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Coccidioidomycosis / Valley Fever (Coccidioides spp.) 2023 Case Definition | CDC  
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spp.)  
2023 Case Definition  
Coccidioidomycosis / Valley Fever (  
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2023 Case Definition  
NOTE:  
A surveillance case definition is a set of uniform criteria used to define a disease for public health surveillance. Surveillance case definitions enable public health officials to classify and count cases consistently across reporting jurisdictions. Surveillance case definitions are not intended to be used by healthcare providers for making a clinical diagnosis or determining how to meet an individual patient’s health needs.  
CSTE Position Statement(s)  
22-ID-07  
Clinical Criteria  
In the absence of a more likely diagnosis of an alternative fungal infection, such as histoplasmosis or blastomycosis, which have similar clinical presentation as coccidioidomycosis, and which can lead to serologic and antigenic false positives for coccidioidomycosis due to cross-reactivity:  
Acute onset or worsening of at least  
two  
of the following signs or symptoms:  
Cough  
Fever or chills or night sweats  
Shortness of breath  
Chest or flank pain  
Headache  
Unintentional weight loss  
Myalgia (muscle pain)  
Arthralgia (joint pain) or bone pain  
Fatigue,  
OR  
At least  
one  
of the following findings:  
Abnormal lung findings on chest imaging (e.g., pulmonary infiltrates, nodule, or cavitary lesions) or report of pneumonia  
Single or multiple skin lesions  
Bone or joint abnormality (e.g., osteomyelitis, pathologic fracture)  
Meningitis, encephalitis, or focal brain lesion  
Abscess, granuloma, or lesion in other body system  
Erythema nodosum or erythema multiforme rash.  
Laboratory Criteria  
For the purposes of surveillance, laboratory evidence includes:  
Confirmatory laboratory evidence:  
Culture of  
Coccidioides  
spp. from a clinical specimen,  
OR  
Identification of characteristic  
Coccidioides  
spp. in tissue or body fluid by histopathology,  
OR  
Identification of characteristic  
Coccidioides  
spp. in tissue or body fluid by cytopathology,  
OR  
Detection of  
Coccidioides  
-specific nucleic acid in a clinical specimen using a validated molecular assay (e.g., polymerase chain reaction [PCR], deoxyribonucleic acid [DNA] Probe),  
OR  
Detection of  
Coccidioides  
-specific proteins in a clinical specimen or isolate using a validated molecular assay (e.g., matrix-assisted laser desorption ionization-time of flight [MALDI-TOF]),  
OR  
Detection of coccidioidal antibodies in cerebrospinal fluid (CSF),  
OR  
Detection of coccidioidal antibodies in serum or other body fluids using any of the following diagnostic tests:  
Immunodiffusion (may be abbreviated as ID, IMD, IMDF, IDTP, IDCF)  
Complement fixation (CF) with a titer of >1:2  
Tube precipitin  
Detection of  
both  
immunoglobulin M (IgM)  
and  
immunoglobulin G (IgG) by enzyme immunoassay (may be abbreviated as EIA or ELISA).  
Presumptive laboratory evidence:  
Detection of coccidioidal antibodies in serum or other body fluids using any of the following diagnostic tests:  
Complement fixation (CF) with a titer of 1:2  
Lateral flow assay (LFA)  
Latex agglutination  
Detection of either IgM or IgG by enzyme immunoassay (may be abbreviated as EIA or ELISA),  
OR  
Detection of  
Coccidioides  
spp. antigen in serum, urine, CSF, or other body fluids.  
Note: The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.  
Epidemiologic Linkage  
Exposure to a  
Coccidioides  
spp. endemic area, including via residence, work, or travel, in the 2 months prior to acute symptom onset or positive coccidioidal laboratory result if acute onset date is unknown.  
To assess areas of endemicity, investigators can reference Centers for Disease Control and Prevention’s estimated areas with  
Coccidioides  
spp. (https://www.cdc.gov/fungal/diseases/coccidioidomycosis/maps.html). Current estimates of where  
Coccidioides  
spp. live are based on public health surveillance data, outbreak locations, skin testing studies, and detection of  
Coccidioides  
spp. in the environment.  
Of note, it can be challenging and complex to determine the  
Coccidioides  
spp. endemicity of a specific area, and endemicity is expected to change and likely expand over time, particularly given the influences of climate change. Investigators can work with public health officials in the state where exposure may have occurred to make a determination if epidemiologic linkage criteria are met.  
If exposure history is not available, assume the case does not meet the epidemiologic linkage criteria.  
Criteria to Distinguish a New Case from an Existing Case  
A new case is a case not known to be previously reported and counted in any public health jurisdiction in the United States.  
There is no standardized system to check if a coccidioidomycosis case has been reported in another state; however, if it is known that a case was previously diagnosed or reported out-of-state, that case should not be counted or reported again.  
Reactivation of coccidioidomycosis can occur, particularly among patients with previous coccidioidomycosis who are later treated with immunosuppressive medications. Potential cases of reactivation should not be counted or reported unless they are known to have not been previously diagnosed or reported.  
Multiple cases of coccidioidomycosis for the same patient should only be reported if reactivation of a previous infection can be ruled out (i.e., patient was reinfected) by whole genome sequencing (i.e., sequencing data indicate infection from distinct  
Coccidioides  
spp. lineages/strains).  
Case Classification  
Suspect  
High-incidence jurisdictions  
(as defined in Case Classification Comments below)  
N/A  
Low-incidence jurisdictions  
(as defined in Case Classification Comments below)  
A case that meets presumptive laboratory evidence AND does NOT meet epidemiologic linkage criteria AND does NOT meet clinical criteria.  
Probable  
High-incidence jurisdictions  
(as defined in Case Classification Comments below)  
N/A  
Low-incidence jurisdictions  
(as defined in Case Classification Comments below)  
A case that meets confirmatory laboratory evidence AND does NOT meet epidemiologic linkage criteria AND does NOT meet clinical criteria,  
OR  
A case that meets presumptive laboratory evidence AND  
either  
epidemiologic linkage OR clinical criteria\*.  
Confirmed  
High-incidence jurisdictions  
(as defined in Case Classification Comments below)  
A case that meets confirmatory or presumptive laboratory evidence.  
Low-incidence jurisdictions  
(as defined in Case Classification Comments below)  
A case that meets confirmatory laboratory evidence AND  
either  
epidemiologic linkage OR clinical criteria\*,  
OR  
A case that meets presumptive laboratory evidence AND epidemiologic linkage AND clinical criteria.  
Suspect, Probable, Confirmed: Illness in a person with compelling evidence (e.g., culture, histopathology, seroconversion) of a different fungal infection, such as histoplasmosis or blastomycosis, should not be counted as a case of coccidioidomycosis without evidence of co-infection since other fungal infections can cause false positive (cross-reactive) Coccidioides spp. antigen and antibody test results. Thus, coccidioidomycosis cases should only be classified as such in the absence of a more likely diagnosis.  
\*Some jurisdictions have systematically validated laboratory evidence with clinical compatibility for the vast majority of cases. Those jurisdictions may assume that clinical criteria are met for cases with no clinical information available.  
Note: This CSTE case definition is intended solely for public health surveillance purposes and does not recommend diagnostic criteria for clinical partners to utilize in diagnosing patients with potential coccidioidomycosis.  
Case Classification Comments  
High-incidence jurisdictions are those that have had an average coccidioidomycosis incidence of ≥10 confirmed cases/100,000 population for a period of three consecutive years. As of July 2022, those jurisdictions were Arizona and California.  
Low-incidence jurisdictions are those that have not had an average coccidioidomycosis incidence of ≥10 confirmed cases/100,000 population for a period of three consecutive years. Once ≥10 confirmed cases/100,000 population have been observed in a low-incidence jurisdiction for a period of three consecutive years, they become a high-incidence jurisdiction for the purposes of surveillance and should permanently switch reporting criteria.  
For determining incidence for case classification and reporting purposes, calculations should be made at the state or territory level. Case classification for reporting should not be differentially applied at the subdivision level (e.g., county or region within a state).  
Some cases of coccidioidomycosis are not identified until months or years after infection (e.g.,  
Coccidioides  
spp. identified from biopsy of lung nodule). If it is believed that exposure or initial onset occurred months or years earlier, cases can be attributed to the estimated time of infection or onset rather than the time of positive test result.  
Contact the laboratory for positive coccidioidal laboratory reports that do not specify test type (e.g., “  
Coccidioides  
spp. antibody positive”). If this is not feasible, consider the report to meet presumptive laboratory evidence. Additionally, if a complement fixation test is reported to be positive, but the specific titer result is absent, then also consider the report to meet presumptive laboratory evidence if contacting the laboratory is not feasible.  
Related Case Definition(s)  
Coccidioidomycosis / Valley Fever (  
Coccidioides  
spp.) | 2011 Case Definition  
Coccidioidomycosis / Valley Fever (  
Coccidioides  
spp.) | 2008 Case Definition  
Coccidioidomycosis / Valley Fever (  
Coccidioides  
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Coccidioides  
spp.) | 1995 Case Definition  
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