

Gastrointestinal (GI) Outbreaks

Toolkit for Long Term Care Facilities (LTCF)



Reporting

Notify New Mexico Department of Health Epidemiology and Response Division as soon as an outbreak is detected

505-827-0006

Transmission

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



Norovirus outbreaks are common in LTCFs

On average, there are **20** norovirus outbreaks **per year** in LTCFs in New Mexico.



Incubation

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



Disinfection

Most GI pathogens, especially norovirus, are very resistant to cleaners. Chlorine bleach is recommended. Hand sanitizer does not work against norovirus! Wash hands for 20 seconds with soap and water.

Infectious Dose

Swallowing as few as 18 norovirus particles can make someone sick. A single gram of feces from an infected individual can contain 10 billion infectious doses of norovirus.



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Supplementary Resources

Sample line list

SLD Clinical Test Request/Specimen Submission Forms

Norovirus Fact Sheet

Stop Norovirus Poster

Incident Cleaning

Visitor Warning Sign

Reporting an Outbreak

Report and Inform

Report the outbreak to the New Mexico Department of Health (NMDOH) and facility management.

- Any outbreak should be immediately reported to **NMDOH Infectious Disease Epidemiology at 505-827-0006**. An infectious disease epidemiologist is available 24/7/365 to answer questions and accept notifiable condition reports.
 - Fax an updated line list (page 8) daily to **505-827-0013** until NMDOH determines the outbreak is over.

What to Report

- Date first person became ill.
- How many residents and staff are ill.
- Symptoms reported for each ill person.
- Duration of illness.
- Location of residence or duties in the facility.
- Vomiting or diarrhea occurrence in communal areas.

Next Steps

Inform all residents, staff and visitors of the outbreak and initiate precautions.

Provide education to facility staff about clinical presentation, disease transmission, and prevention and control measures.

Report the outbreak to the Division of Health Improvement (DHI) at https://ironline.health.state.nm.us/elibrary/ironline/hflc_instructions.php or 1-800-752-8649 (the web link is preferred). Explicitly tell them that we are not requesting any onsite investigation on their part unless we have determined it is necessary.

Work with the Environment Department in your jurisdiction to implement control measures in the kitchen, NMDOH will connect you to the correct environment department.

How to Recognize an Outbreak

What constitutes an outbreak

A GI outbreak in a LTCF is defined as the presence of more diarrhea or vomiting than would be expected in the facility*, or in a particular ward/unit, for a given time frame.

*Residents with diarrhea and receiving stool softeners may not be considered cases.

Common Causes of Acute Gastroenteritis Outbreaks

Etiological Agent	Symptoms	Considerations	Testing
Viral (Norovirus, Sapovirus, Astrovirus)	<ul style="list-style-type: none"> • Acute-onset watery, non-bloody, diarrhea • Acute-onset vomiting • Possible low-grade fever 	<ul style="list-style-type: none"> • Highly infectious • Short incubation period • Typical outbreak agents 	<ul style="list-style-type: none"> • Norovirus PCR • Enteric PCR Panel
<i>Clostridium difficile</i>	<ul style="list-style-type: none"> • Frequent, foul-smelling watery stool • Diarrhea often contains blood and/or mucus 	<ul style="list-style-type: none"> • Typically associated with antibiotic usage • Not a typical cause of rapidly spreading outbreaks 	<ul style="list-style-type: none"> • PCR Panel • <i>C.difficile</i> toxin testing (only available at commercial labs)
Other bacteria (<i>Salmonella</i> , Shiga-toxin <i>E. coli</i> , <i>Campylobacter</i>)	<ul style="list-style-type: none"> • Watery and/or bloody diarrhea • Fever • Occasional vomiting 	<ul style="list-style-type: none"> • Not typically associated with outbreaks in facilities/schools • Foodborne transmission should be considered • Illnesses are often associated with fevers, bloody diarrhea, and/or hospitalization 	<ul style="list-style-type: none"> • Enteric culture • Enteric PCR Panel

NMDOH recommends organizing a clinical evaluation for patients with bloody diarrhea or high fever, and for patients that appear septic.

Norovirus is the most common GI viral illness at LTCF

Individual norovirus cases are not reportable, they will not be individually investigated. However, each case within a suspected outbreak will require review or an interview. New Mexico Department of Health (NMDOH) recommends suspecting norovirus as the agent for all GI outbreaks until confirmed otherwise.

Clinical Case/Illness Definition of Norovirus:

Acute onset of vomiting and/or watery, non-bloody diarrhea (3 or more loose stools in 24-hours) in a resident or staff member in a specified timeframe whose symptoms have no other apparent cause. Abdominal cramps, nausea fever, headache, or body aches may also occur. Symptoms usually last 24-60 hours.

Incubation Period of Norovirus:

Symptoms typically begin 12 to 48 hours after exposure.

Treatment of Norovirus:

There are no antiviral medications or vaccines to treat or protect against noroviruses. Most people recover completely within 1-2 days, with no long-term complications. Dehydration is the most common complication of illness and may require intravenous replacement fluids.

Control Measures

Hand Hygiene is the single most important method to prevent norovirus infection.

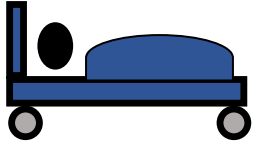
Washing hands with running warm water and plain or antiseptic soap for at least 20 seconds is the most effective and preferred method. Use of alcohol based gels to cleanse hands has not been shown to be consistently effective against norovirus, but may help reduce the spread of other pathogens.



Facility

- When a single ward is affected: at a minimum, restrict admissions and discharges in the ward for a minimum of 48 hours after the resolution of the last case.
- When multiple wards are affected: restrict admissions and discharges for the entire facility for a minimum of 48 hours after the resolution of the last case.
- Provide adequate amounts of gloves, gowns, aprons, masks, goggles and face shields.
- Environmental cleaning (regulatory agencies may request adjustments on a case-by case-basis):
 - Disinfect potentially contaminated surfaces, let sit for 5-10 minutes before rinsing.
 - The most effective disinfectant is a chlorine bleach solution made from diluting household bleach in 1:10 dilution by mixing one cup bleach in nine cups water.
 - Mix new bleach solutions daily, bleach solutions are susceptible to degradation.
 - Disinfect hard non-porous surfaces:
 - Doorknobs, faucets, sinks, toilets, bath rails, phones, counters, chairs, bottles, hand rails, food and drug delivery carts, elevator buttons, light switches, blinds, floors and computer keyboards.
 - Common medical equipment should be adequately disinfected between use.
 - Avoid moving equipment in and out of outbreak areas.
 - Contaminated clothes, linen, and bed curtains should be placed into bags and washed separately in hot water for a complete wash cycle – ideally as a half load for best dilution.
- Disinfect entire kitchen and increase frequency of kitchen cleaning.
- Restrict kitchen service:
 - Use disposable plates, cups, utensils and individual packaged condiments.
 - Remove self-serve areas.
 - Restrict employees that work in areas with ill patients from the kitchen.
 - Disinfect food carts after every use.
- Collect specimen for laboratory testing from symptomatic people.
 - Obtain 2-5 specimens, preferably 5.
- Post signs at appropriate locations throughout the facility (see signs at the end this document).
- Ask nonessential visitors to reschedule their visit.
- Ask any visitors with GI symptoms to avoid visiting.

Control Measures Continued



Residents

- Increase surveillance for diarrhea and vomiting.
- Ensure that all residents wash their hands after using the bathroom, before meals and after any episode of diarrhea or vomiting.
- Isolate ill residents from others by confining them to their rooms until 3 days after their last symptoms resolve.
- Group ill people together (cohort) if possible.
- Discontinue activities where ill and well residents would be together.
- Group activities should be kept to a minimum or ideally postponed until the outbreak is over.
- Avoid transferring residents to “sister facilities” or other institutions while cases of gastroenteritis are occurring. If a transfer is necessary, the receiving institution must be notified of the outbreak.



Staff

- Maintain strict hand hygiene when entering and leaving *every* resident room.
 - Wash hands with soap and water for at least 20 seconds when entering or leaving a room.
 - Alcohol-based hand sanitizers may be used when hands are not visibly soiled, though the effectiveness of these products against noroviruses is uncertain.
- Ill staff should stay home for a minimum of 48 hours after symptoms resolve.
- Staff should be assigned to work with either well residents or ill residents.
- All staff should wear gloves when caring for residents or handling bedding.
- Staff should wear masks when caring for a resident who is vomiting.
- Housekeeping staff should wear gloves and masks when cleaning contaminated or potentially contaminated surfaces or laundry.
- Ensure food staff are aware of the necessary precautions in designated food service areas and educate food staff on the importance of hand washing.

Specimen Collection



NMDOH epidemiology staff can help coordinate testing with Scientific Laboratory Division (SLD) by calling 505-827-0006

1. For Norovirus testing, collect a fresh stool specimen (do not use a preservative or any enteric transport media) in a clean, dry container (e.g., urine cup).
 - A minimum volume of one cc is recommended, however, smaller quantities are acceptable.
 - Collection is best during the first 48-72 hours of illness; however, norovirus can be found by PCR in formed stool up to 7 days after symptoms resolve.
 - While norovirus can be detected from vomitus specimens, this specimen type is NOT preferred. If vomitus is the only specimen available for testing, it may be submitted if testing is approved by ERD and coordinated with SLD.
2. Label each specimen container with the patient's first name, last name, date of birth, date and time of collection, and name of the facility.
 - Testing may not be performed if the specimen container is improperly labeled or if the submission form is incomplete.
3. Fill out the SLD Clinical Test Request Forms (included in this document).
 - One form for Norovirus testing and one form for enteric bacteria testing
 - All yellow highlighted fields must be completed.
 - Submitter Information: fill out your facility name/address and submitter code if you know it.
 - Patient Information: fill out patient name, gender, date of birth, patient ID order of collections (1-5) and include an outbreak number and a NORS number for Other ID if the state gave you one.
 - Specimen Information: for stool - check Feces/Stool, for vomit - check Other and write in vomit.
 - Specimen Collection: fill in date and time of collection.
4. Specimens for norovirus testing should be refrigerated (not frozen) after collection and placed on ice during transport to SLD.
 - They can be stored in a refrigerator for up to 7 days and be acceptable for testing.
5. Indicate "Norovirus Testing, PCR" on the outside of the shipping container.
 - Many specimens are received by SLD each day and this will help to rapidly direct the specimens to the appropriate laboratories for testing.
6. If specimens for norovirus testing are collected over a weekend, the specimens should be refrigerated at 35-45 degrees Fahrenheit and processed for shipment to SLD on the next business day unless specific arrangements have been pre-coordinated with SLD.
7. SLD will also rule out *Salmonella*, *Shigella*, and Shiga-toxin positive *E. coli* (STEC). A portion of the stool specimen should be placed in Cary Blair enteric transport medium (pink liquid).
 - Specimens collected in Cary Blair transport medium should be maintained at room temperature. Do not ship specimens in Cary Blair on ice.

Checklist for Outbreaks at Facilities

Evaluation of residents who are sick:

Are ill residents isolated from others by confining them to their rooms?	Yes	No
If ill individuals are not housed in private rooms, are ill residents grouped together when possible (i.e., cohorting)?	Yes	No

Evaluation of the policy for staff members who are sick:

Are there clear criteria for excluding staff from work?	Yes	No
Are there criteria for returning to work after exclusion?	Yes	No
Are criteria being effectively implemented?	Yes	No

Evaluation of visitor policies:

Are visitors restricted during outbreaks?	Yes	No
Do visitors wash their hands upon entering and leaving the room?	Yes	No
Are visitors reminded not to visit if they are sick?	Yes	No
Are warning signs posted where visitors can see them?	Yes	No

Evaluation of hand washing:

Are, soap, running water, and paper towels available?	Yes	No
Is hand washing done properly (lather with soap for at least 20 seconds, rinse, turn off water with paper towel after drying hands)?	Yes	No
Are the sinks adequate and appropriate for varying levels of activities of daily living?	Yes	No
Do staff assist impaired residents wash their hands?	Yes	No
Do residents wash their hands:		
· After using the toilet?	Yes	No
· Before and after eating snacks and meals?	Yes	No
Do staff wash their hands:		
· Upon entering and leaving every resident's room?	Yes	No
· After each diaper change or after assisting a resident with using the bathroom?	Yes	No
· Before preparing food or assisting residents with meals?	Yes	No
· Before administering medicine/treatments?	Yes	No
· Before eating?	Yes	No
· After toileting?	Yes	No
Do staff wear gloves when caring for ill residents or when touching		

Checklist for Outbreaks at Facilities Continued

potentially contaminated surfaces?	Yes	No
Are gloves discarded and hands washed immediately after completing patient care?	Yes	No

Evaluation of environmental controls:

Has administration adjusted staffing to minimizing the flow of staff between sick and well residents?	Yes	No
Have activities where ill and well residents are together been discontinued?	Yes	No
Are group activities kept to a minimum or postponed until the outbreak is over?	Yes	No
Is the facility closed to new admissions until the incubation period expires after the resolution of the last case?	Yes	No
Is an <u>appropriate</u> disinfectant used? (For example, 1/4 cup bleach per gallon of water prepared daily)?		
Are areas contaminated with vomitus and/or diarrhea cleaned immediately with appropriate disinfectant?	Yes	No
Is a disinfectant used <i>at least</i> daily to clean surfaces such as handrails, doorknobs, physical/occupational therapy equipment?	Yes	No
Are contaminated linen and bed curtains placed into laundry bags immediately upon removal or use?	Yes	No
Are contaminated linen, laundry bags, and bed curtains washed separately in hot water for a complete wash cycle – ideally as a half load for best dilution?	Yes	No
Do housekeeping staff wear gloves when cleaning contaminated or potentially contaminated surfaces or laundry?	Yes	No
Do housekeeping staff wear masks when cleaning contaminated or potentially contaminated surfaces or laundry? (If norovirus suspected)	Yes	No

Are written hand washing instructions/reminders posted?

Yes No

Evaluation of the cleanliness of the food preparation area.

Yes No

Is there a hand washing sink in the kitchen with soap, running water, and paper towels?



SLD CLINICAL TEST REQUEST FORM

Scientific Laboratory Division
1101 Camino de Salud N.E.
Albuquerque, NM 87102

SLD LAB NO. ONLY
ONE FORM PER SPECIMEN

PLEASE PRINT LEGIBLY

SLD Form 101 v3.0

USER CODES →

<input checked="" type="checkbox"/> 51000 (Epidemiology)	<input type="checkbox"/> 52325 (PHD: Adult Hepatitis)
<input type="checkbox"/> 52000 (PHD: General)	<input type="checkbox"/> 52330 (PHD: TB Program)
<input type="checkbox"/> 52110 (PHD: Prenatal)	<input type="checkbox"/> 51006 (EIP)
<input type="checkbox"/> 52120 (PHD: Family Plan)	<input type="checkbox"/> 70704 (OMI)
<input type="checkbox"/> 52340 (PHD: Refugee)	<input type="checkbox"/> Other: (Enter Number) <input type="text"/>

Please limit to one code per form

SLD _____ DATE _____
 USE >>> <<< TIME _____
 ONLY _____ STAMP _____

SUBMITTER INFORMATION PATIENT INFORMATION

SUBMITTER CODE _____
 FACILITY NAME _____
 ADDRESS _____
Street or PO
 City State Zip Code
 PHONE () _____
 ATTENTION: _____

PATIENT NAME _____
Last First
 GENDER MALE FEMALE TRANSGENDER
 DATE OF BIRTH MM/ DD/ YYYY : ____/____/____
 ADDRESS _____
Street or PO
 City State Zip Code
 PATIENT ID (MRN#) _____
 SOCIAL SECURITY _____
 OTHER ID (HIV#) _____

CLINICIAN NAME Chad Smelser
Last First
 PHONE # (505) 827-0006

RACE: Check all that apply.
 American Indian/Alaskan Native Asian Black/African American
 Native Hawaiian/Pacific Islander White Other
 ETHNICITY: Hispanic Non-Hispanic

SPECIMEN INFORMATION

<input type="checkbox"/> Abscess	<input type="checkbox"/> Bronchial Biopsy	<input type="checkbox"/> Hair	<input type="checkbox"/> Nasal wash	<input type="checkbox"/> Sputum, nebulized
<input type="checkbox"/> Ascites fluid	<input type="checkbox"/> Bronchial Wash	<input type="checkbox"/> Fluid (site): _____	<input type="checkbox"/> Pericardial fluid	<input type="checkbox"/> Throat swab
<input type="checkbox"/> Blood, femoral	<input type="checkbox"/> Bronchoalveolar lavage	<input type="checkbox"/> Liver	<input type="checkbox"/> Peritoneal fluid	<input type="checkbox"/> Throat wash
<input type="checkbox"/> Blood, heart	<input type="checkbox"/> Cervix	<input type="checkbox"/> Lymph node	<input type="checkbox"/> Pleural fluid	<input type="checkbox"/> Tissue (site): _____
<input type="checkbox"/> Blood, plasma	<input type="checkbox"/> CSF	<input type="checkbox"/> Lung, left	<input type="checkbox"/> Pleural Biopsy	<input type="checkbox"/> Tracheal aspirate
<input type="checkbox"/> Blood, serum	<input type="checkbox"/> Ear	<input type="checkbox"/> Lung, right	<input type="checkbox"/> Rectum	<input type="checkbox"/> Urine
<input type="checkbox"/> Blood, whole	<input type="checkbox"/> Endocervix	<input type="checkbox"/> Nail (site) _____	<input type="checkbox"/> Rectum/Vagina	<input type="checkbox"/> Urethra
<input type="checkbox"/> Bone	<input type="checkbox"/> Eye	<input type="checkbox"/> Nasopharyngeal swab	<input type="checkbox"/> Skin (site) _____	<input type="checkbox"/> Vagina
<input type="checkbox"/> Bone marrow	<input type="checkbox"/> Feces/Stool	<input type="checkbox"/> Nasopharyngeal wash	<input type="checkbox"/> Spleen	<input type="checkbox"/> Wound (site): _____
<input type="checkbox"/> Brain	<input type="checkbox"/> Genital	<input type="checkbox"/> Nasal swab	<input type="checkbox"/> Sputum, natural	<input type="checkbox"/> Other: _____

SPECIMEN COLLECTION	SPECIMEN TYPE	CLINICAL SYMPTOMS
Date/Time Collected ____/____/____ <small>MM/ DD/ YYYY Military Time</small>	<input type="checkbox"/> Clinical <input type="checkbox"/> Reference	<input type="checkbox"/> Asymptomatic <input type="checkbox"/> Symptomatic: Date of onset: MM / DD / YYYY

ANALYSIS REQUESTED

For Details: <http://nmhealth.org/publication/view/general/1496/>

BACTERIOLOGY <input type="checkbox"/> B. anthracis <input type="checkbox"/> B. cereus/S. aureus <input type="checkbox"/> Culture, OMI <input type="checkbox"/> Culture, OMI anaerobic <input type="checkbox"/> Campylobacter species: _____ <input type="checkbox"/> E. coli O157:H7 <input type="checkbox"/> EIP Group A Streptococcus <input type="checkbox"/> EIP Group B Streptococcus <input type="checkbox"/> EIP S. pneumoniae isolate <input type="checkbox"/> GC culture <input type="checkbox"/> Haemophilus influenzae typing <input type="checkbox"/> Listeria monocytogenes <input type="checkbox"/> Legionella culture ID of Bacteria (specify) <input type="checkbox"/> Anaerobe _____ <input type="checkbox"/> Gram negative _____ <input type="checkbox"/> Gram positive _____ Antimicrobial Resistance (Please attach Susceptibility Report) <input type="checkbox"/> CRE Panel (Indicate below) _____ CRE: _____ _____ CRPa (P. aeruginosa) Other: _____	<input type="checkbox"/> N. meningitidis typing <input type="checkbox"/> Plague FA and culture <input type="checkbox"/> Salmonella, serotype: _____ <input type="checkbox"/> Shigella, serotype: _____ <input type="checkbox"/> Shiga Toxin test/isolation <input type="checkbox"/> Tularemia culture <input type="checkbox"/> Vibrio <input type="checkbox"/> Yersinia enterocolitica: _____ <input type="checkbox"/> Other: _____	<input type="checkbox"/> Arbovirus ID <input type="checkbox"/> CDC referral (attach form 50.34) <input type="checkbox"/> HIV Ag/Ab Combo with Reflex <input type="checkbox"/> Hepatitis A Diagnosis (IgM Only) <input type="checkbox"/> Hepatitis A Immune Status <input type="checkbox"/> Hepatitis B Pre-Vaccination <input type="checkbox"/> Hepatitis B Prenatal Screen <input type="checkbox"/> Hepatitis B Post-Vaccination <input type="checkbox"/> Hepatitis B Post-Vaccination <input type="checkbox"/> Hepatitis B High Risk <input type="checkbox"/> Hepatitis B High Risk and HCV <input type="checkbox"/> Hepatitis C Antibody (Anti-HCV) <input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Hepatitis A,B and C Diagnostic Panel (Acute) <input type="checkbox"/> Mumps Immune Status <input type="checkbox"/> Plague/Tularemia antibody <input type="checkbox"/> Rubella immune status <input type="checkbox"/> Rubella diagnosis (call first) <input type="checkbox"/> Rubeola immune status <input type="checkbox"/> Rubeola diagnosis (call first) <input type="checkbox"/> SNV Hantavirus <input type="checkbox"/> Syphilis RPR with Reflex to TPPA <input type="checkbox"/> Syphilis RPR and TPPA <input type="checkbox"/> TB Quantiferon <input type="checkbox"/> VZV immune status	
	AFB/TUBERCULOSIS/MYCOLOGY <input type="checkbox"/> Aerobic actinomycetes <input type="checkbox"/> AFB Culture <input type="checkbox"/> AFB Reference Isolate Suspected ID: _____ <input type="checkbox"/> Fungal/Yeast Culture <input type="checkbox"/> Fungal/Yeast Reference Isolate Suspected ID: _____	MOLECULAR <input type="checkbox"/> Pertussis (Bordetella sp.) PCR <input type="checkbox"/> Other: _____ (ERD only)	<input checked="" type="checkbox"/> Virus Isolation Agent(s) suspected: ___ Influenza Rapid Test: Pos ___ Neg ___ Not Performed ___ ___ HSV <input checked="" type="checkbox"/> Other (Specify): <u>norovirus</u>	MOLECULAR <input type="checkbox"/> Dengue/Chikungunya PCR <input type="checkbox"/> Ebola PCR <input type="checkbox"/> Other: _____ (ERD only)

Phone #'s: General Microbiology (505)383-9126/27/28; Molecular Biology (505)383-9130/60; Virology/Serology(505)383-9125/24/33; Specimen Receiving (505)383-9122; SLD Main (505)383-9000; Fax(505)383-9121



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Scientific Laboratory Division
1101 Camino de Salud N.E.
Albuquerque, NM 87102

SLD LAB NO. ONLY
ONE FORM PER SPECIMEN

PLEASE PRINT LEGIBLY

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<input type="checkbox"/>	52110 (PHD: Prenatal)	<input type="checkbox"/>	51006 (EIP)
<input type="checkbox"/>	52120 (PHD: Family Plan)	<input type="checkbox"/>	70704 (OMI)
<input type="checkbox"/>	52340 (PHD: Refugee)	<input type="checkbox"/>	Other: (Enter Number) <input type="text"/>

Please limit to one code per form

SLD _____ DATE _____
 USE >>> <<< TIME _____
 ONLY _____ STAMP _____

SUBMITTER INFORMATION

SUBMITTER CODE _____
 FACILITY NAME _____
 ADDRESS _____
Street or PO
 City _____ State _____ Zip Code _____
 PHONE (____) _____

PATIENT INFORMATION

PATIENT NAME _____
Last First
 GENDER MALE FEMALE TRANSGENDER
 DATE OF BIRTH MM/ DD/ YYYY : ____/____/____
 ADDRESS _____
Street or PO
 City _____ State _____ Zip Code _____
 PATIENT ID (MRN#) _____
 SOCIAL SECURITY _____
 OTHER ID (HIV#) _____

CLINICIAN NAME Chad Smelser
Last First
 PHONE # (505) 827-0006

RACE: Check all that apply.
 American Indian/Alaskan Native Asian Black/African American
 Native Hawaiian/Pacific Islander White Other
 ETHNICITY: Hispanic Non-Hispanic

SPECIMEN INFORMATION

<input type="checkbox"/> Abscess	<input type="checkbox"/> Bronchial Biopsy	<input type="checkbox"/> Hair	<input type="checkbox"/> Nasal wash	<input type="checkbox"/> Sputum, nebulized
<input type="checkbox"/> Ascites fluid	<input type="checkbox"/> Bronchial Wash	<input type="checkbox"/> Fluid (site): _____	<input type="checkbox"/> Pericardial fluid	<input type="checkbox"/> Throat swab
<input type="checkbox"/> Blood, femoral	<input type="checkbox"/> Bronchoalveolar lavage	<input type="checkbox"/> Liver	<input type="checkbox"/> Peritoneal fluid	<input type="checkbox"/> Throat wash
<input type="checkbox"/> Blood, heart	<input type="checkbox"/> Cervix	<input type="checkbox"/> Lymph node	<input type="checkbox"/> Pleural fluid	<input type="checkbox"/> Tissue (site): _____
<input type="checkbox"/> Blood, plasma	<input type="checkbox"/> CSF	<input type="checkbox"/> Lung, left	<input type="checkbox"/> Pleural Biopsy	<input type="checkbox"/> Tracheal aspirate
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<input type="checkbox"/> Bone	<input type="checkbox"/> Eye	<input type="checkbox"/> Nasopharyngeal swab	<input type="checkbox"/> Skin (site) _____	<input type="checkbox"/> Vagina
<input type="checkbox"/> Bone marrow	<input type="checkbox"/> Feces/Stool	<input type="checkbox"/> Nasopharyngeal wash	<input type="checkbox"/> Spleen	<input type="checkbox"/> Wound (site): _____
<input type="checkbox"/> Brain	<input type="checkbox"/> Genital	<input type="checkbox"/> Nasal swab	<input type="checkbox"/> Sputum, natural	<input type="checkbox"/> Other: _____

SPECIMEN COLLECTION

Date/Time Collected ____/____/____
MM/ DD/ YYYY Military Time

SPECIMEN TYPE

Clinical
 Reference

CLINICAL SYMPTOMS

Asymptomatic
 Symptomatic: Date of onset: MM / DD / YYYY ____/____/____

ANALYSIS REQUESTED

For Details: <http://nmhealth.org/publication/view/general/1496/>

GENERAL ANALYSIS	BACTERIOLOGY	<input type="checkbox"/> N. meningitidis typing	<input type="checkbox"/> Arbovirus ID	<input type="checkbox"/> Hepatitis A,B and C Diagnostic Panel (Acute)
	<input type="checkbox"/> B. anthracis	<input type="checkbox"/> Plague FA and culture	<input type="checkbox"/> CDC referral (attach form 50.34)	<input type="checkbox"/> Mumps Immune Status
	<input checked="" type="checkbox"/> B. cereus/S. aureus	<input checked="" type="checkbox"/> Salmonella, serotype: _____	<input type="checkbox"/> HIV Ag/Ab Combo with Reflex	<input type="checkbox"/> Plague/Tularemia antibody
	<input type="checkbox"/> Culture, OMI	<input checked="" type="checkbox"/> Shigella, serotype: _____	<input type="checkbox"/> Hepatitis A Diagnosis (IgM Only)	<input type="checkbox"/> Rubella immune status
MICROBIOLOGY	<input type="checkbox"/> Culture, OMI anaerobic	<input checked="" type="checkbox"/> Shiga Toxin test/isolation	<input type="checkbox"/> Hepatitis A Immune Status	<input type="checkbox"/> Rubella diagnosis (call first)
	<input checked="" type="checkbox"/> Campylobacter species: _____	<input type="checkbox"/> Tularemia culture	<input type="checkbox"/> Hepatitis B Pre-Vaccination	<input type="checkbox"/> Rubeola immune status
	<input type="checkbox"/> E. coli O157:H7	<input type="checkbox"/> Vibrio	<input type="checkbox"/> Hepatitis B Prenatal Screen	<input type="checkbox"/> Rubeola diagnosis (call first)
	<input type="checkbox"/> EIP Group A Streptococcus	<input type="checkbox"/> Yersinia enterocolitica: _____	<input type="checkbox"/> Hepatitis B Post-Vaccination	<input type="checkbox"/> SNV Hantavirus
MOLECULAR	<input type="checkbox"/> EIP Group B Streptococcus	<input checked="" type="checkbox"/> Other: <u>C. Perfringes</u>	<input type="checkbox"/> Hepatitis B Post-Vaccination	<input type="checkbox"/> Syphilis RPR with Reflex to TPPA
	<input type="checkbox"/> EIP S. pneumoniae isolate	AFB/TUBERCULOSIS/MYCOLOGY	<input type="checkbox"/> Hepatitis B High Risk	<input type="checkbox"/> Syphilis RPR and TPPA
	<input type="checkbox"/> GC culture	<input type="checkbox"/> Aerobic actinomycetes	<input type="checkbox"/> Hepatitis B High Risk and HCV	<input type="checkbox"/> TB Quantiferon
	<input type="checkbox"/> Haemophilus influenzae typing	<input type="checkbox"/> AFB Culture	<input type="checkbox"/> Hepatitis C Antibody (Anti-HCV)	<input type="checkbox"/> VZV immune status
ANTIMICROBIAL RESISTANCE	<input type="checkbox"/> Listeria monocytogenes	<input type="checkbox"/> AFB Reference Isolate	<input type="checkbox"/> Other (Specify): _____	MOLECULAR
	<input type="checkbox"/> Legionella culture	<input type="checkbox"/> Suspected ID: _____	<input type="checkbox"/> Virus Isolation	<input type="checkbox"/> Dengue/Chikungunya PCR
	ID of Bacteria (specify)	<input type="checkbox"/> Fungal/Yeast Culture	Agent(s) suspected:	<input type="checkbox"/> Ebola PCR
	<input type="checkbox"/> Anaerobe _____	<input type="checkbox"/> Fungal/Yeast Reference Isolate	___ Influenza	<input type="checkbox"/> Other: _____
CRE/CRPa/Other	<input type="checkbox"/> Gram negative _____	<input type="checkbox"/> Suspected ID: _____	Rapid Test: Pos ___ Neg ___	(ERD only)
	<input type="checkbox"/> Gram positive _____	MOLECULAR	Not Performed _____	
	Antimicrobial Resistance	<input type="checkbox"/> Pertussis (Bordetella sp.) PCR	___ HSV	
	(Please attach Susceptibility Report)	<input type="checkbox"/> Other: _____	___ Other _____	
<input type="checkbox"/> CRE Panel (Indicate below)				
___ CRE: _____				
___ CRPa (P. aeruginosa)				
Other: _____				

Phone #'s: General Microbiology (505)383-9126/27/28; Molecular Biology (505)383-9130/60; Virology/Serology (505)383-9125/24/33; Specimen Receiving (505)383-9122; SLD Main (505)383-9000; Fax (505)383-9121

Norovirus Fact Sheet

What are noroviruses?

Norovirus is a virus that causes the “stomach flu,” or vomiting and diarrhea, in people.

What are the symptoms of illness caused by noroviruses?

Common symptoms are nausea, vomiting, diarrhea and stomach cramping. Sometimes people have a low-grade fever, chills, headache, muscle aches and a general sense of tiredness. Norovirus illness usually begins 12 - 48 hours after exposure, but can appear as early as 12 hours after exposure. The illness is usually brief, with symptoms lasting only 1 to 3 days. Sometimes people are unable to drink enough liquids to replace what they lose from vomiting and diarrhea, and they can become dehydrated and need to see a doctor. This problem usually occurs only among the very young, the elderly, and persons with weakened immune systems.

How is norovirus spread?

Noroviruses are very contagious and spread easily from person to person. The virus is found in the stool (feces) and vomit of infected people. People can become infected in several ways, including:

- eating food or drinking liquids that are “dirtied” or contaminated by infected food handlers
- touching objects contaminated with norovirus and then touching their mouth before hand washing
- having direct contact with an infected person and then touching their mouth before hand washing
- drinking water contaminated by sewage.

Persons working in day-care centers or nursing homes should pay special attention to children or residents who have norovirus illness. This virus can spread quickly in such places.

How long are people contagious?

People infected with norovirus can spread the germ from the moment they begin feeling ill to at least three days after recovery. Some people may be contagious for as long as two weeks after recovery. Persons sick with norovirus should not prepare food while they have symptoms and for three days after they recover. **Good hand washing is important.** Infected people do not become long-term carriers of norovirus.

Who gets norovirus infection?

Anyone can become infected with these viruses. Because there are many different strains of norovirus, norovirus infection and illness can re-occur throughout a person’s lifetime.

What treatment is available for people with norovirus infection?

Currently, there is no medication or vaccine for norovirus. Norovirus infection cannot be treated with antibiotics. By drinking fluids, such as juice or water, people can reduce their chance of becoming dehydrated.

Sports drinks do not replace the nutrients and minerals lost during this illness.

Do infected people need to be kept home from school, work or daycare?

Since the virus is passed in vomit and stool, children should not go to day care or school while they have diarrhea or vomiting. Once illness ends, children can return to daycare, but hand washing must be strictly monitored. Persons who work in nursing homes, take care of patients, or handle food should stay out of work until at least 48 hours after symptoms end.

Can norovirus infections be prevented?

You can decrease your chance of coming in contact with noroviruses by following these practices:

- Wash hands frequently with water and soap. (Sanitizing gel may be substituted when hands are not visibly soiled.)
- Promptly disinfect contaminated surfaces with household chlorine bleach-based cleaners.
- Wash soiled clothing and linens.
- Avoid food or water from sources that may be contaminated.

Norovirus Fact Sheet

¿Qué son los norovirus?

Los norovirus son un grupo de virus que causan la “gripe estomacal”, o vómitos y diarrea en las personas.

¿Cuáles son los síntomas de una enfermedad causada por los norovirus?

Los síntomas habituales son náuseas, vómitos y retorcijones en el estómago. Algunas personas pueden tener una fiebre baja, escalofríos, dolor de cabeza, dolores musculares y una sensación general de cansancio. La enfermedad comienza normalmente entre 12 y 48 horas después de haber estado expuesto, pero puede aparecer tan sólo 12 horas después. La enfermedad normalmente es breve, los síntomas sólo duran entre 1 y 3 días. A veces si no se toman suficientes líquidos para reponer los que se están perdiendo por vómitos y diarrea, las personas pueden deshidratarse y tendrán que ir al médico. Este problema, por lo general, sólo ocurre en los que son muy jóvenes, las personas mayores y los que tienen su sistema inmune debilitado.

¿Cómo se transmiten los norovirus?

Los norovirus son *muy* contagiosos y se transmiten fácilmente de persona a persona. El virus se encuentra en las heces y vómitos de las personas infectadas. Se puede transmitir de varias formas, como por ejemplo:

- Al comer algo o beber líquidos contaminados por las personas infectadas que los manipularon.
- Al tocar objetos contaminados con los norovirus y después, sin lavarse las manos, tocarse la boca.
- Por contacto directo con una persona infectada y después, sin lavarse las manos, tocarse la boca.
- Al beber agua contaminada con desechos residuales o aguas negras.

Las personas que trabajen en centros de cuidado infantil o residencias para ancianos deben prestar especial atención a los niños o residentes que estén enfermos con este virus. Estos virus se pueden transmitir rápidamente en estos lugares.

¿Por cuánto tiempo puede una persona con este virus contagiar a otros?

Las personas infectadas pueden transmitir el germen desde el momento en que empiecen a sentirse enfermas hasta tres días después de haberse recuperado. Algunos pueden ser contagiosos hasta por dos semanas después de haberse recuperado. Las personas enfermas con norovirus no deben preparar alimentos mientras tengan síntomas y deben esperar hasta que hayan pasado 3 días sin síntomas. **Es importante lavarse bien las manos.** El virus no permanece en las personas y, por eso, no son portadoras del virus.

¿Quién puede contraer una infección por norovirus?

Cualquiera puede contraerla. Puesto que existen muchas cepas (variedades) diferentes del norovirus, las infecciones pueden darse más de una vez en la vida de una persona.

¿Cómo se tratan las infecciones por norovirus?

Hoy día no existe medicación o vacuna para los norovirus. La infección no se puede tratar con antibióticos. Para reducir la posibilidad de quedar deshidratado, es necesario beber muchos líquidos, como agua o jugos. Las bebidas deportivas no reemplazan los nutrientes y minerales que se pierden con esta enfermedad.

¿Es necesario quedarse en casa y no ir a la escuela, a la guardería o al trabajo?

Puesto que el virus se encuentra en el vómito y las heces, los niños no deben ir a la escuela o a la guardería mientras tengan diarrea o vómitos. Una vez se recuperen, pueden regresar, pero deben lavarse las manos con mucho cuidado. Las personas que trabajan en residencias de ancianos, cuidan de pacientes o manipulan alimentos no deben ir a trabajar hasta que hayan pasado dos días sin ningún síntoma.

¿Se pueden prevenir estas infecciones?

Para reducir las posibilidades de tener contacto con los norovirus, haga lo siguiente:

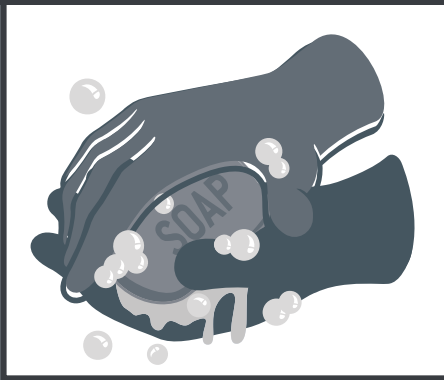
- Lávese las manos con frecuencia con agua y jabón. (En lugar de lavárselas puede usar un gel desinfectante para manos cuando no se vean sucias).
- Desinfecte las superficies contaminadas con blanqueador de cloro.
- Lave todas las prendas de vestir y ropa de cama que se hayan ensuciado.
- Evite tomar agua o comida que puedan provenir de fuentes contaminadas.

Stop Norovirus!

Norovirus causes diarrhea and vomiting. It spreads easily from person to person and by touching contaminated hardware, such as toilet, faucet, and door handles. Infected elderly are more likely to become very sick or die.

Protect your facility from norovirus.

WASH YOUR HANDS



Wash your hands often with soap and water for at least 20 seconds each time and avoid touching your mouth.

CLEAN SURFACES



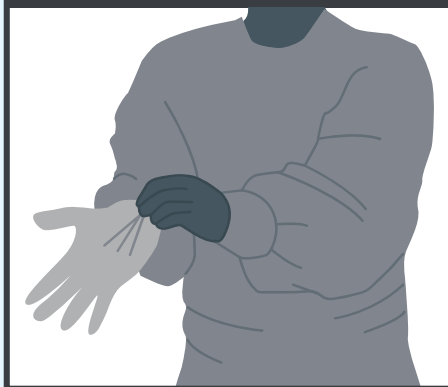
Use a bleach-based cleaner or other approved product* to disinfect surfaces and objects that are frequently touched.

WASH LAUNDRY



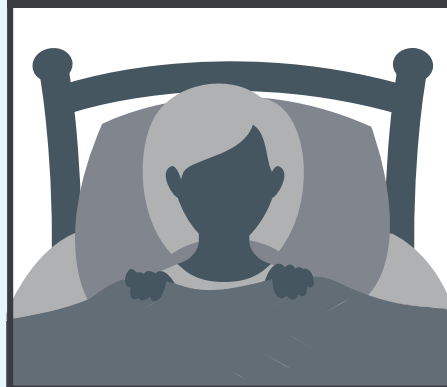
Remove and bag soiled clothes and linens, wash with detergent and hot water at the maximum cycle length and machine dry at the highest heat setting.

USE GOWN AND GLOVES



Use gown and gloves when touching or caring for patients to reduce exposure to vomit or fecal matter.

STAY HOME WHEN SICK



If you're sick, stay home and don't take care of or visit people in long-term care facilities for at least 2 days after your symptoms stop.

For more information, visit www.cdc.gov/norovirus



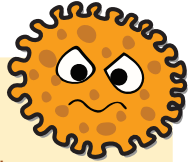
*Use a chlorine bleach solution with a concentration of 1000-5000 ppm (5-25 tablespoons of household bleach [5.25%] per gallon of water) or other disinfectant registered as effective against norovirus by the Environmental Protection Agency (EPA) at http://www.epa.gov/oppad001/list_g_norovirus.pdf



Clean-up and Disinfection for Norovirus ("Stomach Bug")

THESE DIRECTIONS SHOULD BE USED TO RESPOND TO ANY VOMITING OR DIARRHEA ACCIDENT

Note: Anything that has been in contact with vomit and diarrhea should be discarded or disinfected.



1 Clean up

- Remove vomit or diarrhea right away!**
 - Wearing protective clothing, such as disposable gloves, apron and/or mask, wipe up vomit or diarrhea with paper towels
 - Use kitty litter, baking soda or other absorbent material on carpets and upholstery to absorb liquid; do not vacuum material: pick up using paper towels
 - Dispose of paper towel/waste in a plastic trash bag or biohazard bag
- Use soapy water to wash surfaces that contacted vomit or diarrhea and all nearby high-touch surfaces, such as door knobs and toilet handles**
- Rinse thoroughly with plain water**
- Wipe dry with paper towels**

DON'T STOP HERE: GERMS CAN REMAIN ON SURFACES EVEN AFTER CLEANING!

2 Disinfect surfaces by applying a chlorine bleach solution

Steam cleaning may be preferable for carpets and upholstery. Chlorine bleach could permanently stain these. Mixing directions are based on EPA-registered bleach product directions to be effective against norovirus. For best results, consult label directions on the bleach product you are using.

a. Prepare a chlorine bleach solution

Make bleach solutions fresh daily; keep out of reach of children; never mix bleach solution with other cleaners.

IF HARD SURFACES ARE AFFECTED...
e.g., non-porous surfaces, vinyl, ceramic tile, sealed counter-tops, sinks, toilets

3/4 CUP OF CONCENTRATED BLEACH + **1 GALLON WATER**

CONCENTRATION ~3500 ppm

IF USING REGULAR STRENGTH BLEACH (5.25%), INCREASE THE AMOUNT OF BLEACH TO 1 CUP.

- Leave surface wet for at least 5 minutes**
- Rinse all surfaces intended for food or mouth contact with plain water before use**

3 Wash your hands thoroughly with soap and water

Hand sanitizers may not be effective against norovirus.

Facts about Norovirus

Norovirus is the leading cause of outbreaks of diarrhea and vomiting in the US, and it spreads quickly.

Norovirus spreads by contact with an infected person or by touching a contaminated surface or eating contaminated food or drinking contaminated water. Norovirus particles can even float through the air and then settle on surfaces, spreading contamination.

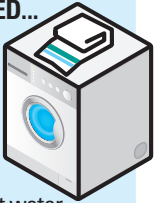
Norovirus particles are extremely small and billions of them are in the stool and vomit of infected people.

Any vomit or diarrhea may contain norovirus and should be treated as though it does.

People can transfer norovirus to others for at least three days after being sick.

IF CLOTHING OR OTHER FABRICS ARE AFFECTED...

- Remove and wash all clothing or fabric that may have touched vomit or diarrhea
- Machine wash these items with detergent, hot water and **bleach** if recommended, choosing the longest wash cycle
- Machine dry



Scientific experts from the U.S. Centers for Disease Control and Prevention (CDC) helped to develop this poster. For more information on norovirus prevention, please see <http://www.cdc.gov/norovirus/preventing-infection.html>.



co.somerset.nj.us/health



neha.org



waterandhealth.org



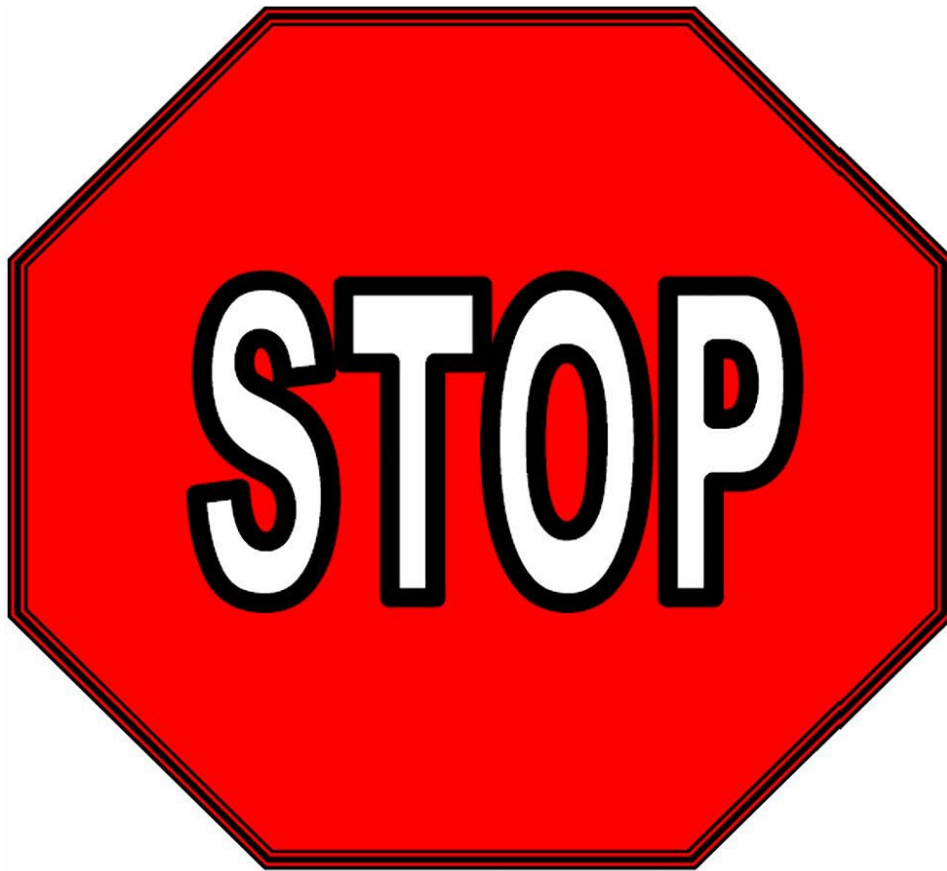
americanchemistry.com



cfour.org

disinfect-for-health.org

Updated March, 2015



ATTENTION VISITORS!!!

Some Residents are Currently Ill

**Please wash your hands before visiting and before leaving.
You may wish to reconsider visiting at this time.**

If you have any questions, please contact either the Administrator of Nursing

or the Director _____



Hand washing is the single most important practice to prevent the spread of outbreaks!

HANDS MUST BE WASHED:

- Whenever they are visibly soiled or there has been contact with stool.
- Between contact with different residents.
- Before putting on gloves and after removing gloves.
- After using the toilet.
- Before eating or smoking.
- Before handling or preparing food.

A PROPER HAND WASH INCLUDES:

- Using warm running water and soap with plenty of friction for 30 seconds.
- Using a clean paper towel to dry your hands and to turn off the tap.

Use of a waterless hand sanitizer may be substituted for handwashing if adequate sink facilities are not immediately accessible and hands are not visibly soiled.