

## KEY INFORMATION

### How to use this toolkit

This toolkit is designed as a reference for norovirus outbreaks and investigations. It contains a variety of data, tools, and resources for both new and experienced investigators, including:



Articles and Research



Checklists and Guides



Forms and Factsheets



Posters and Fliers



Web-based Resources

### Who should use this toolkit

This toolkit is designed for use by any public health agency involved in a norovirus outbreak investigation. Other partners involved in managing an outbreak response, such as health care facility leadership, school administrators, and those managing other regulated facilities such as child care centers and recreation sites, may also find the contents of this toolkit helpful.

### This toolkit contains three sections:

#### KEY INFORMATION

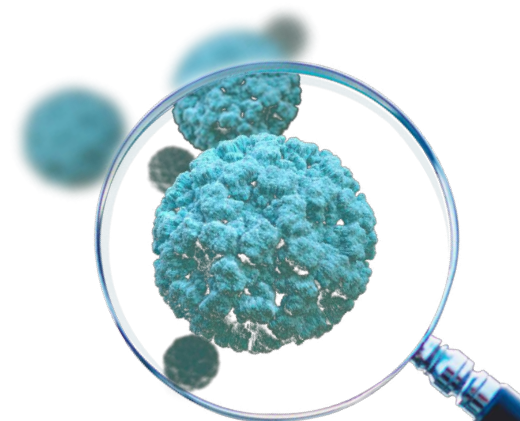
- [Background](#)
- [Prevention Quick Tips](#)
- [Outbreak Reporting](#)

#### SURVEILLANCE AND CONTROL

- [Surveillance and Investigation](#)
- [Laboratory Testing](#)
- [Communications](#)
- [Education](#)
- [Cleaning and Disinfection](#)

#### SETTING-SPECIFIC INVESTIGATIONS

- [Health Care and Long-Term Care Facilities](#)
- [Schools and Childcare Settings](#)
- [Camps and Recreational Facilities](#)
- [Evacuation Centers and Shelters](#)



## KEY INFORMATION

### Background

#### Profile

Norovirus is the most common cause of foodborne disease outbreaks in the United States and is the leading cause of vomiting and diarrhea from acute gastroenteritis (inflammation of the stomach and intestines) among people of all ages in the United States.



#### Symptoms

- Norovirus can cause gastrointestinal illness including: diarrhea, vomiting, nausea, and stomach pain.
- Norovirus may cause severe dehydration and even death, especially in young children, the elderly, and persons with underlying illnesses.

#### Incubation

The incubation period for the virus is **12-48** hours.

#### Transmission

Norovirus is highly contagious, and it's only known transmission reservoir is humans. Norovirus is transmitted by the fecal-oral (or vomitus-oral) route through several mechanisms:

- Direct Person-to-Person contact
- Contaminated food
- Contaminated water
- Contaminated surfaces or objects (environmental transmission)

#### Treatment

**Rehydrate** orally through liquids: water, juice, or ice chips.

#### Immunity

Immunity to norovirus is not completely understood. Although immunity to some types has been observed, infection with one type of norovirus may not provide protection against other types.

#### More Information

For more information about norovirus, how it is spread, how to identify an outbreak, and recommended prevention strategies, read the following resources to learn more:

- [Norovirus Background](#)
- [Norovirus Illness: Key Facts](#)
- [Norovirus Outbreak Detection and Case Definition](#)

### Prevention Quick Tips



Wash your hands frequently



Rinse fruits and vegetables before eating



Cook shellfish thoroughly



Stay home and avoid preparing food for others when sick

## KEY INFORMATION

### Outbreak reporting

#### Identifying an outbreak

An outbreak of norovirus should be suspected when: more persons experience vomiting or diarrhea than would usually be expected for that time of year in a specific setting (school, long-term care facility, restaurant, etc.). A foodborne norovirus outbreak is defined as an incident in which (1) two or more persons experience a similar illness after exposure to the same food source and (2) epidemiologic evidence implicates food as the likely source of the illness. Individual cases of norovirus are not required to be reported to national surveillance systems, however, health departments are encouraged to report norovirus outbreaks to the National Outbreak Reporting System (NORS).

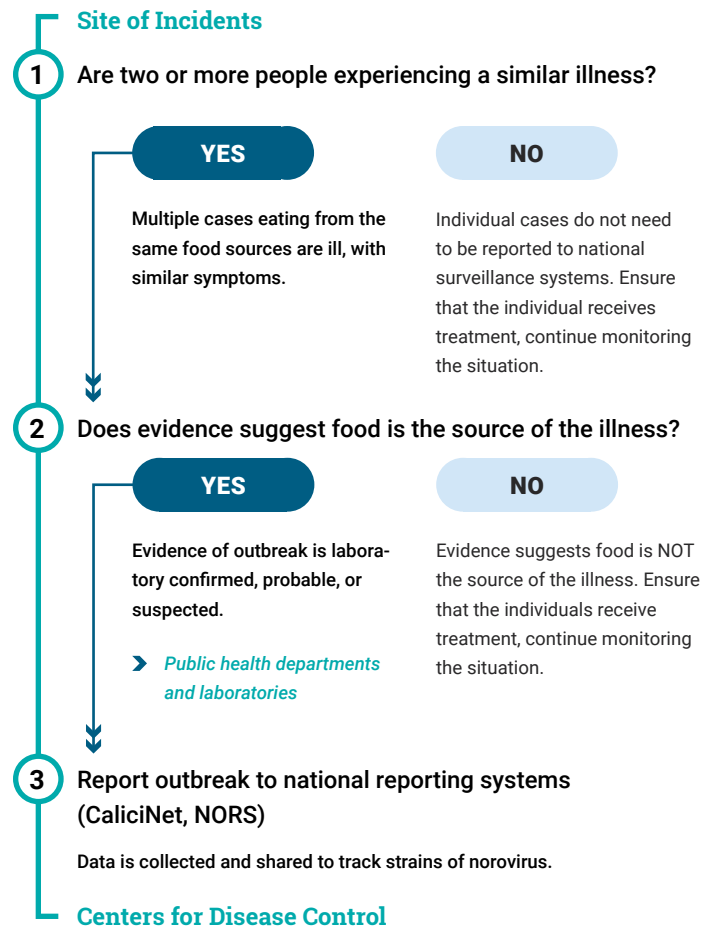
#### Reporting an outbreak

The Centers for Disease Control and Prevention (CDC) manage CaliciNet, the national norovirus outbreak surveillance network. Participating public health laboratories submit data from norovirus outbreaks which helps the CDC link outbreaks to common sources and track specific norovirus strains.

Below are links to these national reporting systems:

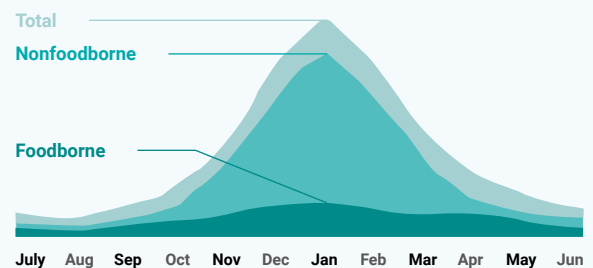
- [NORS](#)
- [CaliciNet](#)

#### Outbreak Reporting Flowchart



#### QUICK FACTS

Although you can get norovirus illness at any time during the year, most norovirus outbreaks in the United States happen from November to April.





## Surveillance and control

Before beginning a norovirus outbreak investigation, review these resources. These tools can be used to guide the steps in your investigation and coordinate surveillance, laboratory testing, communications, education, and cleaning and disinfection strategies. There are additional checklists in the Setting-Specific Resources section that pertain to outbreaks in particular contexts, such as schools or long-term care facilities.

### Investigation and surveillance

Use these **investigation and surveillance tools** to organize your investigation:

- [Norovirus Outbreak Control Checklist for Local Health Jurisdictions](#)
- [Norovirus Outbreak Control Checklist for Facilities](#)
- [Sample Norovirus Line List](#)

### Laboratory testing

Laboratory testing allows investigators to confirm if norovirus is the cause of an outbreak. This step is critical in informing subsequent control and prevention strategies. Use these **laboratory testing tools** to coordinate specimen collection, handling, submission, and testing:

- [Norovirus Laboratory Testing Information](#)
- [Sample Norovirus Test Verbal Consent Form](#)
- [Resources for Specimen Submission for Local Health Jurisdictions](#)

### Communications

During an outbreak, clear communication with all parties involved is key. Use these **communication tools** to communicate with others involved in the investigation and with those impacted by the outbreak (sample notification letters can be found in the Setting-Specific Resources section):

- [Communications Framework for Suspected or Confirmed Norovirus Outbreaks](#)
- [Sample Press Release](#)

### Education

Many factors are involved in norovirus outbreaks. Specific actions and roles, such as food handlers, can make a big difference in the effectiveness of outbreak control and prevention efforts. Use these **education tools** for outreach before or during an outbreak:

- [Handwashing Poster](#)
- [Norovirus: Facts for Food Workers](#)
- [Norovirus: What Healthcare Workers Should Know](#)
- [Dehydration When Sick: Prevention and Recognition](#)

### Cleaning and Disinfection

Norovirus spreads quickly and easily, can stay on surfaces for weeks, and even survives many disinfectants. Use these **cleaning and disinfection tools** to guide the environmental steps of your outbreak response:

- [Clean-up and Disinfection for Norovirus](#)
- [Help Prevent the Spread of Norovirus: Disinfection Steps](#)
- [Environmental Protection Agency's Registered Antimicrobial Products Effective Against Norovirus](#)



## Setting Specific Resources

Health care facilities are the most common sites for norovirus outbreaks in the United States. The setting in which an outbreak occurs impacts important aspects of the investigation, including key partners and specific control strategies. Use these resources to manage outbreaks in long-term care or health care facilities, schools, childcare centers, camps, and evacuation centers or shelters:

### Long-term care or health care facilities

Resources for long-term care or health care facilities:

- [Norovirus Outbreak Control Checklist for Local Health Jurisdictions: Long-Term Care or Health Care Facilities](#)
- [Norovirus Outbreak Control Checklist for Facilities: Long-Term Care or Health Care Facilities](#)
- [Long-Term Care Facility Outbreak Investigation Forms](#)
- [Sample Notification Letter for Long-Term Care or Health Care Facilities](#)
- [Inter-Facility Infection Prevention and Safety Form](#)

### QUICK FACTS

Over half of norovirus outbreaks in the United States occur in health care or long-term care facilities.

Every year norovirus is estimated to cost \$60 billion worldwide due to health care costs and lost productivity.

### Schools or childcare centers

Resources for schools or childcare centers:

- [Norovirus Outbreak Control Checklist for Local Health Jurisdictions: Schools or Childcare Centers](#)
- [Norovirus Outbreak Control Checklist for Facilities: Schools or Childcare Centers](#)
- [Norovirus Toolkit for School or Childcare Center Outbreaks](#)
- [Sample Line List for Schools, Childcare Centers, or Camps](#)
- [Sample Notification Letter for Schools or Childcare Centers](#)
- [Guidance for Parents](#)

### Recreation facilities

Resources for camps:

- [Norovirus Toolkit for Camp Outbreaks](#)
- [Norovirus Prevention at Youth Camps Poster](#)
- [Sample Line List for Schools, Childcare Centers, or Camps](#)
- [Sample Notification Letter for Camps](#)
- [Sample Camper Health History Forms](#)
- [Guidance for Parents](#)
- [Recreational Water Disinfection Factsheet](#)
- [Diarrhea and Swimming Don't Mix Poster](#)

### Evacuation centers or shelters

Resources for evacuation centers or shelters:

- [Norovirus Prevention Recommendations for Evacuation Centers](#)