



National Outbreak Reporting System

Waterborne Disease Transmission



This form is used to report waterborne disease outbreaks. Pages 1-5 ask for the minimum or basic information about the outbreak investigation, epidemiological data, and clinical specimen and water test results. These are followed by sections specific to the type of water exposure. Only 1 of the 5 water exposure sections should be completed.

Public reporting burden of this collection of information is estimated to average 20 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, Project Clearance Officer, 1600 Clifton Road, MS D-24, Atlanta, GA, 30333, ATTN: PRA (0920-0004) --DO NOT MAIL CASE REPORTS TO THIS ADDRESS

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)
- Water (Complete the tabs for General, Water-General, Water-Etiology & Lab, Water Samples and the type of water exposure)
- Animal contact (Complete CDC 52.13)
- Person-to-person (Complete CDC 52.13)
- Environmental contamination other than food/water (Complete CDC 52.13)
- 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 (Number or percent of the primary cases)				
Lab-confirmed primary cases	#	Male	#	%		
Probable primary cases	#	Female	#	%		
Estimated total primary cases	#	Unknown	#	%		
Primary Case Outcomes	# Cases	Total # of case for whom info is available	Age (Number or percent of the primary cases)			
			<1 year	20-49 years	50-74 years	≥ 75 years
Died	#	#	#	%	# %	
Hospitalized	#	#	#	%	# %	
Visited Emergency Room	#	#	#	%	# %	
Visited health care provider (excluding ER visits)	#	#	#	%	# %	

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		
<input type="checkbox"/> Unknown incubation period			<input type="checkbox"/> 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 all that apply)</i>	Number of Secondary Cases	
<input type="checkbox"/> Food <input type="checkbox"/> Water <input type="checkbox"/> Animal contact <input type="checkbox"/> Person-to-person <input type="checkbox"/> Environmental contamination other than food/water <input type="checkbox"/> Other/Unknown	Lab-confirmed secondary cases	#
	Probable secondary cases	#
	Estimated total secondary cases	#
	Estimated total cases (Primary + Secondary)	#

Environmental Health Specialists Network *(If applicable)*

EHS-Net Evaluation ID: 1.) _____ 2.) _____ 3.) _____ 4.) _____

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		Traceback 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: _____ Phone no.: _____
 Contact title: _____ Fax no.: _____

General 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)*

Water - General section

Type of Water Exposure (Check ONE box)

- Treated recreational water (e.g., in manufactured venues such as pools, spas/whirlpools, hot tubs, spray pads, at-home kiddie pools)
- Untreated recreational water (e.g., water in natural venues such as a freshwater lakes, hot springs, marine beaches/oceans)
- Drinking water in public or individual water systems (e.g., municipal system, private well, commercially-bottled water, water kiosk), regardless of the exposure pathway (i.e., not limited to ingestion).
- Other water (e.g., cooling/industrial, water reuse, irrigation, occupational, decorative/display; includes water consumed from sources such as back-country streams)
- Unknown water uses (i.e., the intended purpose or use of the water is unknown or the water exposure category could not be determined)

Epidemiologic Data

- Estimated total number of persons with primary water exposure: _____
- Were data collected from comparison groups to estimate risk? Yes (specify in table below) No Unknown
 If **No** or **Unknown**, was water the common source shared by persons who were ill? Yes No Unknown

Exposure in epidemiologic investigation <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: _____ %

Geographic Location

Symptoms/Conditions

Route of Entry

Percent of ill persons (primary cases) living in reporting state: _____ %

For each category, indicate the # of ill persons (primary cases) with:

Associated Events

Was exposure associated with a specific event or gathering?

- Yes No Unknown

If **Yes**, what type of event or gathering was involved?

If outbreak occurred during a defined event, dates of event:

Start date: _____ End date: _____
 (mm/dd/yyyy) (mm/dd/yyyy)

Gastrointestinal symptoms/ conditions _____

Ingestion

Respiratory symptoms/ conditions _____

Contact

Skin symptoms/conditions _____

Inhalation

Ear symptoms/conditions _____

Other, specify: _____

Eye symptoms/conditions _____

Neurologic symptoms/ conditions _____

Unknown

Wound infections _____

Other, specify (e.g., hepatitis A, leptospirosis): _____

Water-Etiology & Lab

Outbreak Etiology (Report the confirmed and/or suspected etiological agent(s) here, even if no clinical specimens were tested)

Confirmed as Etiology?	Genus/ Chemical/ Toxin	Species	Serotype/ Serogroup/ Serovar	Genotype/ Subtype	Detected In* <i>(list all that apply)</i>	Total # People Tested	Total # People Positive
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							
<input type="checkbox"/> Yes							

* 1-Clinical Specimens, 2-Water Samples, 3-Clinical Specimens & Water Samples, 4-Other (describe in the general remarks), 5-Unknown, 6-None

Outbreak Isolates (Links data about molecular characterization across multiple systems. For each pathogen, provide a representative for each distinct molecular designation)

Which CDC system contains this isolate profile? (e.g., PulseNet, CaliciNet)	CDC Lab System Outbreak Number (e.g., PulseNet tracking number)	State Lab ID (i.e., Lab tracking number)	Molecular Designation 1	Molecular Designation 2

Clinical Specimens

1. Were clinical diagnostic specimens taken from persons? Yes No Unknown

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 subtype), 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-Vomitus, 16-Wound Swab, 17-Other (describe in the general remarks), 18-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, 6-Other (describe in general remarks), 7-Unknown

Test Types (Select all test types used for clinical specimens)

- Culture
- DNA or RNA Amplification/Detection (e.g., PCR, TR-PCR)
- Microscopy (e.g., fluorescent, EM)
- Serological/Immunological Test (e.g., EIA, ELISA)
- Other (describe in the general remarks)
- Phage Typing
- Chemical Testing
- Tissue Culture Infectivity Assay
- Unknown

Recreational Water – Treated Venue

Implicated Water - Recreational Water Venue Description

Venue Number <i>(use this number to link the venue with water treatment or fill water data below)</i>	Water Venue <i>(e.g., spa/whirlpool/hot tub; pool- swimming pool; pool- waterpark)</i>	Water Venue Subtype <i>(select indoor, outdoor, or unknown)</i>	Setting of Exposure <i>(e.g., club, requiring membership; hotel/motel/lodge/inn; waterpark)</i>
1			
2			
3			
4			
5			
6			
Venue Number <i>(Reference the appropriate Venue Number from above)</i>	USUAL Water Treatment Provided at Venue <i>(e.g., no treatment; coagulation; disinfection; flocculation; filtration (pool); unknown)</i>	Venue Treatment Subtype <i>(disinfection or pool filtration: e.g., UV; chlorine dioxide; bag filter; cartridge filter; unknown)</i>	Chlorination Subtype <i>(chlorine disinfection only: e.g., gaseous; sodium hypochlorite; cyanurates (stabilized chlorine))</i>
Venue Number <i>(Reference the appropriate Venue Number from above)</i>	Fill Water Type <i>(e.g., public water supply; sea water; untreated ground or surface water; unknown)</i>	IF PUBLIC WATER WAS USED TO FILL, USUAL Water Treatment Provided for Fill Water Before Coming to the Venue <i>(e.g., no treatment; disinfection; filtration (treatment plant); unknown)</i>	IF PUBLIC WATER WAS USED TO FILL, Fill Water Treatment Subtype <i>(disinfection or filtration: e.g., UV; chlorine dioxide; bag filter; cartridge filter; unknown)</i>

Recreational Water Quality

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

If **No**, explain: _____

Was there a pool operator on the payroll with state-approved training or certification? Yes No Unknown

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

Contributing 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/vomitus accident	<input type="checkbox"/>	<input type="checkbox"/>
	Patrons continued to swim when ill with diarrhea	<input type="checkbox"/>	<input type="checkbox"/>
FACILITY DESIGN	Operator error	<input type="checkbox"/>	<input type="checkbox"/>
	Intentional contamination (explain in remarks)	<input type="checkbox"/>	<input type="checkbox"/>
	Combined pool filtration/recirculation systems led to cross-contamination	<input type="checkbox"/>	<input type="checkbox"/>
	Hygiene facilities (e.g., toilets, diaper changing facilities) inadequate or distant	<input type="checkbox"/>	<input type="checkbox"/>
	Some spray feature water bypasses filtration/treatment system and returns to feature unfiltered/untreated	<input type="checkbox"/>	<input type="checkbox"/>
	No supplemental disinfection installed that would have inactivated pathogen (e.g., <i>Cryptosporidium</i>)	<input type="checkbox"/>	<input type="checkbox"/>
	Water temperature $\geq 30^{\circ}\text{C}$ ($\geq 86^{\circ}\text{F}$)	<input type="checkbox"/>	<input type="checkbox"/>
	Cross-connection with wastewater or non-potable water	<input type="checkbox"/>	<input type="checkbox"/>
	Disinfectant control system malfunctioning, inadequate, or lacking (e.g., hand feed chemicals)	<input type="checkbox"/>	<input type="checkbox"/>
	Incorrect settings on disinfectant control system	<input type="checkbox"/>	<input type="checkbox"/>
MAINTENANCE	pH control system malfunctioning, inadequate, or lacking (e.g., hand feed chemicals)	<input type="checkbox"/>	<input type="checkbox"/>
	Incorrect settings on pH control system	<input type="checkbox"/>	<input type="checkbox"/>
	Filtration system malfunctioning or inadequate (e.g., low flow rate)	<input type="checkbox"/>	<input type="checkbox"/>
	Supplemental disinfection system malfunctioning or inadequate (e.g., ultraviolet light, ozone)	<input type="checkbox"/>	<input type="checkbox"/>
	Insufficient system checks so breakdown detection delayed	<input type="checkbox"/>	<input type="checkbox"/>
	No preventive equipment maintenance programs to reduce breakdowns	<input type="checkbox"/>	<input type="checkbox"/>
	Ventilation insufficient for indoor aquatic facilities	<input type="checkbox"/>	<input type="checkbox"/>
	Chemical handling error (e.g., chemical hookup, improper mixing or application)	<input type="checkbox"/>	<input type="checkbox"/>
	Maintenance chemicals not flushed from system before opening to swimmers	<input type="checkbox"/>	<input type="checkbox"/>
	Recirculation pump off or restarted with swimmers in water	<input type="checkbox"/>	<input type="checkbox"/>
	Low or zero water flow combined with continuous feed of chemicals resulted in excess chemicals in water	<input type="checkbox"/>	<input type="checkbox"/>
	Extensive slime/biofilm formation	<input type="checkbox"/>	<input type="checkbox"/>
	Recent construction	<input type="checkbox"/>	<input type="checkbox"/>
	Cyanurate level excessive	<input type="checkbox"/>	<input type="checkbox"/>
	POLICY AND MANAGEMENT	Lack of draining/cleaning	<input type="checkbox"/>
Stagnant water in spa piping was aerosolized		<input type="checkbox"/>	<input type="checkbox"/>
No aquatics operators on payroll who have completed state/local training		<input type="checkbox"/>	<input type="checkbox"/>
Untrained/inadequately trained staff on duty		<input type="checkbox"/>	<input type="checkbox"/>
Remote monitoring system replaces on-site water quality testing		<input type="checkbox"/>	<input type="checkbox"/>
Unclear communication chain for reporting problems		<input type="checkbox"/>	<input type="checkbox"/>
Inadequate water quality monitoring (e.g., inadequate test kit, inadequate testing frequency)		<input type="checkbox"/>	<input type="checkbox"/>
Employee illness policies absent or not enforced		<input type="checkbox"/>	<input type="checkbox"/>
No or inadequate policies on good chemical handling and storage practices		<input type="checkbox"/>	<input type="checkbox"/>
No operator on duty at the time of incident		<input type="checkbox"/>	<input type="checkbox"/>
Facility falls outside aquatic health code		<input type="checkbox"/>	<input type="checkbox"/>
No shock/hyperchlorination policy		<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.

Remarks