



# National Outbreak Reporting System

## Waterborne Disease Transmission



This form is used to report waterborne disease outbreak investigations. This form has 6 parts, indicated by tabs at the top of each page. Part 1 asks for the minimum or basic information about the outbreak investigation. Part 2 asks for epidemiological data and clinical specimen test results. Parts 3, 4, 5 and 6 collect information about types of water exposure (treated recreational water, untreated recreational water, drinking water, and water not intended for drinking/unknown intent). Only 1 of these 4 water exposure parts should be completed for an outbreak investigation report.

**CDC USE ONLY**

CDC Report ID

State Report ID

Form Approved  
OMB No. 0920-0004

### General Section

#### Primary Mode of Transmission (check one)

Food (Complete CDC 52.13)

Person-to-person (Complete CDC 52.13)

Water (Complete tabs for General, Water-General and type of water exposure)

Environmental contamination other than food/water (Complete CDC 52.13)

Animal contact (Complete CDC 52.13)

Indeterminate/Other/Unknown (Complete CDC 52.13)

#### Investigation Methods (check all that apply)

- Interviews only of ill persons
- Case-control study
- Cohort study
- Food preparation review
- Water system assessment: Drinking water
- Water system assessment: Nonpotable water

- Treated or untreated recreational water venue assessment
- Investigation at factory/production/treatment plant
- Investigation at original source (e.g., farm, water source, etc.)
- Food product or bottled water traceback
- Environment/food/water sample testing
- Other

#### Comments

#### Dates (mm/dd/yyyy)

Date first case became ill (required) \_\_\_\_\_

Date last case became ill \_\_\_\_\_

Date of initial exposure \_\_\_\_\_

Date of last exposure \_\_\_\_\_

Date of report to CDC (other than this form) \_\_\_\_\_

Date of notification to State/Territory or Local/Tribal Health Authorities \_\_\_\_\_

#### Geographic Location

Reporting state: \_\_\_\_\_  
 Exposure occurred in multiple states  
 Exposure occurred in a single state but cases resided in multiple states  
 Other states: \_\_\_\_\_

Reporting county: \_\_\_\_\_  
 Exposure occurred in multiple counties in reporting state  
 Exposure occurred in a single county but cases resided in multiple counties in reporting state  
 Other counties: \_\_\_\_\_

City/Town/Place of exposure: \_\_\_\_\_  
*Do not include proprietary or private facility names*

#### Primary Cases

Number of Primary Cases		Sex (estimated percent of the primary cases)				
# Lab-confirmed cases		Male		%		
# Probable cases		Female		%		
# Estimated total primary cases						
	# Cases	Total # of cases for whom info is available	Approximate percent of primary cases in each age group			
# Died			<1 year	%	20-49 years	%
# Hospitalized			1-4 years	%	50-74 years	%
# Visited Emergency Room			5-9 years	%	≥ 75 years	%
# Visited health care provider (excluding ER visits)			10-19 years	%	Unknown	%

**Incubation Period, Duration of Illness, Signs or Symptoms for Primary Cases only**

Incubation Period <i>(select appropriate units)</i>			Duration of Illness <i>(among recovered cases-select appropriate units)</i>		
Shortest		Min, Hours, Days	Shortest		Min, Hours, Days
Median		Min, Hours, Days	Median		Min, Hours, Days
Longest		Min, Hours, Days	Longest		Min, Hours, Days
Total # of cases for whom info is available			Total # of cases for whom info is available		
Unknown incubation period			Unknown duration of illness		

**Signs or Symptoms**

Feature	# Cases with signs or symptoms	Total # cases for whom info available
Vomiting		
Diarrhea		
Bloody stools		
Fever		
Abdominal cramps		
HUS		
Asymptomatic		

**Secondary Cases**

Mode of Secondary Transmission <i>(check one)</i>	Number of Secondary Cases	
Food Water Animal contact Person-to-person Environmental contamination other than food/water Indeterminate/Other/Unknown	# Lab-confirmed secondary cases	
	# Probable secondary cases	
	Estimated total secondary ill	
	Total # of cases (Primary + Secondary)	

**Environmental Health Specialists Network *(if applicable)***

EHS-Net Evaluation ID: 1.) \_\_\_\_\_ 2.) \_\_\_\_\_ 3.) \_\_\_\_\_

**Traceback *(for food and bottled water only, not public water)***

Please check if traceback conducted

Source name <i>(If publicly available)</i>	Source type <i>(e.g. poultry farm, tomato processing plant, bottled water factory)</i>	Location of source		Comments
		State	Country	

**Recall**

Please check if any food or bottled water product was recalled

Type of item recalled:

Comments:

**Reporting Agency**

Agency name: \_\_\_\_\_ E-mail: \_\_\_\_\_  
 Contact name: \_\_\_\_\_ Contact title: \_\_\_\_\_  
 Phone no.: \_\_\_\_\_ Fax no.: \_\_\_\_\_

**Remarks** *Briefly describe important aspects of the outbreak not covered above. Please indicate if any adverse outcomes occurred in special populations (e.g., pregnant women, immunocompromised persons)*

**Waterborne Disease and Outbreaks - General**

**Type of Water Exposure** (check ONE box)

Water intended for recreational purposes – treated venue (e.g., pool, spa/whirlpool/hot tub, spray pad)	Water intended for recreational purposes – untreated venue (e.g., freshwater lake, hot spring, marine beach)	Water intended for drinking (includes water used for bathing/showering)	Water not intended for drinking or water of unknown intent (e.g., cooling/industrial, occupational, decorative/display)
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**Geographic Location      Symptoms      Route of Entry**

Percent of primary cases living in reporting state : _____ %	<b>For each category, indicate # of persons with:</b>	
<b>Associated Events</b>		
Was exposure associated with a specific event or gathering? Yes      No      Unknown	Gastrointestinal symptoms/ conditions _____	Ingestion
If <b>Yes</b> , what type of event or gathering was involved? _____	Respiratory symptoms/ conditions _____	Contact
_____	Skin symptoms/conditions _____	Inhalation
_____	Ear symptoms/conditions _____	Other, specify: _____
If outbreak occurred during a defined event, dates of event: Start date: _____ End date: _____ (mm/dd/yyyy)      (mm/dd/yyyy)	Eye symptoms/conditions _____	Unknown
_____	Neurologic symptoms/ conditions _____	
_____	Wound infections _____	
_____	Other, specify (e.g., hepatitis A, leptospirosis): _____	

**Epidemiologic Data**

1. Estimated total number of persons with primary exposure: \_\_\_\_\_

2. Were data collected from comparison groups to estimate risk?      Yes (specify in table below)      No      Unknown

    If **No** or **Unknown**, was water the only common source shared by persons who were ill?      Yes      No      Unknown

Exposure (Vehicle/Setting) <i>(e.g., pool—waterpark; hot spring; well water)</i>	Total # Exposed (A)	# Ill Exposed (B)	Total # Not Exposed	# Ill Not Exposed	Attack Rate (%) (B/A)	Odds Ratio	Relative Risk	p-Value <i>(provide exact value)</i>	95% Confidence Interval

**Attack rate for residents of reporting state:** \_\_\_\_\_ %      **Attack rate for non-residents of reporting state:** \_\_\_\_\_ %

**Clinical Specimens - Laboratory Results** (refer to the laboratory findings from the outbreak investigation)

1. Were clinical diagnostic specimens taken from persons?    Yes    No (go to next tab)    Unknown (go to next tab)

If **Yes**, from how many persons were specimens taken? \_\_\_\_\_

Specimen Type*	Specimen Subtype**	Tested for § (list all that apply)

\* Specimen Type: 1- Autopsy Specimen (specify subtype), 2-Biopsy (specify), 3-Blood, 4-Bronchial Alveolar Lavage (BAL), 5-Cerebrospinal Fluid (CSF), 6-Conjunctiva/Eye Swab, 7-Ear Swab, 8-Endotracheal Aspirate, 9-Saliva, 10-Serum, 11-Skin Swab, 12-Sputum, 13-Stool, 14-Urine, 15-Vomit, 16-Wound Swab, 17-Unknown

\*\* Specimen Subtype: 1-Bladder, 2-Brain, 3-Dura, 4-Hair, 5-Intestine, 6-Kidney, 7-Liver, 8-Lung, 9-Nails, 10-Skin, 11-Stomach, 12-Wound, 13-Other, 14-Unknown

§ Tested for: 1-Bacteria, 2-Chemicals/Toxins, 3-Fungi, 4-Parasites, 5-Viruses

Report the confirmed and/or suspected etiological agent(s) in the table below..

Clinical Specimen Row Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype
1				
2				
3				
4				

Clinical Specimen Row Number	Confirmed as Etiology ?	Concentration (numerical value)	Unit	Specimen Type *	Specimen Subtype **
1	Yes				
2	Yes				
3	Yes				
4	Yes				

Clinical Specimen Row Number	Test Type §	Total # People Tested	Total # People Positive
1			
2			
3			
4			

\* Specimen Type: 1- Autopsy Specimen (specify subtype), 2-Biopsy (specify), 3-Blood, 4-Bronchial Alveolar Lavage (BAL), 5-Cerebrospinal Fluid (CSF), 6-Conjunctiva/Eye Swab, 7-Ear Swab, 8-Endotracheal Aspirate, 9-Saliva, 10-Serum, 11-Skin Swab, 12-Sputum, 13-Stool, 14-Urine, 15-Vomit, 16-Wound Swab, 17-Unknown

\*\* Specimen Subtype: 1-Bladder, 2-Brain, 3-Dura, 4-Hair, 5-Intestine, 6-Kidney, 7-Liver, 8-Lung, 9-Nails, 10-Skin, 11-Stomach, 12-Wound, 13-Other, 14-Unknown

§ Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay

**Isolates**

State Lab Isolate ID	Specimen Profile 1 (e.g., the PFGE, MLVA, or genotype sequence)	Specimen Profile 2 (e.g., the PFGE, MLVA, or genotyping method used)

**Recreational Water – Untreated Venue**

**Recreational Water Vehicle Description**

Water Type <i>(e.g., canal; lake; river/stream; ocean)</i>	IF SPRING OR HOT SPRING, Water Subtype <i>(select indoor, outdoor or unknown)</i>	Setting of Exposure <i>(e.g., beach-public; camp/cabin/recreational area)</i>

**Recreational Water Quality**

Did the venue meet state or local recreational water quality regulations?    Yes    No    Unknown    Not applicable

If **No**, explain: \_\_\_\_\_

Did the venue meet Environmental Protection Agency (EPA) recreational water quality standards?    Yes    No    Unknown    Not applicable

If **No**, explain: \_\_\_\_\_

**Laboratory Section - Recreational Water Samples from Untreated Venues**

Was water from untreated recreational water venues tested?    Yes *(specify in table below)*    No    Unknown

Results		1	2	3	4	5
Sample						
Source of Sample <i>(e.g., lake or stream)</i>						
Additional Description <i>(e.g., specific location, time of day, etc)</i>						
Date <i>(mm/dd/yyyy)</i>						
Volume Tested	Number					
	Unit					
Temperature	Number					
	Unit					

**Water Quality Indicator**

Sample Number	Type <i>(e.g., fecal coliforms)</i>	Concentration <i>(numerical value)</i>	Unit

**Microbiology or Chemical/Toxin Analysis *(refer to the laboratory findings from the outbreak investigation)***

Sample Number	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	PFGE Pattern

Sample Number	Test Results Positive?	Concentration <i>(numerical value)</i>	Unit	Test Type*	Test Method <i>(reference: National Environmental Methods Index: <a href="http://www.nemi.gov">http://www.nemi.gov</a>)</i>
	Yes				

\* Test Type: 1-Culture, 2-DNA or RNA Amplification/Detection (e.g., PCR, RT-PCR), 3-Microscopy (e.g., fluorescent, EM), 4-Serological/Immunological Test (e.g., EIA, ELISA), 5-Phage Typing, 6-Chemical Testing, 7-Tissue Culture Infectivity Assay

**Factors Contributing to Recreational Water Contamination and/or Increased Exposure in Untreated Venues**

Factors (check all that apply)*		Documented/ Observed**	Suspected**
PEOPLE	Exceeded maximum bather load	<input type="checkbox"/>	<input type="checkbox"/>
	Primary intended use of water is by diaper/toddler aged children (e.g., kiddie pool)	<input type="checkbox"/>	<input type="checkbox"/>
	Heavy use by child care center groups	<input type="checkbox"/>	<input type="checkbox"/>
	Fecal/vomitous accident	<input type="checkbox"/>	<input type="checkbox"/>
	Patrons continued to swim when ill with diarrhea	<input type="checkbox"/>	<input type="checkbox"/>
SWIM AREA DESIGN	Staff error	<input type="checkbox"/>	<input type="checkbox"/>
	Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
	Hygiene facilities (e.g., toilets, diaper changing facilities) inadequate or distant	<input type="checkbox"/>	<input type="checkbox"/>
	Malfunctioning or inadequate on-site wastewater treatment system *** ≠	<input type="checkbox"/>	<input type="checkbox"/>
	Poor siting/design of on-site wastewater treatment system *** ≠	<input type="checkbox"/>	<input type="checkbox"/>
WATER QUALITY	Stagnant or poorly circulating water in swim area	<input type="checkbox"/>	<input type="checkbox"/>
	Heavy rainfall and runoff	<input type="checkbox"/>	<input type="checkbox"/>
	Sanitary sewer overflow (SSO) impact ***	<input type="checkbox"/>	<input type="checkbox"/>
	Combined sewer overflow (CSO) impact ***	<input type="checkbox"/>	<input type="checkbox"/>
	Domestic animal contamination (e.g., livestock, pets)	<input type="checkbox"/>	<input type="checkbox"/>
	Wildlife contamination - Birds	<input type="checkbox"/>	<input type="checkbox"/>
	Wildlife contamination - Mammals	<input type="checkbox"/>	<input type="checkbox"/>
	Wildlife contamination - Fish kill	<input type="checkbox"/>	<input type="checkbox"/>
	Wastewater treatment plant effluent flows past swim area	<input type="checkbox"/>	<input type="checkbox"/>
	Wastewater treatment plant malfunction ***	<input type="checkbox"/>	<input type="checkbox"/>
	Sewer line break ***	<input type="checkbox"/>	<input type="checkbox"/>
	Nearby biosolid/land application site (e.g., human or animal waste application)	<input type="checkbox"/>	<input type="checkbox"/>
	Contamination from agricultural chemical application (e.g., fertilizer, pesticides)	<input type="checkbox"/>	<input type="checkbox"/>
	Contamination from chemical pollution not related to agricultural application	<input type="checkbox"/>	<input type="checkbox"/>
	Water temperature ≥30°C (≥86°F)	<input type="checkbox"/>	<input type="checkbox"/>
POLICY AND MANAGEMENT	Seasonal variation in water quality (e.g., lake/reservoir turnover events)	<input type="checkbox"/>	<input type="checkbox"/>
	Inappropriate dumping of sewage into water body (e.g., from boat, RV)	<input type="checkbox"/>	<input type="checkbox"/>
	Algal bloom	<input type="checkbox"/>	<input type="checkbox"/>
	Dumping of ballast water	<input type="checkbox"/>	<input type="checkbox"/>
	Tidal wash (i.e., tide exchange or influence by inland water)	<input type="checkbox"/>	<input type="checkbox"/>
	No or inadequate monitoring of water quality	<input type="checkbox"/>	<input type="checkbox"/>
	No managers have completed state/local required training	<input type="checkbox"/>	<input type="checkbox"/>
	Untrained/inadequately trained staff on duty	<input type="checkbox"/>	<input type="checkbox"/>
	Unclear communication chain for reporting problems	<input type="checkbox"/>	<input type="checkbox"/>
	Employee illness policies absent or not enforced	<input type="checkbox"/>	<input type="checkbox"/>
Other, specify:	<input type="checkbox"/>	<input type="checkbox"/>	
Unknown	<input type="checkbox"/>	<input type="checkbox"/>	

\* Only check off what was found during investigation.

\*\* "Documented/Observed" refers to information gathered through document reviews, direct observations, and/or interviews. "Suspected" refers to factors that probably occurred but for which no documentation (as defined previously) is available.

\*\*\* The release of sewage does not have to occur at the property/venue/setting where the people were exposed. The sewage may have occurred at a distant site but still affected the property/venue/setting in question.

≠ "On-site wastewater treatment system" refers to a system designed to treat and dispose of wastewater at the point of generation, generally on the property where the wastewater is generated (e.g., septic systems or other advanced on-site systems). However, contamination that originates from these systems can still occur off the property where treatment and disposal takes place due to migration of contaminants from malfunctioning systems or poor siting and design.

**Remarks**