

Health Alert: Valley Fever (Coccidioidomycosis) reporting in Washington State

September 8, 2014 – UPDATE

Actions requested for laboratories:

- **Report all positive laboratory findings for *Coccidioides*** to your local health jurisdiction (LHJ). This includes: cultures, complement fixation, immunodiffusion, enzyme immunoassay (EIA), and any other tests indicating the presence of *Coccidioides*.
 - LHJ contact info: <http://www.doh.wa.gov/AboutUs/PublicHealthSystem/LocalHealthJurisdictions.aspx>
- **Submit all isolates** of *Coccidioides* to Washington State Public Health Laboratories. Isolates are being requested to allow for additional characterization at the Centers for Disease Control and Prevention which will provide molecular epidemiological evidence to aid in the investigation of potentially locally-acquired cases.
- **Non-culture specimens need only be submitted upon request** by the LHJ or Washington State Department of Health. These types of specimens will only be requested for submission if the infection is thought to be potentially locally acquired.
- Be aware that *C. immitis* has been identified in soil in south-central Washington and 6 locally-acquired coccidioidomycosis cases have been reported with exposure in the same region since 2010.

Current situation in Washington State

Three cases of coccidioidomycosis reported in 2010-2011 from Benton, Franklin, and Walla Walla counties had no recent travel out of the state, but clinical, serologic, and epidemiologic evidence suggested they were recent infections acquired in south-central Washington (*Clin Infect Dis.* 2013;56(6):847-50). Soil samples collected by Washington State Department of Health and Benton-Franklin Health District from areas where 2 of 3 case-patients were likely exposed tested positive for *C. immitis* (*MMWR.* 2014;63(20);450). Sequencing indicated that the soil isolates matched a clinical isolate from one of the case-patients.

Since 2012, an additional 3 cases of coccidioidomycosis with presumed in-state acquisition have been reported to Washington State Department of Health. Two of these cases were culture-confirmed, but isolates had been disposed of prior to notification.

We aim to improve our ability to determine whether *Coccidioides* infections are locally acquired in Washington by using molecular epidemiologic evidence to identify the likely exposure location. Isolates will be sequenced to determine their similarity to strains isolated in south-central Washington versus Arizona, California, or other traditionally defined endemic areas. This will provide valuable information about the emergence of this disease in Washington State. It will be particularly useful in cases where the patient cannot be interviewed or the travel history is unclear.

Coccidioidomycosis is a notifiable condition in Benton, Franklin, and Walla Walla counties. Statewide, it is reportable as a rare disease of public health significance.

Background on Coccidioidomycosis (“Valley Fever”)

Coccidioidomycosis (“Valley Fever”) is a fungal infection caused by *Coccidioides immitis* and *C. posadasii*. Known endemic regions for these soil-dwelling fungi includes Arizona, the central valley and southern California, and parts of Utah, Nevada, New Mexico, Texas, and Central and South America. It has recently been identified as far north as Washington State.

Transmission occurs via inhalation of spores. Exposures typically occur when soil is disrupted, such as during excavation. Most infections (~60%) are subclinical. Symptomatic infections typically manifest as community acquired pneumonia or influenza-like illness 1-4 weeks after exposure. Some patients develop residual lung nodules or lung cavitations. Disseminated disease is rare (~1%), but may involve skin, bones, joints, and meninges.

Resources

- CDC: <http://www.cdc.gov/fungal/diseases/coccidioidomycosis/health-professionals.html>
- Valley Fever Center for Excellence: <https://www.vfce.arizona.edu/Clinicians/default.aspx>