



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)
- Water (Complete tabs for General, Water-General and 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)
- 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 | (A) | Male | | % | | |
| # Probable cases | (B) | Female | | % | | |
| # Estimated total primary ill (if greater than sum A+B) | | | | | | |
| | # 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>(circle appropriate units)</i> | | | Duration of Illness <i>(among recovered cases-circle 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 *(*refer to terms from appendix, if appropriate, to describe other common characteristics of cases)*

| 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 | |
|---|--|-----|
| <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"/> Indeterminate/Other/Unknown | # Lab-confirmed secondary cases | (A) |
| | # Probable secondary cases | (B) |
| | Total # of secondary cases (if greater than sum A+B) | |
| | 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)

| | | | |
|--|---|--|--|
| <input type="checkbox"/> Water intended for recreational purposes – treated venue (e.g., pool, spa/whirlpool/hot tub, spray pad) | <input type="checkbox"/> Water intended for recreational purposes – untreated venue (e.g., freshwater lake, hot spring, marine beach) | <input type="checkbox"/> Water intended for drinking (includes water used for bathing/showering) | <input type="checkbox"/> Water not intended for drinking or water of unknown intent (e.g., cooling/industrial, occupational, decorative/display) |
|--|---|--|--|

Geographic Location Symptoms Route of Entry

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

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, if known)</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? _____

Water-General

| 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

Enter positive findings in the table below. If tests for a specific pathogen/agent were negative, please also list that pathogen/agent and fill in the Specimen Type, Specimen Subtype, Test Type, Total # of People Tested and Total # of People Positive.

| Clinical Specimen Row Number | Genus/ Chemical/ Toxin | Species | Serotype/ Serogroup/ Serovar | Genotype/ Subtype |
|------------------------------|------------------------|---------|------------------------------|-------------------|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

| Clinical Specimen Row Number | Confirmed as Etiology ? | Concentration (number) | Unit (e.g., oocysts, CFU) | Specimen Type * | Specimen Subtype ** |
|------------------------------|------------------------------|------------------------|---------------------------|-----------------|---------------------|
| 1 | <input type="checkbox"/> yes | | | | |
| 2 | <input type="checkbox"/> yes | | | | |
| 3 | <input type="checkbox"/> yes | | | | |
| 4 | <input type="checkbox"/> yes | | | | |
| 5 | <input type="checkbox"/> yes | | | | |

| Clinical Specimen Row Number | Test Type § | Total # People Tested | Total # People Positive |
|------------------------------|-------------|-----------------------|-------------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |

* 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., PFGE, MLVA, or genotype) | Specimen Profile 2 (e.g., PFGE, MLVA, or genotype) |
|----------------------|--|--|
| | | |
| | | |
| | | |

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 Sample | 1 | 2 | 3 | 4 | 5 |
|--|--------|---|---|---|---|
| Source of Sample <i>(e.g., lake or stream)</i> | | | | | |
| Additional Description of Source of Sample <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>(number)</i> | Unit <i>(e.g., CFU)</i> |
|---------------|-------------------------------------|-------------------------------|-------------------------|
| | | | |
| | | | |
| | | | |

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>(number)</i> | Unit <i>(e.g., oocysts, CFU)</i> | Test Type* | Test Method <i>(reference: National Environmental Methods Index: http://www.nemi.gov)</i> |
|---------------|------------------------------|-------------------------------|----------------------------------|------------|---|
| | <input type="checkbox"/> yes | | | | |
| | <input type="checkbox"/> yes | | | | |
| | <input type="checkbox"/> yes | | | | |
| | <input type="checkbox"/> 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 | Out of compliance with bather load/density requirements | <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 or within 2 weeks of being ill | <input type="checkbox"/> | <input type="checkbox"/> |
| SWIM AREA DESIGN | Operator error | <input type="checkbox"/> | <input type="checkbox"/> |
| | Intentional contamination (explain in remarks) | <input type="checkbox"/> | <input type="checkbox"/> |
| | Hygiene facilities inadequate or distant (e.g., no toilets, no diaper changing facilities) | <input type="checkbox"/> | <input type="checkbox"/> |
| | Malfunctioning or inadequate onsite wastewater treatment system *** ≠ | <input type="checkbox"/> | <input type="checkbox"/> |
| | Poor siting/design of onsite 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., 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"/> |
| | Aquatics operator has not received state/local certified 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 | <input type="checkbox"/> | <input type="checkbox"/> |
| | No operator on duty at the time of incident | <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 on the property in which persons have become ill. The sewage release may have occurred at a distant site but still affected the property in question.

≠ "Onsite 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