# LEGIONELLOSIS INVESTIGATION REPORT FORM

Local health departments should fax completed investigation form to regional DSHS office.
Regional DSHS offices should fax completed investigation form to 512-776-7616.

**NBS ID:**

**Case status**: ☐ Confirmed ☐ Not a Case

**Patient name:** ______________________________
Last First

**Address:** ______________________________

**City:** ____________ **County:** ____________ **Zip:** ________

**Phone 1:** ____________ **Phone 2:** ____________

**Birthdate:** ____________ **Age:**_____ **Sex:** ☐Male ☐Female ☐Unknown

**Race:** ☐White ☐Black ☐Asian ☐Pacific Islander ☐Native American/Alaskan ☐Unknown ☐ Other: ____________

**Hispanic:** ☐ Yes ☐ No ☐ Unknown

**Reported by**: ______________________________

**Agency**: ______________________________

**Phone**: ____________ **Report date:**____________

**Investigated by**: ______________________________

**Agency:** ______________________________

**Phone:** ____________

**Email:**______________________________

**Investigation start date**: ____________

**Date investigation completed**: ____________

## CLINICAL DATA

**Symptom onset date**: ____________ **Illness end date**: ____________

**Outcome?** ☐ Survived ☐ Died on: ____________ ☐ Still ill** ☐ Unknown

***If still ill, follow up on patient's outcome in 2-3 weeks and update in NBS.***

**Hospitalized?** ☐ Yes† ☐ No ☐ Unknown

Date of admission: ____________ Date of discharge: ____________

Hospital name:______________________________

Hospital address: ______________________________

*†If hospitalized in more than one facility, please add hospital details in comments section.*

**Physician:**____________________ **Phone:** ____________

**Was the patient diagnosed with clinical or radiographic pneumonia?**

☐ Yes ☐ No ☐ Unknown

**Signs and symptoms** *(Check all that apply)***:** ☐ Altered mental status/confusion

☐ Abdominal pain ☐ Chest pain ☐ Cough ☐ Diarrhea

☐ Fever (Max temp: ________) ☐ Headache ☐ Pneumonia ☐ Malaise

☐ Myalgia (muscle pain) ☐ Other: ______________________________

☐ Shortness of breath ☐ Vomiting

## UNDERLYING HEALTH CONDITIONS

☐ Yes (*check all that apply*) ☐ No ☐ Unknown

☐ Asthma ☐ Cancer, when? ____________

☐ Chemotherapy ☐ Chronic kidney disease

☐ Corticosteroid therapy ☐ Diabetes ☐ Heart disease

☐ HIV/AIDS ☐ Liver disease

☐ Organ transplant recipient, when? ____________

☐ Other chronic lung disease: ____________

☐ Other: ______________________________

| **HEALTH BEHAVIORS** | Yes | No | Unk | **Quantity per day (packs, drinks)** | **Duration (years)** |
|---|---|---|---|---|---|
| Alcohol consumption | ☐ | ☐ | ☐ | | |
| Current smoker | ☐ | ☐ | ☐ | | |
| Former smoker | ☐ | ☐ | ☐ | | |

## LABORATORY DATA

*(If more than one urinary antigen test performed, record second test in "other legionellosis test" section)*

**Urine antigen test:** Date collected: ____________ Result: ☐ Positive ☐Negative ☐ Unknown

Ordering facility: ____________ Reporting facility: ____________ Date rec'd by public health: ____________

**Culture:** Date collected: ____________

Specimen source: ☐ Bronchoalveolar lavage (BAL) or bronchial wash ☐ Sputum ☐ Pleural fluid ☐ Lung tissue ☐ Other:____________

Result: ☐ Positive ☐ Negative ☐ Pending ☐ Unknown If positive, species and serogroup:____________

Ordering facility: ____________ Reporting facility: ____________ Date rec'd by public health:____________

**Antibody test:**

1st (acute) antibody titer:____________ Species / serogroup:____________ Date collected: ____________

2nd (convalescent) antibody titer:____________ Species / serogroup:____________ Date collected: ____________

Ordering facility: ____________ Reporting facility: ____________ Date rec'd by public health: ____________

**Other legionellosis test:**

Test name: ☐ Nucleic acid assay (PCR) ☐ Direct fluorescent antibody (DFA) ☐ Other:____________

Date collected: ____________ Specimen source: ☐ Lung biopsy ☐ Sputum ☐ Pleural fluid ☐ Blood ☐ Other:____________

Result: ☐ Positive ☐ Negative ☐ Pending ☐ Unknown If positive, species____________ serogroup:____________

Ordering facility: ____________ Reporting facility: ____________ Date rec'd by public health: ____________

**Who was interviewed to obtain exposure history?**

☐ Patient ☐ Surrogate; relationship to patient: ____________________________ ☐ Neither; reason: ________________________________

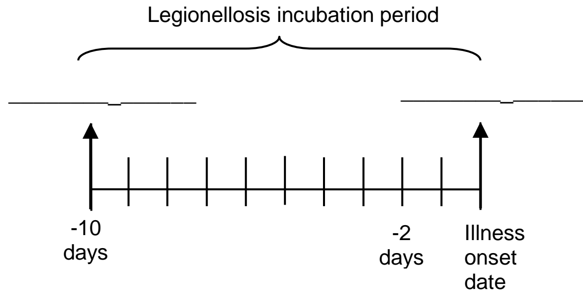
*Whenever possible, interview a patient or surrogate to obtain exposure history. If the patient is unable to communicate at the time of investigation, complete the interview with a surrogate but please consider interviewing the patient at a later date. Ask patient/surrogate to refer to a calendar and gather booking info/receipts/itineraries for recent travel and medical stays.*

**Contact Attempts: Record date(s) and contact method (phone, text, letter):**

| **Date 1: ___________ Time:** | **Date 2: ___________ Time:** | **Date 3: ___________ Time:** |
|---|---|---|

**Were medical records obtained and abstracted/reviewed for this investigation?** ☐ Yes ☐ No ☐ Unknown

**INFECTION TIMELINE:** Enter onset of illness. Count backward to determine beginning of incubation period for exposure history sections below.




- ***Incubation period****: Legionnaires' disease is typically 2–10 days; Pontiac fever is 5–72 hours.*
- *For all legionellosis cases, please ask about exposures in the* ***entire 10-day period*** *prior to illness onset.*

**TRAVEL HISTORY (OR RESIDENCE IN A TRAVEL ACCOMMODATION)**

**In the 10 days before onset, did the patient spend any nights away from home (e.g., hotel, motel, cruise ship, train, RV park, resort, hostel, private residence, campground, etc.), excluding healthcare settings, or was the person living in a travel accommodation?**

☐ Yes, *please complete the table below* ☐ No ☐ Unknown

| # | Accommodation name and type‡ | Address, city, state, zip code, country | Room number | Arrival date | Departure date |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |

*‡If patient was on a cruise ship during the incubation period, complete this investigation form and the CDC Legionellosis Cruise Ship Questionnaire*

**ADDITIONAL TRAVEL QUESTIONS**

**If patient reported using a recreational vehicle (RV) or camper in the table above, please ask the following:**

Name and location of RV park/campgrounds (if not given above): ____________________________________________

Campsite/row number: ___________________________ Used drinking water camper/RV hookups? ☐ Yes ☐ No ☐ Unknown

Date(s) when camper/RV water tanks were last flushed: ______________________________________________

**EVENTS**

**In the 10 days before onset, did the patient attend any conventions, conferences, public gatherings, meetings, festivals, or other events (e.g., wedding, reunion, exhibit, trade show, fair)?** ☐ Yes, *please complete the table below* ☐ No ☐ Unknown

| Type of event | Date(s) attended | Name/location and address of event |
|---|---|---|
| | | |
| | | |

**MEDICAL FACILITY EXPOSURE HISTORY**

**In the 10 days before onset, did the patient visit, stay, or work at a healthcare setting (e.g., hospital, rehab facility, clinic, dental office)?**

☐ Yes, *please complete the table below* ☐ No ☐ Unknown

| Type of healthcare facility | Type of exposure | Facility name and complete address | Reason for visit | Date(s) of visit / admission | Date of discharge |
|---|---|---|---|---|---|
| ☐ Clinic<br>☐ Dental<br>☐ Hospital<br>☐ Other:_________<br>☐ Rehab | ☐ Employee<br>☐ Inpatient<br>☐ Outpatient<br>☐ Visitor<br>☐ Volunteer | | | | |
| ☐ Clinic<br>☐ Dental<br>☐ Hospital<br>☐ Other:_________<br>☐ Rehab | ☐ Employee<br>☐ Inpatient<br>☐ Outpatient<br>☐ Visitor<br>☐ Volunteer | | | | |
| ☐ Clinic<br>☐ Dental<br>☐ Hospital<br>☐ Other:_________<br>☐ Rehab | ☐ Employee<br>☐ Inpatient<br>☐ Outpatient<br>☐ Visitor<br>☐ Volunteer | | | | |

If yes, was the patient hospitalized or living at the facility for the entire incubation period? ☐ **Yes**§ ☐ No ☐ Not applicable ☐ Unknown

If yes, was the facility a transplant center? ☐ Yes ☐ No ☐ Unknown

**In the 10 days before onset, did the patient visit, stay or work at a nursing home, assisted living facility, senior living facility, or similar?**

☐ Yes, *please complete the table below* ☐ No ☐ Unknown

| Type of facility | Type of exposure | Facility name and complete address | Date(s) of visit / admission | Date of discharge |
|---|---|---|---|---|
| ☐ Assisted living facility<br>☐ Nursing home (with skilled nursing or personal care)<br>☐ Other:__________________<br>☐ Senior living facility (without skilled nursing or personal care)<br>☐ Skilled nursing facility | ☐ Employee<br>☐ Other: ___________<br>☐ Resident<br>☐ Visitor<br>☐ Volunteer | | | |
| ☐ Assisted living facility<br>☐ Nursing home (with skilled nursing or personal care)<br>☐ Other:__________________<br>☐ Senior living facility (without skilled nursing or personal care)<br>☐ Skilled nursing facility | ☐ Employee<br>☐ Other: ___________<br>☐ Resident<br>☐ Visitor<br>☐ Volunteer | | | |

If yes, was the patient living at the facility for the entire incubation period? ☐ **Yes**§ ☐ No ☐ Not applicable ☐ Unknown

**CORRECTIONAL FACILITY EXPOSURE HISTORY**

**In the 10 days before onset, did the patient visit, work, or stay at a correctional facility?** ☐ Yes ☐ No ☐ Unknown

If yes, name and address of facility:_______________________________________________

Type of exposure: ☐ Inmate ☐ Employee ☐ Visitor ☐ Other: ___________________________

Date(s) of visit or incarceration:_________________________ Date(s) of release / transfer:_________________________

Was the patient living at the facility for the entire 10 days before onset? ☐ **Yes**§ ☐ No ☐ Not applicable ☐ Unknown

**§Definitions:**

Definite facility-associated case: Case spent entire incubation period in the facility

Possible facility-associated case: Case spent a portion of the incubation period in the facility

Outbreak‖ (one of the following):

- One definitely healthcare-associated case, **OR** at least 2 possibly healthcare-associated cases within 1 year associated with the same healthcare facility
- At least 2 cases associated with the same non-healthcare facility (e.g., hotel, gym, etc.) or other common location (e.g., amusement park) within 1 year

‖Note: A thorough investigation is important to exclude other plausible sources of infection (i.e., those not associated with the facility/location).

*For outbreak investigation and other instructions, see EAIDB Investigation Guidelines: http://www.dshs.state.tx.us/IDCU/investigation/Investigation-Guidance/*

**OTHER EXPOSURE HISTORY QUESTIONS**

**In the 10 days before onset, did the patient have exposure (e.g., getting in, sitting/being near, or walking by, even briefly) to any of the following potential sources of misty/aerosolized water, while traveling, hospitalized, or in the case's home city?**

*Please complete the table below:*

| **Exposure type** *Includes getting in, sitting/ being near, or walking by a functioning/working device* | **Yes** | **No** | **Unknown** | **Location(s)** | **Date(s)** | **Description of exposure and duration (e.g., sat near for 1 hour)** |
|---|---|---|---|---|---|---|
| Car Wash | ☐ | ☐ | ☐ | | | |
| Centralized cooling tower/ HVAC systems | ☐ | ☐ | ☐ | | | |
| Decorative fountain, waterwall, or water display | ☐ | ☐ | ☐ | | | |
| Home humidifier or mister | ☐ | ☐ | ☐ | | | |
| Hot springs, mineral baths, or geothermal waters | ☐ | ☐ | ☐ | | | |
| Hot tub or whirlpool spa | ☐ | ☐ | ☐ | | | |
| Jetted bathtub (away from home, filled and drained after each use) | ☐ | ☐ | ☐ | | | |
| Other: _________________ | ☐ | ☐ | ☐ | | | |
| Other: _________________ | ☐ | ☐ | ☐ | | | |
| Pressure Washer | ☐ | ☐ | ☐ | | | |
| Recreational misters | ☐ | ☐ | ☐ | | | |
| Shower (away from home) | ☐ | ☐ | ☐ | | | |
| Steam room or wet sauna | ☐ | ☐ | ☐ | | | |
| Store misters (e.g., grocery store, gardening) | ☐ | ☐ | ☐ | | | |
| Swimming or wading pool | ☐ | ☐ | ☐ | | | |
| Therapeutic spa venue | ☐ | ☐ | ☐ | | | |
| Waterpark, splash pad | ☐ | ☐ | ☐ | | | |

**In the 10 days before onset, did the patient use a nebulizer, CPAP, BiPAP or any other respiratory therapy equipment for the treatment of sleep apnea, COPD, asthma or for any other reason?** ☐ Yes, *please fill in details below* ☐ No ☐ Unknown

Type of device: ______________________________ Date(s):______________________ Location: ___________________________________

Does the device use a humidifier or misty water? ☐ Yes ☐ No ☐ Unknown

Type of water used in the device? ☐ Sterile ☐ Distilled ☐ Bottled ☐ Tap (well) ☐ Tap (city) ☐ Other:__________ ☐ None ☐ Unknown

Describe how the device is cleaned: ________________________________________________________________________________

**In the 10 days before onset, did the patient have any exposures to soil, potting soil, or compost (e.g., gardening, excavation, etc.)?**

☐ Yes ☐ No ☐ Unknown *If yes, provide place, dates, product, description (e.g., "gardening–potting soil purchased from Store A"):*

Location, soil type, activities:____________________________________________________________ What dates:________________________

**In the 10 days before onset, does the patient recall any general construction, plumbing projects, water main breaks, or water line work at or near a location where the patient lived, was hospitalized, worked, or visited?** ☐ Yes ☐ No ☐ Unknown

*If yes, provide place, dates, and description (e.g., "new building construction at Hospital A on 1/1/16"):*

Location and details:__________________________________________________________________ What dates:_________________________

Location and details:__________________________________________________________________ What dates:_________________________

Location and details:__________________________________________________________________ What dates:_________________________

**In the 10 days before onset, did the patient work, attend school, or volunteer?** ☐ Yes, *please complete table below* ☐ No ☐ Unknown

| Job/activity description | Employer/facility | Employer/facility address | Date(s) worked, volunteered, etc. | Duration (e.g., 8 hours/day) |
|---|---|---|---|---|
| | | | | |
| | | | | |

**Does the patient know of anyone else with similar symptoms or pneumonia?** ☐ Yes, *please complete the table below* ☐ No ☐ Unknown

| Name | Age | Onset date | Contact information | Shared Exposures | Legionella testing done? | Legionella test results |
|---|---|---|---|---|---|---|
| | | ____________ | | | ☐ Yes ☐ No | |
| | | ____________ | | | ☐ Yes ☐ No | |

**PUBLIC HEALTH ACTIONS TAKEN** *(please refer to the Prevention and Control Measures section in the Legionellosis chapter of the EAIDB Investigation Guidelines for examples)*

**ADDITIONAL COMMENTS**

Additional Comments on next page