



Messenger

Legionnaire's Disease in California

In early September, public health officials reported three cases of Legionella pneumonia, also called Legionnaire's disease, among patrons of a hotel in Ukiah. In late September, three laboratory-confirmed cases were identified among individuals staying at the same hotel in downtown Long Beach. Earlier this month, a cluster of confirmed cases of Legionellosis was identified among individuals either traveling to, living in or working in the city of Anaheim. Further epidemiologic investigation linked nine of twelve cases with Disneyland visits.

ProMed digest reported that two Disneyland cooling towers were colonized with the bacterium Legionella, and had been disinfected and taken out of service.

This constellation of unrelated Legionnaire's disease events is unusual. Legionella pneumophila is a bacterial agent of Legionnaire's disease pneumonia, and can also cause Pontiac Fever, in which inhalation of dead bacteria results in a debilitating fever. People contract the infection by inhaling aerosolized bacteria that may be spread by showers, misters, cooling towers and other means. L. pneumophila has a predilection for growth in water and especially man-made hot water sources. Outbreaks have been reported with air-borne bacteria travelling several kilometers before being inhaled.

It is worth note that reported cases of Legionellosis in California have been increasing from less than 100 cases per years 2001-2006 to more than 400 cases in 2015. However, most of these cases are not due to outbreaks, but are due to individual "sporadic" cases in which the spread of a water-loving bacteria that is ubiquitous in the environment colonizes a water feature and is spread by aerosolization of the water in which the bacterium dwells.

Legionella pneumonia—often fatal—can be diagnosed by specific culture by clinical and hospital laboratories. However, in recent years, culture has been supplanted by culture-independent testing such as polymerase chain reaction or PCR and by testing for a unique Legionella protein that appears in the urine of most infected patients.

While diagnosis and treatment of Legionellosis can be accomplished without culture, public health investigators are challenged to link disease with a source. DNA sequencing of culture isolates from patients and from environmental sources like the Disneyland cooling towers can conclusively associate a source with cases of human illness—allowing remediation of such sources with surgical precision. However, without a Legionella culture isolate from a patient, it is exceedingly difficult to link a particular water source to human infection.

Valley Fever Update

California Department of Public Health (CDPH) reported on November 14 a 26 percent increase in the number of new Valley Fever cases reported from local health departments in California through October 31, 2017, compared with the number of cases reported for the same period in 2016.

From January 1 through October 31, 2017: 5,121 provisional cases of Valley Fever were reported in California. This is an increase of 1,294 from the 3,827 cases reported during that same time period in 2016. While cases can be more common in the late summer and fall, it is unknown why there has been an apparent increase in provisional Valley Fever cases in California in 2017.

