

Merlin disease code: 48280 Legionellosis

[Paper case report form](#)  
Merlin extended data required

## Background

Legionellosis is associated with three clinically and epidemiologically distinct illnesses:

- 1) **Legionnaires' disease:** characterized by fever, myalgia, cough, and clinical or radiographic pneumonia. Additional symptoms may include myalgia, shortness of breath, headache, malaise, chest discomfort, confusion, nausea, diarrhea, or abdominal pain.
- 2) **Pontiac fever:** a milder illness without pneumonia.
- 3) **Extrapulmonary legionellosis:** infections at sites outside the lungs with evidence of *Legionella* at that site.

## Clinical criteria for case classification

### Legionnaires' disease:

Pneumonia including acute onset of lower respiratory illness with fever or cough.

### Pontiac fever:

One or more of the following: fever, chills, myalgia, malaise, headache, fatigue, nausea, or vomiting.

### Extrapulmonary legionellosis:

Clinical evidence of disease at sites outside the lungs (e.g., endocarditis, wound infection, joint infection, graft infection).

## Laboratory criteria for case classification

### Confirmatory:

One or more of the following:

- Isolation of any *Legionella* organism from lower respiratory secretions, lung tissue, pleural fluid, or extrapulmonary site (e.g., culture);
- **Or** detection of *Legionella pneumophila* serogroup 1 antigen in urine (e.g., antigen detection);
- **Or** detection of *Legionella* species by nucleic acid assay (e.g., polymerase chain reaction [PCR]);
- **Or** fourfold or greater rise in antibody titer to either single *Legionella* species or multiple species (e.g., antibody titers).

### Supportive:

One or more of the following:

- Single positive antibody titer to either single *Legionella* species or multiple species (e.g., antibody detection);
- Single equivocal antibody titer to either single *Legionella* species or multiple species (e.g., antibody detection) in the absence of a negative titer;
- **Or** detection of specific *Legionella* antigen or staining of the organism in lower respiratory secretions, lung tissue, pleural fluid, or extrapulmonary site (e.g., antigen detection, direct fluorescent antibody [DFA] staining, immunohistochemistry).

### Not a case:

Equivocal and negative antibody titers to either single *Legionella* species or multiple species (e.g., antibody detection).

## Epidemiological criteria for case classification

### Legionnaires' disease:

Either of the following in the 14 days before symptom onset:

- Epidemiologic link to a setting with a confirmed source of *Legionella* (e.g., positive environmental sampling result associated with a cruise ship, public accommodation, cooling tower, etc.)
- **Or** epidemiologic link to a setting with a suspected source of *Legionella* that is associated with at least one confirmed case.

### Pontiac fever:

Either of the following in the 3 days before symptom onset:

- Epidemiologic link to a setting with a confirmed source of *Legionella* (e.g., positive environmental sampling result associated with a cruise ship, public accommodation, cooling tower, etc.)
- **Or** epidemiologic link to a setting with a suspected source of *Legionella* that is associated with at least one confirmed case.

## Case classification

### Confirmed:

A clinically compatible illness in a person with confirmatory laboratory criteria.

### Probable:

A clinically compatible illness in a person with epidemiological criteria.

### Suspect:

A clinically compatible illness in a person with supportive laboratory criteria.

## Criteria to distinguish a new case from previous reports

An individual should be considered a new case if their previous illness was followed by a period of recovery prior to acute onset of clinically compatible symptoms and subsequent laboratory evidence of infection.

## Comments

**Travel-associated Legionnaires' disease:** Legionnaires' disease case in a person who spent at least 1 night away from their usual residence in a hotel, cruise ship, or other public accommodation in the 14 days before onset (excluding health care settings).

**Travel-associated Pontiac fever:** Pontiac fever case in a person who spent at least 1 night away from their usual residence in a hotel, cruise ship, or other public accommodation in the 3 days before onset (excluding health care settings).

**Presumptive health care-associated Legionnaires' disease:** Legionnaires' disease case with  $\geq 10$  days of continuous stay at a health care facility in the 14 days before onset of symptoms.

**Possible health care-associated Legionnaires' disease:** Legionnaires' disease case in a person who spent a portion of the 14 days before date of symptom onset in one or more health care facilities, but not  $\geq 10$  days of continuous stay.