

## **Medical Record Abstraction Form**

**Medical Record Abstraction Form** <Example. Modify to fit current outbreak.>  
**Legionnaires' disease in an Acute Care Hospital**

Medical Record # \_\_\_\_\_

Abstractor Initials: \_\_\_\_\_

Today's Date: \_\_\_\_\_ (mm/dd/yyyy)

Information Source (check all that apply):

\_\_\_\_ hospital chart

\_\_\_\_ other (if other specify) \_\_\_\_\_

**I. PATIENT INFORMATION**

Name: \_\_\_\_\_

Gender: \_\_\_\_\_

DOB: \_\_\_\_\_ Age: \_\_\_\_\_ Race/Ethnicity: \_\_\_\_\_

Type of Residence: Home LTCF Other \_\_\_\_\_

Address: \_\_\_\_\_ Apt: \_\_\_\_\_

City: \_\_\_\_\_ County: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone number: \_\_\_\_\_

**CASE DEFINITIONS** <Modify to fit current outbreak>**A definitely nosocomial** case of LD associated with Hospital A:

- Signs or symptoms of pneumonia AND
- Laboratory confirmation of *Legionella* AND
- Continuously hospitalized at Hospital A for the entire 10 days prior to onset, OR
- The patient had exposure to Hospital A during the 10 days prior to onset AND a clinical respiratory isolate matches an environmental isolate from Hospital A by molecular methods

**A probably nosocomial** case of LD associated with Hospital A:

- Signs or symptoms of pneumonia AND
- Laboratory confirmation of *Legionella* AND
- Exposure to Hospital A (including but not limited to: overnight stay, outpatient visit, visitor, employee, volunteer) during a portion of the 2-10 days prior to onset

**A suspected** case of LD associated with Hospital A:

- Signs or symptoms of pneumonia AND
- No *Legionella* test performed or results unavailable AND
- No other laboratory-confirmed diagnosis for the pneumonia AND
- Exposure to Hospital A (including but not limited to: overnight stay, outpatient visit, visitor, employee, volunteer) during the 2-10 days prior to onset

A person is considered to have signs or symptoms of pneumonia if the following were present:

- Cough or shortness of breath, AND at least one of the following: fever  $\geq 100.5^{\circ}\text{F}$ , nausea, diarrhea (3 or more stools in 24 hrs.), confusion, malaise, or headache, OR
- Physician diagnosis of pneumonia, OR
- Chest x-ray consistent with pneumonia.

## Laboratory criteria for confirmed legionellosis:

- Isolation of any *Legionella* organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid, OR
- Detection of *Legionella pneumophila* serogroup 1 (Lp1) urinary antigen using validated reagents, OR
- Fourfold or greater rise in antibody titer to Lp1 using validated reagents.

## Laboratory criteria for probable legionellosis:

- Fourfold or greater rise in antibody titer to non-Lp1 *Legionella* species using validated reagents.
- Detection of specific *Legionella* antigen or staining of the organism in respiratory secretions, lung tissue or pleural fluid by direct fluorescent antibody (DFA) staining, immunohistochemistry (IHC) or other similar method, using validated reagents
- Detection of *Legionella* species by a validated nucleic acid assay.

**II. LEGIONELLA-SPECIFIC TESTING**

1. Respiratory specimen collected and processed specifically for *Legionella* culture?  
 \_\_\_\_\_ Yes (See 1a. below) \_\_\_\_\_ No (See 1b. below) \_\_\_\_\_ Unknown

a.) If **YES**,

Specimen type: (e.g., expectorated sputum, BAL, etc.) \_\_\_\_\_

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory Name: \_\_\_\_\_

Results: \_\_\_\_\_

b.) If **NO**,

Respiratory specimen collected for **any** culture?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Unknown

If Yes,

Specimen type: (e.g., expectorated sputum, BAL, etc.) \_\_\_\_\_

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory: \_\_\_\_\_

Results: \_\_\_\_\_

2. Urine specimen collected for *Legionella* urine antigen testing?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Unknown

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory Name: \_\_\_\_\_

Results: \_\_\_\_\_

3. Serum sample collected for *Legionella* serologic testing?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Unknown

If Yes,

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory: \_\_\_\_\_

Type of assay (e.g., Lp1 only, Lp1-6 pooled antigen, *Legionella* species pooled antigen, etc.) \_\_\_\_\_

Results: \_\_\_\_\_

a.) If convalescent serum samples were collected, please provide the same information for each:

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory: \_\_\_\_\_

Type of assay (e.g., Lp1 only, Lp1-6 pooled antigen, *Legionella* species pooled antigen, etc.) \_\_\_\_\_

Results: \_\_\_\_\_

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory: \_\_\_\_\_

Type of assay (e.g., Lp1 only, Lp1-6 pooled antigen, *Legionella* species pooled antigen, etc.) \_\_\_\_\_

Results: \_\_\_\_\_

4. PCR testing for *Legionella*?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Unknown

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory Name: \_\_\_\_\_

Results: \_\_\_\_\_

5. DFA or IHC for *Legionella* species?

\_\_\_\_ Yes      \_\_\_\_ No      \_\_\_\_ Unknown

Collected Date: \_\_\_\_/\_\_\_\_/\_\_\_\_ Laboratory Name: \_\_\_\_\_

Results: \_\_\_\_\_

6. Outcome: \_\_\_\_ Still Hospitalized    \_\_\_\_ Transferred to another facility (list: \_\_\_\_\_)  
 \_\_\_\_ Discharged Home    \_\_\_\_ Deceased    \_\_\_\_ Unknown

a.) If deceased,

a. Date of death: \_\_\_\_\_ (mm/dd/yyyy)

b. Was a post-mortem examination performed? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

i. If yes, are tissue specimens available? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

**III. SIGNS AND SYMPTOMS**

Shortness of breath:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Cough:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Hemoptysis:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Myalgias:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Fever (self-report):	____ Yes (Onset Date: _____)	____ No	____ Unknown
Fever $\geq 100.5^{\circ}\text{F}$ :	____ Yes (Onset Date: _____)	____ No	____ Unknown
Diarrhea (3 stools/24h):	____ Yes (Onset Date: _____)	____ No	____ Unknown
Nausea:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Malaise:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Headache:	____ Yes (Onset Date: _____)	____ No	____ Unknown
Other (_____):	____ Yes (Onset Date: _____)	____ No	____ Unknown
Other (_____):	____ Yes (Onset Date: _____)	____ No	____ Unknown
Other (_____):	____ Yes (Onset Date: _____)	____ No	____ Unknown

7. List date of earliest symptom onset (MM/DD/YYYY): \_\_\_\_/\_\_\_\_/\_\_\_\_

**IMPORTANT: How to calculate incubation period**

USE A CALENDAR! Start at the date of earliest symptom onset (Q.7) and count backward 2-10 days. This is the incubation period. See example below.

23	24	25	26	27	28	29
First day of inc pd						
30	1	2	3	4	5	6
	Last day of inc pd		ONSET			

Document incubation period here: \_\_\_\_/\_\_\_\_/\_\_\_\_ to \_\_\_\_/\_\_\_\_/\_\_\_\_

8. Document any radiographic testing in the 14 days after onset of symptoms of LD:

Chest X-ray:             Yes                             No             Unknown  
 CT scan:                 Yes                             No             Unknown

If Yes, when and what were the findings?

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Result:  New Infiltrate     Old / Unchanged Infiltrate     Indeterminate

No infiltrate     Not available

Findings: \_\_\_\_\_

**IV. EXPOSURE HISTORY**

Document the patient's general location for each day during their incubation period. (Additional details regarding specific location(s) within Hospital A will be asked later.)

Date <i>(start with first date of inc pd from top of this page)</i>	Location <i>(e.g., Hospital A, Hospital B, Home, LTCF, travel location)</i>	Water Exposures/Activities <i>(e.g., took pre-op shower, whirlpool spa in gym)</i>

9. Type of exposures to Hospital A during incubation period *(check all that apply)*:  
 Inpatient     Outpatient     Visitor     Volunteer     Employee

10. **Case Classification** *(see p. 2 for case definitions)*:  Definitely Nosocomial  
 Probably Nosocomial     Suspect Case     Not Nosocomial

If **Not Nosocomial**, END HERE. Otherwise, continue to next page.

**VI. MEDICAL HISTORY**

COPD/Emphysema/Chronic Lung Disease:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Diabetes:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Congestive Heart Failure:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
History of stroke/CVA:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Chronic Renal Insufficiency (CRI/CKD) or End-Stage Renal Disease (ESRD):	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Cirrhosis / Liver Disease:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Cancer (Type: _____):	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Organ Transplant:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
HIV/AIDS:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Dementia:	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Taking Immunosuppressive drugs (e.g., corticosteroids or chemotherapy):	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Other ( _____ )::	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown
Other ( _____ )::	<input type="checkbox"/> Yes	<input type="checkbox"/> No/Unknown

11. Current Smoker (or quit in the past year):  Yes  No  Unknown  
 12. Former Smoker:  Yes  No  Unknown

**VII. CLINICAL AND EXPOSURE INFORMATION FOR EACH HOSPITALIZATION TO HOSPITAL A PRIOR TO ONSET**

Beginning at the First Day of Incubation Period (top of p. 5), complete this section for each hospitalization to Hospital A in the 10 days prior to symptom onset. If patient had only outpatient or other exposures (was not inpatient at Hospital A), skip to p. 11.

**Hospitalization #** \_\_\_\_\_

Date of admission: \_\_\_\_/\_\_\_\_/\_\_\_\_ Date of discharge: \_\_\_\_/\_\_\_\_/\_\_\_\_

Admitted to ICU?  Yes  No  Unknown

If yes, # of days in ICU \_\_\_\_\_

Intubated?  Yes  No  Unknown

Discharge diagnosis: (Complete all)

Legionellosis?  Yes  No  Unknown

Pneumonia?  Yes  No  Unknown

If yes, Etiology: \_\_\_\_\_ Lab Test(s): \_\_\_\_\_

Other Dx: \_\_\_\_\_

Chest X-ray?             Yes                     No             Unknown  
 CT scan?                 Yes                     No             Unknown

If Yes, when and what were the findings?

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Result:  New Infiltrate     Old / Unchanged Infiltrate     Indeterminate  
 No infiltrate     Not available

Findings: \_\_\_\_\_

List all campuses, buildings, and rooms the patient stayed in during this visit:

Name of Campus	Building	Room#	Reason for Visit	Admit Date	Discharge Date

Was patient ambulatory?     Yes             No             Unknown

Did patient leave building during hospitalization?  Yes     No     Unknown

Showered in facility?  Yes     No     Unknown

How often?     Daily     Weekly     Monthly     Unknown

Used CPAP/BiPAP while in facility?     Yes     No     Unknown

Nebulized medications while in facility?     Yes     No     Unknown

Document any antibiotic therapies that the patient received during this hospitalization:

Antibiotic	Check if given	Dose	Route	Start Date	End Date	Check if continued as outpatient
Levofloxacin (Levoquin)						
Azithromycin (Zithromax)						
Ciprofloxacin (Cipro)						
Erythromycin						
Ceftriaxone (Rocephin)						
Other (specify): _____						
Other (specify): _____						



**Hospitalization #** \_\_\_\_\_

Date of admission: \_\_\_\_/\_\_\_\_/\_\_\_\_ Date of discharge: \_\_\_\_/\_\_\_\_/\_\_\_\_

Admitted to ICU? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

If yes, # of days in ICU \_\_\_\_\_

Intubated? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Discharge diagnosis: (Complete all)

Legionellosis? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Pneumonia? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

If yes, Etiology: \_\_\_\_\_ Lab Test(s): \_\_\_\_\_

Other Dx: \_\_\_\_\_

Chest X-ray? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

CT scan? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

If Yes, when and what were the findings?

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Result: \_\_\_\_ New Infiltrate \_\_\_\_ Old / Unchanged Infiltrate \_\_\_\_ Indeterminate

\_\_\_\_ No infiltrate \_\_\_\_ Not available

Findings: \_\_\_\_\_

List all campuses, buildings, and rooms the patient stayed in during this visit:

Name of Campus	Building	Room#	Reason for Visit	Admit Date	Discharge Date

Was patient ambulatory? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Did patient leave building during hospitalization? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Showered in facility? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

How often? \_\_\_\_ Daily \_\_\_\_ Weekly \_\_\_\_ Monthly \_\_\_\_ Unknown

Used CPAP/BiPAP while in facility? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Nebulized medications while in facility? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Document any antibiotic therapies that the patient received during this hospitalization:

Antibiotic	Check if given	Dose	Route	Start Date	End Date	Check if continued as outpatient
Levofloxacin (Levoquin)						
Azithromycin (Zithromax)						
Ciprofloxacin (Cipro)						
Erythromycin						
Ceftriaxone (Rocephin)						
Other (specify): _____						
Other (specify): _____						

**Hospitalization #** \_\_\_\_\_

Date of admission: \_\_\_\_/\_\_\_\_/\_\_\_\_ Date of discharge: \_\_\_\_/\_\_\_\_/\_\_\_\_

Admitted to ICU? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

If yes, # of days in ICU \_\_\_\_\_

Intubated? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Discharge diagnosis: (Complete all)

Legionellosis? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

Pneumonia? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

If yes, Etiology: \_\_\_\_\_ Lab Test(s): \_\_\_\_\_

Other Dx: \_\_\_\_\_

Chest X-ray? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

CT scan? \_\_\_\_ Yes \_\_\_\_ No \_\_\_\_ Unknown

If Yes, when and what were the findings?

Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Result: \_\_\_\_ New Infiltrate \_\_\_\_ Old / Unchanged Infiltrate \_\_\_\_ Indeterminate

\_\_\_\_ No infiltrate \_\_\_\_ Not available

Findings: \_\_\_\_\_

List all campuses, buildings, and rooms the patient stayed in during this visit:

Name of Campus	Building	Room#	Reason for Visit	Admit Date	Discharge Date

Was patient ambulatory?     Yes     No     Unknown

Did patient leave building during hospitalization?  Yes  No  Unknown

Showered in facility?  Yes  No  Unknown

How often?  Daily  Weekly  Monthly  Unknown

Used CPAP/BiPAP while in facility?  Yes  No  Unknown

Nebulized medications while in facility?  Yes  No  Unknown

Document any antibiotic therapies that the patient received during this hospitalization:

Antibiotic	Check if given	Dose	Route	Start Date	End Date	Check if continued as outpatient
Levofloxacin (Levoquin)						
Azithromycin (Zithromax)						
Ciprofloxacin (Cipro)						
Erythromycin						
Ceftriaxone (Rocephin)						
Other (specify): _____						
Other (specify): _____						

**VIII. OUTPATIENT VISITS** to Hospital A or associated clinics (including rehab visits)

Did patient have any outpatient visits during the 2-10 days prior to symptom onset?

\_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Unknown

If yes, list location of visits and name of clinic:

Name of Campus	Clinic (e.g., Primary Care, Cardiology)	Building	Room#	Date(s) of Visit

**IX. OTHER EXPOSURES**

Did patient have any other exposure to Hospital A in the 2-10 days prior to symptom onset (e.g., visitor, volunteer, employee)? \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Unknown

Please note these exposures: \_\_\_\_\_