

Norovirus Toolkit

Outbreak prevention and response information for long-term care facilities

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

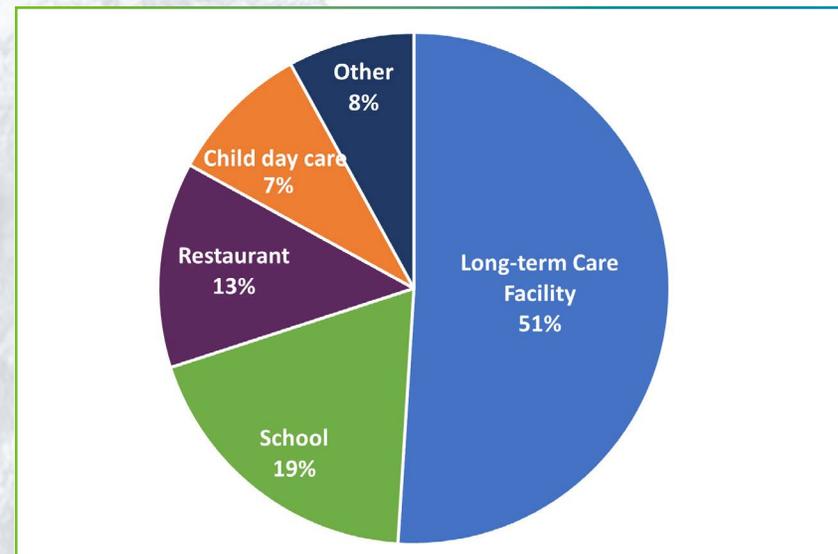
Norovirus is spread via the fecal-oral route. Infected individuals shed the virus in their stool and vomit, which can then contaminate food, surfaces, and objects. The virus spreads to others when they consume or contact the contaminated items. Virus can be shed in the stool for several weeks after recovery.

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.

Outbreak Setting

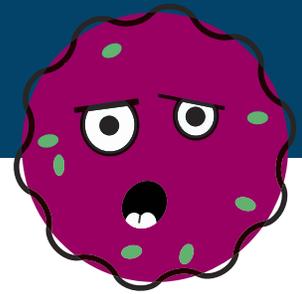
Norovirus Outbreaks Reported by Setting in Minnesota, 2015 - 2024



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. At facilities like yours, the most common cause of acute GI illness outbreaks is norovirus (often referred to by the misnomer “stomach flu”), though these outbreaks can also be caused by a variety of other pathogens (e.g., sapovirus, *Salmonella*, *C. difficile*, and others).

We are here to help with an outbreak at your facility, 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 facility. Here are some examples of when to report:

1. Illnesses above established baseline

Determine what the baseline incidence of GI illness in your facility is. Report to MDH when the number or percent of illnesses rises above your baseline (e.g., look at your routine resident illness tracking to establish a baseline of diarrhea/vomiting in the facility).

2. Multiple cases in one wing or unit

3. More staff calling in sick with GI symptoms than usual

HOW TO REPORT

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

HOW TO USE THIS TOOLKIT

This packet is intended for use during a suspected outbreak of acute viral gastroenteritis at your facility. 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 do not hesitate to contact us with any questions or concerns regarding diarrheal/vomiting illnesses at your facility.

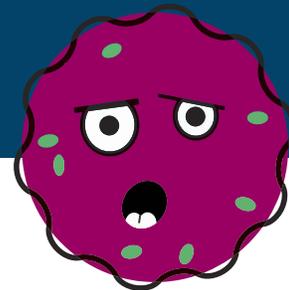
Sincerely,

Amy Saupe, MPH
Epidemiologist Senior
Foodborne Diseases Unit

Carly Baade
Health Program Representative
Foodborne Diseases Unit

Norovirus Toolkit • Prevention

Help prevent an outbreak at your facility and be prepared to respond if one occurs



PREVENTION TOOLS

1. Hand hygiene

- Train staff on proper hand hygiene.
- Make sure staff and resident handwashing facilities are stocked with soap and paper towels.
- Do not use hand sanitizer as an alternative to handwashing.

2. Clean/Disinfect

- Check the labels on your cleaning products to ensure they are effective against norovirus.
 - If not, obtain a disinfectant that is effective against norovirus to have on hand. Consider getting a product that is also effective against *C. difficile*. Check with your chemical supplier, or look at [EPA's Registered Antimicrobial Products Effective Against Norovirus \(feline calicivirus\) \[List G\]](http://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-norovirus-feline) (www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-norovirus-feline) and [EPA's Registered Antimicrobial Products Effective Against *Clostridioides difficile* \(*C. diff*\) Spores \[List K\]](http://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-clostridioides) (www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-clostridioides).
- Clean up vomiting or diarrheal incidents immediately, using appropriate PPE. Do not use a vacuum. See RESOURCES for best practices.
- Always use best practices for cleaning/disinfecting, washing linens, etc.

3. Person movement

- When possible, do not transfer patients into or out of the facility while they have vomiting or diarrhea.
- Visitors with vomiting or diarrhea should not visit the facility while ill. See a new poster from MDH in RESOURCES.
- Staff and volunteers should stay home from work if ill with vomiting or diarrhea.

QUICKLY IDENTIFY AN OUTBREAK

- Update and regularly check your resident illness tracking log. Understand what your normal or baseline level of diarrhea and vomiting is in the facility. Call MDH and initiate outbreak response measures when more residents are ill than expected, or there are multiple illnesses in one wing or unit.
- Keep track of staff and volunteer illnesses.

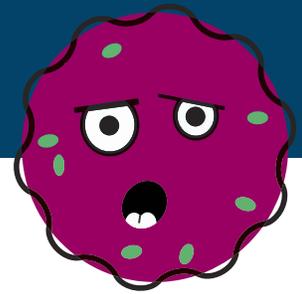
OTHER PATHOGENS

- [Clostridioides \(Clostridium\) difficile Toolkit for Long-term Care Facilities](http://www.health.state.mn.us/diseases/cdiff/hcp/lctoolkit/) (www.health.state.mn.us/diseases/cdiff/hcp/lctoolkit/)
- [Long-term Care: Influenza](http://www.health.state.mn.us/diseases/flu/ltc/) (www.health.state.mn.us/diseases/flu/ltc/)
- [Long-term Care: COVID-19](http://www.health.state.mn.us/diseases/coronavirus/hcp/ltc.html) (www.health.state.mn.us/diseases/coronavirus/hcp/ltc.html)

Norovirus Toolkit • Checklist

Use this checklist for outbreak response

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REPORT

- Report the possible outbreak when you detect an increase in gastrointestinal illnesses above the expected baseline, or “normal” rate (e.g., more illnesses than usual in the facility/unit/wing).
 - Call your local (i.e., city or county) health department, or notify the Minnesota Dept. of Health (MDH).

Phone: **651-201-5655** (Toll Free: **1-877-366-3455**)

Email: health.foodill@state.mn.us

- Information MDH will ask for:
 - What date did the earliest illness start? When did the other illnesses occur?
 - How many residents do you have in the facility? How many have been ill?
 - How many staff do you have in the facility? 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 unit or wing, or spread across the facility?
 - Have any dietary or food staff been ill?

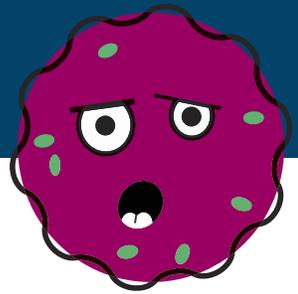
DOCUMENT

- Use the RESIDENT ILLNESS LOG and STAFF ILLNESS LOG to document illnesses among staff and residents/patients.
 - Contact managers of each unit, etc. as necessary to gather illness information.
- Send both ILLNESS LOGS back to MDH within 2 business days of reporting the suspected outbreak. It’s okay if it’s not complete, you’ll send a complete one at the end of the outbreak.
 - 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.
 - List activities, events, etc., held during the week prior to the first illness (especially if food was served).
 - Determine when and where there were any vomiting incidents or diarrheal accidents in the facility.
 - If requested by MDH, provide a dietary menu (breakfast, lunch, and dinner).
 - If requested by MDH, provide names and phone numbers for staff and/or residents (in rare cases, MDH may want to conduct interviews).
- Collect a stool sample from three (3) residents and/or staff and send to MDH Laboratory for analysis (MDH will provide specimen collection kits; the testing is free of charge).
 - If stools from residents or staff were sent to a clinical laboratory, notify MDH of any results.
- Send both completed ILLNESS LOGS back to MDH between 1 and 2 weeks after the last illness.
 - This information is used to report to the [National Outbreak Reporting System \(NORS\)](http://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

RESIDENTS

- Monitor for resident illness (record on RESIDENT ILLNESS LOG) and when possible, isolate residents while they are ill and for 72 hours after symptoms have stopped.
- Consider halting new admissions until the outbreak has ended.
- Exclude actively ill residents from games/activities where touching common items occurs (e.g., checkers, cards).

STAFF

- Monitor for staff illness (record on STAFF ILLNESS LOG) and restrict ill staff/volunteers from patient care and food handling duties until 72 hours after their vomiting/diarrhea has ended.
- Redouble efforts to promote glove use and hand hygiene.
 - Educate residents, staff, and visitors on proper technique.
 - Promote proper glove use followed by handwashing. Hands should be washed before patient contact, food prep, snacks/meals; and after patient contact, and bathroom visits.
 - Traditional alcohol-based hand sanitizers are not effective against common gastrointestinal pathogens such as norovirus and *C. difficile*. Wash hands with soap and water to remove pathogens.
- Avoid having staff care for patients with active illness before caring for patients who have not been ill.

VISITORS

- Consider limiting visitors during the outbreak, as they can spread illness in the facility or become ill themselves.
- Post signs to promote visitor hand hygiene, particularly after visiting ill residents.

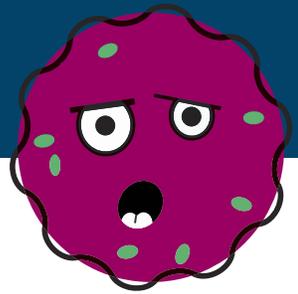
CLEAN

- Immediately clean/disinfect the facility. Focus on frequently touched surfaces and objects (e.g., bathrooms, door handles, counters, tables, water fountains, etc.).
 - Clean all surfaces with soap and water. Rinse.
 - Disinfect all surfaces with a disinfectant that is effective against norovirus. Norovirus is a hardy organism that is not killed by regular bleach solution, quaternary ammonia, or alcohol-based hand sanitizers. 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 PPE and use ventilation when applying this solution.

Norovirus Toolkit • Checklist

Use this checklist for outbreak response

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- Clean/disinfect at least daily until the outbreak is over (1 week after last illness onset).
- Clean up vomiting or diarrheal incidents immediately.
 - Use appropriate procedures to prevent those doing the cleaning from getting sick (see RESOURCES).
 - Consider having a staff member who has been ill and recovered during the outbreak do the cleaning.
 - Never use a vacuum to clean up vomit.
 - Use caution when emptying commodes; consider using commode liners.
- Launder soiled bedding and other linens immediately, and use appropriate PPE.

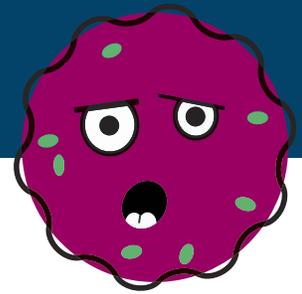
FOOD SERVICE

Dietary/food staff can be a source of ongoing transmission of illness by contaminating food that residents eat.

- Contact your dietary department to determine if dietary staff are ill (add them to the STAFF ILLNESS LOG). Notify MDH if dietary staff are ill so that a sanitarian can work with the kitchen to implement additional prevention measures.
- Monitor for dietary staff illnesses during the outbreak using the food service Employee Illness Screening Form.
- Exclude ill dietary staff from work for 72 hours after diarrhea/vomiting have stopped as required by the Minnesota Food Code.
- Clean and disinfect all kitchen and dining area surfaces with a product described above.
- Discontinue all self-service food/drinks including self-service foods using tongs or other serving utensils.
- Postpone or cancel common events such as birthdays, holidays, and special celebrations until the conclusion of the outbreak.
- Restrict sharing of communal food/snack items and foods brought from outside the facility or prepared by residents.

Norovirus Toolkit • Resources

Try these sources for other materials to help your investigation



RESOURCES

A copy of this toolkit packet is also available online:

[Gastrointestinal Illness Outbreaks at Facilities](http://health.state.mn.us/gioutbreak)
(health.state.mn.us/gioutbreak)

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

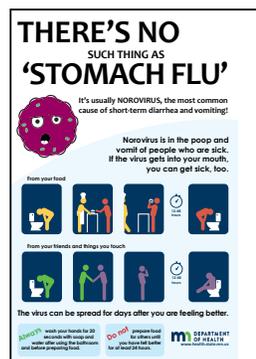
- (1) [Be A Germ-Buster...Wash Your Hands Poster](http://health.state.mn.us/people/handhygiene/wash/fsgermbuster.html)
(health.state.mn.us/people/handhygiene/wash/fsgermbuster.html)
- (2) [There's No Such Thing as 'Stomach Flu'](http://health.state.mn.us/diseases/norovirus/nostomachflu.pdf)
(health.state.mn.us/diseases/norovirus/nostomachflu.pdf)
- (3) [Protect Our Residents! Visitor Poster](http://health.state.mn.us/diseases/foodborne/outbreak/facility/protectourresidents.pdf)
(health.state.mn.us/diseases/foodborne/outbreak/facility/protectourresidents.pdf)
- (4) [Norovirus Outbreak Poster for Residents: Diarrhea/vomiting outbreak in facility](http://health.state.mn.us/diseases/foodborne/outbreak/facility/protectourresidentsres.pdf)
(health.state.mn.us/diseases/foodborne/outbreak/facility/protectourresidentsres.pdf)

FURTHER READING

- [MDH Project Firstline Diarrhea Education Bundle](http://www.health.state.mn.us/facilities/patientsafety/infectioncontrol/pfl/training/diarrheaedu.pdf)
(www.health.state.mn.us/facilities/patientsafety/infectioncontrol/pfl/training/diarrheaedu.pdf)
- [MDH Hand Hygiene](http://www.health.state.mn.us/people/handhygiene)
(www.health.state.mn.us/people/handhygiene)
- [CDC Norovirus Prevention and Control Guidelines for Healthcare Settings](http://www.cdc.gov/infection-control/hcp/norovirus-guidelines/)
(www.cdc.gov/infection-control/hcp/norovirus-guidelines/)
- [CDC Key Infection Control Recommendations](http://www.cdc.gov/healthcare-associated-infections/media/pdfs/norovirus-controlrecomm-508.pdf)
(www.cdc.gov/healthcare-associated-infections/media/pdfs/norovirus-controlrecomm-508.pdf)
- [CDC Sequence for Putting on Personal Protective Equipment \(PPE\)](http://www.cdc.gov/healthcare-associated-infections/media/pdfs/ppe-sequence-p.pdf)
(www.cdc.gov/healthcare-associated-infections/media/pdfs/ppe-sequence-p.pdf)
- [National Park Service Norovirus Response and Cleanup](http://www.nps.gov/articles/norovirus-response.htm)
(www.nps.gov/articles/norovirus-response.htm)



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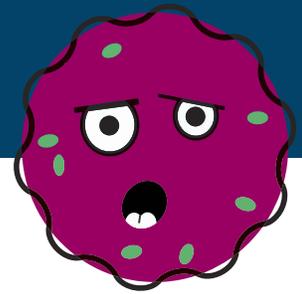
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Norovirus Toolkit • FAQ

Here are some frequently asked questions



FAQ

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. It is important to collect stool specimens to confirm the outbreak etiology.

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

A: Probably not. You must use a cleaner/disinfectant that specifically says that it is effective against norovirus on the label.

Consider choosing a product that is also effective against *C. difficile*; [EPA's Registered Antimicrobial Products Effective Against *Clostridioides difficile* \(*C. diff*\) Spores \[List K\] \(www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-clostridioides\)](http://www.epa.gov/pesticide-registration/epas-registered-antimicrobial-products-effective-against-clostridioides).

The bleach solution described in the CHECKLIST is effective against both norovirus and *C. difficile*.

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 local health department as needed. You may want to give your licensor a heads up.

Q: Which staff are considered dietary or food workers?

A: Any staff member who handles or prepares food, trays, utensils, etc., or who assists patients with eating.

Q: How do we report an outbreak of *C. difficile*?

A: Another unit at MDH works with *C. difficile* – please see [Clostridioides \(*Clostridium*\) difficile Toolkit for Long-term Care Facilities \(www.health.state.mn.us/diseases/cdiff/hcp/lctoolkit/\)](http://www.health.state.mn.us/diseases/cdiff/hcp/lctoolkit/) or call call 1-877-676-5414

Q: How do we report an outbreak of flu/influenza?

A: Another unit at MDH works with influenza – please see [Long-term Care: Influenza \(www.health.state.mn.us/diseases/flu/lct/\)](http://www.health.state.mn.us/diseases/flu/lct/) or call call 1-877-676-5414.

Q: How do we report an outbreak of COVID-19?

A: Another unit at MDH works with COVID-19 – please see [Long-term Care: COVID-19 \(www.health.state.mn.us/diseases/coronavirus/hcp/lct.html\)](http://www.health.state.mn.us/diseases/coronavirus/hcp/lct.html) or call 1-877-676-5414.