



GASTROENTERITIS, VIRAL (Outbreaks only)

(Both epidemic and sporadic viral gastroenteritis. See also **FOODBORNE DISEASE**)

1. **Agent:** Noroviruses—formerly named Norwalk-like viruses (NLV)—a family of serologically related viruses; rotaviruses; astroviruses; enteric adenoviruses; other viruses.

2. **Identification:**

a. **Symptoms:** Symptoms may vary by etiologic agent and population; see Appendix B for details.

Norovirus: Nausea, vomiting, diarrhea, abdominal pain, headache, and low-grade fever lasting about 24-48 hours. Present in children and adults.

Rotavirus Group A: Diarrhea and vomiting in infants and young children, which often leads to significant dehydration.

b. **Differential Diagnosis:** See Appendix B—MMWR Guidelines for Confirmation of Foodborne-Disease Outbreaks.*

3. **Incubation:** See Appendix B.

4. **Reservoir:**

- a. **Noroviruses:** Man.
- b. **Rotavirus:** Probably man.
- c. **Other viruses:** Probably man.

5. **Source:** None.

6. **Transmission:** Noroviruses are found in the stool (feces/poop) or vomit of infected people. People can become infected with the virus in several ways, including:

- a. eating food or drinking liquids that are contaminated with norovirus
- b. touching surfaces or objects contaminated with norovirus, and then placing their hand in their mouth

- c. having direct contact with another person who is infected and showing symptoms (for example, when caring for someone with illness, or sharing foods or eating utensils with someone who is ill)
- d. Persons working in day-care centers or nursing homes should pay special attention to children or residents who have norovirus illness. This virus is very contagious and can spread rapidly throughout such environments.

7. **Communicability:** During the acute stage of disease while virus shedding continues. May continue for days after recovery.

8. **Specific Treatment:** None. For dehydrated patients, implement supportive treatment with correction of fluid and electrolyte deficits.

9. **Immunity:**

- a. **Norovirus:** Short-term immunity lasting up to 14 weeks.
- b. **Rotavirus Group A:** By 2 years of age most individuals are immune. A vaccine for infants was approved in 2006.
- c. **Other viruses:** Short-term immunity may occur.

REPORTING PROCEDURES

1. Individual cases not reportable. Outbreaks reportable, *California Code of Regulations*, Section 2502.

Note: acute care facility/hospital and foodborne outbreaks are followed by ACDC; sub-acute health care facility and other community outbreaks are followed by CHS.

2. **Report Form:** Depends upon route of transmission.

If foodborne:
INVESTIGATION OF A FOODBORNE OUTBREAK (52.13, 3/7/2007 fillable).

Available at:
<http://www.publichealth.lacounty.gov/acd/Epi>

* CDC. Appendix B: Guidelines for confirmation of foodborne-disease outbreaks. MMWR 2000; 49(SS01):54-62. Available at:
www.cdc.gov/mmwr/preview/mmwrhtml/ss4901a3.htm.



[Forms/Foodborne%20Outbreak-CDC%2052.13.pdf](#)

If a prepared commercial food item is the LIKELY source of this infection, a **FOODBORNE INCIDENT REPORT (FBIR)** should be filed. Available at: https://www.visualcmr.net/webvcmr/pages/public/pub_FBI_Report.aspx.

For likelihood determination and filing procedures, see Part 1, Section 7 in this manual - Reporting of a Case or Cluster of Cases Associated with a Commercial Food: Filing of Foodborne Incident Reports.

If associated with a healthcare facility:

For acute care facility- **CD OUTBREAK INVESTIGATION – HEALTH CARE FACILITY (H-1164, 5/92)**. Available at: <http://www.publichealth.lacounty.gov/acd/EpiForms/H-1164%20old.pdf>

For sub-acute care facility- **CD OUTBREAK INVESTIGATION – SUB-ACUTE HEALTH CARE FACILITY (H-1164-Sub-Acute, 5/08)**. Available at: <http://www.publichealth.lacounty.gov/acd/EpiForms/CD%20Outbreak%20Investigation%20-%20Sub-Acute-%20H-1164-SubAcute.pdf>

For school/daycare setting:
INITIAL OUTBREAK FORM FOR SCHOOL/DAYCARE SETTINGS (acdc obschdc 3/09). Available at: <http://www.lapublichealth.org/acd/EpiForms/acd-obschdc.pdf> **and**
OUTBREAK WORKSHEET FOR SCHOOL/DAYCARE SETTINGS (7/08). Available at: <http://www.lapublichealth.org/acd/EpiForms/acd-obworksheet.pdf>.

All other settings:
OUTBREAK/USUAL DISEASE REPORT (CDPH 8554, 07/07 fillable). Available at: <http://www.publichealth.lacounty.gov/acd/EpiForms/OBUnusualDiseaseReportCDPH8554.pdf>

If waterborne:
WATERBORNE DISEASES OUTBREAK REPORT (CDC 52.12, 1/2003 fillable). Available at: <http://www.publichealth.lacounty.gov/acd/Epi>

[Forms/Waterborne%20Disease%20Outbreaks-CDC%2052.12.pdf](#)

3. **Epidemiologic Data:**

- a. Other cases among persons attending a common gathering, or in hospital or clinics. Secondary cases.
- b. Possible food and water (potable, recreational) sources.

CONTROL OF CASE, CONTACTS & CARRIERS

Investigate outbreaks within 24 hours.

CASE:

Precautions: Enteric precautions. Food handlers should be removed from work until 48 hours after symptoms end.

CONTACTS:

Search for other cases among household members. Symptomatic food handlers should be managed as a case.

PREVENTION/EDUCATION

1. Implement hygienic measures applicable to diseases transmitted via fecal-oral route, or contaminated fomites route.
2. Prevent exposure of infants and young children to individuals with acute gastroenteritis.
3. For more information on norovirus see the ACDC website at <http://www.publichealth.lacounty.gov/acd/Norovirus.htm> and the CDC norovirus website at <http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus.htm>.

DIAGNOSTIC PROCEDURES

Clinical and epidemiological history will determine tests to be performed. Research laboratory protocols can identify norovirus in stools or vomitus. **In outbreak situations, contact ACDC with outbreak and case information as soon as viral etiology is considered.**

1. **Noroviruses** (children and adults): Testing is a research protocol. Individual patient results will



not be released. At least 3 specimens need to be collected for a norovirus-suspected outbreak, but no more than 10.

Test: Norovirus reverse transcriptase by polymerase chain reaction (RT-PCR), performed by the PHL Molecular Epidemiology Laboratory.

Container: Sterile, 30 oz. wide-mouth, screw-capped bottle.

Laboratory Form: Test Requisition and Report Form H-3021 or online request if electronically linked to the Public Health Laboratory.

Note: Check "other" box and write-in "norovirus." As a research test, norovirus is not on the Sunquest catalog.

Material: 2-3 grams stool (no preservatives). Obtain as soon as possible, preferably within 48 hours of onset, but no later than 7 days.

Storage: Keep refrigerated, not frozen, deliver to the laboratory within 48 hours.

2. **Rotavirus** (infants and children): Testing should be strongly considered when illness is primarily among infants or young children.

Test: EIA (enzyme immunoassay) for rotavirus group A antigen.

Containers: Sterile, 30 oz. wide-mouth, screw-capped bottles.

Laboratory Form: Test Requisition and Report Form H-3021 or online request if electronically linked to the Public Health Laboratory.

Material: 2-3 grams stool (no preservative). Obtain as soon as possible, preferably within 48 hours of onset, but no later than 7 days.

Storage: Keep refrigerated, not frozen, deliver to the laboratory within 48 hours.

In addition, specimens from every outbreak will be sent to the California Viral and Rickettsial Diseases Laboratory for further testing. Complete the following preliminary investigation form that must be sent with these specimens.

CA DPH Laboratory form: Norovirus Outbreaks Submittal Form for Positive Specimens/RNA EXTRACT (Rev 2/17/06). Available at:
<http://www.publichealth.lacounty.gov/acd/EpiForms/norovirusrOBSubmittalForm.pdf>.