OMB 0920-004 exp date: 8/31/2014

Centers for Disease Control and Prevention (CDC)
Division of Viral Diseases
National Calicivirus Laboratory

FORM FOR SUBMITTING SPECIMENS FROM SUSPECTED NOROVIRUS OUTBREAKS

National Calicivirus Laboratory
DASH Unit 187
Centers for Disease Control and Prevention
1600 Clifton Rd, N.E.
Atlanta, GA 30333

Telephone: 404-639-1923
Alternate: 404-639-3577
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Primary Contact for Epidemiologic Investigation

Date: _____

Name: _____ Telephone: _____

Agency: _____ Email: _____

Address: _____

State Outbreak Identification Number: _____

Outbreak Date: _____

End Date: _____

Event Date(s): _____

OUTBREAK INFORMATION

City	
County	
State	
Setting (e.g., long-term care facility)	
Transmission (e.g., person-to-person, food)	
Suspected Source	
Additional Comments:	

ILLNESS CHARACTERISTICS

	Number
Sick	
Susceptible	
Sought Care	
Admitted to hospital	
Deaths	
Fever	
Diarrhea	
Vomitus	
Duration (range, in hours)	
Incubation time (range, in hours)	

Public reporting burden of this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC, Reports Clearance Officer, 1600 Clifton Rd., MS D-74, Atlanta, GA 30333, ATTN: PRA (0920-0004).

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Primary Contact for Clinical Specimens

Name: _____

Telephone: _____

Email: _____

Specimens Collection:*

Type	Number collected	Any previous testing (yes/no)	If yes, details about results
Stool			
Vomitus			
Serum (acute)			
Serum (convalescent)			

*See page 3 for specimen collection recommendations.

Specimen Details:

Specimen ID	Date of Collection	Date onset	Age	Additional Information

Additional Comments:

Revised 06/12

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RECOMMENDATIONS FOR COLLECTION of CLINICAL SPECIMENS FOR NOROVIRUS LABORATORY DIAGNOSIS

Stool Samples

Timing. Specimen collection for viral testing should begin on day 1 of the epidemiologic investigation. Delaying collection of specimens for viral testing while awaiting test results for bacterial or parasitic agents could preclude establishing a viral diagnosis. **Ideally, whole stool specimens should be obtained during the acute phase of illness (i.e., within 48--72 hours after onset) while the stools are still liquid or semisolid** when the virus titer is greatest. With the increased sensitivity of real-time RT-PCR assays, norovirus and sapovirus can be collected later during the illness (i.e., 7--10 days after onset), if the testing is necessary for either determining the etiology of the outbreak or for epidemiologic purposes (e.g., a specimen obtained from an ill food handler who might be the source of infection).

Number and Quantity. Ideally, specimens from **at least 5 ill persons** should be collected during the acute phase of illness. Bulk samples (i.e., 10--50 ml of stool placed in a stool cup or urine container) are preferred, as are acute diarrhea specimens that are loose enough to assume the shape of their containers. Serial specimens from persons with acute, frequent, high-volume diarrhea are useful as reference material for the development of assays. The smaller the specimen and the more formed the stool, the lower the diagnostic yield. **Rectal swabs are of limited or no value** because they usually contain insufficient quantity for typing of the strains. Given the high background rate of norovirus in healthy individuals, it may often be useful to collect control specimens against which to compare prevalence in cases.

Storage and Transport. Whole Stool and vomitus specimens collected should be stored in watertight containers (e.g., urine specimen cups) and should be kept refrigerated at 4°C. At this temperature, specimens can be stored without compromising diagnostic yield for 2--3 weeks, during which time testing for other pathogens can be completed. If the specimens have to be transported to a laboratory for testing, they should be bagged and sealed and kept on ice or frozen refrigerant packs in an insulated, waterproof container. If facilities are not available for testing specimens within 2--3 weeks, specimens can be frozen at -20°C or -70°C for antigen or RT-PCR testing.

Vomitus

Vomiting is a characteristic, but not unique symptom of norovirus illness, and vomitus can be collected to supplement the diagnostic yield from stool specimens during an investigation. Recommendations for collection, storage, and shipment of vomitus specimens are the same as those for stool specimens.

Serum

Serum specimens may useful in unique circumstances or for special studies, but are not recommended for routine diagnostics.

Timing. Acute- and convalescent-phase serum specimens should be obtained to test for a diagnostic $\geq$4-fold rise in IgG titer to noroviruses. Acute specimens should be obtained during the first 5 days of symptoms and convalescent serum should be collected 3 weeks after the onset of disease.

Number and Quantity. Ideally, 10 pairs of specimens from ill persons (i.e., the same persons submitting stool specimens) and 10 pairs from well persons (controls) should be obtained. Adults 5--7 ml of blood and children 3--4 ml.

Storage. Matching acute and convalescent serologic specimens should be stored and shipped frozen in plastic (transportable) aliquot tubes Specimens should be collected in tubes containing no anticoagulant, sera should be spun off and frozen.

Environmental Specimens

Current real-time RT-PCR methods allow detection of noroviruses in water, food, and environmental specimens established methods are available only for water (at CDC) and shellfish (at FDA's Gulf Coast Seafood Laboratory). If a food or water item is strongly suspected as the source of an outbreak, then a sample should be obtained as early as possible, stored at 4°C (water) or -20°C (food), and CDC (404-639-1923 or 404-639-3577) should be contacted for further testing.

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