collection
   - Stools specimens should be collected in containers with no preservative. Use a sterile container (pink top).

   - Place the patient in a single room with a private bathroom.
   - If a single room is not available, patients infected by the same organism, may share a room (cohorting).

5. Hand Cleansing and Gloving
   - Glove for all direct contact with the patient or the environmental surfaces in the room.
   - Change gloves after contact with infectious material that may contain high concentrations of microorganisms.
   - Remove gloves, then the gown and cleanse hands with soap and water or 70% alcohol hand sanitizer before leaving the room. Avoid touching surfaces as you exit the room.

6. Gowns
   - Gown for all direct contact with the patient or environmental surfaces in the room.
   - Gowns are single use only. Remove immediately if wet.
   - Remove the gown after gloves are removed by untying at the back, pulling forward and turning inside on itself, rolling up and discarding in the laundry hamper in the room. Avoid contact with the environmental surfaces when leaving the room.

7. Masks
   - Wear masks when cleaning areas heavily contaminated with vomitus or feces, or when assisting a patient that is vomiting or has diarrhea.

8. Patient Transport
   - Transportation of the patient to other departments should be limited to essential services only.
   - Inform the receiving department or facility that precautions are required.
   - Prior to leaving their room the patient must have on a freshly laundered gown/housecoat.
   - Have patient cleanse hands prior to leaving the room.
   - Wheelchair/stretcher should be cleaned with an Accelerated Hydrogen Peroxide disinfectant following use. Leave to air dry on surface for a contact time of 5 minutes.
9. Patient Care Equipment
   • Dedicate non-critical equipment to a single patient (e.g. stethoscope, blood pressure cuff, tourniquet, vacutainer, laundry hamper stand, walker and commode).
   • If sharing of equipment is unavoidable, clean and disinfect with an Accelerated Hydrogen Peroxide disinfectant between patients.
   • Any equipment that comes in direct contact with the patients should be wiped with an Accelerated Hydrogen Peroxide disinfectant.
   • Limit the amount of supplies taken into the room to avoid unnecessary waste.
   • Linens, garbage and meal trays are handled as per usual.

10. Visitors
    • Instruct visitors regarding hand cleansing before and after patient contact.
    • Gowns and gloves are required when the visitor has direct contact with the patient or surfaces in the room.

11. Patient and family teaching
    • Patients, if possible, should understand the nature of their infectious disease and the precautions being used, as well as the prevention of transmission of Norovirus to others. Provide the Norovirus Fact Sheet (SHR Printing Services # 102812) and the Contact Precautions Visitor Information (SHR Printing Services # 102926) found in the Infection Prevention and Control manual.
    • The Infection Prevention and Control Professional may be called to assist with education on Norovirus.

12. Environmental cleaning
    • Noroviruses are non-enveloped virus particles. There is relative resistance to disinfection. Quaternary ammonium compounds do not have significant activity against them. Use of Accelerated Hydrogen Peroxide agents is required.
    • Daily cleaning of rooms is performed using Accelerated Hydrogen Peroxide disinfectant while wearing protective equipment for Contact precautions with added regular masks for direct cleaning of vomitus or feces.
    • Following discharge, terminal cleaning is performed as for all patients using an Accelerated Hydrogen Peroxide disinfectant.
    • Bed screens are to be changed when a patient has been on Contact Precautions.

For an outbreak, refer to Infection Prevention and Control policy 55-40, GI outbreak.

References


Centers for Disease Control (CDC) Norwalk-Like Viruses, June 01, 2001/50(RR09); 1-18. MMWR Recommendations and Reports.