

# Viral Gastroenteritis Outbreak Guidelines For Washoe County Schools

Outbreaks of gastroenteritis in Washoe County Schools (WCSs) are not uncommon. Viruses cause most outbreaks of gastroenteritis and almost always are transmitted person-to-person, by contaminated surfaces or, occasionally, by contaminated food. These outbreaks can be detected early by recognizing the typical symptoms of illness and can be controlled by taking specific steps to prevent the virus from being transmitted person-to-person.

## What causes viral gastroenteritis in WCSs?

Many different viruses can cause gastroenteritis, including rotavirus and norovirus; however, norovirus is the cause of the majority of these outbreaks. Although the symptoms may be similar, viral gastroenteritis is not caused by bacteria (such as *Salmonella*) or parasites (such as *Giardia*), or by medications or other medical conditions.

## What are the signs and symptoms of viral gastroenteritis?

The main symptoms of viral gastroenteritis are watery diarrhea and vomiting. The affected person can also have a headache, fever, nausea and abdominal cramps ("stomach ache"). In general, the symptoms begin 1 to 2 days following infection and may last for 1 to 10 days, depending on which virus causes the illness. In general, children with norovirus experience more vomiting than adults.

## How is viral gastroenteritis spread?

Norovirus is spread when material contaminated by feces or vomit from an infected person is ingested. Norovirus is **extremely infectious**. Only eighteen particles of norovirus can make someone sick, yet a pea-sized amount of feces can contain billions of viral particles. The viruses can continue to be present in the feces of infected persons for a week or more, even after they recover or even if they have never been sick. In WCSs the virus is spread primarily through contamination of the hands of persons who are ill. Vomiting also will suspend viral particles in the air, resulting in contamination of the environment. Norovirus can remain infectious on environmental surfaces for many days and is relatively resistant to disinfection, heat, and cold.

## How is viral gastroenteritis diagnosed?

Viral gastroenteritis can be diagnosed by testing stool. A special test for norovirus is available at the

Nevada State Public Health Laboratory. This requires fresh (unfrozen) stool. While the test can typically be completed within one to two days of receiving a specimen, ***decisions to institute control of a possible outbreak should be taken immediately.*** Testing stool may not be possible in every outbreak.

## How can an outbreak of viral gastroenteritis be identified?

Facilities should establish and maintain a surveillance program for viral gastrointestinal disease. ***In general, an outbreak of viral gastroenteritis should be suspected when the number of illnesses exceeds what is normal or typical.*** Each WCS also has access to a gastrointestinal illness (GI) Excel spreadsheet tool. This tool can provide each WCS with more school-specific indications of when an outbreak of viral gastroenteritis may be occurring.

## How is an outbreak of viral gastroenteritis controlled?

Interrupting person-to-person transmission controls an outbreak of viral gastroenteritis. There is probably little that can be done to prevent the initial introduction of the virus, since an infected staff member or student may be shedding the virus even before they are ill, or may never be symptomatic. However, routine handwashing at all times may prevent initial introduction. Note that hand sanitizer alone is NOT effective against norovirus, so good handwashing is essential to controlling disease spread. Staff should monitor student handwashing practices. At all times, staff must use gloves or other method of "no bare hand contact" (e.g. tongs, toothpicks, gloves, etc.) when handling "ready-to-eat" foods or snacks for students (e.g. crackers, cookies, cut vegetables, etc.) ***If people practice good personal hygiene after going to the bathroom it may limit the spread of the disease.*** The recommendations on following pages may assist facility personnel in controlling an outbreak of viral gastroenteritis.

## **References:**

- ◆ Centers for Disease Control and Prevention. *Norovirus: Q&A*
- ◆ County of Sonoma Department of Health Services. *For Schools: Norovirus Control Measures.*
- ◆ Division of Epidemiology and Public Health, University of Nottingham, Queens Medical Centre. *A school outbreak of Norwalk-like virus: evidence of airborne transmission.*

# CONTROLLING PERSON-TO-PERSON TRANSMISSION OF VIRUSES IN WASHOE COUNTY SCHOOLS

## INSTITUTE CONTROL MEASURES WHEN A VIRAL GASTROENTERITIS OUTBREAK IS SUSPECTED (DO NOT WAIT FOR DIAGNOSTIC CONFIRMATION)

Rapidly implementing control measures at the first sign of a gastroenteritis outbreak can prevent additional cases.

### Reporting – when an outbreak is suspected

- Notify Northern Nevada Public Health at **775-328-2447**
- Record cases on a log and/or computerized system. Include name, staff or student status, date and time of symptom onset, symptoms, classroom number, date of birth or age, and phone number. If a parent reports a child has tested positive, it is also helpful to record who the doctor was or where they were seen and what the child tested positive for.

### Infection Control

- Thoroughly clean fecal and vomiting accidents promptly – follow recommendations on next page
- Ill students should be placed in a “sick” room away from other students until a parent is able to pick them up. Ill employees should be sent home.
- Increase the frequency of bathroom and toilet cleaning (at least daily), especially faucets, door handles, toilet handles and light switches.

### Personnel & Students

- **Exclude all ill students and employees with vomiting and/or diarrhea until 48 hours after symptoms stop.**
- Maintain the same staff to assigned classrooms, if possible. Limit staff and students from moving between contaminated and uncontaminated areas.
- Exclude parents and non-essential staff from contaminated areas, if possible.
- Request parents do not bring symptomatic family members into the facility.
- Cancel or postpone group activities (i.e. outings, field trips, parties etc.) until restrictions are lifted by Northern Nevada Public Health.



***Handwashing is the single most important procedure for preventing the spread of infection!***

*Frequent handwashing with soap and water for at least 20 seconds of vigorous rubbing, thorough rinsing under a stream of clean water, and drying with disposable towels is recommended. Note that hand sanitizer alone is NOT effective against norovirus so good handwashing is essential.*

## CLEANING UP VOMIT, FECES AND OTHER UNPLEASANT TASKS

*Have a trained “hit squad” with the right chemicals and equipment at all times. Only trained staff should clean and disinfect affected areas.*

Always **clean** with detergent and hot water **prior** to disinfecting:

**Disinfect with 1000 ppm chlorine solution**

or

Use an effective virucide<sup>2</sup>.

### CHLORINE SOLUTION DIRECTIONS

Prepare 1000 ppm chlorine solution by mixing ½ cup liquid chlorine (bleach) with 1 gallon of water. Make solutions fresh daily, label with date & contents, and store out of reach of children. For questions regarding appropriate use of chlorine solutions or other effective disinfectants, please call Environmental Health Services at 328-2434.

## General Principles of Cleaning & Disinfecting

### Clean soiled areas

- Isolate the areas where a vomiting or diarrhea incident has occurred (25 feet surrounding the location of the incident).
- Wear disposable gloves, and masks.<sup>1</sup>
- When heavily contaminated, absorb and remove as much of the vomit/feces as possible with paper towels or disposable cloths.
- Clean soiled areas with detergent and hot water *prior* to disinfecting.
- Dispose of paper towels/cloths in plastic waste bags.

### Disinfect soiled areas

- Use freshly made 1000 ppm chlorine solution or an effective virucide<sup>2</sup>. See manufacturer's instructions for appropriate use.
- Dispose of gloves, mask and cloths in plastic waste bags. Put plastic bags in the regular trash.
- Wash hands thoroughly using soap and water and dry them just as thoroughly with disposable paper towels.

## RECOMMENDED ITEMS TO CLEAN AND DISINFECT

**Areas that need to be cleaned and disinfected:** All classrooms, multi-purpose room, restrooms, gyms, locker rooms, clinic area, hall lockers, drinking fountains, vending machines, libraries, etc.

**Classrooms:** Clean and disinfect all areas of the classroom. All desks, chairs, cubbies, white/black boards, TVs / VCR, sinks, storage cabinets, etc.

**Hard surfaces, horizontal surfaces, furniture, and soft furnishings:** Clean and disinfect within 25 feet surrounding the location of the incident. Clean and disinfect doors, door handles, light switches, toilet handles, sinks, faucets, phones, chairs, tables. If unable to use liquid disinfectants, steam clean with a temperature of 170° F minimum.

**Carpets:** Use paper towels to soak up excess liquid and dispose of towels in a plastic waste bag; clean using a disposable cloth, then disinfect. Carpet should be steam-cleaned with a temperature of 170° F minimum after disinfection. Note that home-style (non-professional) carpet cleaners often do not reach this temperature so professional cleaning is recommended. Dry with fan (unit sits over spot-does not blow across). Do not use dry or wet vacuum.

**Walls:** Clean and disinfect from floor up to 6 feet.

**Non-disposable mop heads:** Launder in hot water with bleach.

**Toys and playground equipment:** Clean and disinfect all toys, activity tables, books, cubbies, playground equipment, plastic tubs and storage bins. Discontinue use of sensory bins until outbreak is over and restrictions have been lifted by the Washoe County Health District.

**Front office area:** Clean and disinfect front office counter, parent sign-in area, and all door handles multiple times throughout the day.

**Food preparation and food storage areas:** Destroy any food that may have been contaminated, and food that was handled by an infected person. Clean and disinfect all tables, food contact surfaces, refrigerator doors/handles, microwave oven (inside and out), counters, and all cooking equipment and utensils.

**Buses:** Clean and disinfect inside of all transport buses on a daily basis.

<sup>1</sup> With outbreaks of norovirus, it is recommended that persons who clean areas substantially contaminated by feces and/or vomitus wear masks because spattering or aerosolization of infectious material might result in disease transmission.

<sup>2</sup> Effective virucides are those effective against feline calicivirus (FCV) including: Virkon® (Biosafety USA), Accel® (Virox Technologies), EcoTru, and Mikro BAC 3® (Ecolab).