

PLEASE DISTRIBUTE TO YOUR HEALTHCARE PROVIDERS

URGENT HEALTH BULLETIN

Increase in Legionnaires' Disease in Kern County

This document contains hyperlinks and can be accessed on our [Health Bulletin webpage](https://kernpublichealth.com/health-bulletin/)
(<https://kernpublichealth.com/health-bulletin/>)

October 2, 2023

Dear Kern County Healthcare Provider:

This urgent health bulletin is being sent to call your attention to an increase in Legionnaires' Disease in Kern County residents.

□ Summary

The Kern County Public Health Department recently identified 6 cases of Legionnaires' disease among residents of Bakersfield. Known illness onset dates range from July 2023 through September 2023. A common exposure has not been identified and investigation into these cases is ongoing. Clinicians should consider Legionnaires' disease among patients with pneumonia and assess patients accordingly.

□ Background

Legionnaires' disease is a respiratory infection caused by *Legionella* spp. that usually results from inhalation of aerosolized water containing the bacteria. The incubation period for Legionnaire's disease is 2 to 14 days. Legionnaires' disease presents as progressive pneumonia that may include cough, shortness of breath, fever, chills, headaches, and muscle aches. Other symptoms such as diarrhea, nausea, and confusion may also be associated with infection. Legionnaires' disease can cause cardiac, renal, and gastrointestinal involvement. *Legionella pneumophila* is the most commonly identified cause of infection in the United States with the majority of *L. pneumophila* infections caused by sergroup 1. In recent years, the number of reported *Legionella* infections have increased in California and nationwide, but the reason(s) for these increases is unclear.

Patients at increased risk of Legionnaires' disease include persons with the following conditions:

- Aged 50 years or older
- Current or former smoker
- Immunocompromised
- Chronic heart, lung, or renal disease
- Diabetes

Legionnaires' disease is distinguished from Pontiac fever in that Pontiac fever tends to have milder symptoms, does not include pneumonia, and resolves without treatment. Pontiac fever is most often diagnosed when there are other known cases of *Legionella* infection identified.

□ **Recommendations for Healthcare Providers and Healthcare Facilities**

Healthcare providers are recommended to do the following:

- **Consider** Legionnaires' disease in any patient with compatible symptoms, especially if in a high-risk category.
- **Report** any suspected or confirmed case of Legionnaires' disease to Kern County Public Health by phone at (661) 321-3000, by fax at (661) 868-0261, or through the CalREDIE Provider Portal.
- **Order** appropriate laboratory testing or patients with suspected Legionnaire's disease, such as the following:
 - Lower respiratory culture on buffered charcoal yeast extract (BCYE agar)
 - Urinary antigen testing
 - Nucleic acid amplification testing, such as PCR

Cultures are the preferred test to identify *Legionella* spp, and is often used in conjunction with urinary antigen testing. Urinary antigen testing only identifies *L. pneumophila* serogroup 1 and may not detect other *Legionella* spp. Serological assays can be nonspecific, require paired testing for diagnosis, and are not recommended in most situations. Cultures also have the added benefit of allow clinical isolates to be compared to environmental isolates and potentially link patients to exposure sources.

- **Query** patients for potential sources of exposure. Common sources may include the following:
 - Hot tubs or Jacuzzis
 - Household showers
 - Decorative fountains or water features, including misters
 - Cooling towers (parts of centralized air-conditioning systems for large buildings)

Legionella species are naturally occurring, ubiquitous aquatic organisms found in freshwater environments. However, most sources of exposure are related to plumbing and other human-made water systems, as described above. Travel is also a risk factor as hotels, resorts, cruise ships and other types of residences outside the home often have large, complex water systems and aerosol-generating devices. Healthcare and long-term care stays have also been identified in healthcare-associated legionellosis cases.

- **Treat** patients promptly. The culture of lower respiratory specimens is less sensitive in patients who have begun antibiotic therapy; however, treatment should not be delayed. Refer to the [IDSA-ATS Guidelines for Treatment of Community-acquired Pneumonia](#) and [IDSA-ATS Guidelines for Treatment of Hospital-acquired Pneumonia](#) for more treatment guidelines.

Legionella infection is not usually transmitted from person-to-person; however, one episode of probable person-to-person transmission of Legionnaire's disease has been reported in [literature](#).

□ **Recommendations for Clinical Laboratories**

Clinical laboratories are recommended to do the following:

- **Test** all specimens sent for *Legionella* spp. testing as soon as possible.

Use caution when rejecting lower respiratory specimens based on specimen quality (e.g. due to lack of white blood cells in sample or contamination of other bacteria. Sputum produced by patients with Legionnaires' disease may not have many white blood cells and contaminating bacteria do not negatively impact isolation of *Legionella* on selective media (e.g. BCYE agar plus antibiotics).
- **Report** all positive *Legionella* spp. results within one working day, including antigen and culture results, by phone at (661) 321-3000, by fax (661) 868-0261, or through the CalREDIE electronic laboratory reporting (ELR) system.
- **Submit** *Legionella* spp. isolates to the Kern County Public Health Lab as soon as possible. Isolates can be submitted to 1800 Mt Vernon Avenue, Bakersfield, CA 93306 during regular business hours.

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□ **Additional Resources**

CDC: [What Clinicians Need to Know about Legionnaires' Disease.](#)

CDC: [Legionella \(Legionnaires' Disease and Pontiac Fever\) Information for Clinicians](#)

CDPH: [Legionellosis \(Legionella\)](#)

If you have any questions, please contact KCPHSD by phone at 661-321-3000, via email at publichealth@kerncounty.com, or visit the [KCPHSD website](#).

Thank you,

Kristopher Lyon, MD

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Health Officer