

Norovirus Outbreaks – Schools

A guide for facility managers on how to respond to Norovirus outbreaks and prevention for future outbreaks in educational facilities

Norovirus is a highly contagious virus that can infect anyone. Norovirus causes the stomach and intestines to become inflamed, which leads to stomach pain, vomiting, and diarrhea. These symptoms can be more serious for those who are more vulnerable, such as children and the elderly. Norovirus is spread by those who are infected, as well as contaminated food and water or contaminated surfaces. Norovirus is often called stomach flu or food poisoning.



Due to the highly contagious nature of Norovirus, outbreaks of Norovirus can be common in various facilities where close contact is common, such as health care facilities, schools, daycares, cruise ships, and food establishments. Since children can be especially vulnerable, protecting schools from Norovirus outbreaks is crucial.

The purpose of this document is to provide information on how to recognize Norovirus and the proper steps to take before and during Norovirus outbreaks in schools and similar facilities.

Norovirus Facts

A preliminary background on Norovirus is very useful in helping to recognize Norovirus, and will help determine what precautions need to be taken. This will help identify potential outbreaks sooner and prevent the spread of Norovirus, stopping outbreaks early on.

- Each year, Norovirus accounts for:
 - 20 million cases of gastroenteritis
 - 65,000 hospitalizations
 - 600 deaths
- About 50% of food-related illness is caused by Norovirus: more than E. coli and salmonella combined
- Symptoms of Norovirus include:
 - Diarrhea
 - Vomiting
 - Stomach pain
 - Fever and dehydration are secondary symptoms caused by vomiting and diarrhea
- Norovirus illness usually lasts 1-2 days, but those who have the illness are contagious 3-14 days after they recover

- Norovirus is highly contagious; as few as 18 Norovirus particles can cause infection
- Modes of Norovirus transmission include:
 - Eating food contaminated with Norovirus
 - Touching surfaces/objects contaminated with Norovirus, and then placing your hand in your mouth
 - Direct contact with an infected person (caring for a sick person, sharing food, drinks, and eating utensils, etc.)
- There is no vaccine, no cure, and no drug to treat Norovirus
 - The most effective treatment for Norovirus is rest and rehydration to replace liquids lost from vomiting and diarrhea

Before an Outbreak: Develop an Infection Control Program

Before an outbreak ever happens, it is important to create an Infection Control Program (ICP) that presents clear protocols for communications, routine cleaning and disinfecting, intensive cleaning and disinfecting, and hygiene. Having an ICP in place will make the school or facility much better prepared to respond to a potential outbreak more quickly and effectively, which will result in fewer infections and quicker resolution to the outbreak.



A school Infection Control Program should include:

- High-risk areas (bathrooms, cafeteria, nurse's office) and high-touch points (door handles, computers, desk tops)
 - These areas may require targeted disinfecting in addition to routine cleaning
- Procedures for cleaning and disinfecting high-risk areas and high-touch points
 - Which products should be used
 - When tasks should be completed (during school sessions or after students have gone home)
- A list of approved and supplied cleaning and disinfecting products and equipment
- Staff designated and trained to perform cleaning and disinfecting tasks
- Special precautions and procedures for handling blood and bodily fluid incidents
- Procedures and recommendations for hand hygiene practices

In addition to developing an Infection Control Program for the facility, it is also important to prepare policies and procedures in the event of an actual outbreak. This will help quicken response time to an outbreak and prevent further illnesses. The CDC and the Department of Health and Human Services has provided a checklist to develop plans to prepare for and respond to outbreaks of Norovirus, Influenza, and other illnesses. The checklist is split into four categories:

- **Planning and Coordination:** Working with local agencies to develop a plan in the event of an outbreak, and coordinating responsibilities should an outbreak occur.
- **Continuity of Student Learning and Core Operations:** Developing scenarios and procedures regarding school operations during an outbreak.
- **Infection Control Policies and Procedures:** Developing and implementing infection prevention and control procedures to limit the spread of illness.
- **Communications Planning:** Developing policies for communications with students, staff, parents, and local agencies in the event of an outbreak.

Following such a checklist can provide insight into what a school is doing well and what is still needed in terms of outbreak readiness.

Responding to an Outbreak

There are various steps to take when responding to a potential outbreak of Norovirus, each being important in preventing the spread of the infection and stopping the outbreak before it occurs.

Step 1 – Communication

The first step in responding to an outbreak is to communicate the situation to the appropriate people. The first people that should be notified of a case of Norovirus should be the infection control unit in the facility, as they can get the ball rolling with the proper infection control procedures to stop the spread of the infection.

Internally, everyone working in the facility should know about the outbreak situation, as they can help limit contact with the virus and this will help stop the spread. Externally, the local or state health department should be notified as soon as possible, as they can provide very useful guidance in how to further deal with outbreak. Parents of students should also be notified of an outbreak, to seek treatment for sick children and to keep sick students at home rather than at school spreading the infection.



Step 2 – Isolation

Isolation is key in stopping the spread of Norovirus infection, as it limits the contact between sick people and those who could contract the illness.

Isolation does not mean the sick should be quarantined with no contact with anyone; rather, those who are sick should stay home from work or school until they have recovered. Those who are infected with Norovirus should stay home for 72 AFTER SYMPTOMS GO AWAY. This means that if you get sick on Saturday, and feel better on Sunday night, you shouldn't return to work or school until Thursday (72 hours after Sunday night would be Wednesday night).

This type of isolation ensures that sick or contagious people are not coming into the facility and further spreading the infection.

Step 3 – Infection Control

When an outbreak of Norovirus is suspected or confirmed, infection control procedures need to be stepped up to properly clean and disinfect surfaces. Disinfection should focus on “high-touch surfaces” – desks, doorknobs, water fountains, toilets, etc.

Infection control procedures during an outbreak can be split into two situations:

- School is in session, students and staff are present
- School is closed, students and staff are not present



When school is in session, cleaning and disinfecting procedures should focus on high-touch cleaning and disinfecting, where contact is most common. The school can be segregated into different areas and high-touch surfaces should be identified in each area. For example, one area of attention would be classrooms, and high-touch surfaces would include:

- Desks/chairs/tables
- Keyboards
- Door knobs
- Waste receptacles
- Soap/towel/tissue dispensers

A good way to ensure all high-touch surfaces in all areas are being cleaned and disinfected is with a simple guide checklist. This checklist would segregate the school into separate areas and list the high-touch surfaces in each area to be routinely disinfected throughout the day when school is in session.

For a sample outbreak cleaning/disinfecting checklist for high-touch cleaning, [click here](#).

When school is not in session, infection control procedures should focus on intensive cleaning and disinfecting, where all surfaces are properly cleaned and disinfected daily or nightly until the outbreak subsides. A similar checklist can be used that segregates the school into areas and lists all the procedures and surfaces to be disinfected.

For a sample outbreak cleaning/disinfecting checklist for intensive cleaning, [click here](#).

It is also very important to use the proper product and procedure when cleaning and disinfecting. Always use a product with a specific claim for Norovirus when disinfecting during a Norovirus outbreak. Also, follow the manufacturer's instructions for dilution, application, and contact time of the disinfectant product you are using.

Some tips for infection control during a Norovirus outbreak:

- Carefully wash fruits and vegetables, and fully cook oysters, shellfish, and meats before eating them
- Do not prepare food if you are infected or could be infected
- Immediately wash clothing and linens that may be contaminated with vomit or fecal matter
- Handle soiled items carefully to avoid spreading the virus

Step 4 – Hand Hygiene

Hand hygiene should always be followed, but during an outbreak it should be actively promoted and strictly adhered to. Wash your hands with soap and water frequently, especially after using the restroom or changing diapers, and before eating or preparing food.

It is also important to note that although hand sanitizers are a good complement to washing with soap and water, it is not an appropriate replacement. Hand sanitizers are not effective against Norovirus, so washing with soap and water is crucial.



With proper background knowledge of Norovirus and by following these steps before and during an outbreak, you can much more effectively control an outbreak of Norovirus and, ideally, stop the outbreak before it happens.

Resources

For more information on Norovirus, visit the [CDC Norovirus website](#).

For a fact sheet on Norovirus, [click here](#).

[Infection Control & Outbreak Planning Checklist](#)

Outbreak Cleaning & Disinfecting Checklist – [High-Touch Cleaning](#)

Outbreak Cleaning & Disinfecting Checklist – [Intensive Cleaning](#)

For more information on infection control products and procedures, visit Multi-Clean's [Infection Control resource webpage](#).



Millennium Q –

Concentrated, Hospital-Grade disinfectant with Norovirus claim



Microcide TB –

Ready-to-use disinfectant with faster kill times and Norovirus claim



Century Q Wipes –

Pre-Packaged ready-to-use wipes with Norovirus claim