

Norovirus Toolkit

Outbreak prevention and response information for schools

About Norovirus

Symptoms

Diarrhea, vomiting, nausea, and stomach ache are the most common symptoms. Fever (usually low-grade), headache, and body aches are also reported. Symptoms typically last 1-3 days.

Incubation

Individuals generally become ill 12-48 hours after exposure (swallowing norovirus).

Transmission

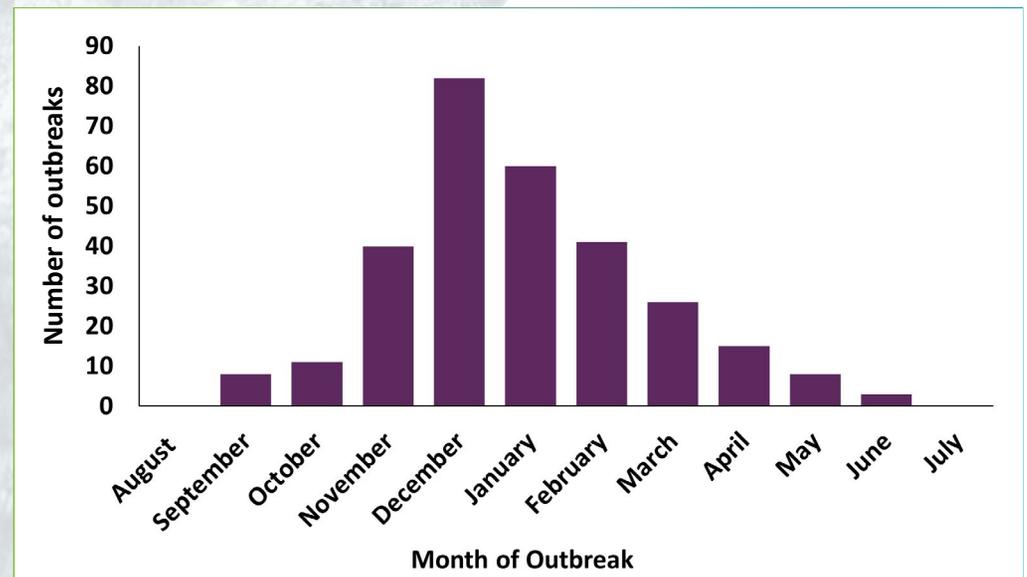
Norovirus is spread via the fecal-oral route. Infected individuals shed the virus in their stool and vomit, which can then contaminate food, surfaces, and objects. The virus spreads to others when they consume or contact the contaminated items. Virus can be shed in the stool for a few weeks after recovery.

Reporting

Multiple cases with norovirus-like symptoms, including suspected outbreaks, must be reported. Call MDH at 1-877-FOOD-ILL, email health.foodill@state.mn.us, or contact your local health department.

Outbreaks in Schools

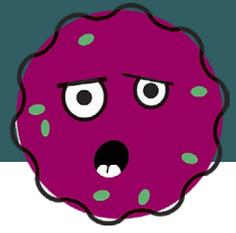
Norovirus Outbreaks Reported in Schools,
Minnesota, 2015 - 2024



Norovirus season in Minnesota typically starts in October, but can occur all year.

Norovirus Toolkit

This letter explains how and when to use this toolkit



Greetings from the Minnesota Department of Health (MDH) Foodborne Diseases Unit!

WHO WE ARE & WHAT WE DO

At MDH, one of the things we are charged with is investigating, tracking, and controlling gastrointestinal (GI) illness outbreaks. In schools, the most common cause of acute GI illness outbreaks is norovirus (often referred to by the misnomer “stomach flu”), though outbreaks can also be caused by a variety of other pathogens (e.g., *Salmonella*, Shiga toxin-producing *E. coli*, and others).

We are here to help with an outbreak at your school, including answering questions and determining the best strategies for outbreak control. We will also document the outbreak to better understand disease burden and trends.

WHEN TO REPORT A SUSPECTED OUTBREAK

By Minnesota state law (Minn. Rules part 4605.7050), “any pattern of cases, suspected cases, or increased incidence of any illness beyond the expected number of cases in a given period” shall be reported immediately to MDH. This includes suspected outbreaks, increases in GI illnesses, or unusual disease activity at your school. Here are some examples of when to report:

- **Illnesses above established baseline (i.e., more than what you normally see)**
Determine what the baseline incidence of GI illness is in your school based on daily absence records. Report to MDH when the number or percent of illnesses rises above your baseline (e.g., double the number of absences due to vomiting or diarrhea).
- **Multiple cases in one classroom or group (e.g., sports or other activity groups)**
- **More staff calling in sick with GI symptoms than usual**

HOW TO REPORT

Use the online form: [Respiratory Illness and Gastrointestinal Illness Outbreak Reporting \(redcap.health.state.mn.us/redcap/surveys/?s=MJEJYFFCKNLD4N4C\)](https://redcap.health.state.mn.us/redcap/surveys/?s=MJEJYFFCKNLD4N4C)

For questions, call or email the MDH Foodborne Diseases Unit:

Phone: 651-201-5655 (Toll Free: **1-877-366-3455**) **Email: health.foodill@state.mn.us**

We will notify your field epidemiologist or local public health department as needed. You can also contact your field epidemiologist or local public health department directly, and they will pass the information to MDH.

This packet is intended for use during a suspected outbreak of acute viral gastroenteritis at your school. The intent is to: 1) provide guidance on implementing measures to stop the outbreak and determine its cause, and 2) collect data on the outbreak to prevent future outbreaks and inform disease burden estimates. Please have a low threshold to contact us with any questions or concerns regarding diarrheal/vomiting illnesses at your school.

Sincerely,

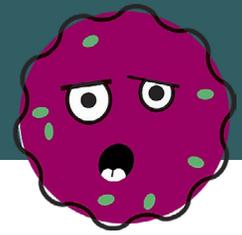
Amy Saupe, MPH
Epidemiologist Senior

Carly Baade
Health Program Representative

Norovirus Toolkit • Checklist

Use this checklist for outbreak response

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REPORT

- Report the possible outbreak when you detect an increase in illnesses above the expected baseline, or “normal” rate (e.g., double the normal absence rate due to vomiting or diarrhea).
 - Call your local (i.e., city or county) health department, field epidemiologist or notify the Minnesota Department of Health (MDH) using the online form:
[Respiratory Illness and Gastrointestinal Illness Outbreak Reporting \(redcap.health.state.mn.us/redcap/surveys/?s=MJEJYFFCKNLD4N4C\)](https://redcap.health.state.mn.us/redcap/surveys/?s=MJEJYFFCKNLD4N4C)
- Information MDH will ask for:
 - What date did the earliest illness start? When did the other illnesses occur?
 - How many students do you have in the school? How many have been ill?
 - How many staff members do you have in the school? How many have been ill?
 - What symptoms did ill individuals have? What is the approximate duration of illness?
 - Have the ill individuals been in one grade, classroom, or activity group or spread across the school?
 - Have any kitchen staff been ill?

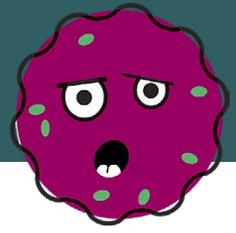
DOCUMENT

- Use attendance reports or other information to track **how many** students and staff are sick, **what symptoms** they have, and **when** they got sick.
 - You can use the STUDENT ILLNESS LOG and STAFF ILLNESS LOG to track illness, if you like.
 - Epidemiology staff will use this to assess A) which pathogen is causing the outbreak, B) the likely route of transmission, and C) whether additional prevention measures are needed.
- Gather additional information.
 - Determine when and where there were any vomiting incidents or diarrheal accidents in the facility.
 - If requested by MDH, provide menus (breakfast and lunch).
 - If requested by MDH, provide names and phone numbers for staff and/or students (in rare cases, MDH may want to conduct interviews).
- Stool samples are important to confirm the outbreak cause, and determine strains that cause illness. Please distribute stool sample collection kits to 3 students (obtain parent permission if <18) or staff (MDH will provide kits; the testing is free of charge at the MDH Public Health Laboratory).
 - MDH will provide results.
 - If stools from students or staff were tested at a clinical laboratory, notify MDH of any results.
- Report your final outbreak information (e.g., number sick, symptoms, dates) to MDH when requested.
 - This information is used to report to the [National Outbreak Reporting System \(NORS\)](https://www.cdc.gov/nors/) (www.cdc.gov/nors/) and helps us understand disease burden and trends. Your facility name is not reported.

Norovirus Toolkit • Checklist

Use this checklist for outbreak response

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IMPLEMENT OUTBREAK CONTROL MEASURES

GENERAL

- Promote hand hygiene (e.g., handwashing posters in bathrooms).
 - Most alcohol-based hand sanitizers are not effective against norovirus. Wash hands with soap and water to remove pathogens.
- Restrict sharing of communal food/snack items in classrooms, cafeteria (e.g., food sharing table), and staff rooms.

STUDENTS

- Monitor for student illness. You may use the STUDENT ILLNESS LOG if helpful.
- Have students stay home from school while ill with vomiting or diarrhea (or follow district policy, if more strict).

STAFF

- Monitor for staff illness. You may use the STAFF ILLNESS LOG if helpful.
- Make sure staff are aware of the outbreak and prevention measures (including handwashing, sending ill students home promptly, and asking for cleaning assistance if needed).

CLEAN

- Notify custodial staff of special cleaning consideration for norovirus.
- Immediately clean/disinfect the facility. Focus on frequently touched surfaces and objects (e.g., bathrooms, door handles, counters, tables, water fountains, toys in younger classrooms).
 - Clean all surfaces with soap and water. Rinse.
 - Disinfect all surfaces with a disinfectant that is effective against norovirus. Norovirus is not killed by regular bleach solution, or quaternary ammonia. Use one of these products:

1. Disinfectant with a norovirus claim (see FAQ). Check that the label on your disinfectant specifically says that it is effective against norovirus. Use as directed on the packaging (some disinfectants have a long contact time to kill norovirus).
2. Strong (1000 ppm) bleach solution mixed fresh daily: 1 gallon water + 1/3 cup bleach.
 - For food contact surfaces, rinse with clean water after disinfectant solution has fully dried.
 - Wear Personal Protective Equipment (PPE) and use ventilation when applying this solution.

- Clean/disinfect at least daily until the outbreak is over (1 week after last illness onset).
- Clean up vomiting or diarrheal incidents immediately.
 - Use proper procedures to protect those doing the cleaning from getting sick (see RESOURCES). Never use a vacuum to clean up vomit.

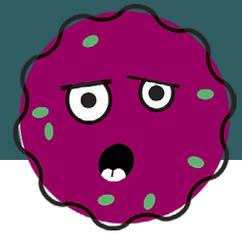
FOOD SERVICE

Kitchen staff and volunteers can be a source for ongoing transmission of illness from contaminated food.

- Contact your kitchen department to determine if kitchen staff are ill (You may add them to the STAFF ILLNESS LOG if helpful). Notify MDH if kitchen staff are ill so that a sanitarian can work with the kitchen to implement other prevention measures.
- Monitor for kitchen staff illnesses during the outbreak using the food service Employee Illness Screening Form.
- Exclude ill kitchen staff from work for 72 hours after diarrhea/vomiting have stopped.
- Clean and disinfect all kitchen and dining area surfaces with a product described above.
- Discontinue all self-service food/drinks (e.g., salad bars, food sharing table) and have kitchen staff or other adults serve.

Norovirus Toolkit • Resources

Further resources and other materials



RESOURCES

A copy of this toolkit packet is also available online:

[Outbreaks at Schools, Child Care, and Long-term Care Facilities](http://www.health.state.mn.us/diseases/foodborne/outbreak/facility/)
(www.health.state.mn.us/diseases/foodborne/outbreak/facility/)

FACT SHEETS

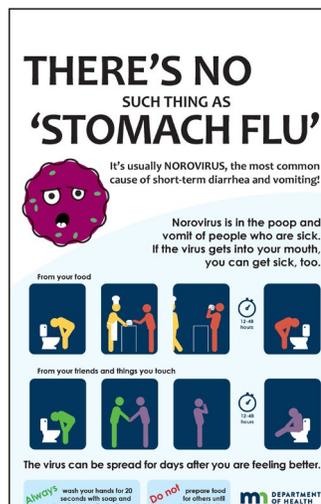
- [Norovirus Fact Sheet](http://www.health.state.mn.us/diseases/norovirus/noro.pdf) (www.health.state.mn.us/diseases/norovirus/noro.pdf)

POSTERS

1. [Be A Germ-Buster...Wash Your Hands Poster](http://www.health.state.mn.us/people/handhygiene/wash/fsgermbuster.html)
(www.health.state.mn.us/people/handhygiene/wash/fsgermbuster.html) *available in 14 languages
2. [There's no Such Thing as 'Stomach Flu'](http://www.health.state.mn.us/diseases/norovirus/nostomachflu.pdf)
(www.health.state.mn.us/diseases/norovirus/nostomachflu.pdf)
3. [Clean Up & Disinfect for Norovirus: Vomit Poster](http://www.health.state.mn.us/diseases/foodborne/vomitposter.pdf)
(www.health.state.mn.us/diseases/foodborne/vomitposter.pdf)



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FURTHER READING

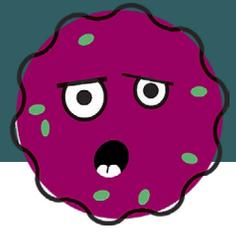
- [MDH Hand Hygiene](http://www.health.state.mn.us/people/handhygiene/) (www.health.state.mn.us/people/handhygiene/)
- [CDC Norovirus Outbreaks](http://www.cdc.gov/norovirus/outbreak-basics/) (www.cdc.gov/norovirus/outbreak-basics/)

VIDEOS

- [Preventing Norovirus](http://www.youtube.com/watch?v=zFHnfLIMFD8) (www.youtube.com/watch?v=zFHnfLIMFD8)
- [Clean Up After Someone with Norovirus Vomits or has Diarrhea](http://www.youtube.com/watch?v=TAKH4jakLYA) (www.youtube.com/watch?v=TAKH4jakLYA)

Norovirus Toolkit • FAQ

Here are some frequently asked questions



Q: What if this outbreak is not caused by norovirus?

A: The interventions in this toolkit are effective at controlling outbreaks of similar diarrheal pathogens. MDH can provide additional guidance as needed.

Q: Can we use our regular cleaner(s)?

A: Probably not. You must use a disinfectant that specifically says that it is effective against norovirus on the label. If you have trouble finding an appropriate product, either use the bleach solution described in the CHECKLIST, or provide this list of EPA-approved products to your chemical supplier and have them order one for you: [List G: EPA's Registered Antimicrobial Products Effective Against Norovirus](https://www.epa.gov/pesticide-registration/list-g-epas-registered-antimicrobial-products-effective-against-norovirus) (www.epa.gov/pesticide-registration/list-g-epas-registered-antimicrobial-products-effective-against-norovirus).

Q: Are hand sanitizers effective?

A: Most are not effective against norovirus. Check with your chemical supplier, or read the label carefully to make sure it lists effectivity against norovirus.

Q: Do we need to report this outbreak to anyone other than MDH?

A: No. MDH will notify your field epidemiologist and/or local health department as needed.

Q: Are there HIPAA or other privacy concerns with releasing student names to MDH?

A: No. MDH is not a HIPAA-covered entity. MDH has authority to undertake this investigation and collect private data under Minn. Stat. 144.05, subd. 1, 144.053, and Minn. Rules part 4605.7500. Private data held by MDH is protected under Minn. Stat. Section 144.658.

Q: Do we need to close the school?

A: It is extremely unlikely. MDH rarely recommends that schools close due to a gastrointestinal illness outbreak. The cleaning and other recommendations to control the outbreak can usually be accomplished while the school is open for class and activities as usual.

Q: Should we send a letter to parents/guardians?

A: MDH may request that you send a letter home to help [Communicate with Parents During an Outbreak](https://www.health.state.mn.us/diseases/foodborne/outbreak/facility/parents.html) (www.health.state.mn.us/diseases/foodborne/outbreak/facility/parents.html). Otherwise, it is up to your discretion.

Q: How do we report an outbreak of flu/influenza or COVID-19?

A: You can use the same online form to report outbreaks of flu/influenza or COVID-19: [Respiratory Illness and Gastrointestinal Illness Outbreak Reporting](https://redcap.health.state.mn.us/redcap/surveys/?s=MJEJYFFCKNLD4N4C) (redcap.health.state.mn.us/redcap/surveys/?s=MJEJYFFCKNLD4N4C).

Q: What can I do to prevent an outbreak?

- A: Take these actions now and throughout the year to help prevent an outbreak at your school:
1. Educate staff on proper hand hygiene. Encourage them to report vomiting incidents and ill students.
 2. Buy a disinfectant that is effective against norovirus. Talk to your janitorial staff about having this product on hand, and about proper vomit clean-up.
 3. Identify a possible outbreak early – discuss how attendance is being tracked, and ensure information on diarrhea/vomiting is being collected.