NJHealth New Jersey Department of Health Communicable Disease Service

Coccidioidomycosis

3/30/2026

REPORT CONFIRMED CASES BY THE NEXT BUSINESS DAY

Local health officers shall report confirmed cases by the close of the next business day to NJDOH by electronic reporting (CDRSS).

1 THE DISEASE AND ITS EPIDEMIOLOGY

A. Etiologic Agent

Coccidioidomycosis, also known as Valley Fever, is a lung infection caused by *Coccidioides*, a fungus that lives in the soil. The fungus is found in the Pacific Northwest and southwestern United States, and parts of Mexico, Central America, and South America.

B. Clinical Description

Coccidioidomycosis is a fungal infection caused by *Coccidioides* species. Two species of *Coccidioides* cause infection: *Coccidioides immitis* (typically in California) and *Coccidioides posadasii* (typically outside of California). Coccidioidomycosis is typically acquired through inhalation of airborne spores from disturbed soil in endemic areas. *Coccidioides* species are not endemic to New Jersey. Symptomatic persons (approximately 40% of cases) typically present 1-3 weeks after exposure and often presents with nonspecific symptoms, such as fatigue, cough, dyspnea, headache, night sweats, and myalgia. Some patients develop a characteristic rash, such as erythema nodosum or erythema multiforme. Approximately 5-10% of patients develop complications or chronic pulmonary disease. Disseminated disease occurs in approximately 1% of cases.

Risk factors for severe or disseminated coccidioidomycosis include people who have weakened immune systems, for example people who have HIV/AIDS, have had an organ transplant, or who are taking medications such as corticosteroids or TNF-inhibitors. Other groups at higher risk for developing severe disease include pregnant women, people who have diabetes, people who are Black or Filipino, and people over 60 years of age. Severe disease may involve diffuse pulmonary infection, respiratory failure, or dissemination to the skin, bones, joints, or central nervous system, including meningitis, and may result in death.

C. Modes of Transmission

Coccidioidomycosis is acquired through inhalation of airborne fungal spores of Coccidioides species that become aerosolized when contaminated soil is disturbed by activities such as construction, agriculture, excavation, or natural events (e.g., dust storms). Coccidioidomycosis species are not endemic to New Jersey, therefore, cases identified among New Jersey residents are likely to be associated with travel to endemic areas. Infection is not transmitted through person-to-person contact, and casual exposure to infected individuals does not a post a risk. Rarely, transmission has been reported through organ transplantation from infected donors. Laboratory-acquired infections have also been reported in the absence of appropriate biosafety precautions.

D. Incubation Period

Symptoms generally appear 1-3 weeks after inhalation of *Coccidioides* spores, though symptom onset may range from as early as a few days to several weeks after exposure.

E. Period of Communicability or Infectious Period

Coccidioidomycosis is not transmitted person-to-person, and there is no communicable period for infected individuals. Rare transmission has been reported through organ transplantation.

F. Epidemiology

Coccidioidomycosis is caused by two species of *Coccidioides*: *Coccidioides immitis* (typically in California) and *Coccidioides posadasii* (typically outside of California). Cases occur in areas where the fungus is endemic, particularly the southwestern United Sates (e.g., Arizonia, California), parts of Mexico, Central America, and South America.

In the United States, approximately 20,000 cases are reported annually to the CDC, however the true number of symptomatic infections is likely higher due to underdiagnosis and underreporting. Reported incidence is highest in Arizona and California, and the majority of cases occur among adults >60 years of age.

Because *Coccidioidomycosis* is not endemic in New Jersey and became a reportable condition in January 2026, the incidence of cases among New Jersey residents is currently unknown. Most cases in New Jersey are expected to be travel-associated, highlighting the importance of collecting detailed travel history during clinical evaluation and public health case investigations.

2 CASE DEFINITION

NJDOH follows the current case definition as published on the CDC National Notifiable Disease Surveillance System (NNDSS) website.
Coccidioidomycosis Case Definition: https://ndc.services.cdc.gov/conditions/coccidioidomycosis/

Case definitions enable public health to classify and count cases consistently across reporting jurisdictions and should not be used by healthcare providers to determine how to meet an individual patient's health needs.

A. Clinical Description (for the purpose of surveillance)

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 symptoms:

- Cough
- Fever or chill or night sweats
- Shortness of breath

- Chest or flank pain
- Headache
- Unintentional weight loss
- Myalgia
- Arthralgia 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 of 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

B. Laboratory Criteria

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.

C. 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 *Coccidioides* 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. 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.

D. 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).

E. Case Classification

New Jersey is a low-incidence jurisdiction.

CONFIRMED

- High-incidence jurisdictions: A case that meets confirmatory or presumptive laboratory evidence.
- Low-incidence jurisdictions:

- 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.

PROBABLE

- High-incidence jurisdictions: N/A
- Low-incidence jurisdictions:
  - 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.

SUSPECT/POSSIBLE

- High-incidence jurisdictions: N/A
- Low-incidence jurisdictions: a case that meets presumptive laboratory evidence AND does NOT meet epidemiologic linkage criteria AND does NOT meet clinical criteria.

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.

3 LABORATORY TESTING

Laboratory confirmation of coccidioidomycosis relies on serologic, molecular, and culture-based methods. Serologic testing is the most commonly used diagnostic approach. These tests detect IgM and IgG antibodies.

Serology: Serologic tests include enzyme immunoassay (EIA), immunodiffusion (ID), and complement fixation (CF) and lateral flow assay (LFA)

- EIA: Highly sensitive and commonly used method for diagnosing coccidioidomycosis. It detects IgM and IgG antibodies. It is often used as an initial test.
- ID: Detects IgM antibodies; positive early in the course of infection

- CF: detected IgG antibodies and allows for assessment of disease severity
- LFA: detects the presence of total antibodies against *Coccidioides* spp. (IgM or IgG)

Because antibodies may take 1-3 weeks after symptom onset to become detectable, a negative early serologic test does not rule out infection. Paired serum samples taken weeks apart to demonstrate a four-fold rise in antibody titer provides more reliable evidence of recent infection. Antibodies may remain detectable for months or longer after clinical illness is resolved.

Culture: Isolation of *Coccidioides* from clinical specimens (tissues and respiratory specimens) is possible in specialized laboratories, but it is rarely performed due to biosafety risks, slow growth, and limited availability. Manipulation of cultures should be done in a biosafety level 3 laboratory

Microscopy: can be used for detection of spherules in tissue or respiratory secretions though this has low sensitivity.

Urinary antigen detection: Detection of *Coccidioides* antigen in urine is not routinely used for diagnosis; however, it may be useful in immunocompromised patients with severe forms of disease.

Nucleic acid testing: PCR assays can detect *Coccidioides* DNA in clinical specimens, such as lower respiratory secretions.

The Division of Public Health and Environmental Laboratories (PHEL) does not provide testing for coccidioidomycosis, but testing is available at commercial laboratories.

4 SURVEILLANCE AND REPORTING

Purpose of Surveillance and Reporting

- To better understand the epidemiology of infection of coccidioidomycosis among New Jersey residents, including travel-associated cases.
- To identify trends in case occurrence, such as increases in travel-related infections or changes in disease patterns
- To guide public health messaging and preventive education, including raising awareness among clinicians and the public about risk factors, travel to endemic areas, and early recognition of illness.

Laboratory Reporting Requirements

Clinical laboratories must report by ELR or electronic reporting a result that is positive for the presence of a causative organism for an infectious condition that appears on the Notifiable Condition List of infectious conditions for the year in which the result is obtained (NJAC 8:57-2.6).

Reports shall contain:

- Patient demographics (name, age, DOB, sex assigned at birth, current gender identity, sexual orientation, race, ethnicity)

- Patient home address and telephone number
- Test performed and test result
- Specimen source or type, date of specimen collection, and date tested
- Ordering provider's name, address and telephone number
- Reporting laboratory's name, address and telephone number
- Upon request, results of other tests performed pertaining to the case

Healthcare Provider Reporting Requirements

The New Jersey Administrative Code (NJAC 8:57-2.2) stipulates that healthcare professional and administrator shall report each confirmed case of a disease, infection, or condition not listed at N.J.A.C. 8:57-2.3, if the disease, infection, or condition is included on the Notifiable Condition List of infectious conditions for the year in which the disease, infection, or condition is identified, in accordance with N.J.A.C. 8:57-2.3(b). Duplicate reporting of the same case by healthcare professionals and administrators is not necessary.

Reports shall contain:

- Disease name
- Patient demographics (name, age, DOB, sex assigned at birth, current gender identity, sexual orientation, race, ethnicity)
- Patient home address, all known telephone numbers, and email address
- Clinical presentation & diagnosis
- Date of symptom onset
- Clinical laboratory data that supports the diagnosis, if available
- A description of provided treatment
- Hospitalization and mortality status
- Reporting provider or administrator name, institution name, address, telephone number, and email address
- Medical records upon request

5 CASE INVESTIGATION

A. Investigation

Local health departments are asked to investigate coccidioidomycosis reports and close cases in CDRSS within 2 weeks of case creation. The Coccidioidomycosis Investigation Worksheet may be used to help guide the patient or physician interview. Information on the worksheet should be entered into CDRSS; worksheets should not be sent to NJDOH unless requested.

A minimum of 3 attempts should be made to obtain case information. Attempts to both the healthcare provider/infection preventionist and patient should be made before closing the case.

After 3 attempts, enter what is known into CDRSS, including attempts to obtain information (dates and results of the attempts), and classify/close the case according to the case definition.

B. Key CDRSS Fields Specific for Coccidioidomycosis

CDRSS Screen	Required Information
Disease Information	• Ensure the correct disease is selected.
Patient Personal Information	• Ensure name, sex, date of birth, race and ethnicity are entered.
Laboratory and Diagnostic Test Information	• Review test result to determine if it meets laboratory criteria for case definition. • If manually entering a case, ensure the method field is completed.
Additional Requirements	• Answer all questions (i.e., travel, activities during travel, exposures to soil). Focus on the two months prior to illness onset or positive test result. • If the patient did not travel to an endemic area in the two months prior to illness onset/positive test result, notify the REP and Zoonotic Disease Team (zoonoticrn@doh.nj.gov) by email. • Document if the case was previously diagnosed with coccidioidomycosis or other fungal infection
Clinical Status	• Enter illness onset date, hospitalization (as part of this investigation), pre-existing conditions and mortality information.
Industry and Occupation Information	• Indicate the patient's occupation and industry/work setting
Medical Facility and Provider Information	• For admitted/hospitalized patients, ensure patient status is marked as INPATIENT and admission and discharge dates are entered.
Signs/Symptoms	• Inquire if the patient had each sign/symptom and update the response to Yes, No or Unknown accordingly. Not Asked should not be left as a default response. Enter onset and resolution dates, if known.
Treatment	• Document all medications received with duration/dates of treatment. This should include treatment that will be continued in an outpatient setting.

CDRSS Screen	Required Information
Comments	• If requested information was not provided by the patient's healthcare provider, list the dates attempts were made to obtain information and the outcomes. For example, 1/21/26 faxed form to provider; 1/31/26, spoke with office manager and re-sent form; 2/5/25 refaxed form to provider. • Missing information should be obtained by interviewing the patient. If the patient is non-responsive, document attempts and call outcomes in Comments section as well.

6 CONTROLLING FURTHER SPREAD

A. Isolation and Quarantine Requirements/Protection of Contacts of a Case

There are no isolation or quarantine restrictions.

B. Managing Special Situations

Local Case

If the patient did not travel to an endemic area in the two month prior to illness onset or positive test result, notify the REP and NJDOH Zoonotic Disease Team (zoonticrn@doh.nj.gov) by email. NJDOH may work with other programs to identify potential exposures.

NJDOH may request the following additional information

1. Alternative diagnoses
2. Test results for other fungal infection
3. Exposures (activity and address locations) to soil and outdoor dust within NJ and/or other non-endemic states
4. Contact with imported plants, soil, or dust-containing materials from endemic areas.
5. If case is a recent organ recipient, name of organ, date of transplant, facility of transplantation

C. Preventive Measures

Avoid dust exposure in endemic areas

1. Stay indoors during dust storms or high winds
2. Keep car windows closed in dusty areas
3. Avoid activities that disturb soil, such as construction sites, digging, gardening, off-road biking, ATV riding, desert hiking during dry/windy conditions
4. Use air filtration and closed windows to minimize dust exposure
5. Clean skin injuries well with soap and water to prevent infection

Use protection if dust exposure in endemic areas is unavoidable

1. Wear an N95 mask
2. Wear long sleeves, pants, and closed shoes
3. Shower and change clothes after heavy dust exposure
4. Clean skin injuries well with soap and water to prevent infection

References

Centers for Disease Control and Prevention. Case definitions for infectious conditions under public health surveillance, 2023. https://ndc.services.cdc.gov/conditions/coccidioidomycosis/

Centers for Disease Control and Prevention. *Clinical overview of Valley fever (Coccidioidomyscosis)*. CDC. https://www.cdc.gov/valley-fever/hcp/clinical-overview/index.html

Centers for Disease Control and Prevention. *Surveillance for coccidioidomycosis, histoplasmosis, and blastomycosis — United States, 2019* (MMWR Surveillance Summary). CDC. https://www.cdc.gov/mmwr/volumes/71/ss/ss7107a1.htm

Centers for Disease Control and Prevention. *Testing algorithm for coccidioidomycosis*. CDC, 2025. https://www.cdc.gov/valley-fever/hcp/testing-algorithm/index.html

Centers for Disease Control and Prevention. *Valley Fever (coccidioidomycosis)*. CDC. https://www.cdc.gov/valley-fever/index.html

COCCIDIOIDOMYCOSIS INVESTIGATION WORKSHEET

MR #: _____ **CDRSS #:** _____

DEMOGRAPHICS

Patient Last Name	**First Name**	**DOB:**	**Phone number**
		____ / ____ / ____	

Address	**City**	**Municipality**

Race

White Black American Indian or Alaskan Native
Asian Pacific Islander Unknown

Ethnicity

Hispanic
Non-Hispanic Unknown

Sex	**Industry (work setting)**	**Occupation (job title)**

CLINICAL INFORMATION

Date first seen by a medical professional	**Onset Date**	**Diagnosis:**
____ / ____ / ____	____ / ____ / ____	

Signs/Symptoms	**Response**			**Onset Date**
Abscess	Yes	No	Unk.	____ / ____ / ____
Arthralgia	Yes	No	Unk.	____ / ____ / ____
Back pain	Yes	No	Unk.	____ / ____ / ____
Bone pain	Yes	No	Unk.	____ / ____ / ____
Chest pain	Yes	No	Unk.	____ / ____ / ____
Chills	Yes	No	Unk.	____ / ____ / ____
Cough	Yes	No	Unk.	____ / ____ / ____
Encephalitis	Yes	No	Unk.	____ / ____ / ____
Erythema multiforme rash	Yes	No	Unk.	____ / ____ / ____
Fatigue	Yes	No	Unk.	____ / ____ / ____
Fever, Tmax _____F	Yes	No	Unk.	____ / ____ / ____
Focal brain lesion	Yes	No	Unk.	____ / ____ / ____
Granuloma	Yes	No	Unk.	____ / ____ / ____
Headache	Yes	No	Unk.	____ / ____ / ____
Meningitis	Yes	No	Unk.	____ / ____ / ____
Myalgia	Yes	No	Unk.	____ / ____ / ____
Osteomyelitis	Yes	No	Unk.	____ / ____ / ____
Pathologic fracture	Yes	No	Unk.	____ / ____ / ____
Pneumonia	Yes	No	Unk.	____ / ____ / ____
Shortness of breath	Yes	No	Unk.	____ / ____ / ____
Skin lesions	Yes	No	Unk.	____ / ____ / ____
Sweats (night)	Yes	No	Unk.	____ / ____ / ____
Unintentional weight loss	Yes	No	Unk.	____ / ____ / ____
Other *specify*:				____ / ____ / ____

Was a pre-existing condition present?

Yes, *specify*_____ No Unknown

Was patient hospitalized because of this illness?	**Did the patient die because of this illness?**
Yes, *specify location and date(s)* Hospital name: _____ Admission: _____ / _____ / _____ Discharge: _____ / _____ / _____ Diagnosis:_____ No	Yes, *specify date* _____ / _____ / _____ No Unknown

TREATMENT INFORMATION
Including any medication to be continued outpatient, if hospitalized

Treatment	**Dosage**	**Dates**
Fluconazole		_____ / _____ / _____ to _____ / _____ / _____
Itraconazole		_____ / _____ / _____ to _____ / _____ / _____
Other: _____		_____ / _____ / _____ to _____ / _____ / _____
Not treated		

RISK FACTORS AND ADDITIONAL INFORMATION

	Response		
IN THE 2 MONTHS PRIOR TO ILLNESS ONSET OR POSITIVE TEST RESULT, DID THE PATIENT VISIT, WORK, OR LIVE IN AN COCCIDIOIDES SPP. ENDEMIC AREA? *If yes, provide dates and location(s):*	Yes	No	Unk.
WAS THE CASE EXPOSED TO DUST/WIND STORM, EARTHQUAKE, OR SUBSTANTIAL SOIL DISTURBANCE DURING TRAVEL? *If yes, provide date of exposure, location and type of disturbance:*	Yes	No	Unk.
DID THE CASE PARTICIPATE IN DUST GENERATING RECREATIONAL ACTIVITY DURING TRAVEL? *If yes, describe activity and date of activity:*	Yes	No	Unk.
DID THE CASE PARTICIPATE IN ANY OTHER OUTDOOR RECREATIONAL ACTIVITIES? *If yes, describe activity and date of activity:*	Yes	No	Unk.
HAS THIS CASE HAD ADDITIONAL OR RECENT ALTERNATIVE FUNGAL INFECTIONS DIAGNOSED? *If yes, provide diagnoses and date of diagnosis:*	Yes	No	Unk.
WAS THE CASE PREVIOUSLY DIAGNOSED WITH COCCIDIOIDOMYCOSIS? *If yes, provide date of diagnosis:*	Yes	No	Unk.
WAS A CHEST X-RAY PERFORMED? *If yes, provide date of chest x-ray:* *Select findings:* *Pulmonary infiltrate* *Pulmonary nodule* *Cavitary lesion*	Yes	No	Unk.

ADDITIONAL CASE NOTES