



Epidemiological Alert

Norovirus outbreak in institutional health care and community settings

8 January 2013

The Pan American Health Organization (PAHO) / World Health Organization (WHO) recommends that Member States implement prevention and control in health care and gated communities to reduce the impact caused by norovirus outbreaks.

Situation

Norovirus gastroenteritis is a common disease worldwide affecting all age groups and often causing outbreaks.

Molecular epidemiological studies have documented a high genetic diversity of norovirus with the regular emergence of variants. It has been suggested that the emergence of new variants causes an increase in cases.

In this Region outbreaks of norovirus have been registered in institutional and community care settings (such as boarding schools, day care, nursing homes, prisons, military camps), in restaurants, at social events, on cruise ships and on other means of mass transportation.

A recently published article by the European Centre for Disease Prevention and Control (ECDC) indicated that the norovirus epidemiological and laboratory surveillance system in Japan, the Netherlands and the United Kingdom, detected increased levels of activity in late 2012. A similar increase was detected in Australia, France and New Zealand.

From the data available at present, it is not possible to conclude whether the increase observed in these countries represents an early onset of the seasonal spread in the northern hemisphere or if the increase is due to a new variant emergence.

In light of this situation and in order to prepare institutional health care and community care services staff to handle potential norovirus outbreaks, PAHO/WHO has prepared the following recommendations.

Norovirus

The viruses are, non-enveloped RNA, single-stranded virus, of the Caliciviridae family, that cause gastroenteritis in humans.

The norovirus gastroenteritis occurs in mild to moderate forms, often in outbreaks, with clinical symptoms such as nausea, vomiting, diarrhea, abdominal pain, myalgia, headache, malaise, fever, or a combination of several of these symptoms. The symptoms are of short duration, usually 24 to 48 hours.

The disease can be severe especially in the elderly, young children and immunocompromised persons.

Its incubation period ranges from 24 to 48 hours. It is transmitted by the fecal-oral route although it is possible to transmit by contact or through the air from an infected person's fomites. Transmission has also been documented through food, water and shellfish.

The virus is relatively stable in the environment and can survive low temperatures (freezing) and heat (up to 60 °C).

Since there is no vaccine, prevention is based primarily on measures of personal and community hygiene.

Recommendations

Outbreak surveillance and investigation:

1. Implement and maintain an early warning system at the hospital and community care levels for the early detection of gastroenteritis outbreaks.
2. Involve laboratories to determine the causal agent.
3. Carry out rapid outbreak investigation to identify the transmission mode and potential sources to guide the implementation of response measures.

Laboratory detection:

The detection of norovirus infection takes place both through molecular techniques (conventional Polymerase Chain Reaction (PCR) or real time reversed PCR) and through serological techniques (enzyme immune-assay).

Patient management:

There is no specific antiviral therapy, signifying that the treatment consists exclusively of supportive measures. The treatment goal is to properly maintain fluid levels and avoid dehydration. For patients who tolerate fluid intake it is recommended to administer oral rehydration salts; intravenous rehydration fluids should be administered as appropriate for those who do not tolerate oral fluid intake. For most cases, oral delivery of isotonic fluids is sufficient to replace lost fluids.

Particular attention should be paid to children, the elderly and people with medical comorbidities as they are the most vulnerable to dehydration effects.

The administration of antibiotics is not recommended.

Prevention and control methods:

Upon detection of an outbreak in institutional health care and/or community care services, the strict adherence to administrative and preventive measures is recommended.

Patient cohorting and isolation

It is recommended that patients with norovirus infection be placed in separate areas from uninfected patients and when possible in single rooms. The isolation should be continued until at least 48 hours after the termination of symptoms in order to prevent exposing susceptible patients. Some patients with special characteristics (immunosuppressed or kidney disease) or children under 2 years of age may require prolonged isolation.

Hand Hygiene

Promoting the adherence of proper hand washing hygiene with soap and water by health personnel, patients and visitors is important. The WHO Guidelines on Hand Hygiene in Health Care provides a detailed explanation of the proper technique:

http://whqlibdoc.who.int/publications/2009/9789241597906_eng.pdf (page 156).

Visitors

During norovirus outbreaks, policies for visitors should be implemented to restrict non-essential visits to affected areas. For areas which require maintaining visitations, a screening of visitors should be conducted to exclude those with symptoms consistent with norovirus infection and ensure that visitors comply with proper hand hygiene and contact precautions.

Use of personal protective equipment (PPE)

Personnel entering the areas affected by a norovirus outbreak should use personal protective equipment (PPE) in accordance with the standard precautions detailed in the PAHO /WHO Infection Control Guide, available at:

http://www.who.int/csr/resources/publications/EPR_AM2_E7.pdf

Environmental cleaning

Inadequate disinfection of surfaces contaminated by vomit or stool of infected patients is considered to affect the spread of norovirus. Therefore, cleaning and disinfecting surfaces and equipment in areas of isolation and of patients' cohorting with the norovirus infection should be increased. Cleaning and disinfection are recommended to occur at least 2-3 times a day, especially for frequently touched surfaces, such as tables, beds, arms of the chairs next to the bed, rings, door handles and telephones.

To maximize the effect of disinfection, effective cleaning is essential as is the removal of organic debris before using disinfectants. It is recommended to use a 0.1% sodium hypochlorite solution for disinfection, while adhering to the recommended guidelines for its preparation, use, contact time, storage and disposal of unused solution.

The vomit and feces of norovirus symptomatic patients is highly infectious. To prevent exposure of the virus and minimize the likelihood of transmission any environmental contamination with vomit and feces should be cleaned immediately using appropriate PPE.

Cleaning of patient sheets and other bed clothes should be in accordance with standard precautions, including the appropriate use of PPE and avoiding waving the materials to minimize the spread of the virus. Washing temperatures between 65° C (for at least 10 minutes) to 71 ° C (3 minutes) are recommended.

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