



ARIZONA DEPARTMENT OF HEALTH SERVICES

Case Definitions for Reportable
Communicable Morbidities

MARCH 2010

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(β) = Case of Bi-national Interest

Introduction

In the United States, requirements for reporting diseases are mandated by state or local laws or regulations, and the list of reportable diseases in each state differs. Since 1990, in collaboration with the [Council of State and Territorial Epidemiologists](#) (CSTE), the [Centers for Disease Control and Prevention](#) (CDC) has published case definitions for public health surveillance to provide uniform criteria for reporting cases to increase the specificity of reporting and improve the comparability of diseases reported from different geographic areas.

The CDC/CSTE surveillance case definitions included in this report differ in their use of clinical, laboratory, and epidemiologic criteria to define cases. Some clinical syndromes do not have confirmatory laboratory tests; however, laboratory evidence may be one component of a clinical definition (e.g., toxic-shock syndrome). Most case definitions include a brief clinical description; however, unless this description is explicitly cited in the case classification section, it is included only as background information. Some diseases require laboratory confirmation for diagnosis regardless of clinical symptoms, whereas others are diagnosed based on epidemiologic data. Many case definitions for the childhood vaccine-preventable diseases and foodborne diseases include epidemiologic criteria (e.g., exposure to probable or confirmed cases of disease or to a point source of infection [i.e., a single source of infection, such as an event resulting in a foodborne-disease outbreak, to which all confirmed case-patients were exposed]). In some instances, the anatomic site of infection may be important; for example, whether the organism was isolated from a normally sterile site (e.g., blood).

Since each state has the authority to make additional morbidities reportable, there are some morbidities reportable in Arizona that are not nationally notifiable. Case definitions for those morbidities are also included in this report to standardize surveillance within Arizona. Case definitions in this document for nationally notifiable conditions match the CDC case definitions for most morbidities.

For more information see:

ADHS's Summary and Overview for Case Definitions for Public Health Surveillance at http://www.azdhs.gov/phs/oids/epi/surv_manual.htm;

CDC's National Notifiable Diseases Surveillance System at <http://www.cdc.gov/ncphi/diss/nndss/nndsshis.htm>;

The introduction to any of the ADHS Infectious Disease annual reports posted at http://www.azdhs.gov/phs/oids/data_reports.htm.

Definition of Terms Used in Case Classification

Confirmed case: A case that is classified as confirmed for reporting purposes.

Probable case: A case that is classified as probable for reporting purposes.

Suspected case: A case that is classified as suspected for reporting purposes.

Laboratory confirmed case: A case that is confirmed by one or more of the laboratory methods listed in the case definition under Laboratory Criteria for Diagnosis. Although other laboratory methods can be used in clinical diagnosis, only those listed are accepted as laboratory confirmation for national reporting purposes.

Epidemiologically linked case: A case in which a) the patient has had contact with one or more persons who either have/had the disease or have been exposed to a point source of infection (i.e., a single source of infection, such as an event leading to a foodborne-disease outbreak, to which all confirmed case-patients were exposed) and b) transmission of the agent by the usual modes of transmission is plausible. A case may be considered epidemiologically linked to a laboratory-confirmed case if at least one case in the chain of transmission is laboratory confirmed.

Supportive or presumptive laboratory results: Specified laboratory results that are consistent with the diagnosis, yet do not meet the criteria for laboratory confirmation.

Clinically compatible case: A clinical syndrome generally compatible with the disease, as described in the clinical description.

Definition of Bi-national Case

Communicable Disease of Bi-national Interest (β)

(β) Denotes a communicable disease that is classified as a bi-national case of interest for reporting and investigating purposes in collaboration between the Arizona Department of Health Services (ADHS) and the Sonora (Mexico) Secretariat of Public Health (SSS).

Bi-national Case Definition refers to an individual with a confirmed, probable or suspect case of a notifiable communicable disease, AND:

- who has recently traveled or lived in the neighboring country or had recent contact with persons who lived or traveled in the neighboring country; OR
- who is thought to have acquired the infection in the neighboring country or have been in the neighboring country during the incubation period of the infection and was possibly contagious during this period; OR
- who is thought to have acquired the infection from a product from the other country; OR
- whose investigation requires the collaboration of both countries for the purposes of disease investigation and control.

Through the [Arizona Mexico Commission](#) / Comisión Sonora-Arizona Health Services Committee, the [Early Warning Infectious Disease Surveillance](#) (EWIDS) program in the ADHS Office of Border Health and the SSS General Direction of Epidemiology collaborated and agreed upon a list of communicable diseases that are determined to be of special interest to both States.

Arizona and Sonora will utilize [Arizona's Health Services Gateway](#) (HSG), Medical Electronic Disease Intelligence System (MEDSIS) and/or secure SIREN email accounts to share all confidential information.

All County, Tribal, State and International Health Departments will use the MEDSIS Bi-national User Guide for suspect, probable and confirmed cases of bi-national interest.

Diseases that are not classified as bi-national (β) will still be shared between Arizona and Sonora as per the agreed upon bi-national information sharing guidelines.

During cross-border disease investigations of bi-national interest:

- Arizona health authorities will use Arizona's Communicable Disease Case Definition list for epidemiologic investigations.
- Sonora health authorities will use Communicable Disease Case Definitions based on the Guidelines established by the [Mexican Official Norms for Epidemiologic Surveillance](#).

Cross-border Investigations of bi-national cases will be determined on a case by case basis.

SUBMIT A REPORT WITHIN 24 HOURS IF

AMEBIASIS

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-305](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Infection of the large intestine by [Entamoeba histolytica](#) may result in an illness of variable severity ranging from mild, chronic diarrhea to fulminant dysentery. Infection may also be asymptomatic. Extraintestinal infection may also occur. The most common is hepatic abscess.

Laboratory Criteria for Diagnosis

- Intestinal amebiasis:
 - Demonstration of cysts or trophozoites of *E. histolytica* in stool, OR
 - Demonstration of trophozoites in tissue biopsy or ulcer scrapings by culture or histopathology
- Extraintestinal amebiasis
 - Demonstration of *E. histolytica* trophozoites in extraintestinal tissue

Case Classification

Confirmed, intestinal amebiasis: A clinically compatible illness that is laboratory confirmed.

Confirmed, extraintestinal amebiasis: A parasitologically confirmed infection of extraintestinal tissue or among symptomatic persons (with clinical or radiographic findings consistent with extraintestinal infection) demonstration of specific antibody against *E. histolytica* as measured by IHA (indirect hemagglutination), or other reliable immunodiagnostic test such as ELISA (enzyme-linked immunosorbent assay).

Comment

Asymptomatic intestinal carriage of *E. histolytica* should not be reported. Among asymptomatic persons, a positive serologic test does not necessarily indicate extraintestinal amebiasis.

ANTHRAX (β) (*Bacillus anthracis*)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-306](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical description

- Cutaneous Anthrax: An acute illness, or post-mortem examination revealing a painless skin lesion developing over 2 to 6 days from a papular through a vesicular stage into a depressed black eschar with surrounding edema. Fever, malaise and lymphadenopathy may accompany the lesion.
- Inhalation Anthrax: An acute illness, or post-mortem examination revealing a prodrome resembling a viral respiratory illness, followed by hypoxia, dyspnea or acute respiratory distress with resulting cyanosis and shock. Radiological evidence of mediastinal widening or pleural effusion is common.
- Gastrointestinal Anthrax: An acute illness, or post-mortem examination revealing severe abdominal pain and tenderness, nausea, vomiting, hematemesis, bloody diarrhea, anorexia, fever, abdominal swelling and septicemia.
- Oropharyngeal Anthrax: An acute illness, or post-mortem examination revealing a painless mucosal lesion in the oral cavity or oropharynx, with cervical adenopathy, edema, pharyngitis, fever, and possibly septicemia.
- Meningeal Anthrax: An acute illness, or post-mortem examination revealing fever, convulsions, coma, or meningeal signs. Signs of another form will likely be evident as this syndrome is usually secondary to the above syndromes.

Case classification

Confirmed: A clinically compatible illness with one of the following:

- Culture and identification of *B. anthracis* from clinical specimens by the Laboratory Response Network (LRN);
- Demonstration of *B. anthracis* antigens in tissues by immunohistochemical staining using both *B. anthracis* cell wall and capsule monoclonal antibodies;
- Evidence of a four-fold rise in antibodies to protective antigen between acute and convalescent sera or a fourfold change in antibodies to protective antigen in paired convalescent sera using Centers for Disease Control and Prevention (CDC) quantitative anti-PA IgG ELISA testing;
- Documented anthrax environmental exposure AND evidence of *B. anthracis* DNA (for example, by LRN-validated polymerase chain reaction) in clinical specimens collected from a normally sterile site (such as blood or CSF) or lesion of other affected tissue (skin, pulmonary, reticuloendothelial, or gastrointestinal).

Probable: A clinically compatible illness that does not meet the confirmed case definition, but with one of the following:

- Epidemiological link to a documented anthrax environmental exposure;
- Evidence of *B. anthracis* DNA (for example, by LRN-validated polymerase chain reaction) in clinical specimens collected from a normally sterile site (such as blood or CSF) or lesion of other affected tissue (skin, pulmonary, reticuloendothelial, or gastrointestinal);
- Positive result on testing of clinical serum specimens using the Quick ELISA Anthrax-PA kit;
- Detection of Lethal Factor (LF) in clinical serum specimens by LF mass spectrometry
- Positive result on testing of culture from clinical specimens with the RedLine Alert test.

Suspect: An illness suggestive of one of the known anthrax clinical forms. No definitive, presumptive, or suggestive laboratory evidence of *B. anthracis*, or epidemiologic evidence relating it to anthrax.

ASEPTIC MENINGITIS (viral)**SUBMIT A REPORT WITHIN 5 WORKING DAYS**

For more information on control measures, see [Arizona Administrative Code R9-6-307](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A syndrome characterized by acute onset of meningeal symptoms, fever, and cerebrospinal fluid pleocytosis, with bacteriologically sterile cultures.

Laboratory Criteria for Diagnosis

No evidence of bacterial or fungal meningitis

Case Classification

Confirmed: A clinically compatible illness diagnosed by a physician as aseptic meningitis with no laboratory evidence of bacterial or fungal meningitis

Comment

Aseptic meningitis is a syndrome of multiple etiologies, but many cases are caused by a viral agent.

BASIDIOMYCOSES

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-308](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A disease consistent with clinical presentation and/or:

- Subcutaneous nodules that are firm and painful;
- Nodules that involve the muscle;
- Nodules or inflammatory mass that involves the gastrointestinal tract or other organs

Laboratory Criteria for Diagnosis

- Biopsy with microscopic appearance consistent with *Basidiobolus ranarum* (septate hyphae with eosinophilic infiltration), OR
- Isolation of *B. ranarum* from culture of a mass, OR
- A positive serologic result for *Basidiobolus*

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed.

BOTULISM, FOODBORNE (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-309](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Ingestion of botulinal toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Laboratory Criteria for Diagnosis

- Detection of botulinal toxin in serum, stool, or patient's food, or
- Isolation of *Clostridium botulinum* from stool or from the food of a patient with a compatible illness

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed or that occurs among persons who ate the same food as persons with laboratory confirmed botulism.

Comment

Botulism may be diagnosed without laboratory confirmation if the clinical and epidemiologic evidence is overwhelming.

BOTULISM, INFANT (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-309](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness among infants characterized by constipation, poor feeding, and "failure to thrive" that may be followed by progressive weakness, impaired respiration, and death.

Laboratory Criteria for Diagnosis

- Detection of botulinal toxin in stool, serum, OR
- Isolation of *Clostridium botulinum* from stool

Case Classification

Confirmed: A clinically compatible, laboratory confirmed illness occurring among children <1 year of age.

BOTULISM, WOUND (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-309](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness resulting from toxin produced by *Clostridium botulinum* that has infected a wound

Laboratory Criteria for Diagnosis

- Detection of botulinal toxin in serum, OR
- Isolation of *Clostridium botulinum* from wound

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed among patients with no suspect food exposure and with a history of fresh, contaminated wound in the 2 weeks before onset of symptoms

BOTULISM, OTHER (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-309](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Ingestion of botulinal toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Laboratory Criteria for Diagnosis:

- Detection of botulinal toxin in clinical specimen, or
- Isolation of *Clostridium botulinum* from clinical specimen

Case Classification

Confirmed: An illness clinically compatible with botulism that is laboratory confirmed among patients >11 months of age without histories of ingestion of suspect food and without wounds.

BRUCELLOSIS (β)

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-310](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical description

An illness characterized by acute or insidious onset of fever and one or more of the following: night sweats, arthralgia, headache, fatigue, anorexia, myalgia, weight loss, arthritis/spondylitis, meningitis, or focal organ involvement (endocarditis, orchitis/epididymitis, hepatomegaly, splenomegaly).

Laboratory criteria for diagnosis

- Definitive
 - Culture and identification of *Brucella* spp. from clinical specimens
 - Evidence of a fourfold or greater rise in *Brucella* antibody titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart .
- Presumptive
 - *Brucella* total antibody titer of greater than or equal to 160 by standard tube agglutination test (SAT) or *Brucella* microagglutination test (BMAT) in one or more serum specimens obtained after onset of symptoms.
 - Detection of *Brucella* DNA in a clinical specimen by PCR assay.

Case classification

Confirmed: A clinically compatible illness with definitive laboratory evidence of *Brucella* infection

Probable: A clinically compatible illness with at least one of the following:

- Epidemiologically linked to a confirmed human or animal brucellosis case
- Presumptive laboratory evidence, but without definitive laboratory evidence, of *Brucella* infection

**BURKHOLDERIA MALLEI and B.
PSEUDOMALLEI**

REPORTABLE BY LABORATORIES ONLY

For more information on control measures, see [Arizona Administrative Code R9-6-351](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Please contact the Vector-Borne and Zoonotic Disease program for case definition.
(602) 364-4562

CAMPYLOBACTERIOSIS

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-311](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An infection that may result in diarrheal illness of variable severity

Laboratory Criteria for Diagnosis

- Isolation of *Campylobacter* spp. from any clinical specimen

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable: A clinically compatible illness that is epidemiologically linked to a confirmed case.

CHAGAS DISEASE (American trypanosomiasis)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-312](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Please contact the Vector-Borne and Zoonotic Disease program for case definition.
(602) 364-4562

CHANCROID

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A sexually transmitted disease characterized by painful genital ulceration and inflammatory inguinal adenopathy. The disease is caused by infection with *Haemophilus ducreyi*.

Laboratory criteria for diagnosis

Isolation of *H. ducreyi* from a clinical specimen

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable: A clinically compatible case with one or more painful genital ulcers in which:

- a) There is no evidence of *Treponema pallidum* infection by darkfield examination of ulcer exudate or by a serologic test for syphilis performed at least 7 days after onset of ulcers, and
- b) The clinical presentation of the ulcer(s) is not typical disease caused by HSV (herpes simplex virus) or HSV culture is negative.

CHLAMYDIA TRACHOMATIS INFECTION

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Infection with *Chlamydia trachomatis* may result in urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted. Perinatal infections may result in conjunctivitis and pneumonia among newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum and trachoma.

Laboratory Criteria for Diagnosis

- Isolation of *C. trachomatis* by culture, OR
- Demonstration of *C. trachomatis* in a clinical specimen by antigen detection methods

Case Classification

Confirmed: A case that is laboratory confirmed.

LYMPHOGRANULOMA VENEREUM (LGV)

Clinical Description

Infection with L₁, L₂, or L₃ serovars of *Chlamydia trachomatis* may result in a disease characterized by genital lesions, suppurative regional lymphadenopathy, or hemorrhagic proctitis. The infection is usually sexually transmitted.

Laboratory Criteria for Diagnosis

- Isolation of *C. trachomatis*, serotype L₁, L₂, or L₃, from clinical specimen, OR
- Demonstration of inclusion bodies by immunofluorescence in leukocytes of an inguinal lymph node (bubo) aspirate, OR
- Positive microimmunofluorescent serologic test for a lymphogranuloma venereum strain of *C. trachomatis* in a clinically compatible case

Case Classification

Confirmed: A case that is laboratory confirmed

Probable: A clinically compatible case with one or more tender fluctuant inguinal lymph nodes or characteristic proctogenital lesions with supportive laboratory findings of a single *C. trachomatis* complement fixation (CF) titer of greater than 64

SUBMIT A REPORT WITHIN 1 WORKING DAY

CHOLERA (β)

SUBMIT A REPORT WITHIN 24 HOURS IF

- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-315](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness characterized by diarrhea and/or vomiting. Severity is variable.

Laboratory Criteria for Diagnosis

- Isolation of toxigenic (cholera toxin-producing) *Vibrio cholerae* 01 or 0139 from stool or vomitus, OR
- Significant rise in vibriocidal or antitoxic antibodies in acute-and early convalescent-phase sera, OR
- Significant fall in vibriocidal antibodies in early-and late convalescent-phase sera among persons not recently vaccinated.

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed.

Comment

When other cases are known to be occurring, a less than four-fold rise in titer between acute-and convalescent-phase serum may be considered significant. Likewise, a less than four-fold fall may be important in these circumstances. Only confirmed cases should be reported nationally. Illnesses due to strains of *V. cholerae* other than toxigenic *V. cholerae* 01 or 0139 should be reported as *Vibrio* infection rather than cholera. The etiologic agent of a case of cholera should be reported as either *V. cholerae* 01 or *V. cholerae* 0139.

COCCIDIOIDOMYCOSIS (Valley fever)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-316](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Infection may be asymptomatic or may produce an acute or chronic disease. While the disease initially resembles an influenza-like febrile illness primarily involving the bronchopulmonary system, dissemination can occur to virtually any organ system. Confirmation of coccidioidomycosis requires the demonstrated presence of *Coccidioides* histopathologic, cultural or molecular means and/or demonstration of a specific immunologic response: skin test conversion or demonstration of presence of coccidioidal antibody. The results of these immunologic tests must be interpreted in the context of the varied clinical presentations and duration and clinical type of coccidioidomycosis.

Clinical Case Definition

An illness characterized by at least one of the following:

- Influenza-like signs and symptoms, including fever, chest pain, cough, myalgia, arthralgia, headache
- Pneumonia or other pulmonary lesion, by chest X-ray
- Rashes, including erythema nodosum or erythema multiforme
- Involvement of bones, joints, or skin by dissemination
- Meningitis
- Involvement of viscera and lymph nodes

Laboratory Criteria for Diagnosis

Laboratory-confirmed coccidioidomycosis requires at least one of the following:

- Cultural, histopathologic, or molecular evidence of presence of *C. immitis*, OR
- Immunologic evidence of infection (**All titers from blood must be $\geq 1:4$**)
 1. Serologic (testing of serum, cerebrospinal fluid, or other body fluid):
 - a. Detection of coccidioidal IgM by immunodiffusion, enzyme immunoassay (EIA), latex agglutination, or tube precipitin, OR
 - b. Detection of any titer of coccidioidal IgG by immunodiffusion, enzyme immunoassay (EIA), or complement fixation.
 2. Coccidioidal skin test conversion from negative to positive after the onset of clinical signs and symptoms.

Case Classification

Confirmed: A case that is laboratory confirmed.

COLORADO TICK FEVER

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-317](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute viral disease characterized by fever, chills, lethargy, headache and myalgias with infrequent macular or maculopapular rash. After initial onset, a remission is usual, followed by a second bout of fever lasting 2-3 days.

Laboratory Criteria for Diagnosis

- Isolation of CTF virus from blood or CSF, OR
- Fourfold or greater change in serum antibody

Case Classification

Confirmed: A case that is laboratory confirmed with symptoms and history as above.

Probable: A compatible history of tick or outdoor exposure, plus clinical symptoms with supportive laboratory results (demonstration of single serological test result suggestive of recent infection with no history of previous infection, by use of hemagglutination, IFA or ELISA).

CONJUNCTIVITIS, ACUTE

REPORT OUTBREAKS ONLY

For more information on control measures, see [Arizona Administrative Code R9-6-318](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute inflammation of the conjunctiva involving redness and burning or itching of the eyes. Drainage from the eyes may be present as clear and watery fluid or white or yellowish pus.

Laboratory Criteria for Diagnosis

Cultures of purulent drainage or conjunctival swabs may be used to identify the specific infectious agent in cases of bacterial conjunctivitis.

Case Classification

Confirmed: A case that meets the clinical case description

Comment

Only outbreaks of acute conjunctivitis should be reported. An outbreak consists of:

- three or more cases,
- diagnosed or detected within a one-week period,
- all of whom have a common exposure, AND
- not from the same household or family.

CREUTZFELDT-JAKOB DISEASE

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-319](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Creutzfeldt-Jakob Disease (CJD) is a fatal disease characterized by progressive dementia and a variety of other neurological symptoms including:

- Myoclonus
- Visual or cerebellar signs
- Pyramidal/extrapyramidal signs
- Akinetic mutism

CJD is typified by development of spongy spaces in brain tissue where cells have died. Incubation periods range from 15 months to 30 years.

Laboratory Criteria for Diagnosis

Confirmed:

- Detection of characteristic lesions by examination of frozen brain tissue. This diagnosis can be made in the U.S. only by the National Prion Disease Pathology Surveillance Center (NPDPS) in Cleveland, Ohio.
- Detection of abnormal prion protein by Western blot testing performed on frozen brain tissue, or by immunohistochemistry (IHC)/histology performed on fixed tissue.

Probable:

- Detection of 14-3-3 protein in CSF.
- Genetic analysis suggestive of the presence of the mutation associated with CJD.
- Detection of characteristic patterns by EEG or MRI.

Case Classification

When possible, each case of CJD should be classified into one of the types according to the mode of transmission.

Confirmed: A case that meets at least one of the confirmatory laboratory criteria and only when performed by the NPDPS.

- Iatrogenic CJD meets the above criteria PLUS
 - Progressive cerebellar syndrome in a recipient of human cadaveric-derived hormone
 - A CJD recognized exposure risk (i.e. antecedent neurosurgery with dura mater implantation, corneal transplants, brain surgery).
- Familial CJD meets the above criteria PLUS
 - Confirmed or Probable CJD in a first degree relative
- Sporadic CJD meets the above criteria PLUS
 - No evidence of iatrogenic and familial CJD

Probable: A case that meets one of the probable laboratory criteria and in which three of the five clinical findings described above are present. Findings must include progressive dementia with clinical duration lasting < 2 years. Routine investigations should not suggest an alternative diagnosis.

- Iatrogenic CJD meets the above criteria PLUS
 - Progressive cerebellar syndrome in a recipient of human cadaveric-derived hormone

- A recognized CJD exposure risk (i.e. antecedent neurosurgery with dura mater implantation, corneal transplants, brain surgery).
- Familial CJD meets the above criteria PLUS
 - Confirmed or Probable CJD in a first degree relative
- Sporadic CJD meets the above criteria PLUS
 - No evidence of iatrogenic and familial CJD

Suspect: A case that meets one of the probable laboratory criteria and in which no clinical information is known and routine investigations should not suggest an alternative diagnosis.

Additional Information

Additional information and forms may be obtained by visiting the website for the National Prion Disease Pathology Surveillance Center at Case Western Reserve University in Cleveland, Ohio at www.cjdsurveillance.com. CJD is reportable in Arizona but is not yet a nationally notifiable condition. ADHS should be notified of all pending case investigations involving possible CJD and may coordinate shipment of specimens to the NPDPSC.

Additional information regarding the different CJD classifications based on mode of transmission is included below:

- Classical (Sporadic or Spontaneous) CJD: CJD of unexplained origin and presumably autochthonous. The prevalence of classical CJD is about one case per 1,000,000 population/year. This type of CJD typically strikes older individuals with the vast majority of cases occurring in those over 65 years of age (median = 68 years). Median duration of illness is 4-5 months.
- Iatrogenic CJD: Occurs as a result of exposure to infectious prions during a medical procedure. Corneal transplants, dura mater grafts, brain surgery, and growth or gonadotropic hormones made from human pituitary glands have all been implicated in iatrogenic CJD cases.
- Familial (Genetic) CJD: Same general characteristics as classical CJD, but a case may be given this classification when the patient has a known family history of rapid-onset dementia.
- (New) Variant CJD: Associated with consumption of Bovine Spongiform Encephalopathy- (BSE, *aka* "Mad Cow Disease") infected beef. Only three cases with this form of CJD have been found in the U.S. and all cases had acquisition of the disease almost certainly in countries with BSE-contaminated cattle products (United Kingdom and Saudi Arabia). The typical age of onset of Variant CJD is much younger than Classical CJD (median = 28 years). Median duration of illness is 13-14 months.
- Human cases of CJD associated with consumption of venison contaminated with Chronic Wasting Disease (CWD) prions have not been documented. If such a situation were to occur, it would most likely be classified as a new type of CJD.

CRYPTOSPORIDIOSIS (*Cryptosporidium* *parvum*)

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-320](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical description

An illness characterized by watery diarrhea, abdominal cramps, loss of appetite, low-grade fever, nausea and vomiting. The disease can be prolonged and life-threatening in severely immunocompromised persons.

Laboratory criteria for diagnosis

Laboratory-confirmed cryptosporidiosis shall be defined as the detection of a member of the genus *Cryptosporidium* by one of the following methods:

- Organisms in stool, intestinal fluid, or tissue samples or biopsy specimens
- Antigens in stool or intestinal fluid, OR
- Nucleic acid by PCR in stool, intestinal fluid, or tissue samples or biopsy specimens

Case classification

Confirmed: a case that meets the clinical description and at least one of the criteria for laboratory-confirmation as described above. When available, species designation and molecular characterization should be reported.

Probable: a case that meets the clinical description and that is epidemiologically linked to a confirmed case.

CYCLOSPORIASIS (*Cyclopora cayetanensis*)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-321](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness of variable severity caused by the protozoan parasite *Cyclopora cayetanensis* and commonly characterized by watery diarrhea. Other common symptoms include loss of appetite, weight loss, abdominal bloating and cramping, increased flatus, nausea, fatigue, and low-grade fever. Vomiting also may be noted. Relapses and asymptomatic infections can occur.

Laboratory Criteria for Diagnosis

- Laboratory-confirmed cyclosporiasis shall be defined as the detection of *Cyclopora* organisms or DNA in stool, intestinal fluid/aspirate, or intestinal biopsy specimens. This includes: Oocysts in stool by microscopic examination, OR
- In intestinal fluid or small bowel biopsy specimens, OR
- Demonstration of sporulation, OR
- DNA (by polymerase chain reaction) in stool, duodenal/jejunal aspirates or small bowel biopsy specimens.

Case Classification

Confirmed: A case that meets the clinical description and at least one of the criteria for laboratory confirmation as described above.

Probable: A case that meets the clinical description and that is epidemiologically linked to a confirmed case.

CYSTICERCOSIS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-322](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Cysticercosis is a tissue infection with the larval stage of the pork tapeworm, *Taenia solium*. When tapeworm eggs or proglottids are swallowed, the hatching eggs release larvae which can migrate from the intestine into tissues (including muscle, organs or central nervous system (CNS)) where they form cysts or cysticerci. The occurrence of cysticerci in the CNS (neurocysticercosis) can present with headache, epileptiform seizures, signs of intracranial hypertension, or psychiatric disturbances.

Laboratory Criteria for Diagnosis

Diagnosis can be made from:

- Microscopic examination of excised cysticerci from tissues, OR
- Recognition of cysticerci by CAT scan, MRI, or, when calcified, X-ray, OR
- Specific serologic tests.

Case Classification

Confirmed: A case with cysticerci in tissues or CNS identified by microscopy

Probable: A clinically compatible case with suspected cysticerci visualized in CAT scan, MRI, or X-ray, OR positive serologic tests.

DENGUE FEVER (β) (DENGUE HEMORRHAGIC FEVER) (DENGUE SHOCK SYNDROME)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-323](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Laboratory criteria for diagnosis

- Confirmatory
 - Isolation of dengue virus from or demonstration of specific arboviral antigen or genomic sequences in tissue, blood, cerebrospinal fluid (CSF), or other body fluid by polymerase chain reaction (PCR) test, immunofluorescence or immunohistochemistry, OR
 - Seroconversion from negative for dengue virus-specific serum Immunoglobulin M (IgM) antibody in an acute phase (≤ 5 days after symptom onset) specimen to positive for dengue-specific serum IgM antibodies in a convalescent-phase specimen collected ≥ 5 days after symptom onset, OR
 - Demonstration of a ≥ 4 -fold rise in reciprocal Immunoglobulin G (IgG) antibody titer or Hemagglutination inhibition titer to dengue virus antigens in paired acute and convalescent serum samples, OR
 - Demonstration of a ≥ 4 -fold rise in PRNT (plaque reduction neutralization test) end point titer (as expressed by the reciprocal of the last serum dilution showing a 90% reduction in plaque counts compared to the virus infected control) between dengue viruses and other flaviviruses tested in a convalescent serum sample, OR
 - Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF.
- Presumptive/Probable
 - Dengue-specific IgM antibodies present in serum with a P/N ratio ≥ 2 .

Exposure

- Travel to a dengue endemic country or presence at location with ongoing outbreak within previous two weeks of dengue-like illness, OR
- Association in time and place with a confirmed or probable dengue case.

Case classification

Confirmed: A clinically compatible case of DF, DHF, or DSS with confirmatory laboratory results

Probable: A clinically compatible case of DF, DHF, or DSS with laboratory results indicative of presumptive infection

Suspected: A clinically compatible case of DF, DHF or DSS that is epidemiologically linked to a confirmed case

DENGUE FEVER

Clinical Description

Dengue fever (DF) is most commonly an acute febrile illness defined by the presence of fever and two or more of the following, retro-orbital or ocular pain, headache, rash, myalgia, arthralgia, leukopenia, or hemorrhagic manifestations (e.g., positive tourniquet test, petechiae; purpura/ecchymosis; epistaxis; gum bleeding; blood in vomitus, urine, or stool; or vaginal bleeding) but not meeting the case definition of dengue hemorrhagic fever. Anorexia, nausea, abdominal pain, and persistent vomiting may also occur but are not case-defining criteria for DF.

Dengue hemorrhagic fever (DHF) is characterized by all of the following

- Fever lasting from 2-7 days

- Evidence of hemorrhagic manifestation or a positive tourniquet test
- Thrombocytopenia ($\leq 100,000$ cells per mm^3)
- Evidence of plasma leakage shown by hemoconcentration (an increase in hematocrit $\geq 20\%$ above average for age or a decrease in hematocrit $\geq 20\%$ of baseline following fluid replacement therapy), OR pleural effusion, or ascites or hypoproteinemia.

DENGUE SHOCK SYNDROME

Clinical Description

Dengue shock syndrome (DSS) has all of criteria for DHF plus circulatory failure as evidenced by

- Rapid and weak pulse and narrow pulse pressure (< 20 mm Hg), OR
- Age-specific hypotension and cold, clammy skin and restlessness

Comment

Asymptomatic Blood or Tissue Donor: Dengue virus - specific viral antigen or genomic sequences demonstrated in donated blood or organs during screening and confirmatory testing in the absence of symptoms in the donor.

Dengue viruses are members of the Flaviviridae and have sufficient antigenic similarity to yellow fever virus, Japanese encephalitis virus, and West Nile virus that previous infection or vaccination may raise cross-reactive serum antibodies. After a primary infection with a heterologous flavivirus, subsequent antibody testing by ELISA may produce false positive results for a different flavivirus. PRNT can often resolve cross-reactive serum antibodies in this situation and identify the infecting virus. However, high-titered cross-reactive antibody levels produced from multiple previous flavivirus infections cannot be resolved by PRNT. This demonstrates the complexity inherent in serological diagnosis and differentiation in populations living in regions where more than one flavivirus co-circulates. However, only a small proportion of the US population has evidence of previous flavivirus infection (or vaccination) so that cross-reactive flavivirus antibodies should not be a significant limitation to dengue diagnosis among most US travelers. Among US residents, most testing for dengue is done through private clinical laboratories using IgM or IgG detection techniques.

Reference testing is available from CDC's Dengue Branch, Division of Vector-Borne Infectious Diseases, National Center for Infectious Diseases, 1324 Calle Cañada, San Juan, PR 00920-3860, telephone 787-706-2399, fax 787-706-2496

For more information on control measures, see [Arizona Administrative Code R9-6-324](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Possible outbreaks of disease come to the attention of public health officials in various ways. Often, an astute clinician, infection control nurse, or clinical laboratory worker first notices an unusual disease or an unusual number of cases of a disease and alerts public health officials. Frequently, it is the patient (or someone close to the patient) who first suspects a problem, as is often the case in foodborne outbreaks after a shared meal.

Outbreak Definition for Diarrhea, Nausea, or Vomiting

An outbreak of D, N, V is defined as two or more people not from the same household or family diagnosed or detected within a one-week period with similar illness consisting of a new onset of diarrhea, nausea and/or vomiting all of whom have a common exposure (ingestion of common food, residence in common location, or other exposure or event common to those ill).

Case Definition of Gastroenteritis (D, N, V)

A case of gastroenteritis is defined as a person with new onset of nausea, diarrhea and/or vomiting. Diarrhea is defined as two or more loose stools per 24 hour period or an unexplained increase in the number of bowel movements.

DIPHTHERIA (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-325](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An upper respiratory tract illness typically characterized by sore throat, low grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose

Laboratory Criteria for Diagnosis

- Isolation of *Corynebacterium diphtheriae* from a clinical specimen.
- Histopathologic diagnosis of diphtheria.

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed, or is epidemiologically linked to a laboratory-confirmed case.

Probable: A clinically compatible case that is not laboratory confirmed, and is not epidemiologically linked to a laboratory-confirmed case.

Comment

Cutaneous diphtheria should not be reported. Disease due to nontoxigenic *C. diphtheria* should be reported as diphtheria. All diphtheria isolates, whether associated with disease or not, should be forwarded to the Arizona State Laboratory.

For more information on control measures, see [Arizona Administrative Code R9-6-326](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical presentation:

A tick-borne illness characterized by acute onset of fever and one or more of the following signs or symptoms: headache, myalgia, malaise, anemia, leukopenia, thrombocytopenia, or elevated liver enzymes. Nausea, vomiting, or rash may be present in some cases. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients. There are at least three species of bacteria responsible for ehrlichia/anaplasmosis in the U.S.: *Ehrlichia chaffeensis*, found primarily in monocytes, and *Anaplasma phagocytophilum* and *Ehrlichia ewingii*, found primarily in granulocytes*.

Four categories of confirmed or probable ehrlichiosis/anaplasmosis should be reported:

1. Human ehrlichiosis caused by *E. chaffeensis* (formerly Human Monocytic Ehrlichiosis or HME),
2. Human ehrlichiosis caused by *E. ewingii* (formerly unspecified or other agent),
3. Human anaplasmosis caused by *Anaplasma phagocytophilum* (formerly Human Granulocytic Ehrlichiosis or HGE), OR
4. Human ehrlichiosis/anaplasmosis- undetermined. Cases in this category can only be reported as “probable” because the cases are only weakly supported by ambiguous lab test results.

*Note: The clinical signs of disease from infection with these agents are similar, and the range distributions overlap, so testing for one or more species may be indicated. Serologic cross-reactions may occur among tests for these agents.

Clinical evidence: Any reported fever and one or more of the following: headache, myalgia, anemia, leukopenia, thrombocytopenia, or any hepatic transaminase elevation.

Exposure: Exposure is defined as having been in potential tick habitats within the past 14 days before onset of symptoms. A history of tick bite is not required.

Laboratory Criteria for Surveillance*Ehrlichia chaffeensis* infection (formerly HME):

Laboratory confirmed:

- Serological evidence of a four-fold change in immunoglobulin G (IgG)-specific antibody titer to *E. chaffeensis* antigen by indirect immunofluorescence assay (IFA) in paired serum samples, OR
- Detection of *E. chaffeensis* DNA in a clinical specimen via PCR assay, OR
- Demonstration of ehrlichial antigen in a biopsy or autopsy sample by IHC, OR
- Isolation of *E. chaffeensis* from a clinical specimen in cell culture.

Laboratory supportive:

- Serological evidence of elevated IgG or IgM antibody reactive with *E. chaffeensis* antigen by IFA, ELISA, dot-ELISA, or assays in other formats (i.e CDC testing format), OR
- Identification of morulae in the cytoplasm of monocytes or macrophages by microscopic examination.

Ehrlichia ewingii infection (formerly unspecified or other agent):

Laboratory confirmed: Detection of *E. ewingii* DNA in a clinical specimen via PCR assay. *E. ewingii* has never been cultured, therefore antigens are not available and this infection may only be diagnosed by molecular detection methods.

Anaplasma phagocytophilum infection (formerly HGE):

Laboratory confirmed:

- Serological evidence of a four-fold change in IgG-specific antibody titer to *A. phagocytophilum* antigen by IFA in paired serum samples, OR
- Detection of *A. phagocytophilum* DNA in a clinical specimen via PCR assay, OR
- Demonstration of anaplasma antigen in a biopsy or autopsy sample by IHC, OR
- Isolation of *A. phagocytophilum* from a clinical specimen in cell culture.

Laboratory supportive:

- Serological evidence of elevated IgG or IgM antibody reactive with *A. phagocytophilum* antigen by IFA, ELISA, dot-ELISA, or assays in other formats (i.e. CDC testing format), OR
- Identification of morulae in the cytoplasm of neutrophils or eosinophils by microscopic examination.

Human ehrlichiosis/anaplasmosis - undetermined:

- See case classification

Problem cases for which sera demonstrate elevated antibody IFA responses to more than a single infectious agent are usually resolvable by comparing the levels of the antibody responses, the greater antibody response generally being that directed at the actual agent involved. Tests of additional sera and further evaluation using PCR, IHC, and isolation via cell culture may be needed for further clarification. Cases involving persons infected with more than a single agent, while possible, are extremely rare and every effort should be made to resolve cases that appear as such by other explanations.

Case Classification

Confirmed: A clinically compatible case that meets clinical evidence criteria that is laboratory-confirmed.

Probable: A clinically compatible case that meets clinical evidence criteria that has lab supportive results. For ehrlichiosis/anaplasmosis, an undetermined case can only be classified as probable. An undetermined case has compatible clinical criteria with lab evidence to support ehrlichia/anaplasma infection, but not with sufficient clarity to definitively place it in one of the categories described. This may include identification of morulae in white cells by microscopic examination in the absence of other supportive lab results.

Suspect: A case with lab evidence of past or present infection but no clinical information available (e.g. a lab report).

Comment

Current commercially available ELISA tests are not quantitative, cannot be used to evaluate changes in antibody titer, and are not useful for serological confirmation. IgM tests are not always specific and the IgM response may be persistent. IgM tests are not strongly supported for use in serodiagnosis of acute disease.

EMERGING OR EXOTIC DISEASE

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-327](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Definition

Emerging or Exotic Diseases are defined as those meeting one of the following definitions:

- A disease which is newly appeared in the population, or
- A disease whose incidence in humans has increased in the past two decades or threatens to increase in the near future, or
- A disease with increasing incidence in a defined time period and location

Examples may include:

- New infections resulting from changes or evolution of existing organisms
- Known infections spreading to new geographic areas or populations
- Previously unrecognized infections appearing in areas undergoing ecologic transformation
- Old infections reemerging as a result of antimicrobial resistance in known agents or breakdown in public health measures

Case reports of emerging or exotic disease should specify the morbidity and etiological agent, if known, and may be subject to additional clinical or laboratory criteria for classification.

ENCEPHALITIS, VIRAL or PARASITIC

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-328](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

- Arboviral infections may be asymptomatic or may result in illnesses of variable severity sometimes associated with central nervous system (CNS) involvement. When the CNS is affected, clinical syndromes ranging from febrile headache to aseptic meningitis to encephalitis may occur, and these are usually indistinguishable from similar syndromes caused by other viruses. Arboviral meningitis is characterized by fever, headache, stiff neck, and pleocytosis.
- Arboviral encephalitis is characterized by fever, headache, and altered mental status ranging from confusion to coma with or without additional signs of brain dysfunction (e.g., paresis or paralysis, cranial nerve palsies, sensory deficits, abnormal reflexes, generalized convulsions, and abnormal movements).

Clinical Criteria for Diagnosis

Neuroinvasive disease requires the presence of fever and at least one of the following, as documented by a physician and in the absence of a more likely clinical explanation:

- Acutely altered mental status (e.g., disorientation, obtundation, stupor, or coma), OR
- Other acute signs of central or peripheral neurologic dysfunction (e.g., paresis or paralysis, nerve palsies, sensory deficits, abnormal reflexes, generalized convulsions, or abnormal movements), OR
- Pleocytosis (increased white blood cell concentration in cerebrospinal fluid [CSF]) associated with illness clinically compatible with meningitis (e.g., headache or stiff neck).

Laboratory Criteria for Diagnosis

- Fourfold or greater change in virus-specific serum antibody titer, OR
- Isolation of virus from or demonstration of specific viral antigen or genomic sequences in tissue, blood, cerebrospinal fluid (CSF), or other body fluid, OR
- Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF by antibody-capture enzyme immunoassay (EIA), OR
- Virus-specific IgM antibodies demonstrated in serum by antibody-capture EIA and confirmed by demonstration of virus-specific serum immunoglobulin G (IgG) antibodies in the same or a later specimen by another serologic assay (e.g., neutralization or hemagglutination inhibition), OR
- Confirmation of the parasite by a method approved by ADHS and/or CDC.

Case Classification

Confirmed: An encephalitis or meningitis case that is laboratory confirmed

Probable: An encephalitis or meningitis case occurring during a period when arboviral transmission is likely, and with the following supportive serology: 1) a single or stable (less than or equal to twofold change) but elevated titer of virus-specific serum antibodies; or 2) serum IgM antibodies detected by antibody-capture EIA but with no available results of a confirmatory test for virus-specific serum IgG antibodies in the same or a later specimen.

Comment

Because closely related arboviruses exhibit serologic cross-reactivity, positive results of serologic tests using antigens from a single arbovirus can be misleading. In some circumstances (e.g., in areas where two or more

closely related arboviruses occur, or in imported arboviral disease cases), it may be epidemiologically important to attempt to pinpoint the infecting virus by conducting cross-neutralization tests using an appropriate battery of closely related viruses. This is essential, for example, in determining that antibodies detected against St. Louis encephalitis virus are not the result of an infection with West Nile (or dengue) virus, or vice versa, in areas where both of these viruses occur.

The seasonality of arboviral transmission is variable and depends on the geographic location of exposure, the specific cycles of viral transmission, and local climatic conditions. Reporting should be etiology-specific. These encephalitides/meningitides are nationally reportable to CDC: [St. Louis encephalitis/meningitis](#), [West Nile encephalitis/meningitis](#), Powassan encephalitis/meningitis, [Eastern equine encephalitis/meningitis](#), [Western equine encephalitis/meningitis](#), California serogroup viral encephalitis/meningitis (includes infections with the following viruses: La Crosse, Jamestown Canyon, snowshoe hare, trivittatus, Keystone, and California encephalitis viruses), and other viral CNS infections transmitted by mosquitoes, ticks, or midges (e.g., Venezuelan equine encephalitis/meningitis and Cache Valley encephalitis/meningitis)

ENTEROHEMORRHAGIC ESCHERICHIA COLI

(*E. coli* O157:H7 or
Shiga toxin-producing *E. coli*)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-329](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also may occur.

Laboratory Criteria for Diagnosis

- Isolation of *Escherichia coli* O157:H7 from a specimen, OR
- Isolation of Shiga toxin-producing *E. coli* from a clinical specimen

Case Classification

Confirmed: A case that meets the laboratory criteria for diagnosis

Probable:

- A case with isolation of *E. coli* O157 from a clinical specimen, pending confirmation of H7 or Shiga toxin production, OR
- A clinically compatible case that is epidemiologically linked to a confirmed or probable case, OR
- Identification of Shiga toxin in a specimen from a clinically compatible case, OR
- Definitive evidence of an elevated antibody titer to a known EHEC serotype from a clinically compatible case

Suspect: A case of post-diarrheal HUS or TTP (see HUS case definition)

Comment

Laboratory-confirmed isolates are reported via the Public Health Laboratory Information System (PHLIS), which is managed by the Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC. Both probable and confirmed cases are reported to the [National Notifiable Diseases Surveillance System](#) (NNDSS), but only confirmed cases are reported to PHLIS. Confirmation is based primarily on laboratory findings.

ENTEROTOXIGENIC ESCHERICHIA COLI (ETEC)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-330](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Diarrhea caused by enterotoxigenic *E. coli* or ETEC is a self-limited illness lasting 1 to 5 days of moderate severity with watery stools and abdominal cramps. Vomiting, dehydration, and low grade fever may also be present.

Laboratory Criteria for Diagnosis

Demonstration of production of enterotoxin in an *E. coli* isolate by a technique that is able to identify heat-labile toxin (LT) and heat-stable toxin (ST).

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed

Probable: A clinically compatible case that is epidemiologically linked to a probable or confirmed case

FOODBORNE DISEASE OUTBREAK

SUBMIT A REPORT WITHIN 24 HOURS

*For more information on control measures, see [Arizona Administrative Code R9-6-324](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your *local health department*.*

If Suspected Norovirus: Complete [Suspected Viral Gastroenteritis Outbreak Form](#)

Clinical Description

Symptoms of illness depend upon etiologic agent. Please see Appendix B, "[Guidelines for Confirmation of Foodborne-Disease Outbreaks](#)" in the [MMWR 2000; 49\(No. SS-1\)](#).

Laboratory Criteria for Diagnosis

Dependent upon the etiologic agent. Please see Appendix B, "[Guidelines for Confirmation of Foodborne-Disease Outbreaks](#)" in the [MMWR 2000; 49\(No. SS-1\)](#).

Definition

An incident in which two or more persons experience a similar illness after ingestion of a common food, and epidemiologic analysis implicates the food as the source of the illness.

Comment

There are two exceptions: one case of botulism or chemical poisoning constitutes an outbreak.

SUBMIT A REPORT WITHIN 24 HOURS IF

GIARDIASIS

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-331](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness caused by the protozoan *Giardia lamblia* and characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorption. Infected persons may be asymptomatic.

Laboratory Criteria for Diagnosis

- Demonstration of *G. lamblia* cysts in stool, OR
- Demonstration of *G. lamblia* trophozoites in stool, duodenal fluid, or small bowel biopsy, OR
- Demonstration of *G. lamblia* antigen in stool by a specific immunodiagnostic test such as enzyme-linked immunosorbent assay (ELISA)

Case Classification

Confirmed, symptomatic: A laboratory-confirmed case associated with one or more of the symptoms described above

Confirmed, asymptomatic: A laboratory-confirmed case associated with none of the above symptoms

GONORRHEA

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A sexually transmitted infection commonly manifested by urethritis, cervicitis, or salpingitis. Infection may be asymptomatic.

Laboratory Criteria for Diagnosis

- Isolation of typical gram-negative, oxidase-positive diplococci (presumptive *Neisseria gonorrhoeae*) from a clinical specimen, OR
- Demonstration of *N. gonorrhoeae* in a clinical specimen by detection of antigen or nucleic acid, OR
- Observation of gram-negative intracellular diplococci in a urethral smear obtained from a male

Case Classification

Confirmed: A case that is laboratory confirmed

Probable: Demonstration of gram-negative intracellular diplococci in an endocervical smear obtained from a woman or a written (morbidity) report of gonorrhea submitted by a physician.

SUBMIT A REPORT WITHIN 24 HOURS

**HAEMOPHILUS INFLUENZAE
(Invasive Disease)**

Haemophilus influenzae, type b, isolated from a normally sterile site is a 24 hour lab reportable

For more information on control measures, see [Arizona Administrative Code R9-6-333](#).

To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Complete [Bacterial Meningitis and Bacteremia Case Report Form](#).

If < 15 yrs of age: Complete the Expanded Case Report: *Haemophilus influenzae* Type B Form which is located on the [Communicable Disease Investigations Form page](#)

Clinical Description

Invasive disease due to *Haemophilus influenzae* may produce any of several clinical syndromes, including meningitis, bacteremia, epiglottitis, or pneumonia.

Laboratory Criteria for Diagnosis

- Isolation of *H. influenzae* from a normally sterile site

Case Classification

Confirmed: A clinically compatible illness that is culture-confirmed.

Probable: A clinically compatible illness with detection of *H. influenzae* type b antigen in cerebrospinal fluid.

Comment

Antigen test results in urine or serum are unreliable for diagnosis of *H. influenzae* disease.

HANSEN'S DISEASE (LEPROSY)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-334](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A chronic bacterial disease characterized by the involvement of skin, peripheral nerves, and the mucosa of the upper airway. Clinical forms of Hansen's disease represent a spectrum reflecting the cellular immune response to *Mycobacterium leprae*. Typical of the major forms of the disease are the following characteristics:

- Tuberculoid. One or a few well-demarcated, hypopigmented, and anesthetic skin lesions, frequently with active, spreading edges and a clearing center: peripheral nerve swelling or thickening may also occur.
- Lepromatous. A number of erythematous papules and nodules or an infiltration of the face, hands, and feet with lesions in a bilateral and symmetrical distribution that progress to thickening of the skin.
- Borderline (demorphous). Skin lesions characteristic of both the tuberculoid and lepromatous forms.
- Indeterminate. Early lesions, usually hypopigmented macules without developed tuberculoid or lepromatous features.

Laboratory Criteria for Diagnosis

Demonstration of acid-fast bacilli in skin or dermal nerve obtained from the full-thickness skin biopsy of a lepromatous lesion.

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

HANTAVIRUS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-335](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical description

Hantavirus pulmonary syndrome (HPS), commonly referred to as hantavirus disease, is a febrile illness characterized by bilateral interstitial pulmonary infiltrates and respiratory compromise usually requiring supplemental oxygen and clinically resembling acute respiratory disease syndrome (ARDS). The typical prodrome consists of fever, chills, myalgia, headache, and gastrointestinal symptoms. Typical clinical laboratory findings include hemoconcentration, left shift in the white blood cell count, neutrophilic leukocytosis, thrombocytopenia, and circulating immunoblasts.

Clinical case definition

An illness characterized by one or more of the following clinical features:

- A febrile illness (i.e., temperature greater than 101.0° F [greater than 38.3° C]) corroborated by bilateral diffuse interstitial edema or a clinical diagnosis of acute respiratory distress syndrome (ARDS) or radiographic evidence of noncardiogenic pulmonary edema, or unexplained respiratory illness resulting in death, and occurring in a previously healthy person
- An unexplained respiratory illness resulting in death, with an autopsy examination demonstrating noncardiogenic pulmonary edema without an identifiable cause

Laboratory criteria for diagnosis

- Detection of hantavirus-specific immunoglobulin M or rising titers of hantavirus-specific immunoglobulin G, OR
- Detection of hantavirus-specific ribonucleic acid sequence by polymerase chain reaction in clinical specimens, OR
- Detection of hantavirus antigen by immunohistochemistry

Case classification

Confirmed: A clinically compatible case that is laboratory confirmed

Comment

Laboratory testing should be performed or confirmed at a reference laboratory such as Arizona State Public Health Laboratory or Centers for Disease Control and Prevention. Because the clinical illness is nonspecific and ARDS is common, a screening case definition can be used to determine which patients to test. In general, a predisposing medical condition (e.g., chronic pulmonary disease, malignancy, trauma, burn, and surgery) is a more likely cause of ARDS than HPS, and patients who have these underlying conditions and ARDS need not be tested for hantavirus.

HEMOLYTIC UREMIC SYNDROME, POST-DIARRHEAL (HUS, TTP)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-336](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Hemolytic uremic syndrome (HUS) is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. Thrombotic thrombocytopenic purpura (TTP) also is characterized by these features but can include central nervous system (CNS) involvement and fever and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal).

Laboratory Criteria for Diagnosis

The following are both present at some time during the illness:

- Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear, and
- Renal injury (acute onset) evidenced by either hematuria, proteinuria, or elevated creatinine level (i.e., greater than or equal to 1.0 mg/dL in a child aged less than 13 years or greater than or equal to 1.5 mg/dL in a person aged greater than or equal to 13 years, or greater than or equal to 50% increase over baseline)

Note: A low platelet count can usually, but not always, be detected early in the illness, but it may then become normal or even high. If a platelet count obtained within 7 days after onset of the acute gastrointestinal illness is not less than 150,000/mm³, other diagnoses should be considered.

Case Classification

Confirmed: An acute illness diagnosed as HUS or TTP that both meets the laboratory criteria and began within 3 weeks after onset of an episode of acute or bloody diarrhea

Probable:

- An acute illness diagnosed as HUS or TTP that meets the laboratory criteria in a patient who does not have a clear history of acute or bloody diarrhea in preceding 3 weeks, OR
- An acute illness diagnosed as HUS or TTP, that has onset within 3 weeks after onset of an acute or bloody diarrhea AND meets the laboratory criteria except that microangiopathic changes are not confirmed

Comment

Some investigators consider HUS and TTP to be part of a continuum of disease. Therefore, criteria for diagnosing TTP on the basis of CNS involvement and fever are not provided because cases diagnosed clinically as post-diarrheal TTP also should meet the criteria for HUS. These cases are reported as post-diarrheal HUS.

HEPATITIS A (β)

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-337](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels*

Laboratory Criteria for Diagnosis

Immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV) positive

*Note: Elevated serum aminotransferase levels should be considered as greater than 2.5 times the upper limit of normal.

Case Classification

Confirmed: A case that meets the clinical case definition and is laboratory confirmed OR a case that meets the clinical case definition and occurs in a person who has an epidemiologic link with a person who has laboratory-confirmed hepatitis A (i.e., household or sexual contact with an infected person during the 15-50 days before the onset of symptoms)

HEPATITIS B, ACUTE (β)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-338](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels*

Laboratory Criteria for Diagnosis

- IgM antibody to hepatitis B core antigen (anti-HBc) positive or hepatitis B surface antigen (HBsAg) positive
- IgM anti-HAV negative (if done)

*Note: Elevated serum aminotransferase levels should be considered as greater than 2.5 times the upper limit of normal.

Case Classification

Confirmed: A case that meets the clinical case definition and is laboratory confirmed

Probable: A case that meets the laboratory criteria for diagnosis but for which information on clinical illness is unavailable. If an investigation indicates the absence of clinical illness, the case should be ruled out rather than classified as probable.

Comment

Persons who have chronic hepatitis or persons identified as HBsAg positive should not be reported as having acute viral hepatitis unless they have evidence of an acute illness compatible with viral hepatitis (with the exception of perinatal hepatitis B infection). ([See Hepatitis, Viral, Perinatal Hepatitis B Virus Infection Acquired in the United States or U.S. Territories.](#))

For more information on control measures, see [Arizona Administrative Code R9-6-338](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Persons with chronic HBV infection may have no evidence of liver disease or may have a spectrum of disease ranging from chronic hepatitis to cirrhosis or liver cancer. Persons with chronic infection may be asymptomatic.

Laboratory Criteria for Diagnosis

- IgM anti-HBc negative AND a positive result on one of the following tests: HBsAg, HBeAg, or HBV DNA, OR
- HBsAg positive or HBV DNA positive or HBeAg positive two times at least 6 months apart (Any combination of these tests performed 6 months apart is acceptable.)

Case Classification

Confirmed: A case that meets either laboratory criteria for diagnosis

Probable: A case with a single HBsAg positive or HBV DNA positive or HBeAg positive lab result when no IgM anti-HBc results are available

Comment

Multiple laboratory tests indicative of chronic HBV infection may be performed simultaneously on the same patient specimen as part of a “hepatitis panel”. Testing performed in this manner may lead to seemingly discordant results, e.g. HBsAg-negative AND HBV DNA-positive. For the purposes of this case definition, any positive result among the three laboratory tests mentioned above is acceptable, regardless of other testing results. Negative HBeAg results and HBV DNA levels below positive cutoff level do not confirm the absence of HBV infection.

In the United States, an estimated 1.25 million persons have chronic hepatitis B virus (HBV) infection. Fifteen to 25% of these persons will develop the complications of cirrhosis or hepatocellular carcinoma. In addition, chronically infected persons are a major reservoir of transmission to others. Persons who test positive for the presence of hepatitis B surface antigen (HBsAg), HBeAg or HBV DNA are potentially infectious to household, sexual, and needle-sharing contacts. In order for a person to meet the current case definition for chronic HBV infection, the state or local health department must receive the positive results from two HBsAg tests conducted at least 6 months apart. For many health departments, only a small percentage of reported persons meet this criteria, resulting in a potentially significant undercount of chronic HBV cases in their jurisdiction. States and counties need a case definition that will accurately identify true cases of chronic infection in order to monitor the disease burden, develop prevention programs, and provide educational follow-up and referral for infected patients.

HEPATITIS B, PERINATAL
Acquired in the United States
or U.S. Territories

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-338](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Perinatal hepatitis B in the newborn may range from asymptomatic to fulminant hepatitis.

Laboratory Criteria for Diagnosis

Hepatitis B surface antigen (HBsAg) positive

Case Classification

Confirmed: HBsAg positivity in any infant aged >1-24 months who was born in the United States or in U.S. territories to an HBsAg-positive mother

Comment

Infants born to HBsAg-positive mothers should receive hepatitis B immune globulin (HBIG) and the first dose of hepatitis B vaccine within 24 hours of birth, followed by the second and third doses of vaccine at 1 and 6 months of age, respectively. Post-vaccination testing for antibody to HBsAg and HBsAg is recommended from 3 to 6 months following completion of the vaccine series. If HBIG and the initial dose of vaccine are delayed for >1 month after birth, testing for HBsAg may determine if the infant is already infected.

HEPATITIS C, ACUTE

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see *Arizona Administrative Code R9-6-339*. To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., anorexia, abdominal discomfort, nausea, vomiting), and either a) jaundice, or b) serum alanine aminotransferase (ALT) levels >400 IU/L.

Laboratory Criteria for Diagnosis

One or more of the following three criteria:

- Antibodies to hepatitis C virus (anti-HCV) screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay as defined by CDC. (URL for the signal to cut-off ratios: http://www.cdc.gov/ncidod/diseases/hepatitis/c/sc_ratios.htm), OR
- Hepatitis C Virus Recombinant Immunoblot Assay (HCV RIBA) positive, OR
- Nucleic Acid Test (NAT) for HCV RNA positive

AND, meets the following two criteria:

- IgM antibody to hepatitis A virus (IgM anti-HAV) negative, AND
- IgM antibody to hepatitis B core antigen (IgM anti-HBc) negative

Case Classification

Confirmed: A case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis C case

Comment

- Up to 20% of acute hepatitis C cases will be anti-HCV negative when reported and will be classified as non-A, non-B hepatitis because some (5%-10%) have not yet seroconverted and others (5%-10%) remain negative even with prolonged follow-up (6).
- Available serologic tests for anti-HCV do not distinguish between acute and chronic or past infection. Thus, other causes of acute hepatitis should be excluded for anti-HCV positive patients who have an acute illness compatible with viral hepatitis.

HEPATITIS C, CHRONIC or past infection

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-339](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Most HCV-infected persons are asymptomatic. However, many have chronic liver disease, which can range from mild to severe including cirrhosis and liver cancer.

Laboratory Criteria for Diagnosis

- Anti-HCV positive (repeat reactive) by EIA, verified by an additional more specific assay (e.g. RIBA for anti-HCV or nucleic acid testing for HCV RNA); OR
- HCV RIBA Positive; OR
- Nucleic acid test for HCV RNA Positive; OR
- Report of HCV genotype; OR
- Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay (e.g., ≥ 3.8 for the enzyme immunoassays) as determined and posted by CDC.

Case Classification

Confirmed: A case that is laboratory confirmed and that does not meet the case definition for acute hepatitis C.

Probable: A case that is anti-HCV positive (repeat reactive) by EIA and has alanine aminotransferase (ALT or SGPT) values above the upper limit of normal, but the anti-HCV EIA result has not been verified by an additional more specific assay or the signal to cutoff ratio is unknown.

Comment

Only 25-30% of acutely infected persons are asymptomatic. Regardless of whether symptoms are present, the vast majority of persons who are infected with HCV become chronically infected ($\geq 85\%$). Chronic liver disease develops in most ($\geq 70\%$) of those infected, including cirrhosis and hepatocellular carcinoma. Persons with chronic HCV infection are a major reservoir for transmission of HCV infections. Most people do not know that they are infected. It is essential that infected persons are counseled regarding ways to prevent transmission of HCV to others and to avoid hepatotoxic substances, especially alcohol, which may worsen the course of liver disease. Infected persons need to be evaluated for the presence of liver disease and referred for treatment if indicated. The $<15\%$ of acutely infected persons who clear the virus and persons who clear the virus due to treatment may show evidence of past infection by testing positive for antibodies to HCV (EIA or RIBA) even if they are not chronically infected.

HEPATITIS D

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-338](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute illness with a discrete onset of symptoms and jaundice or elevated serum aminotransferase levels*

Laboratory Criteria for Diagnosis

HBsAg-positive or IgM anti-HBc positive and antibody to hepatitis delta virus positive

*Note: Elevated serum aminotransferase levels should be considered as greater than 2.5 times the upper limit of normal.

Case Classification

Confirmed: A case that meets the clinical case definition and is laboratory confirmed

HEPATITIS E

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-340](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute illness with a discrete onset of symptoms and jaundice or elevated serum aminotransferase levels*

Laboratory Criteria for Diagnosis

Presence of either of the following criteria in CDC-conducted testing:

- IgM or IgG to hepatitis E virus, OR
- Detection of hepatitis E virus by nucleic acid testing in a clinical specimen

*Note: Elevated serum aminotransferase levels should be considered as greater than 2.5 times the upper limit of normal.

Case Classification

Confirmed: A case that meets the clinical case definition and is laboratory confirmed or, a case that meets the clinical case definition and occurs in a person who has an epidemiologic link with a person who has laboratory-confirmed hepatitis E (i.e., household or sexual contact with an infected person during the 15-50 days before the onset of symptoms)

For more information on control measures, see [Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness characterized by visible, painful genital or anogenital lesions

Laboratory Criteria for Diagnosis

- Isolation of herpes simplex virus from cervix, urethra, or anogenital lesion, OR
- Demonstration of virus by antigen detection technique in clinical specimens from cervix, urethra, or anogenital lesion, OR
- Demonstration of multinucleated giant cells on a Tzanck smear of scrapings from an anogenital lesions

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed

Probable: A clinically compatible case (in which primary and secondary syphilis have been ruled out by serology and darkfield microscopy, when available) with either a diagnosis of genital herpes based on clinical presentation (without laboratory confirmation) or a history of one or more previous episodes of similar genital lesions.

Comment

Herpes should be reported only once per patient. The first diagnosis for a patient with no previous diagnosis should be reported.

For more information on control measures, see [Arizona Administrative Code R9-6-341, R9-6-1001 thru R9-6-1006](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

2008 Surveillance Case Definition for HIV Infection Among Adults and Adolescents

The 2008 HIV infection case definition for adults and adolescents (aged ≥ 13 years) replaces the HIV infection and AIDS case definitions and the HIV infection classification system (1--3,5). The case definition is intended for public health surveillance only and not as a guide for clinical diagnosis. The definition applies to all HIV variants (e.g., HIV-1 or HIV-2) and excludes confirmation of HIV infection through diagnosis of AIDS-defining conditions alone. For surveillance purposes, a reportable case of HIV infection among adults and adolescents aged ≥ 13 years is categorized by increasing severity as stage 1, stage 2, or stage 3 (AIDS) or as stage unknown (Table).

Laboratory Criteria

- Positive result from an HIV antibody screening test (e.g., reactive enzyme immunoassay [EIA]*) confirmed by a positive result from a supplemental HIV antibody test (e.g., Western blot or indirect immunofluorescence assay test) OR
- Positive result or report of a detectable quantity (i.e., within the established limits of the laboratory test) from any of the following HIV virologic (i.e., non-antibody) tests†:
 - HIV nucleic acid (DNA or RNA) detection test (e.g., polymerase chain reaction [PCR])
 - HIV p24 antigen test, including neutralization assay
 - HIV isolation (viral culture)

Other Criterion (for Cases that Do Not Meet Laboratory Criteria)

HIV infection diagnosed by a physician or qualified medical-care provider[§] based on the laboratory criteria and documented in a medical record.[¶] Oral reports of prior laboratory test results are not acceptable.

Case Classification

A confirmed case meets the laboratory criteria for diagnosis of HIV infection and one of the four HIV infection stages (stage 1, stage 2, stage 3, or stage unknown) (Table). Although cases with no information on CD4+ T-lymphocyte count or percentage and no information on AIDS-defining conditions can be classified as stage unknown, every effort should be made to report CD4+ T-lymphocyte counts or percentages and the presence of AIDS-defining conditions at the time of diagnosis. Additional CD4+ T-lymphocyte counts or percentages and any identified AIDS-defining conditions can be reported as recommended (6).

HIV Infection, Stage 1

No AIDS-defining condition and either CD4+ T-lymphocyte count of ≥ 500 cells/ μ L or CD4+ T-lymphocyte percentage of total lymphocytes of ≥ 29 .

HIV Infection, Stage 2

No AIDS-defining condition and either CD4+ T-lymphocyte count of 200--499 cells/ μ L or CD4+ T-lymphocyte percentage of total lymphocytes of 14--28.

HIV Infection, Stage 3 (AIDS)

CD4+ T-lymphocyte count of < 200 cells/ μ L or CD4+ T-lymphocyte percentage of total lymphocytes of < 14 or documentation of an AIDS-defining condition (Appendix A). Documentation of an AIDS-defining condition supersedes a CD4+ T-lymphocyte count of ≥ 200 cells/ μ L and a CD4+ T-lymphocyte percentage of total

lymphocytes of ≥ 14 . Definitive diagnostic methods for these conditions are available in Appendix C of the 1993 revised HIV classification system and the expanded AIDS case definition (2) and from the National Notifiable Diseases Surveillance System (available at http://www.cdc.gov/epo/dphsi/casedef/case_definitions.htm).

HIV Infection, Stage Unknown

No information available on CD4+ T-lymphocyte count or percentage and no information available on AIDS-defining conditions. (Every effort should be made to report CD4+ T-lymphocyte counts or percentages and the presence of AIDS-defining conditions at the time of diagnosis.)

2008 Surveillance Case Definitions for HIV Infection and AIDS Among Children Aged 18 Months to <13 Years

These 2008 surveillance case definitions of HIV infection and AIDS supersede those published in 1987 (1) and 1999 (3) and apply to all variants of HIV (e.g., HIV-1 or HIV-2). They are intended for public health surveillance only and are not a guide for clinical diagnosis. The 2008 laboratory criteria for reportable HIV infection among persons aged 18 months to <13 years exclude confirmation of HIV infection through the diagnosis of AIDS-defining conditions alone. Laboratory-confirmed evidence of HIV infection is now required for all reported cases of HIV infection among children aged 18 months to <13 years (20).

Criteria for HIV Infection

Children aged 18 months to <13 years are categorized as HIV infected for surveillance purposes if at least one of laboratory criteria or the other criterion is met.⁽¹⁾

Laboratory Criteria

- Positive result from a screening test for HIV antibody (e.g., reactive EIA), confirmed by a positive result from a supplemental test for HIV antibody (e.g., Western blot or indirect immunofluorescence assay). OR
- Positive result or a detectable quantity by any of the following HIV virologic (non-antibody) tests^{***}:
 - HIV nucleic acid (DNA or RNA) detection (e.g., PCR)
 - HIV p24 antigen test, including neutralization assay
 - HIV isolation (viral culture)

Other Criterion (for Cases that Do Not Meet Laboratory Criteria)

HIV infection diagnosed by a physician or qualified medical-care provider based on the laboratory criteria and documented in a medical record. Oral reports of prior laboratory test results are not acceptable.

Criteria for AIDS

Children aged 18 months to <13 years are categorized for surveillance purposes as having AIDS if the criteria for HIV infection are met and at least one of the AIDS-defining conditions has been documented (Appendix A). The 2008 surveillance case definition for AIDS retains the 24 clinical conditions in the AIDS surveillance case definition published in 1987 (1) and revised in 1994 (4) for children aged <13 years (Appendix A). Because the 2008 definition requires that all AIDS diagnoses have laboratory-confirmed evidence of HIV infection, the presence of any AIDS-defining condition listed in Appendix A indicates a surveillance diagnosis of AIDS. Guidance on the diagnosis of these diseases in the context of all nationally notifiable diseases is available at http://www.cdc.gov/epo/dphsi/casedef/case_definitions.htm.

2008 Surveillance Case Definition for HIV Infection Among Children Aged <18 Months

The 2008 case definition of HIV infection among children aged <18 months replaces the definition published in 1999 (3) and applies to all variants of HIV (e.g., HIV-1 or HIV-2). The 2008 definition is intended for public health surveillance only and not as a guide for clinical diagnosis. The 2008 definition takes into account new available testing technologies. Laboratory criteria for children aged <18 months at the time of diagnosis include revisions to one category: presumptively uninfected with HIV. No substantial changes have been made to the remaining three categories (definitively HIV infected, presumptively HIV infected, and definitively uninfected with HIV), and no changes have been made to the conditions listed under the AIDS criteria in the 1987 pediatric surveillance case definition for AIDS for children aged <18 months (1,2,13). Because diagnostic laboratory testing for HIV infection among children aged <18 months might be unreliable, children in this age group with perinatal HIV exposure whose illness meets the AIDS case definition on the basis of clinical criteria are considered presumptively HIV infected when the mother has laboratory-confirmed HIV infection. The definitive or presumptive exclusion of HIV infection for surveillance purposes does not mean that clinical HIV infection can be ruled out. For the purposes of calculating the exact timing of tests (e.g., when a specimen was obtained for laboratory testing) based on the surveillance case definition, 1 month corresponds to 30 days.

Criteria for Definitive or Presumptive HIV Infection

A child aged <18 months is categorized for surveillance purposes as definitively or presumptively HIV infected if born to an HIV-infected mother and if the laboratory criterion or at least one of the other criteria is met.

Laboratory Criterion for Definitive HIV Infection

A child aged <18 months is categorized for surveillance purposes as definitively HIV infected if born to an HIV-infected mother and the following laboratory criterion is met.

- Positive results on two separate specimens (not including cord blood) from one or more of the following HIV virologic (non-antibody) tests:
 - HIV nucleic acid (DNA or RNA) detection**
 - HIV p24 antigen test, including neutralization assay, for a child aged ≥ 1 month
 - HIV isolation (viral culture)

Laboratory Criterion for Presumptive HIV Infection

A child aged <18 months is categorized for surveillance purposes as presumptively HIV infected if 1) born to an HIV-infected mother, 2) the criterion for definitively HIV infected is not met, and 3) the following laboratory criterion is met.

- Positive results on one specimen (not including cord blood) from the listed HIV virologic tests (HIV nucleic acid detection test; HIV p24 antigen test, including neutralization assay, for a child aged ≥ 1 month; or HIV isolation [viral culture] for definitively HIV infected) and no subsequent negative results from HIV virologic or HIV antibody tests.

Other Criteria (for Cases that Do Not Meet Laboratory Criteria for Definitive or Presumptive HIV Infection)

- HIV infection diagnosed by a physician or qualified medical-care provider based on the laboratory criteria and documented in a medical record. Oral reports of prior laboratory test results are not acceptable OR
- When test results regarding HIV infection status are not available, documentation of a condition that meets the criteria in the 1987 pediatric surveillance case definition for AIDS (1) ([Appendix A](#)).

Criteria for Uninfected with HIV, Definitive or Presumptive

A child aged <18 months born to an HIV-infected mother is categorized for surveillance purposes as either definitively or presumptively uninfected with HIV if 1) the criteria for definitive or presumptive HIV infection are not met and 2) at least one of the laboratory criteria or other criteria are met.

Laboratory Criteria for Uninfected with HIV, Definitive

A child aged <18 months born to an HIV-infected mother is categorized for surveillance purposes as definitively uninfected with HIV if 1) the criteria for definitive or presumptive HIV infection are not met and 2) at least one of the laboratory criteria or other criteria are met.^{††}

- At least two negative HIV DNA or RNA virologic tests from separate specimens, both of which were obtained at age ≥ 1 month and one of which was obtained at age ≥ 4 months OR
- At least two negative HIV antibody tests from separate specimens obtained at age ≥ 6 months AND
- No other laboratory or clinical evidence of HIV infection (i.e., no positive results from virologic tests [if tests were performed] and no current or previous AIDS-defining condition) ([Appendix A](#)).

Laboratory Criteria for Uninfected with HIV, Presumptive

A child aged <18 months born to an HIV-infected mother is categorized for surveillance purposes as presumptively uninfected with HIV if 1) the criteria for definitively uninfected with HIV are not met and 2) at least one of the laboratory criteria are met.

- Two negative RNA or DNA virologic tests, from separate specimens, both of which were obtained at age ≥ 2 weeks and one of which was obtained at age ≥ 4 weeks ^{§§} OR
- One negative RNA or a DNA virologic test from a specimen obtained at age ≥ 8 weeks OR
- One negative HIV antibody test from a specimen obtained at age ≥ 6 months OR
- One positive HIV virologic test followed by at least two negative tests from separate specimens, one of which is a virologic test from a specimen obtained at age ≥ 8 weeks or an HIV antibody test from a specimen obtained at age ≥ 6 months AND
- No other laboratory or clinical evidence of HIV infection (i.e., no subsequent positive results from virologic tests if tests were performed, and no AIDS-defining condition for which no other underlying condition indicative of immunosuppression exists) ([Appendix A](#)).

Other Criteria (for Cases that Do Not Meet Laboratory Criteria for Uninfected with HIV, Definitive or Presumptive)

- Determination of uninfected with HIV by a physician or qualified medical-care provider based on the laboratory criteria and who has noted the HIV diagnostic test results in the medical record. Oral reports of prior laboratory test results are not acceptable AND
- No other laboratory or clinical evidence of HIV infection (i.e., no positive results from virologic tests [if tests were performed] and no AIDS-defining condition for which no other underlying condition indicative of immunosuppression exists) ([Appendix A](#)).

Criteria for Indeterminate HIV Infection

A child aged <18 months born to an HIV-infected mother is categorized as having perinatal exposure with an indeterminate HIV infection status if the criteria for infected with HIV and uninfected with HIV are not met.

<http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5710a1.htm>

Clinical Description

Influenza-like illness with a reported fever >100°F AND cough and/or sore throat, in the absence of a known cause other than influenza.

Laboratory Criteria for Diagnosis

- Isolation of influenza virus in tissue cell culture from respiratory specimens;
- Positive reverse-transcriptase polymerase chain reaction (RT-PCR) from respiratory specimens;
- Positive immunofluorescent antibody staining (direct or indirect) of respiratory specimens;
- Positive rapid influenza diagnostic test of respiratory specimens;
- Demonstration of immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens;
- Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera*.

Case Classification

Confirmed: A case that meets the laboratory criteria for diagnosis

Comment

The sensitivity and specificity of rapid diagnostic test kits vary and the predictive value positive may be low outside the time of peak influenza activity. Therefore, Arizona prefers to obtain culture or RT-PCR confirmation for reporting the first laboratory- confirmed case of influenza of the season. After a culture- or PCR-confirmed case has been reported in the state, Arizona will consider all cases that meet the above laboratory criteria to be lab-confirmed.

*Serologic testing for influenza is available in a limited number of laboratories, and should only be considered as evidence of recent infection if a four-fold rise in influenza (HI) antibody titer is demonstrated in paired sera. Single serum samples are not interpretable.

INFLUENZA-ASSOCIATED PEDIATRIC MORTALITY

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-342](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. Influenza-associated deaths in all persons aged <18 years should be reported.

A death should not be reported if:

- There is no laboratory confirmation of influenza virus infection.
- The influenza illness is followed by full recovery to baseline health status prior to death.
- The death occurs in a person 18 years or older.
- After review and consultation there is an alternative agreed upon cause of death.

Laboratory Criteria for Diagnosis

See laboratory criteria for Influenza. Laboratory testing for influenza virus infection may be done on pre- or post-mortem clinical specimens.

Case Classification

Confirmed: A death meeting the clinical case definition that is laboratory confirmed. Laboratory or rapid diagnostic test confirmation is required as part of the case definition; therefore, all reported deaths will be classified as confirmed.

KAWASAKI SYNDROME

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-343](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A febrile illness of greater than or equal to 5 days' duration, with at least four of the five following physical findings and no other more reasonable explanation for the observed clinical findings:

- Bilateral conjunctival injection
- Oral changes (erythema of lips or oropharynx, strawberry tongue, or fissuring of the lips)
- Peripheral extremity changes (edema, erythema, or generalized or periungual desquamation)
- Rash
- Cervical lymphadenopathy (at least one lymph node greater than or equal to 1.5 cm in diameter)

Laboratory Criteria for Diagnosis

None

Case Classification

Confirmed: A case that meets the clinical case definition

Comment

If fever disappears after intravenous gamma globulin therapy is started, fever may be of less than 5 days' duration, and the clinical case definition may still be met.

LEGIONELLOSIS (Legionnaires' disease)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-344](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires' disease, which is characterized by fever, myalgia, cough, and clinical or radiographic pneumonia; and Pontiac fever, a milder illness without pneumonia.

Laboratory Criteria for Diagnosis

Confirmed:

- By culture: isolation of any *Legionella* organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid.
- By detection of *Legionella pneumophila* serogroup 1 antigen in urine using validated reagents.
- By seroconversion: fourfold or greater rise in specific serum antibody titer to *Legionella pneumophila* serogroup 1 using validated reagents.

Suspect:

- By seroconversion: fourfold or greater rise in antibody titer to specific species or serogroups of *Legionella* other than *L. pneumophila* serogroup 1 (e.g., *L. micdadei*, *L. pneumophila* serogroup 6).
- By seroconversion: fourfold or greater rise in antibody titer to multiple species of *Legionella* using pooled antigen and validated reagents.
- By the detection of specific *Legionella* antigen or staining of the organism in respiratory secretions, lung tissue, or pleural fluid by direct fluorescent antibody (DFA) staining, immunohistochemistry (IHC), or other similar method, using validated reagents.
- By detection of *Legionella* species by a validated nucleic acid assay.

Case Classification

Confirmed: A clinically compatible case that meets at least one of the confirmatory laboratory criteria.

- Travel-associated: A case that has a history of spending at least one night away from home, either in the same country of residence or abroad, in the ten days before onset of illness.

Suspect: A clinically compatible case that meets at least one of the presumptive (suspect) laboratory criteria.

- Travel-associated: A case that has a history of spending at least one night away from home, either in the same country of residence or abroad, in the ten days before onset of illness.

LEPTOSPIROSIS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-345](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness characterized by fever, headache, chills, myalgia, conjunctival suffusion, and less frequently by meningitis, rash, jaundice, or renal insufficiency. Symptoms may be biphasic.

Laboratory Criteria for Diagnosis

- Isolation of *Leptospira* from a clinical specimen, OR
- Fourfold or greater increase in *Leptospira* agglutination titer between acute and convalescent-phase serum specimens obtained ≥ 2 weeks apart and studied at the same laboratory, OR
- Demonstration of *Leptospira* in a clinical specimen by immunofluorescence

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

Probable: A clinically compatible case with supportive serology (i.e., a *Leptospira* agglutination titer of ≥ 200 in one or more serum specimens).

LISTERIOSIS (*Listeria monocytogenes*)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-346](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

In adults, invasive disease caused by *Listeria monocytogenes* manifests most commonly as meningitis or bacteremia; infection during pregnancy may result in fetal loss through miscarriage or stillbirth, or neonatal meningitis or bacteremia. Other manifestations can also be observed.

Laboratory Criteria for Diagnosis

- Isolation of *L. monocytogenes* from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid)
- In the setting of miscarriage or stillbirth, isolation of *L. monocytogenes* from placental or fetal tissue

Case Classification

Confirmed: A clinically compatible case that is laboratory-confirmed

Comment

The usefulness of other laboratory methods such as fluorescent antibody testing or polymerase chain reaction to diagnose invasive listeriosis has not been established.

For more information on control measures, see [Arizona Administrative Code R9-6-347](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Presentation

A systemic, tick-borne disease with protean manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The best clinical marker for the disease is the initial skin lesion, erythema migrans, which occurs among 60%-80% of patients.

Erythema migrans (EM)

For purpose of surveillance, EM is defined as skin lesion that typically begins as a red macule or papule and expands over a period of days to weeks to form a large round lesion, often with partial central clearing. A single primary lesion must be greater than or equal to 5 cm in size across its largest diameter. Secondary lesions may also occur. Annular erythematous lesions occurring within several hours of a tick bite represent hypersensitivity reactions and do not qualify as EM. For most patients, the expanding EM lesion is accompanied by other acute symptoms; particularly fatigue, fever, headache, mild stiff neck, arthralgia, or myalgia. These symptoms are typically intermittent. The diagnosis of EM must be made by a physician. Laboratory confirmation is recommended for persons with no known exposure.

Early manifestations

Early systemic manifestations may be intermittent and may include malaise, fatigue, fever, headache, stiff neck, myalgia, migratory arthralgias and/or lymphadenopathy lasting several weeks.

Late Manifestations

Late manifestations occur after the acute period of illness, usually after months or years of infection. Late manifestations include any of the following when *an alternate explanation is not found*:

- Musculoskeletal system
 - Recurrent, brief attacks (weeks or months) of objective joint swelling in one or a few joints, sometimes followed by chronic arthritis in one or a few joints.
 - Manifestation not considered as criteria for diagnosis include chronic progressive arthritis not preceded by brief attacks and chronic symmetrical polyarthritis.
 - Arthralgia, myalgia, or fibromyalgia syndromes alone are not criteria for musculoskeletal involvement.
- Nervous system
 - Any one of the following, alone or in combination: lymphocytic meningitis; cranial neuritis, particularly facial palsy (may be bilateral); radiculoneuropathy; or, rarely, encephalomyelitis.
 - Encephalomyelitis must be confirmed by showing antibody production against *B. burgdorferi* in the CSF (cerebrospinal fluid) demonstrated by a higher titer of antibody in CSF than in serum.
 - Headache, fatigue, paresthesia, or mild stiff necks alone are not criteria for neurologic involvement and are sometimes associated with myocarditis.
 - Palpitations, bradycardia, bundle branch block, or myocarditis alone are not criteria for cardiovascular involvement.

- Acute onset, high-grade (2 or 3) atrioventricular conduction defects that resolve in days to weeks
- Cardiovascular system

Exposure

Exposure is defined as having been in wooded, brushy, or grassy areas (potential tick habitats) in a county in which Lyme disease is endemic (see below) ≤ 30 days before onset of EM. A history of tick bite is NOT required.

Disease Endemic to County

A county in which Lyme disease is endemic is one where at least two definite cases have been previously identified, or in which a known tick vector has been shown to be infected with *B. burgdorferi*. States with highly endemic counties include: Connecticut, Delaware, Maryland, Massachusetts, Minnesota, New Jersey, New York, Pennsylvania, Rhode Island, and Wisconsin.

Laboratory evidence

- A positive culture for *Borrelia burgdorferi*, OR
- Two-tier testing:
 - Positive or equivocal EIA or IFA test followed by,
 - Positive Western blot test (IgM and IgG if within the first four weeks of disease onset*. After four weeks of disease onset, only IgG immunoblot.) OR
- Single-tier IgG immunoblot seropositivity

*If IgM positive, a Western blot with at least 2 out of the 3 bands reactive.
If IgG positive, a Western blot with at least 5 out of the 10 bands reactive.

Case Classification

Confirmed*:

- A case with a known exposure, travel to an endemic area, clinically compatible early manifestations, and lab evidence of infection (IgG positive if >4 weeks after exposure)-EM may or may not be present, OR
- A case with at least one late manifestation, travel in the past to an endemic area with or without a known exposure, and lab evidence of infection (*must be IgG positive*).

Probable*:

- A case with clinically compatible early manifestations, travel to an endemic area with no known exposure that has lab evidence of infection but is IgM positive only. EM is not required.

Suspect:

- A case of EM where there is no known exposure and no lab evidence of infection, OR
- A case with lab evidence of infection (IgG positive) but no clinical information available (e.g. a lab report).

Comment

*For surveillance purposes in Arizona, travel with plausible exposure, lab evidence, and clinical presentation should all be considered before classifying a case as confirmed or probable. All of these aspects should be investigated thoroughly and should adhere to the classification selected above.

This surveillance case definition was developed for national reporting of Lyme disease; it is NOT

appropriate for clinical diagnosis.

Lyme disease reports will not be considered cases if the medical provider specifically states “this is not a case of Lyme disease”, or if the only symptom listed is “tick bite” or “insect bite”.

LYMPHOCYTIC CHORIOMENINGITIS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-348](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Lymphocytic choriomeningitis virus (LCMV) is a rodent-borne arenavirus which is endemic in house mice throughout the world. Infection has also been documented in pet rodents such as mice, guinea pigs and hamsters. Transmission to humans can occur through direct contact with infected rodents or rodent-contaminated environments. LCMV infection in humans can range from asymptomatic to mild self-limited illness characterized by any or all of the following symptoms: fever, malaise, lack of appetite, muscle aches, headache, nausea, and vomiting. Aseptic meningitis can also occur in some patients. Orchitis, parotitis, arthritis, myocarditis, and rash occasionally occur. Lab findings can include leucopenia and thrombocytopenia.

Laboratory diagnosis

- Confirmatory tests:
 - Isolation of the lymphocytic choriomeningitis virus
 - Polymerase chain reaction (PCR) for LCMV
- Additional tests:
 - Serology indicating a positive IgM or a four-fold increase in IgG
 - Complete blood count showing leucopenia and thrombocytopenia
 - Cerebral spinal fluid analysis indicating increased protein or an increase in white blood cells with an increase in lymphocytes

Case Classification

Confirmed: A clinically-compatible illness that is laboratory confirmed by culture or PCR

Probable: A clinically-compatible illness that has at least one of the additional tests listed

MALARIA

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-349](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical description

The first symptoms of malaria (most often fever, chills, sweats, headaches, muscle pains, nausea and vomiting) are often not specific and are also found in other diseases (such as influenza and other common viral infections). Likewise, the physical findings are often not specific (elevated temperature, perspiration, tiredness). In severe malaria (caused by *P. falciparum*), clinical findings (confusion, coma, neurologic focal signs, severe anemia, respiratory difficulties) are more striking and may increase the suspicion index for malaria.

Laboratory criteria for diagnosis:

- Detection of circulating malaria-specific antigens using rapid diagnostic test (RDT), OR
- Detection of species specific parasite DNA in a sample of peripheral blood using a Polymerase Chain Reaction test*, OR
- Detection of malaria parasites in thick or thin peripheral blood films.

Case classification

Confirmed:

- Detection and specific identification of malaria parasites by microscopy on blood films in a laboratory with appropriate expertise in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country, OR
- Detection of Plasmodium species by nucleic acid test* in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country.

Suspect: Detection of Plasmodium species by rapid diagnostic antigen testing without confirmation by microscopy or nucleic acid testing in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country.

Comment

* Laboratory-developed malaria PCR tests must fulfill CLIA requirements, including validation studies

A subsequent attack experienced by the same person but caused by a different *Plasmodium* species is counted as an additional case. A subsequent attack experienced by the same person and caused by the same species in the United States may indicate a relapsing infection or treatment failure caused by drug resistance or a separate attack.

Blood smears from questionable cases should be referred to the CDC Division of Parasitic Diseases Diagnostic Laboratory for confirmation of the diagnosis.

Cases also are classified according to the following World Health Organization categories:

- Autochthonous:
 - Indigenous: malaria acquired by mosquito transmission in an area where malaria is a regular occurrence

- Introduced: malaria acquired by mosquito transmission from an imported case in an area where malaria is not a regular occurrence
- Imported: malaria acquired outside a specific area (e.g., the United States and its territories)
- Induced: malaria acquired through artificial means (e.g., blood transfusion, common syringes, or malariotherapy)
- Relapsing: renewed manifestation (i.e., of clinical symptoms and/or parasitemia) of malarial infection that is separated from previous manifestations of the same infection by an interval greater than any interval resulting from the normal periodicity of the paroxysms
- Cryptic: an isolated case of malaria that cannot be epidemiologically linked to additional cases

For more information on control measures, see [Arizona Administrative Code R9-6-350](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness characterized by all the following:

- A generalized rash lasting ≥ 3 days
- A temperature greater than or equal to 101.0°F (greater than or equal to 38.3°C)
- Cough, or coryza, or conjunctivitis

Laboratory Criteria for Diagnosis

- Positive serologic test for measles immunoglobulin M antibody, or
- Significant (four-fold) rise in measles antibody level by any standard serologic assay, or
- Isolation of measles virus from a clinical specimen

Case Classification

Confirmed: A case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a confirmed case. A laboratory-confirmed case does not need to meet the clinical case definition.

Probable: A case that meets the clinical case definition, has noncontributory or no serologic or virologic testing, and is not epidemiologically linked to a probable or confirmed case.

Suspect: Any febrile illness accompanied by rash

Classification of Import Status

- Internationally imported case: An internationally imported case is defined as a case in which measles results from exposure to measles virus outside the United States as evidenced by at least some of the exposure period (7–21 days before rash onset) occurring outside the United States and rash onset occurring within 21 days of entering the United States and there is no known exposure to measles in the U.S. during that time. All other cases are considered U.S.-acquired.
- U.S.-acquired case: An U.S.-acquired case is defined as a case in which the patient had not been outside the United States during the 21 days before rash onset or was known to have been exposed to measles within the United States. U.S.-acquired cases are subclassified into four mutually exclusive groups:
- Import-linked case: Any case in a chain of transmission that is epidemiologically linked to an internationally imported case.
- Imported-virus case: a case for which an epidemiologic link to an internationally imported case was not identified, but for which viral genetic evidence indicates an imported measles genotype, i.e., a genotype that is not occurring within the United States in a pattern indicative of endemic transmission. An endemic genotype is the genotype of any measles virus that occurs in an endemic chain of transmission (i.e., lasting ≥ 12 months). Any genotype that is found repeatedly in U.S.-acquired cases should be thoroughly investigated as a potential endemic genotype, especially if the cases are closely related in time or location.
- Endemic case: a case for which epidemiological or virological evidence indicates an endemic chain of transmission. Endemic transmission is defined as a chain of measles virus transmission that is continuous for ≥ 12 months within the United States.
- Unknown source case: a case for which an epidemiological or virological link to importation or to endemic transmission within the U.S. cannot be established after a thorough investigation. These cases must be carefully assessed epidemiologically to assure that they do not represent a sustained U.S.-acquired chain

of transmission or an endemic chain of transmission within the U.S.

Note: Internationally imported, import-linked, and imported-virus cases are considered collectively to be import-associated cases.

MENINGOCOCCAL INVASIVE DISEASE (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-352](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Meningococcal disease presents most commonly as meningitis and/or meningococemia that may progress rapidly to purpura fulminans, shock, and death. However, other manifestations may be observed.

Laboratory Criteria for Diagnosis

Isolation of *Neisseria meningitidis* from a normally sterile site (e.g., blood or CSF or, less commonly, synovial, pleural, or pericardial fluid) or skin scrapings of purpuric lesions.

Case Classification

Confirmed: A clinically compatible case that is culture confirmed.

Probable: A clinically compatible case that has either:

- Evidence of *N. meningitidis* DNA using a validated PCR, obtained from a normally sterile site (e.g., blood or CSF), OR
- Evidence of *N. meningitidis* antigen by IHC on formalin-fixed tissue or latex agglutination of CSF.

Suspect:

- Clinical purpura fulminans in the absence of a positive blood culture, OR
- A clinically compatible case with gram negative diplococci from a normally sterile site (e.g., blood or CSF)

Comment

Antigen test results in urine or serum are unreliable for diagnosing meningococcal disease.

**METHICILLIN-RESISTANT
STAPHYLOCOCCUS AUREUS
(INVASIVE)**

REPORTABLE BY LABORATORIES ONLY

Clinical Description

Staphylococcus aureus can produce a variety of presentations, ranging from skin or soft tissue infection to bacteremia or the involvement of various organs (e.g., endocarditis, pneumonia, osteomyelitis). Methicillin-resistant *Staphylococcus aureus* (MRSA) is resistant to beta-lactam antibiotics. Only MRSA from normally sterile sites (invasive disease) is reportable.

Laboratory Criteria for Diagnosis

- Isolation of *Staphylococcus aureus* from a normally sterile site. Examples of sterile sites include but are not limited to: CSF, blood, peritoneal fluid, pericardial fluid, or pleural fluid AND
- Intermediate or high level resistance of *Staphylococcus aureus* isolate to methicillin, detected and defined according to the standards and guidelines approved by the National Committee for Clinical Laboratory Standards (NCCLS) (MIC: 4-8 mg/L for intermediate and >16 mg/L for high (NCCLS 2006)).

Case Classification

Confirmed: A case that meets the laboratory criteria for diagnosis

For more information on control measures, see [Arizona Administrative Code R9-6-353](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland(s), lasting greater than or equal to 2 days, and without other apparent cause.

Clinically Compatible Illness

Infection with mumps virus may present as aseptic meningitis, encephalitis, hearing loss, orchitis, oophoritis, parotitis or other salivary gland swelling, mastitis or pancreatitis.

Laboratory Criteria for Diagnosis

- Isolation of mumps virus from clinical specimen, OR
- Detection of mumps nucleic acid (e.g., standard or real time RT-PCR assays), OR
- Detection of mumps IgM antibody, OR
- Demonstration of specific mumps antibody response in absence of recent vaccination, either a four-fold increase in IgG titer as measured by quantitative assays, or a seroconversion from negative to positive using a standard serologic assay of paired acute and convalescent serum specimens.

Case Classification

Confirmed: A case that meets the clinical case definition or has clinically compatible illness, and is either laboratory confirmed or is epidemiologically linked to a confirmed case.

Probable: A case that meets the clinical case definition without laboratory confirmation and is epidemiologically linked to a clinically compatible case.

Suspect: A case with clinically compatible illness or that meets the clinical case definition without laboratory testing, or a case with laboratory tests suggestive of mumps without clinical information.

Classification of Import Status

- **Internationally imported case:** An internationally imported case is defined as a case in which mumps results from exposure to mumps virus outside the United States as evidenced by at least some of the exposure period (12–25 days before onset of parotitis or other mumps-associated complications) occurring outside the United States and the onset of parotitis or other mumps-associated complications within 25 days of entering the United States and no known exposure to mumps in the U.S. during that time. All other cases are considered U.S.-acquired cases.
- **U.S.-acquired case:** A U.S.-acquired case is defined as a case in which the patient had not been outside the United States during the 25 days before onset of parotitis or other mumps-associated complications or was known to have been exposed to mumps within the United States. U.S.-acquired cases are sub-classified into four mutually exclusive groups:
 - **Import-linked case:** Any case in a chain of transmission that is epidemiologically linked to an internationally imported case.
 - **Imported-virus case:** A case for which an epidemiologic link to an internationally imported case was not identified but for which viral genetic evidence indicates an imported mumps genotype, i.e., a genotype that is not occurring within the United States in a pattern indicative of endemic transmission. An endemic genotype is the genotype of any mumps virus that occurs in an endemic chain of transmission (i.e., lasting ≥ 12 months). Any genotype that is found repeatedly in U.S.-acquired cases should be thoroughly

investigated as a potential endemic genotype, especially if the cases are closely related in time or location.

- Endemic case: A case for which epidemiological or virological evidence indicates an endemic chain of transmission. Endemic transmission is defined as a chain of mumps virus transmission continuous for ≥ 12 months within the United States.
- Unknown source case: A case for which an epidemiological or virological link to importation or to endemic transmission within the U.S. cannot be established after a thorough investigation. These cases must be carefully assessed epidemiologically to assure that they do not represent a sustained U.S.-acquired chain of transmission or an endemic chain of transmission within the U.S.

Note: Internationally imported, import-linked, and imported-virus cases are considered collectively to be import-associated cases.

Comment

With previous contact with mumps virus either through vaccination (particularly with 2 doses) or natural infection, serum mumps IgM test results may be negative; IgG test results may be positive at initial blood draw and viral detection in RT-PCR or culture may have low yield. Therefore, mumps cases should not be ruled out by negative laboratory results. Serologic tests should be interpreted with caution, as false positive and false negative results are possible with IgM tests.

Currently, there is insufficient information to determine whether any mumps strains are endemic to the United States or to distinguish endemic from non-endemic strains. States may also choose to classify cases as “out-of-state-imported” when imported from another state in the United States. For national reporting, however, cases will be classified as either internationally imported or U.S.-acquired.

NOROVIRUS

REPORTABLE BY LABORATORIES ONLY

For more information on control measures, see [Arizona Administrative Code R9-6-354](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Norovirus usually causes a self-limited, mild-to-moderate disease that often occurs in outbreaks. Clinical symptoms include nausea, vomiting, diarrhea, abdominal pain, or other symptoms typical of gastrointestinal illnesses.

Laboratory Criteria for Diagnosis

Identification of norovirus through nucleic acid testing at the state laboratory or CDC.

Case Classification

Confirmed: A case that meets the laboratory criteria for diagnosis

PERTUSSIS (WHOOPIING COUGH)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-356](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A cough illness lasting at least 2 weeks with one of the following: paroxysms of coughing, inspiratory "whoop," or post-tussive vomiting, without other apparent cause (as reported by a health professional)

Laboratory Criteria for Diagnosis

- Isolation of *Bordetella pertussis* from clinical specimen
- Positive polymerase chain reaction (PCR) for *B. pertussis*

Case Classification

Confirmed: A case that is culture-positive and in which an acute cough illness of any duration is present; or a case that meets the clinical case definition and is confirmed by positive PCR; or a case that meets the clinical case definition and is epidemiologically linked directly to a case confirmed by either culture or PCR

Probable: A case that meets the clinical case definition, is not laboratory confirmed, and is not epidemiologically linked to a laboratory-confirmed case

Comment

The clinical case definition above is appropriate for endemic or sporadic cases. In outbreak settings, a case may be defined as a cough illness lasting at least 2 weeks (as reported by a health professional). Because direct fluorescent antibody testing of nasopharyngeal secretions has been demonstrated in some studies to have low sensitivity and variable specificity, such testing should not be relied on as a criterion for laboratory confirmation. Serologic testing for pertussis is available in some areas but is not standardized and, therefore, should not be relied on as a criterion for laboratory confirmation.

Both probable and confirmed cases should be reported nationally.

PLAGUE (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-357](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A disease characterized by fever and leukocytosis that presents in one or more of the following principal clinical forms:

- Regional lymphadenitis (bubonic plague)
- Septicemia without an evident bubo (septicemic plague)
- Plague pneumonia resulting from hematogenous spread in bubonic or septicemic cases (secondary plague pneumonia) or inhalation of infectious droplets (primary plague pneumonia)
- Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague)
- Plague is transmitted to humans by fleas or by direct exposure to infected tissues or respiratory droplets.

Laboratory Criteria for Diagnosis

- Isolation of [Yersinia pestis](#) from a clinical specimen, OR
- Fourfold or greater change in serum antibody titers to *Y. pestis*

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable: A clinically compatible illness with supportive laboratory results (demonstration of a single test result suggestive of recent infection with no history of immunization, or demonstration of a Fraction I antigen in blood, bubo aspirate, or tissue by antigen detection - ELISA (enzyme-linked immunosorbent assay) or FA (Fluorescent assay)).

For more information on control measures, see [Arizona Administrative Code R9-6-358](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss (as reported by a physician).

Laboratory Criteria for Diagnosis

None

Case Classification

Confirmed: A case that meets the clinical case definition and in which the patient has a neurologic deficit 60 days after onset of initial symptoms, has died, or has unknown follow-up status.

Probable: A case that meets the clinical case definition.

Comment

All suspected cases of paralytic poliomyelitis are reviewed by a panel of expert consultants before final classification occurs. Confirmed cases are then further classified based on epidemiologic and laboratory criteria (classification described in Sutter RW, *et al.* 1989. *AJPH*: 79(4):495-498).

I. SPORADIC: A case of paralytic poliomyelitis not linked epidemiologically to another case of paralytic poliomyelitis

- A. Wild virus poliomyelitis: Virus characterized as wild virus
- B. Vaccine-associated poliomyelitis
 - 1. Recipient—OPV was received 4 to 30 days before onset of illness
 - 2. Contact—illness onset was 4 to 75 days after OPV was fed to a recipient in contact with patient and contact occurred within 30 days before onset of illness
 - 3. Community—No history of receiving OPV or of contact with an OPV recipient, as defined in 1 and 2, and virus isolated and characterized as vaccine-related
- C. Poliomyelitis with no history of receiving OPV or of contact with an OPV recipient, as defined in B1 and B2, and virus not isolated or not characterized

II. EPIDEMIC: A case of paralytic poliomyelitis linked epidemiologically to another case of paralytic poliomyelitis.

- A. Not a recipient of OPV
 - 1. Virus characterized as wild virus
 - 2. Virus characterized as vaccine-related
 - 3. Virus not isolated or not characterized
- B. OPV recipient—OPV received 4 to 30 days before onset of illness
 - 1. Virus characterized as wild virus
 - 2. Virus characterized as vaccine-related
 - 3. Virus not isolated or not characterized

III. IMMUNOLOGICALLY ABNORMAL: Proven or presumed

- A. Wild virus poliomyelitis—Virus characterized as wild virus
- B. Vaccine-associated poliomyelitis

1. Recipient—OPV was received 4 to 30 days before onset of illness
 2. Contact—Illness onset was 4 to 75 days after OPV was fed to a recipient in contact with patient and contact occurred within 30 days before onset of illness
 3. Community—No history of receiving OPV or of contact with an OPV recipient, as defined in 1 and 2, and virus isolated and characterized as vaccine-related
- C. Poliomyelitis with no history- of receiving OPV or of contact with an OPV recipient, as defined in B1 and B2, and virus not isolated or not characterized

IV. IMPORTED: Poliomyelitis in a person (US resident or other) who has entered the United States

- A. Virus characterized as wild virus
- B. Virus characterized as vaccine-related
- C. Indeterminate—Virus not isolated or characterized

POLIO (NONPARALYTIC)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-358](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Most poliovirus infections are asymptomatic or cause mild febrile disease. Poliovirus infections occasionally cause aseptic meningitis and one out of 200 infections from poliovirus type 1 results in paralytic poliomyelitis, characterized by acute onset of flaccid paralysis that is typically asymmetric and associated with a prodromal fever. Poliovirus is spread through fecal material, oral secretions, some aerosols and fomites.

*Note that this case definition applies only to poliovirus infections found in asymptomatic persons or those with mild, nonparalytic disease (e.g., those with a nonspecific febrile illness, diarrhea, or aseptic meningitis). Isolation of polioviruses from persons with acute paralytic poliomyelitis should continue to be reported as "paralytic poliomyelitis."

Laboratory Criteria for Diagnosis

None

Case Classification

Confirmed: Poliovirus isolate identified in an appropriate clinical specimen (e.g., stool, cerebrospinal fluid, oropharyngeal secretions), with confirmatory typing and sequencing performed by the CDC Poliovirus Laboratory, as needed.

Comment

In 2005, a vaccine-derived poliovirus (VDPV) type 1 was identified in a stool specimen obtained from an immunodeficient Amish infant and, subsequently, from 4 other children in 2 other families in the infant's central Minnesota community¹. Epidemiological and laboratory investigations determined that the VDPV had been introduced into the community about 3 months before the infant was identified and that there had been virus circulation in the community. Investigations in other communities in Minnesota and nearby states and Canada did not identify any additional infections or any cases of paralytic poliomyelitis.

Although oral poliovirus vaccine (OPV) is still widely used in most countries, inactivated poliovirus vaccine (IPV) replaced OPV in the United States in 2000². Therefore, the Minnesota poliovirus infections were the result of importation of a vaccine-derived poliovirus into the United States and the first time a VDPV has been shown to circulate in a community in a developed country³. Circulating VDPVs commonly revert to a wild poliovirus phenotype and have increased transmissibility & high risk for paralytic disease; they have recently caused polio infections and outbreaks of paralytic poliomyelitis in several countries³. Contacts between persons in communities with low polio vaccination coverage pose the potential for transmission of polioviruses and outbreaks of paralytic poliomyelitis.

Because of the success of the routine childhood immunization program in the U.S. and the Global Polio Eradication Initiative, polio has been eliminated in the Americas since 1991. Because the U.S. has used IPV exclusively since 2000, the occurrence of any poliovirus infections in the U.S. is a cause for concern. Reflecting the global concern for poliovirus importations into previously polio-free countries, the World Health Assembly, W.H.O., has added circulating poliovirus to the notifiable events in the International Health Regulations (IHR)⁴.

References

¹ CDC. Poliovirus infections in four unvaccinated children – Minnesota, August-October 2005. *MMWR*; 54(41); 1053–1055.

² CDC. Poliomyelitis prevention in the United States. Updated recommendations from the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2000;49 (No. RR-5).

³ Kew OM, Sutter RW, de Gourville EM, Dowdle WR, Pallansch MA. Vaccine-derived polioviruses and the endgame strategy for global polio eradication. *Ann Rev Microbiol* 2005;59:587-635.

⁴ CDC. Brief report. Conclusions and recommendations of the Advisory Committee on Poliomyelitis Eradication — Geneva, Switzerland, October 2005. *MMWR* 2005;54;1186-8.

PSITTACOSIS (*Chlamydia psittaci*) (Ornithosis)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-359](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical description

Psittacosis is an illness characterized by fever, chills, headache, myalgia, and a dry cough with pneumonia often evident on chest x-ray. Severe pneumonia requiring intensive-care support, endocarditis, hepatitis, and neurologic complications occasionally occur.

Laboratory criteria for diagnosis

- Isolation of *Chlamydia psittaci* from respiratory specimens (e.g., sputum, pleural fluid, or tissue), or blood, OR
- Fourfold or greater increase in antibody (Immunoglobulin G [IgG]) against *C. psittaci* by complement fixation (CF) or microimmunofluorescence (MIF) between paired acute- and convalescent-phase serum specimens obtained at least 2-4 weeks apart, OR
- Supportive serology (e.g. *C. psittaci* antibody titer [Immunoglobulin M (IgM)] of greater than or equal to 32 in at least one serum specimen obtained after onset of symptoms), OR
- Detection of *C. psittaci* DNA in a respiratory specimen (e.g. sputum, pleural fluid or tissue) via amplification of a specific target by polymerase chain reaction (PCR) assay.

Case classification

Confirmed: An illness characterized by fever, chills, headache, cough and myalgia, and laboratory confirmed by either:

- Isolation of *Chlamydia psittaci* from respiratory specimens (e.g., sputum, pleural fluid, or tissue), or blood, OR
- Fourfold or greater increase in antibody (Immunoglobulin G [IgG]) against *C. psittaci* by complement fixation (CF) or microimmunofluorescence (MIF) between paired acute- and convalescent-phase serum specimens obtained at least 2-4 weeks apart.

Probable: An illness characterized by fever, chills, headache, cough and myalgia that has either:

- Supportive serology (e.g. *C. psittaci* antibody titer [Immunoglobulin M, IgM] of greater than or equal to 32 in at least one serum specimen obtained after onset of symptoms), OR
- Detection of *C. psittaci* DNA in a respiratory specimen (e.g. sputum, pleural fluid or tissue) via amplification of a specific target by polymerase chain reaction (PCR) assay.

Comment

Although MIF has shown greater specificity to *C. psittaci* than CF, positive serologic findings by both techniques may occur as a result of infection with other *Chlamydia* species and should be interpreted with caution. To increase the reliability of test results, acute- and convalescent-phase serum specimens should be analyzed at the same time in the same laboratory. A realtime polymerase chain reaction (rtPCR) has been developed and validated in avian specimens but has not yet been validated for use in humans (1).

References

1. Mitchell SL, BJ Wolff, WL Thacker, PG Ciombor, CR Gregory, KDE Everett, BW Ritchie, JM Winchell 2008 Genotyping of *Chlamydia psittaci* by real-time PCR and high resolution melt analysis. *J. Clin. Microbiol.* 47:175-181

Q FEVER (*Coxiella burnetii*)

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-360](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Exposure

Exposure is usually via aerosol, is broadly interpreted, and may be unknown (especially for chronic infection), but often includes the presence of goats, sheep, or other livestock, especially during periods of parturition. Direct contact with animals is not required, and variable incubation periods may be dose dependent.

Q FEVER, ACUTE

Clinical Description

Acute fever usually accompanied by rigors, myalgia, malaise, and a severe retrobulbar headache. Fatigue, night-sweats, dyspnea, confusion, nausea, diarrhea, abdominal pain, vomiting, non-productive cough, and chest pain have also been reported. Severe disease can include acute hepatitis, atypical pneumonia with abnormal radiograph, and meningoencephalitis. Pregnant women are at risk for fetal death and abortion. Clinical laboratory findings may include elevated liver enzyme levels, leukocytosis, and thrombocytopenia. Asymptomatic infections may also occur.

Note: Serologic profiles of pregnant women infected with acute Q fever during gestation may progress frequently and rapidly to those characteristic of chronic infection.

Clinical evidence

Acute fever and one or more of the following: rigors, severe retrobulbar headache, acute hepatitis, pneumonia, or elevated liver enzyme levels.

Laboratory criteria for diagnosis

- Laboratory confirmed:
 - Serological evidence of a fourfold change in immunoglobulin G (IgG)-specific antibody titer to *C. burnetii* phase II antigen by indirect immunofluorescence assay (IFA) between paired serum samples, (CDC suggests one taken during the first week of illness and a second 3-6 weeks later, antibody titers to phase I antigen may be elevated or rise as well), OR
 - Detection of *C. burnetii* DNA in a clinical specimen via amplification of a specific target by polymerase chain reaction (PCR) assay, OR
 - Demonstration of *C. burnetii* in a clinical specimen by immunohistochemical methods (IHC), OR
 - Isolation of *C. burnetii* from a clinical specimen by culture.
- Laboratory supportive:
 - Has a single supportive IFA IgG titer of $\geq 1:128$ to phase II antigen (phase I titers may be elevated as well).
 - Has serologic evidence of elevated phase II IgG or IgM antibody reactive with *C. burnetii* antigen by enzyme-linked immunosorbent assay (ELISA), dot-ELISA, or latex agglutination.

Note: For acute testing, CDC uses in-house IFA IgG testing (cutoff of $\geq 1:128$), preferring simultaneous testing of paired specimens, and does not use IgM results for routine diagnostic testing.

Case Classification

Confirmed acute Q fever. A laboratory confirmed case that either meets clinical case criteria or is epidemiologically linked to a lab confirmed case.

Probable acute Q fever: A clinically compatible case of acute illness (meets clinical evidence criteria for acute Q fever illness) that has laboratory supportive results for past or present acute disease (antibody to Phase II antigen) but is not laboratory confirmed.

Q FEVER, CHRONIC

Clinical Description

Infection that persists for more than 6 months. Potentially fatal endocarditis may evolve months to years after acute infection, particularly in persons with underlying valvular disease. Infections of aneurysms and vascular prostheses have been reported. Immunocompromised individuals are particularly susceptible. Rare cases of chronic hepatitis without endocarditis, osteomyelitis, osteoarthritis, and pneumonitis have been described.

Clinical evidence

Newly recognized, culture-negative endocarditis, particularly in a patient with previous valvulopathy or compromised immune system, suspected infection of a vascular aneurysm or vascular prosthesis, or chronic hepatitis, osteomyelitis, osteoarthritis, or pneumonitis in the absence of other known etiology.

Laboratory criteria for diagnosis

- Laboratory confirmed:
 - Serological evidence of IgG antibody to *C. burnetii* phase I antigen $\geq 1:800$ by IFA (while phase II IgG titer will be elevated as well; phase I titer is higher than the phase II titer), OR
 - Detection of *C. burnetii* DNA in a clinical specimen via amplification of a specific target by PCR assay, OR
 - Demonstration of *C. burnetii* antigen in a clinical specimen by IHC, OR
 - Isolation of *C. burnetii* from a clinical specimen by culture.

- Laboratory supportive:
 - Has an antibody titer to *C. burnetii* phase I IgG antigen $\geq 1:128$ and $< 1:800$ by IFA.

Note: Samples from suspected chronic patients should be evaluated for IgG titers to both phase I and phase II antigens. Current commercially available ELISA tests (which test only for phase 2) are not quantitative, cannot be used to evaluate changes in antibody titer, and hence are not useful for serological confirmation. IgM tests are not strongly supported for use in serodiagnosis of acute disease, as the response may not be specific for the agent (resulting in false positives) and the IgM response may be persistent. Complement fixation (CF) tests and other older test methods are neither readily available nor commonly used.

Serologic test results must be interpreted with caution, because baseline antibodies acquired as a result of historical exposure to Q fever may exist, especially in rural and farming areas.

Case Classification

Confirmed chronic Q fever: A clinically compatible case of chronic illness (meets clinical evidence criteria for chronic Q fever) that is laboratory confirmed for chronic infection.

Probable chronic Q fever: A clinically compatible case of chronic illness (meets clinical evidence criteria for chronic Q fever) that has laboratory supportive results for past or present chronic infection (antibody to Phase I antigen).

RABIES, ANIMAL

REPORT IMMEDIATELY

For more information on control measures, see [Arizona Administrative Code R9-6-501 thru R9-6-506](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Laboratory Criteria for Diagnosis

- A positive direct fluorescent antibody test (preferably performed on central nervous system tissue)
- Isolation of rabies virus (in cell culture or in a laboratory animal)

Case Classification

Confirmed: A case that is laboratory confirmed

RABIES, HUMAN (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-361](#). See also [Arizona Administrative Code R9-6-601 thru R9-6-601](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days of the first symptom.

Laboratory Criteria for Diagnosis

- Detection by direct fluorescent antibody of viral antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck), OR
- Isolation (in cell culture or in a laboratory animal) of rabies virus from saliva, CSF (cerebrospinal fluid) or central nervous system tissue, OR
- Identification of a rabies-neutralizing antibody titer ≥ 5 (complete neutralization) in the serum or CSF of an unvaccinated person.

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed.

Comment

- Laboratory confirmation by all of the above methods is strongly recommended.
- All confirmatory testing must be performed by the Centers for Disease Control and Prevention. Contact the Arizona Department of Health Services (602) 364-4562 to consult on suspected rabies cases.
- Serology performed by a commercial laboratory is not recognized for diagnosis of rabies.

RELAPSING FEVER (borreliosis)**SUBMIT A REPORT WITHIN 5 WORKING DAYS**

For more information on control measures, see [Arizona Administrative Code R9-6-362](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute febrile disease with headache, fever, shaking chills, and myalgia. Symptoms may relapse after a febrile periods of 2-4 days.

Laboratory Criteria for Diagnosis

- Demonstration of visible spirochetes in a peripheral blood smear, OR
- Demonstration of spirochetemia in inoculated swiss mice, OR
- Serological evidence of non-treponemal spirochetes in persons not visiting endemic Lyme disease area.

Case Classification

Confirmed: A case that is laboratory confirmed with a consistent history of exposure or epidemiologically linked to confirmed case.

Probable: A compatible history of exposure to soft ticks in rustic cabins, caves, or firewood, and at least three of the major symptoms.

RESPIRATORY SYNCYTIAL VIRUS (RSV)

REPORTABLE BY LABORATORIES ONLY

Laboratory Criteria for Diagnosis

- RSV isolation in tissue cell culture from nasopharyngeal secretions;
- Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens;
- Immunofluorescent antibody staining (direct or indirect) of respiratory specimens;
- Rapid RSV diagnostic testing of respiratory specimens;
- Four-fold rise in antibody titer in paired acute and convalescent sera.

Case Classification

Confirmed: A case that meets the laboratory criteria for diagnosis.

REYE SYNDROME

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-363](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness that meets all of the following criteria:

- Acute, noninflammatory encephalopathy that is documented clinically by:
 - An alteration in consciousness and, if available
 - A record of the CSF containing ≥ 8 leukocytes/mm³ or a histologic specimen demonstrating cerebral edema without perivascular or meningeal inflammation.
- Hepatopathy documented by either:
 - A liver biopsy or an autopsy considered to be diagnostic of Reye syndrome or
 - A threefold or greater increase in the levels of the serum glutamic- oxaloacetic transaminase (SGOT), serum glutamic-pyruvic transaminase (SGPT), or serum ammonia.
- No more reasonable explanation for the cerebral and hepatic abnormalities.

Laboratory Criteria for Diagnosis

None

Case Classification

Confirmed: A case that meets the clinical case definition

ROCKY MOUNTAIN SPOTTED FEVER & OTHER SPOTTED FEVER RICKETTSIOSES

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-364](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Epidemiology

Spotted fever rickettsioses are a group of tick-borne infections caused by some members of the genus *Rickettsia*. Rocky Mountain spotted fever (RMSF) is an illness caused by *Rickettsia rickettsii*, a bacterial pathogen transmitted to humans through contact with ticks. *Dermacentor* species of ticks are most commonly associated with infection, including *Dermacentor variabilis* (the American dog tick), *Dermacentor andersoni* (the Rocky Mountain wood tick), and more recently *Rhiphicephalus sanguineus* (the brown dog tick). Disease onset averages one week following a tick bite. Age-specific illness is highest for children and older adults. In addition to RMSF, human illness associated with other spotted fever group *Rickettsia* species, including infection with *Rickettsia parkeri* (associated with *Amblyomma maculatum* ticks), has also been reported. In these patients, clinical presentation appears similar to, but may be milder than, RMSF; the presence of an eschar at the site of tick attachment has been reported for some other spotted fever rickettsioses.

Clinical Description

Illness is characterized by acute onset of fever, and may be accompanied by headache, malaise, myalgia, nausea/vomiting, or neurologic signs; a macular or maculopapular rash appears 4-7 days following onset in many (~80%) patients, often present on the palms and soles. RMSF may be fatal in as many as 20% of untreated cases, and severe, fulminant disease can occur.

Note: The characteristic rash may appear late or not at all. Also, some RMSF cases present with acute respiratory distress syndrome (ARDS) and thrombocytopenia.

Clinical evidence

Any reported fever and one or more of the following: rash, eschar, headache, myalgia, anemia, thrombocytopenia, or any hepatic transaminase elevation.

Laboratory criteria for diagnosis

The organism in the acute phase of illness is best detected by polymerase chain reaction (PCR) and immunohistochemical methods (IHC) in skin biopsy specimens, and occasionally by PCR in appropriate whole blood specimens taken during the first week of illness, prior to antibiotic treatment. Serology can also be employed for detection, however an antibody response may not be detectable in initial samples, and paired acute and convalescent samples are essential for confirmation.

For the purposes of surveillance,

- Laboratory confirmed:
 - Serological evidence of a fourfold change in immunoglobulin G (IgG)-specific antibody titer reactive with *Rickettsia rickettsii* or other spotted fever group antigen by indirect immunofluorescence assay (IFA) between paired serum specimens (one taken in the first week of illness and a second 2-4 weeks later), OR
 - Detection of *R. rickettsii* or other spotted fever group DNA in a clinical specimen via amplification of a specific target by PCR assay, OR

- Demonstration of spotted fever group antigen in a biopsy or autopsy specimen by IHC, OR
- Isolation of *R. rickettsii* or other spotted fever group rickettsia from a clinical specimen in cell culture.
- Laboratory supportive:
 - Has serologic evidence of elevated IgG or IgM antibody reactive with *R. rickettsii* or other spotted fever group antigen by IFA, enzyme-linked immunosorbent assay (ELISA), dot-ELISA, or latex agglutination.

Note: Current commercially available ELISA tests are not quantitative, cannot be used to evaluate changes in antibody titer, and hence are not useful for serological confirmation. IgM tests are not strongly supported for use in serodiagnosis of acute disease, as the response may not be specific for the agent (resulting in false positives) and the IgM response may be persistent. Complement fixation (CF) tests and other older test methods are neither readily available nor commonly used. CDC uses in-house IFA IgG testing (cutoff of $\geq 1:64$), preferring simultaneous testing of paired specimens, and does not use IgM results for routine diagnostic testing.

Exposure

Exposure is defined as having been in potential tick habitats within the past 14 days before onset of symptoms. Occupation should be recorded if relevant to exposure. A history of a tick bite is not required.

Case Classification

Confirmed: A clinically compatible case (meets clinical evidence criteria) that is laboratory confirmed.

Probable: A clinically compatible case (meets clinical evidence criteria) that has supportive laboratory results.

Suspected: A case with laboratory evidence of past or present infection but no clinical information available (e.g. a laboratory report).

RUBELLA (German measles)

SUBMIT A REPORT WITHIN 1 WORKING DAY

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-365](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness with all of the following characteristics

- Acute onset of generalized maculopapular rash
- Temperature greater than 99.0 F (greater than 37.2 C), if measured
- Arthralgia/arthritis, or lymphadenopathy, or conjunctivitis

Laboratory Criteria for Diagnosis

- Isolation of rubella virus, OR
- Significant rise between acute- and convalescent-phase titers in serum rubella immunoglobulin G antibody level by any standard serologic assay, OR
- Positive serologic test for rubella immunoglobulin M (IgM) antibody

Case Classification

Confirmed: A case that is laboratory confirmed or that meets the clinical case definition and is epidemiologically linked to a laboratory-confirmed case.

Probable: A case that meets the clinical case definition, has no or noncontributory serologic or virologic testing, and is not epidemiologically linked to a laboratory-confirmed case.

Suspect: Any generalized rash illness of acute onset.

Classification of Import Status

- Internationally imported case: An internationally imported case is defined as a case in which rubella results from exposure to rubella virus outside the United States as evidenced by at least some of the exposure period (12–23 days before rash onset) occurring outside the United States and the onset of rash within 23 days of entering the United States and no known exposure to rubella in the U.S. during that time. All other cases are considered U.S.-acquired cases.
- U.S.-acquired case: A U.S.-acquired case is defined as a case in which the patient had not been outside the United States during the 23 days before rash onset or was known to have been exposed to rubella within the United States. U.S.-acquired cases are subclassified into four mutually exclusive groups:
- Import-linked case: Any case in a chain of transmission that is epidemiologically linked to an internationally imported case.
- Imported-virus case: A case for which an epidemiologic link to an internationally imported case was not identified but for which viral genetic evidence indicates an imported rubella genotype, i.e., a genotype that is not occurring within the United States in a pattern indicative of endemic transmission. An endemic genotype is the genotype of any rubella virus that occurs in an endemic chain of transmission (i.e., lasting ≥ 12 months). Any genotype that is found repeatedly in U.S.-acquired cases should be thoroughly investigated as a potential endemic genotype, especially if the cases are closely related in time or location.

- Endemic case: A case for which epidemiological or virological evidence indicates an endemic chain of transmission. Endemic transmission is defined as a chain of rubella virus transmission continuous for ≥ 12 months within the United States.
- Unknown source case: A case for which an epidemiological or virological link to importation or to endemic transmission within the U.S. cannot be established after a thorough investigation. These cases must be carefully assessed epidemiologically to assure that they do not represent a sustained U.S.-acquired chain of transmission or an endemic chain of transmission within the U.S.

Note: Internationally imported, import-linked, and imported-virus cases are considered collectively to be import-associated cases.

Comments

Serum rubella IgM test results that are false positives have been reported in persons with other viral infections (e.g., acute infection with Epstein-Barr virus [infectious mononucleosis], recent cytomegalovirus infection, and parvovirus infection) or in the presence of rheumatoid factor. Patients who have laboratory evidence of recent measles infection are excluded.

RUBELLA syndrome, congenital (β)

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-366](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Presence of any defect(s) or laboratory data consistent with congenital rubella infection. Infants with congenital rubella syndrome usually present with more than one sign or symptom consistent with congenital rubella infection. However, infants may present with a single defect. Hearing impairment is most common single defect.

Laboratory Criteria for Diagnosis

- Isolation of rubella virus, OR
- Demonstration of rubella-specific immunoglobulin M (IgM) antibody, OR
- Infant rubella antibody level that persists at a higher level and for a longer period than expected from passive transfer of maternal antibody (i.e., rubella titer that does not drop at the expected rate of a twofold dilution per month).
- PCR positive rubella virus

Clinical case definition

An illness, usually manifesting in infancy, resulting from rubella infection *in utero* and characterized by signs or symptoms from the following categories:

- Cataracts/congenital glaucoma, congenital heart disease (most commonly patent ductus arteriosus or peripheral pulmonary artery stenosis), hearing impairment, pigmentary retinopathy.
- Purpura, hepatosplenomegaly, jaundice, microcephaly, developmental delay, meningoencephalitis, radiolucent bone disease.

Case Classification

Confirmed: A clinically consistent case that is laboratory confirmed.

Probable: A case that is not laboratory confirmed and that has any two complications listed in paragraph "a" of the clinical case definition or one complication from paragraph "a" and one from paragraph "b", and lacks evidence of any other etiology.

Suspected: A case with some compatible clinical findings but not meeting the criteria for a probable case

Infection only: A case that demonstrates laboratory evidence of infection, but without any clinical symptoms or signs.

Comment

In probable cases, either or both of the eye-related findings (cataracts and congenital glaucoma) count as a single complication. In cases classified as infection only, if any compatible signs or symptoms (e.g., hearing loss) are identified later, the case is reclassified as confirmed.

Classification of Import Status

Congenital Rubella Syndrome cases will be classified epidemiologically as internationally imported or U.S.-acquired, according to the source of infection in the mother, using the definitions below, which parallel the classifications for rubella cases.

- Internationally imported case: To be classified as an internationally imported CRS case, the mother must have acquired rubella infection outside the U.S. or in the absence of documented rubella infection, the

- mother was outside the United States during the period when she may have had exposure to rubella that affected her pregnancy (from 21 days before conception and through the first 24 weeks of pregnancy).
- U.S.-acquired case: A US-acquired case is one in which the mother acquired rubella from an exposure in the United States. U.S.-acquired cases are subclassified into four mutually exclusive groups:
 - Import-linked case: Any case in a chain of transmission that is epidemiologically linked to an internationally imported case.
 - Imported-virus case: A case for which an epidemiologic link to an internationally imported case was not identified but for which viral genetic evidence indicates an imported rubella genotype, i.e., a genotype that is not occurring within the United States in a pattern indicative of endemic transmission. An endemic genotype is the genotype of any rubella virus that occurs in an endemic chain of transmission (i.e., lasting ≥ 12 months). Any genotype that is found repeatedly in U.S.-acquired cases should be thoroughly investigated as a potential endemic genotype, especially if the cases are closely related in time or location.
 - Endemic case: A case for which epidemiological or virological evidence indicates an endemic chain of transmission. Endemic transmission is defined as a chain of rubella virus transmission continuous for ≥ 12 months within the United States.
 - Unknown source case: A case for which an epidemiological or virological link to importation or to endemic transmission within the U.S. cannot be established after a thorough investigation. These cases must be carefully assessed epidemiologically to assure that they do not represent a sustained U.S.-acquired chain of transmission or an endemic chain of transmission within the U.S.

Note: Internationally imported, import-linked, and imported-virus cases are considered collectively to be import-associated cases.

SALMONELLOSIS

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-367](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infections may occur and the organism may cause extraintestinal infections.

Laboratory Criteria for Diagnosis

Isolation of *Salmonella* from a clinical specimen

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable: A clinically compatible illness that is epidemiologically linked to a confirmed case.

SCABIES

REPORT OUTBREAKS ONLY

For more information on control measures, see [Arizona Administrative Code R9-6-368](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A parasitic disease of the skin caused by a mite whose penetration is visible as papules, vesicles, or tiny linear burrows containing the mites and their eggs. Lesions are prominent around finger webs, anterior surfaces of wrists and elbows, anterior axillary folds, belt line, thighs, and external genitalia in men, nipples, buttocks, and abdomen in women.

Laboratory Criteria for Diagnosis

Recovery of *Sarcoptes scabiei* mite or parts of the mite or eggs by scraping.

Case Classification

Confirmed: A laboratory confirmed case

Probable: An infested individual with rash occurring as above.

Comment

Report outbreaks only

SEVERE ACUTE RESPIRATORY SYNDROME (SARS) (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-369](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

- Early illness
 - Presence of two or more of the following features: fever (might be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, or rhinorrhea
- Mild-to-moderate respiratory illness
 - Temperature of >100.4° F (>38° C) and
 - One or more clinical findings of lower respiratory illness (e.g., cough, shortness of breath, or difficulty breathing)
- Severe respiratory illness
 - Meets clinical criteria of mild-to-moderate respiratory illness and
 - One or more of the following findings:
 - Radiographic evidence of pneumonia, OR
 - Acute respiratory distress syndrome, OR
 - Autopsy findings consistent with pneumonia or acute respiratory distress syndrome without an identifiable cause

Epidemiologic Criteria

Possible exposure to SARS-associated coronavirus (SARS-CoV)

One or more of the following exposures in the 10 days before onset of symptoms:

- Travel to a foreign or domestic location with documented or suspected recent transmission of SARS-CoV, OR
- Close contact with a person with mild-to-moderate or severe respiratory illness and history of travel in the 10 days before onset of symptoms to a foreign or domestic location with documented or suspected recent transmission of SARS-CoV

Likely exposure to SARS-CoV

One or more of the following exposures in the 10 days before onset of symptoms:

- Close contact with a person with confirmed SARS-CoV disease, OR
- Close contact with a person with mild-to-moderate or severe respiratory illness for whom a chain of transmission can be linked to a confirmed case of SARS-CoV disease in the 10 days before onset of symptoms

Laboratory Criteria for Diagnosis

Tests to detect SARS-CoV are being refined and their performance characteristics assessed; therefore, criteria for laboratory diagnosis of SARS-CoV are changing. The following are general criteria for laboratory confirmation of SARS-CoV:

- Detection of serum antibody to SARS-CoV by a test validated by CDC (e.g., enzyme immunoassay), OR
- Isolation in cell culture of SARS-CoV from a clinical specimen, OR
- Detection of SARS-CoV RNA by a reverse transcription polymerase chain reaction test validated by

CDC and with subsequent confirmation in a reference laboratory (e.g., CDC).

- Information about the current criteria for laboratory diagnosis of SARS-CoV is available at <http://www.cdc.gov/ncidod/sars/labdiagnosis.htm>.

Exclusion Criteria

A case may be excluded as a SARS report under investigation (SARS RUI), including as a CDC-defined probable SARSCoV case, if any of the following apply:

- An alternative diagnosis can explain the illness fully, OR
- Antibody to SARS-CoV is undetectable in a serum specimen obtained >28 days after onset of illness, OR
- The case was reported on the basis of contact with a person who was excluded subsequently as a case of SARS-CoV disease; then the reported case also is excluded, provided other epidemiologic or laboratory criteria are not present.

Case Classification

SARS RUI

Reports in persons from areas where SARS is not known to be active

SARS RUI-1: Cases compatible with SARS in groups likely to be first affected by SARS-CoV if SARS-CoV is introduced from a person without clear epidemiologic links to known cases of SARS-CoV disease or places with known ongoing transmission of SARS-CoV

Reports in persons from areas where SARS activity is occurring

SARS RUI-2: Cases meeting the clinical criteria for mild-to-moderate illness and the epidemiologic criteria for possible exposure (spring 2003 CDC definition for suspect cases)

SARS RUI-3: Cases meeting the clinical criteria for severe illness and the epidemiologic criteria for possible exposure (spring 2003 CDC definition for probable cases)

SARS RUI-4: Cases meeting the clinical criteria for early or mild-to-moderate illness and the epidemiologic criteria for likely exposure to SARS-CoV

SARS-CoV disease

Confirmed case of SARS-CoV disease: clinically compatible illness (i.e., early, mild-to-moderate, or severe) that is laboratory confirmed

Probable case of SARS-CoV disease: meets the clinical criteria for severe respiratory illness and the epidemiologic criteria for likely exposure to SARS-CoV

Comments

See the [MMWR report from December 12, 2003](#) / 52(49); 1202-1206 for more information.

SHIGELLOSIS

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-370](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections occur.

Laboratory Criteria for Diagnosis

Isolation of *Shigella* species from a clinical specimen

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable: A clinically compatible illness that is epidemiologically linked to a confirmed case.

SMALLPOX (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-371](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness with acute onset of fever $\geq 101^{\circ}\text{F}$ ($\geq 38.3^{\circ}\text{C}$) followed by a rash characterized by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause. Clinically consistent cases are those presentations of smallpox that do not meet this classical clinical case definition: a) hemorrhagic type, b) flat type, and c) *variola sine eruptione*. (Detailed clinical description is available on the CDC web site, see URL: <http://www.bt.cdc.gov/agent/smallpox/index.asp>)

Laboratory Criteria for Diagnosis

- Polymerase chain reaction (PCR) identification of variola DNA in a clinical specimen, OR
- Isolation of smallpox (variola) virus from a clinical specimen (Level D laboratory only; confirmed by variola PCR)

Note: Indications for laboratory testing of patients with suspected smallpox should be followed as described in detail in Guide A of the CDC Smallpox Response Plan. Laboratory diagnostic testing for variola virus should be conducted in Level C or D laboratories only.

Generic orthopox PCR and negative strain electron microscopy (EM) identification of a pox virus in a clinical specimen are suggestive of an orthopox virus infection but not diagnostic for smallpox.

Case Classification*

Confirmed: Case of smallpox that is laboratory confirmed, or a case that meets the clinical case definition that is epidemiologically linked to a laboratory confirmed case.

Probable: A case that meets the clinical case definition, or a clinically consistent case that does not meet the clinical case definition and has an epidemiological link to a confirmed case of smallpox.

Suspected: A case with a generalized, acute vesicular or pustular rash illness with fever preceding development of rash by 1-4 days.

**Exclusion Criteria:* A case may be excluded as a suspect or probable smallpox case if an alternative diagnosis fully explains the illness or appropriate clinical specimens are negative for laboratory criteria for smallpox.

Comment

The smallpox case definition is to be used only during post-event surveillance. The case definition described in Guide A of the Smallpox Response Plan and Guidelines (Version 3) on the CDC bioterrorism preparedness website (URL: <http://www.bt.cdc.gov/agent/smallpox/response-plan/index.asp>) includes different criteria for a suspected case than the smallpox case definition the Council of State and Territorial Epidemiologists approved for use in the National Notifiable Diseases Surveillance System (NNDSS). The smallpox case definition on the CDC bioterrorism web site is more sensitive and less specific than the case definition for the NNDSS, in that a "suspect" case is defined as: "a case with febrile rash illness with fever preceding the development of rash by 1-4 days."

STREPTOCOCCAL GROUP A: INVASIVE DISEASE (β)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-372](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Invasive group A streptococcal infections may present with any of several clinical syndromes including pneumonia, bacteremia in association with cutaneous infection (cellulitis, erysipelas, or infection of a surgical or nonsurgical wound), deep soft tissue infection (myositis or necrotizing fasciitis), meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis (puerperal fever), neonatal sepsis, and non-focal bacteremia.

Streptococcal Toxic Shock Syndrome (STSS)

The streptococcal toxic shock syndrome is a severe illness associated with invasive or noninvasive group A streptococcal (*Streptococcus pyogenes*) infection. STSS may occur with infection at any site, but most often occurs in association with infection of a cutaneous lesion. Signs of toxicity and a rapidly progressive clinical course are characteristic, and the case fatality rate may exceed 50 percent.

An illness with the following clinical manifestations occurring within the first 48 hours of hospitalization or, for a nosocomial case, within the first 48 hours of illness.

- Hypotension defined by a systolic blood pressure ≤ 90 mm Hg for adults or less than the fifth percentile by age for children <16 years of age.
- Multiorgan involvement - two or more of the following:
 - o Renal impairment: Creatinine ≥ 2.0 mg/dL (≥ 177 μ mol/L) for adults or greater than or equal to twice the upper limit of normal for age. In patients with pre-existing renal disease, a ≥ 2 -fold elevation over the baseline level.
 - o Coagulopathy: Platelets $\leq 100,000/\text{mm}^3$ ($\leq 100 \times 10^9/\text{L}$) or disseminated intravascular coagulation defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products.
 - o Liver involvement: Alanine aminotransferase (SGOT) aspartate aminotransferase (SGPT), or total bilirubin levels greater than or equal to twice the upper limit of normal for age. In patients with pre-existing liver disease, a ≥ 2 -fold increase over the baseline level.
 - o Adult respiratory distress syndrome (ARDS) defined by acute onset of diffuse pulmonary infiltrates and hypoxemia in the absence of cardiac failure; or evidence of diffuse capillary leak manifested by acute onset of generalized edema, or pleural or peritoneal effusions with hypoalbuminemia.
 - o A generalized erythematous macular rash that may desquamate.
 - o Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene.

Laboratory Criteria for Diagnosis

Isolation of group A *Streptococcus* (*Streptococcus pyogenes*) by culture from a normally sterile site.

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

**STREPTOCOCCAL GROUP B:
INVASIVE DISEASE**

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-373](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Group B Streptococcus can produce a variety of syndromes in neonates. Clinical manifestations include pneumonia, bloodstream infection, and meningitis.

Laboratory Criteria for Diagnosis

Isolation of Group B Streptococcus (*Streptococcus agalactiae*) from a normally sterile site

Case Classification

Confirmed: A clinically compatible case of invasive Group B Streptococcus that is laboratory-confirmed in a sterile site in children < 90 days of age

STREPTOCOCCUS PNEUMONIAE: INVASIVE DISEASE

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-374](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Streptococcus pneumoniae causes many clinical syndromes, depending on the site of infection (e.g., acute otitis media, pneumonia, bacteremia, or meningitis). Starting in 2000, a conjugate pneumococcal vaccine is recommended for prevention of pneumococcal disease in the pediatric population.

Laboratory Criteria for Diagnosis

Isolation of *S. pneumoniae* from a normally sterile site (e.g., blood, cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)

Case Classification

Confirmed: A clinically compatible case caused by laboratory-confirmed culture of *S. pneumoniae* from a normally sterile site

Comment

The licensure of a new 13-valent pneumococcal conjugate vaccine (PCV13) is expected in late 2009 or early 2010. Surveillance should be enhanced to provide baseline and ongoing data for the assessment of disease burden and immunization program effects.

In January 2008, the Clinical and Laboratory Standards Institute published new Minimum Inhibitory Concentration (MIC) breakpoints for defining susceptibility of *S. pneumoniae* isolates to penicillin (1). The new breakpoints are estimated to decrease the number of isolates classified as antibiotic-resistant by approximately 5% (2). The changes in breakpoints will likely result in a surveillance artifact in drug resistant *S. pneumoniae* reporting and further complicate interpretation of the reported data.

References

1. Clinical and Laboratory Standards Institute. Performance Standards for Antimicrobial Susceptibility Testing; Eighteenth Informational Supplement. CLSI document M100-S18 (ISBN 1-56238-653-0). Clinical and Laboratory Standards Institute, 940 West Valley Road, Suite 1400, Wayne, Pennsylvania. 19087-1898 USA, 2008.
2. Centers for Disease Control and Prevention. Effect of New Penicillin Susceptibility Breakpoints for *Streptococcus pneumoniae*—United States, 2006-2007. MMWR 2008;57:1353-5.

**SYPHILIS- Primary, Secondary, Latent,
Early Latent, Late Latent, Unknown
Latent, & Neurosyphilis**

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Case Definition

Syphilis is a complex, sexually transmitted disease with a highly variable clinical course. Classification by a clinician with expertise in syphilis may take precedence over the following case definitions developed for surveillance purposes.

PRIMARY SYPHILIS

Clinical Description

- The characteristic lesion of primary syphilis is the chancre, but atypical primary lesions may occur.

Laboratory Criteria for Diagnosis

- Demonstration of *Treponema pallidum* in clinical specimens by darkfield, fluorescent antibody, or equivalent microscopic methods

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

Probable: A clinically compatible case with one or more ulcers (chancres) consistent with primary syphilis and a reactive serologic test.

SECONDARY SYPHILIS

Clinical Description

- A stage of infection due to *T. pallidum*, characterized by localized or diffuse mucocutaneous lesions and generalized lymphadenopathy. Constitutional symptoms are common and clinical manifestations are protean. The primary chancre may still be present.

Laboratory Criteria for Diagnosis

- Demonstration of *T. pallidum* in clinical specimens by darkfield, fluorescent antibody, or equivalent microscopic methods

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.

Probable: A clinically compatible case with a reactive nontreponemal (VDRL, RPR) test titer ≥ 4 .

LATENT SYPHILIS

Clinical Description

A stage of infection due to *T. pallidum* in which organisms persist in the body of the infected person without causing signs or symptoms. Latent syphilis is subdivided into early, late, and unknown, syphilis categories based upon the length of elapsed time from initial infection.

Case Classification

Presumptive. No clinical signs or symptoms of syphilis and the presence of one of the following:

- A non reactive serologic test for syphilis or a nontreponemal titer that has dropped fourfold within the past 12 months
- A history of symptoms consistent with primary or secondary syphilis without history of subsequent treatment in the past 12 months
- A history of sexual exposure to a partner with confirmed or presumptive primary or secondary syphilis, or presumptive early latent syphilis, and no history of treatment in the past 12 months
- Reactive nontreponemal and treponemal tests from a person whose only possible exposure occurred within the preceding 12 months.

LATE LATENT SYPHILIS

Clinical Description

A subcategory of latent syphilis. When initial infection has occurred >1 year previously, latent syphilis is classified as late.

Case Classification

Presumptive: Latent syphilis of a patient who shows no evidence of having acquired the disease within the past 12 months and whose age and titer do not meet the criteria specified for **Unknown Latent Syphilis**.

UNKNOWN LATENT SYPHILIS

Clinical Description

A subcategory of latent syphilis. When the date of initial infection cannot be established as occurring within the previous year, and the patient's age and titer meet the criteria described below, latent syphilis is classified as unknown latent.

Case Classification

Presumptive: Latent syphilis that does not meet the criteria for early latent syphilis, where the patient is 13-35 years of age with a nontreponemal test serologic titer ≥ 32 .

NEUROSYPHILIS

Clinical Description

Evidence of CNS infection with *T. pallidum*.

Laboratory Criteria for Diagnosis

- A reactive serologic test for syphilis and reactive VDRL in CSF (cerebrospinal fluid)

Case Classification

Presumptive: Syphilis of any stage, a negative VDRL in CSF, and both of the following:

- Elevated CSF protein or leukocyte count in the absence of other known causes of these abnormalities
- Clinical symptoms or signs consistent with neurosyphilis without other known

causes for these clinical abnormalities

Confirmed: Syphilis of any stage that meets the laboratory criteria for neurosyphilis

Clinical Description

A condition caused by infection *in utero* with *Treponema pallidum*. A wide spectrum of severity exists and only severe cases are clinically apparent at birth. An infant (<2 years) may have signs such as hepatosplenomegaly, characteristic skin rash, condyloma lata, snuffles, jaundice (non-viral hepatitis), pseudoparalysis, anemia, or edema (nephrotic syndrome or malnutrition). An older child may have stigmata such as interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints.

Laboratory Criteria for Diagnosis

Demonstration of *T. pallidum* by darkfield microscopy, fluorescent antibody, or other specific stains in specimens from lesions, placenta, umbilical cord, or autopsy material.

Case Classification

Confirmed: A case (among infants) that is laboratory confirmed.

Presumptive: The infection of an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant; or the infection of an infant or child who has a reactive treponemal test for syphilis and any one of the following:

- Any evidence of congenital syphilis on physical examination
- Any evidence of congenital syphilis on long bone x-ray
- A reactive CSF (cerebrospinal fluid) VDRL
- An elevated CSF cell count or protein (without other cause)
- A reactive test for fluorescent treponemal antibody absorbed-19S-IgM antibody

Comment

Congenital and acquired syphilis may be difficult to distinguish when a child is seropositive after infancy. Signs of congenital syphilis may not be obvious and stigmata may not yet have developed.

Abnormal values for CSF VDRL, cell count, and protein, as well as IgM antibodies, may be found in either congenital or acquired syphilis. Findings on long bone x-rays may help since x-ray changes in the metaphysis and epiphysis are considered classic for congenitally acquired disease. The decision may ultimately be based on maternal history and clinical judgment. The possibility of sexual abuse should be considered.

For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.

*Any non-penicillin therapy or penicillin given <30 days before delivery.

SUBMIT A REPORT WITHIN 24 HOURS IF

TAENIASIS

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-376](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A parasitic disease characterized by an intestinal infection with the adult stage of large tapeworms. Clinical manifestations are variable and may include nervousness, insomnia, anorexia, weight loss abdominal pain and digestive disturbances. Many cases are asymptomatic.

Laboratory Criteria for Diagnosis

Recovery of *Taenia* scolex, proglottids or eggs from the stool.

Case Classification

Confirmed: A case that is laboratory confirmed.

TETANUS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-377](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Acute onset of hypertonia and/or painful muscular contractions (usually of the muscles of the jaw and neck) and generalized muscle spasms without other apparent medical cause (as reported by a health professional)

Laboratory Criteria for Diagnosis

None

Case Classification

Probable:

In the absence of a more likely diagnosis, an acute illness with:

- Muscle spasms or hypertonia, AND
- Diagnosis of tetanus by a health care provider;

OR: Death, with tetanus listed on the death certificate as the cause of death or a significant condition contributing to death

Comment

There is no definition for “confirmed” tetanus.

For more information on control measures, see [Arizona Administrative Code R9-6-378](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

For Toxic Shock Syndrome (not Streptococcal):

An illness with the following clinical manifestations:

- Fever: Temperature $\geq 38.9^{\circ}\text{C}$ (102°F)
- Rash: diffuse macular erythroderma
- Desquamation: 1-2 weeks after onset of illness, particularly palms and soles
- Hypotension: systolic blood pressure ≤ 90 mm Hg for adults or < 5 th percentile by age for children < 16 years of age; orthostatic drop in diastolic blood pressure ≥ 15 mm Hg from lying to sitting, orthostatic syncope, or orthostatic dizziness
- Multisystem involvement - three or more of the following:
 - Gastrointestinal (vomiting or diarrhea at onset of illness)
 - Muscular (severe myalgia or creatine phosphokinase level at least twice the upper limit of normal for laboratory):
 - Mucous membrane (vaginal, oropharyngeal, or conjunctival hyperemia);
 - Renal (blood urea nitrogen or creatinine at least twice the upper limit of normal for laboratory or urinary sediment with pyuria ≥ 5 leukocytes per high-power field] in the absence of urinary tract infection):
 - Hepatic (total bilirubin, SGOT [serum glutamic-oxaloacetic transaminase], or SGPT [serum glutamic - pyruvic transaminase] at least twice the upper limit of normal for laboratory):
 - Hematologic (platelets $< 100,000/\text{mm}^3$):
 - Central nervous system (disorientation or alterations in consciousness without focal neurologic signs when fever and hypotension are absent)

For Streptococcal Toxic Shock Syndrome:

An illness with the following clinical manifestations:

- Hypotension defined by a systolic blood pressure less than or equal to 90 mm Hg for adults or less than the fifth percentile by age for children aged less than 16 years.
- Multi-organ involvement characterized by two or more of the following:
 - Renal impairment: Creatinine greater than or equal to 2 mg/dL (greater than or equal to 177 $\mu\text{mol/L}$) for adults or greater than or equal to twice the upper limit of normal for age. In patients with preexisting renal disease, a greater than twofold elevation over the baseline level.
 - Coagulopathy: Platelets less than or equal to 100,000/ mm^3 (less than or equal to 100 x 106/L) or disseminated intravascular coagulation, defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products.
 - Liver involvement: Alanine aminotransferase, aspartate aminotransferase, or total bilirubin levels greater than or equal to twice the upper limit of normal for the patient's age. In patients with preexisting liver disease, a greater than twofold increase over the baseline level.
 - Acute respiratory distress syndrome: defined by acute onset of diffuse pulmonary infiltrates and hypoxemia in the absence of cardiac failure or by evidence of diffuse capillary leak manifested by acute onset of generalized edema, or pleural or peritoneal effusions with hypoalbuminemia.

- A generalized erythematous macular rash that may desquamate.
- Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene.

Laboratory Criteria for Diagnosis

For Toxic Shock Syndrome (not Streptococcal):

Negative results on the following tests, if obtained:

- Blood, throat, or cerebrospinal fluid cultures (blood culture may be positive for *Staphylococcus aureus*);
- Rise in titer to Rocky Mountain spotted fever, leptospirosis, or measles

For Streptococcal Toxic Shock Syndrome:

- Isolation of group A *Streptococcus*.

Case Classification

For Toxic Shock Syndrome (not Streptococcal):

Confirmed: A case which meets the lab criteria and in which all five of the clinical findings described above are present, including desquamation, unless the patient dies before desquamation occurs.

Probable: A case which meets the laboratory criteria and in which four of the five clinical findings described above are present.

For Streptococcal Toxic Shock Syndrome:

Confirmed: A case that meets the clinical case definition and with isolation of group A *Streptococcus* from a normally sterile site (e.g., blood or cerebrospinal fluid or, less commonly, joint, pleural, or pericardial fluid).

Probable: A case that meets the clinical case definition in the absence of another identified etiology for the illness and with isolation of group A *Streptococcus* from a nonsterile site.

Comments

Streptococcal toxic-shock syndrome (STSS) is a severe illness associated with invasive or noninvasive group A streptococcal (*Streptococcus pyogenes*) infection. STSS may occur with infection at any site but most often occurs in association with infection of a cutaneous lesion. Signs of toxicity and a rapidly progressive clinical course are characteristic, and the case fatality rate may exceed 50%.

TRICHINOSIS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-379](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A disease caused by ingestion of larvae *Trichinella spiralis* that has variable clinical manifestations. Common signs and symptoms among symptomatic persons include eosinophilia, fever, myalgia, and periorbital edema.

Laboratory Criteria for Diagnosis

- Demonstration of larvae of cysts of *T. spiralis* on muscle biopsy, OR
- Positive serology for *T. spiralis*

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed.

Comment

In an outbreak setting, at least one of case must be laboratory confirmed. Associated cases should be reported as confirmed if the patient shared an epidemiologically implicated meal or ate an epidemiologically implicated meat product and has either a positive serology for trichinosis or a clinically compatible illness.

TUBERCULOSIS

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-380 and R9-6-601](#) (pg 31 and 69). Complete the [Report of Verified Case of Tuberculosis Form](#), [Report of Verified Case of Tuberculosis Addendum Form](#) and the [ADHS TB Prevention Registry Form](#) located at the [Communicable Disease Investigations Form page](#). **If Interjurisdictional:** Complete [Interjurisdictional Tuberculosis Notification Form](#) and [Interjurisdictional Tuberculosis Notification Follow-up Form](#) found at the [Communicable Disease Investigations Form page](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A chronic bacterial infection due to *Mycobacterium tuberculosis*, characterized pathologically by the formation of granulomas. The most common site infection is the lung, but other organs may be involved.

Clinical Case Definition

A case must meet all the following criteria:

- Evidence of tuberculosis infection indicated by a positive tuberculin skin test; AND
- Other signs and/or symptoms compatible with tuberculosis, such as an abnormal, unstable (i.e. worsening or improving) chest radiographs, or clinical evidence of current disease;
- Treatment with two or more antituberculosis medications AND
- Completed diagnostic evaluation

Laboratory Criteria for Diagnosis

- Isolation of *M. tuberculosis* complex from a clinical specimen, OR
- Demonstration of *M. tuberculosis* from a clinical specimen by nucleic acid amplification test, OR
- Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained

Case Classification

Confirmed: A case that meets the clinical case definition or is lab confirmed.

Comment

Only one case should be counted in a person within any consecutive 12-month period. However, a case in a patient who had previously had verified disease should be reported again if more than 12 months have elapsed since the patient was discharged from treatment. A case should also be reported again if the patient was lost to supervision for >12 months and disease can be verified again. Mycobacterial diseases other than those caused by *M. tuberculosis* complex should not be counted in tuberculosis morbidity statistics unless there is concurrent tuberculosis.

TULAREMIA (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-381](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness characterized by several distinct forms, including:

- Ulceroglandular (cutaneous ulcer with regional lymphadenopathy)
- Glandular (regional lymphadenopathy with no ulcer)
- Oculoglandular (conjunctivitis with preauricular lymphadenopathy)
- Intestinal (pharyngitis, intestinal pain, vomiting, and diarrhea)
- Pneumonic (primary pleuropulmonary disease)
- Typhoidal (febrile illness without early localizing signs and symptoms)
- Clinical diagnosis is supported by evidence or history of a tick or deerfly bite, exposure to tissues of a mammalian host of *Francisella tularensis*, or exposure to potentially contaminated water.

Laboratory Criteria for Diagnosis

- Isolation of *F. tularensis* from a clinical specimen, OR
- Demonstration of *F. tularensis* in a clinical specimen by immunofluorescence, OR
- Fourfold or greater rise in agglutination titer between acute-and convalescent-phase serum specimens obtained ≥ 2 weeks apart, analyzed at the same time, and in the same laboratory

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable: A clinically compatible case with supportive serologic results (tularemia agglutination titer of ≥ 160 in one or more serum specimens obtained after onset of symptoms).

TYPHOID FEVER (*Salmonella typhi*) (β)**SUBMIT A REPORT WITHIN 24 HOURS**

For more information on control measures, see [Arizona Administrative Code R9-6-382](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An illness caused by *Salmonella typhi* that is often characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea, and nonproductive cough. However, many mild and atypical infections occur. Carriage of *S. typhi* may be prolonged.

Laboratory Criteria for Diagnosis

- Isolation of *S. typhi* from blood, stool, or other clinical specimen

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed

Probable: A clinically compatible case that is epidemiologically linked to a confirmed case in an outbreak

Comment

Isolation of the organism is required for confirmation. Serologic evidence alone is not sufficient for diagnosis. Asymptomatic carriage should not be reported as typhoid fever. Isolates of *S. typhi* are reported to the Foodborne and Diarrheal Diseases Branch, Division of Bacterial and Mycotic Diseases, National Center for Infectious Diseases, CDC, through the Public Health Laboratory Information System. (See [Salmonella](#).)

TYPHUS FEVER

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-383](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute febrile disease characterized by fever, headache, myalgia, and a maculopapular rash. The rash is distributed over the trunk, with minimal involvement of the extremities, palms, soles and face.

Laboratory Criteria for Diagnosis

- Single titer ≥ 64 by Indirect Fluorescent Antibody (IFA) test using differentially absorbed sera with the respective rickettsial antigen prior to testing, or
- Single titer ≥ 16 by Complement-Fixation (CF) test with group-specific rickettsial antigen. Antibody tests usually become positive in the second week.

Case Classification

Confirmed: A case that is laboratory confirmed with symptoms and history as above.

Probable: A compatible history of exposure to domestic rats and their fleas, plus rash and symptoms of typhus.

UNEXPLAINED DEATH WITH HISTORY OF FEVER

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-384](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Deaths meeting any of the following criteria should be reported:

- Hospital/facility-based death with no known cause, with history of fever ($>38.0^{\circ}\text{C}$) within 48 hours of death or a temperature of $< 36^{\circ}\text{C}$.
- Patient reported history of fever within 48 hours of death.
- High clinical suspicion of infectious etiology by health care provider, caretaker, or medical examiner.
- Unattended death with no obvious cause of death.

Deaths from homicide, suicide, trauma or accidents should be excluded.

Additional exclusion/inclusion criteria will be used to determine the level of investigation needed on reported cases. Laboratory testing for diagnosis and classification are case-dependent.

VACCINIA-RELATED ADVERSE EVENT

SUBMIT A REPORT WITHIN 1 WORKING DAY

For more information on control measures, see [Arizona Administrative Code R9-6-385](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Adverse events may include one or more of the following:

- Common adverse reactions
 - Local skin reaction
 - Nonspecific rashes, e.g., reticular maculopapular, generalized urticarial rash
 - Erythema migrans
- Vaccinia-specific reactions
 - Inadvertent inoculation
 - Ocular vaccinia infection (keratitis)
 - Generalized vaccinia: disseminated, non-centrifugal maculopapular or vesicular rash
 - Progressive vaccinia/vaccinia necrosum: an initial lesion which continues to progress without healing for more than 15 days after the vaccination; painless progressive necrosis at the site with or without metastases to other distant sites
 - Eczema vaccinia: localized or generalized popular, vesicular or pustular rash anywhere on the body, especially at sites of previous atopic dermatitis lesions
 - Encephalopathy or encephalomyelitis: most common in infants; symptoms include fever, headache, change in mental status, lethargy, seizures, coma, and is diagnosed by exclusion of other causes

Other adverse effects

- Cardiac, e.g., myocarditis, pericarditis
- Osteomyelitis
- Transverse myelitis, seizures, paralysis and neuritis
- Fetal vaccinia: transmission from mother to fetus resulting in skin diseases and other organ involvement leading to fetal or neonatal death
- Wound complications

Exposure Criteria

- Vaccination with smallpox vaccine within the three months preceding symptom onset, or
- Contact exposure to someone vaccinated with smallpox vaccine within the three months preceding symptom onset

Case Classification

Confirmed: A person who has at least one of the clinical features and meets at least one of the exposure criteria

**VANCOMYCIN-INTERMEDIATE
STAPHYLOCOCCUS AUREUS (VISA),
or VANCOMYCIN-RESISTANT
STAPHYLOCOCCUS AUREUS
(VRSA)**

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-386](#).

To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Staphylococcus aureus can produce a variety of syndromes with clinical manifestations including skin and soft tissue infections, empyema, bloodstream infection, pneumonia, osteomyelitis, septic arthritis, endocarditis, sepsis, and meningitis. *S. aureus* may also colonize individuals who remain asymptomatic. The most frequent site of *S. aureus* colonization is the nares.

Laboratory Criteria for Diagnosis

- Isolation of *Staphylococcus aureus* from any body site AND
- Intermediate or resistance of the *S. aureus* isolate to vancomycin, detected and defined according to Clinical and Laboratory Standards Institute (CLSI, formerly NCCLS) approved standards and recommendations (Minimum Inhibitory Concentration [MIC]=4-8 µg/ml for VISA and MIC≥16 µg/ml for VRSA).

Case Classification

Confirmed: A case of vancomycin-intermediate or vancomycin-resistant *S. aureus* that is laboratory-confirmed (MIC=4-8 µg/ml for VISA and MIC≥16 µg/ml for VRSA).

Comment

Data to be collected: A standardized data collection form should be used for all reported vancomycin-intermediate or vancomycin-resistant *Staphylococcus aureus* through the National Notifiable Diseases Surveillance System.

References

Clinical and Laboratory Standards Institute/NCCLS. Performance Standards for Antimicrobial Susceptibility Testing. Sixteenth informational supplement. M100-S16. Wayne, PA: CLSI, 2006

VANCOMYCIN-RESISTANT STAPHYLOCOCCUS EPIDERMIDIS

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-387](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

Vancomycin-resistant *Staphylococcus epidermidis* (VRSE) can cause a variety of infections ranging from skin infections to deeper tissue/organ involvement such as bacteremia, endocarditis, or urinary tract infections.

Laboratory Criteria for Diagnosis

- Isolation of *Staphylococcus epidermidis* from any body site AND
- Resistance of *Staphylococcus epidermidis* isolate to vancomycin, detected and defined according to the standards and guidelines approved by the National Committee for Clinical Laboratory Standards (NCCLS) (MIC >32 mg/L (NCCLS 2006)).

Case Classification

Confirmed: A clinically-compatible case of vancomycin-resistant *Staphylococcus epidermidis* that is laboratory confirmed

VARICELLA (Chickenpox) and VARICELLA DEATHS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-388](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#). **If case expired:** Complete [Varicella Death Investigation Worksheet Form](#) located at the [Communicable Disease Investigations Form page](#).

Clinical Description

An illness with acute onset of diffuse (generalized) maculo-papulovesicular rash without other apparent cause. In vaccinated persons who develop varicella more than 42 days after vaccination (breakthrough disease), the disease is almost always mild with fewer than 50 skin lesions and shorter duration of illness. The rash may also be atypical in appearance (maculopapular with few vesicles).

Laboratory Criteria for Diagnosis

- Positive serologic test for varicella-zoster immunoglobulin M (IgM) antibody; OR
- Isolation of varicella virus from a clinical specimen; OR
- Varicella antigen by direct fluorescent antibody (DFA); OR
- Varicella-specific nucleic acid detected by polymerase chain reaction (PCR); OR
- Significant rise in serum varicella immunoglobulin G (IgG) antibody level by any standard serologic assay

Case Classification (Varicella Case)

Confirmed: An acute illness with diffuse (generalized) maculopapulovesicular rash, AND

- Epidemiologic linkage to another probable or confirmed case; OR
- Laboratory confirmation by any of methods above.

Probable: An acute illness with:

- Diffuse (generalized) maculopapulovesicular rash, AND
- Lack of laboratory confirmation, AND
- Lack of epidemiologic linkage to another probable or confirmed case.

Case Classification (Varicella Death)

Confirmed: A confirmed case of varicella that contributes directly or indirectly to acute medical complications that result in death

Probable: A probable case of varicella that contributes directly or indirectly to acute medical complications that result in death.

Comment

Two probable cases that are epidemiologically linked would be considered confirmed, even in the absence of laboratory confirmation.

Laboratory confirmation of cases of varicella is not routinely recommended; laboratory confirmation is recommended for fatal cases and in other special circumstances.

VIBRIO INFECTION

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-389](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An infection of variable severity characterized by diarrhea and vomiting, primary septicemia, or wound infections. Asymptomatic infections may occur, and the organism may cause extraintestinal infections.

Laboratory Criteria for Diagnosis

Isolation of *Vibrio spp.* other than toxigenic *Vibrio cholerae* O1 or O139 from a clinical specimen.*

Case Classification

Confirmed: A case that meets the laboratory criteria for diagnosis. Note that species identification and, if applicable, serotype designation (i.e., *Vibrio cholerae* non-O1/non-O139) should be reported.

Probable: A clinically-compatible symptomatic case that is epidemiologically linked to a confirmed case.

Comment

*Infections due to toxigenic *Vibrio cholerae* O1 or O139 are reportable as cholera.

VIRAL HEMORRHAGIC FEVER (β)

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-390](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Filoviruses (Ebola, Marburg)

Lassa Virus

New World Arenaviruses (Guanarito, Machupo, Junin, Sabia)

Crimean-Congo Hemorrhagic Fever (Nairovirus)

Clinical Description

A person with acute onset with ALL the following clinical findings:

- A fever > 40°C, AND
- One or more of the following clinical findings:
 - Severe headache
 - Muscle pain
 - Erythematous maculopapular rash on the trunk with fine desquamation 3–4 days after rash onset
 - Vomiting
 - Diarrhea
 - Pharyngitis (arenavirus only)
 - Abdominal pain
 - Bleeding not related to injury
 - Retrosternal chest pain (arenavirus only)
 - Proteinuria (arenavirus only)

Laboratory Criteria for Diagnosis

Laboratory criteria are virus-specific. Diagnostic tests should be performed in consultation with ADHS.

Laboratory criteria include one or more of the following laboratory findings:

- Detection of VHF viral antigens in blood by enzyme-linked immunosorbent assay (ELISA) antigen detection
- VHF viral isolation in cell culture for blood or tissues
- Detection of VHF viral genes using reverse transcriptase with polymerase chain reaction amplification (RT-PCR) from blood or tissues
- Detection of VHF viral antigens in tissues by immunohistochemistry

Exposure/Epidemiological Criteria

- One or more of the following exposures within the 3 weeks before onset of symptoms:
 - Contact with blood or other body fluids of a patient with VHF
 - Residence in—or travel to—a VHF endemic area
 - Work in a laboratory that handles VHF specimens
 - Work in a laboratory that handles primates from endemic areas

OR

- Exposure within the past 3 weeks to semen from a confirmed acute or convalescent case of VHF within the 10 weeks of onset of symptoms

Case Classification

Confirmed: A case that meets the clinical and laboratory criteria.

Suspect: A case that meets the clinical and epidemiological linkage (exposure) criteria.

Comment

Viral hemorrhagic fever (VHF) may be due to a variety of etiologies which may have a wide spectrum of clinical presentations. The clinical presentations vary from constitutional symptoms of fever, myalgia, headache to bleeding/hemorrhaging from vascular abnormalities to shock and death. There are four RNA viral families that cause VHF:

- Arenaviridae family (Lassa fever, Argentina HF, Bolivian HF, Venezuelan HF, Brazilian HF);
- Bunyaviridae family (Rift Valley fever, Crimean-Congo HF, Hantavirus, Korean HF);
- Filoviridae (Marburg HF, Ebola HF);
- Flaviviridae (Yellow Fever, Dengue HF, Omsk HF, Kyasanur Forest Disease).

Hemorrhagic cases of dengue, hantavirus, or yellow fever should be reported and counted as those morbidities.

WATERBORNE DISEASE OUTBREAK

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-324](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#). Complete [Waterborne Diseases Outbreak Report Form](#) located at the [Communicable Disease Investigations Form page](#). If Suspected Norovirus: Complete [Suspected Viral Gastroenteritis Outbreak Form](#) located at the [Communicable Disease Investigations Form page](#).

Definition

An incident in which two or more epidemiologically-linked persons experience a similar illness after exposure to the same water source and epidemiologic evidence implicates the water as the source of the illness.

Clinical Description

Symptoms of illness depend upon etiologic agent.

Laboratory Criteria for Diagnosis

Dependent upon etiologic agent

Case classification

Confirmed: Any outbreak of an infectious disease, chemical poisoning or toxin-mediated illness where water is indicated as the source by an epidemiological investigation

Comment

The implicated water in these waterborne disease outbreaks may be drinking water, recreational water, water not intended for drinking (e.g., water used for agricultural purposes or in a cooling tower) or water of unknown intent. The route of exposure may be ingestion, inhalation, intranasal, or contact. The agent associated with the waterborne disease outbreak may be a microbe, chemical, or toxin. Water testing to demonstrate contamination or identify the etiologic agent is preferred, but not required for inclusion. Chemicals (including disinfection byproducts) in drinking water or in recreational water that cause health effects either through water exposure or by volatilization leading to poor air quality are included. Reports of waterborne disease outbreaks received through the National Outbreak Reporting System (NORS) are captured in the Waterborne Disease and Outbreak Surveillance System (WBD OSS).

Although not reported through NORS, the WBD OSS also accepts single cases of chemical exposure, wound infection and other illnesses, (e.g., Naegleria infections) that are epidemiologically linked to water exposure as well as aquatic facility-related health events (e.g., chemical mixing accidents or air quality problems). However, these single cases or aquatic facility-related health events are not reported or analyzed as waterborne disease outbreaks.

WEST NILE VIRUS

SUBMIT A REPORT WITHIN 5 WORKING DAYS

For more information on control measures, see [Arizona Administrative Code R9-6-391](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A non-specific, self-limited, febrile illness caused by infection with West Nile virus, a mosquito-borne flavivirus. Clinical disease generally occurs 2-6 days (range, 2-15 days) following the bite of an infected mosquito. Typical cases are characterized by the acute onset of fever, headache, arthralgias, myalgias, and fatigue. Maculopapular rash and lymphadenopathy generally are observed in less than 20% of cases. Symptoms typically last a few days to many weeks.

When the CNS is affected, clinical syndromes ranging from febrile headache to aseptic meningitis to encephalitis may occur. West Nile meningitis is characterized by fever, headache, stiff neck, and pleocytosis. West Nile encephalitis is characterized by fever, headache, and altered mental status ranging from confusion to coma with or without additional signs of brain dysfunction (e.g., paresis or paralysis, cranial nerve palsies, sensory deficits, abnormal reflexes, generalized convulsions, and abnormal movements).

Laboratory Criteria for Diagnosis

- Fourfold or greater change in West Nile virus-specific serum antibody titer;
- Isolation of West Nile virus from or demonstration of specific West Nile viral antigen or genomic sequences in tissue, blood, CSF, or other bodily fluid; or
- West Nile virus-specific IgM antibodies demonstrated in serum or CSF by antibody-capture enzyme immunoassay and confirmed by demonstration of West Nile virus-specific serum neutralizing antibodies in the same or later specimen.

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed.

Probable: A clinically compatible illness with West Nile virus-specific serum IgM antibodies detected by antibody-capture enzyme immunoassay but with no available results of a confirmatory test for West Nile virus-specific serum neutralizing antibodies in the same or later specimen.

Note: Some West Nile fever cases progress to West Nile meningitis or encephalitis. Cases meeting the more restrictive case definition of West Nile encephalitis/meningitis (see above for clinical description) should be reported as such and only once.

Comment

The seasonality of arbovirus transmission is variable and depends on the geographic location of exposure, the specific cycles of viral transmission, and local climatic conditions. Because closely related arboviruses exhibit serologic cross-reactivity, positive results of serologic tests using antigens from a single arbovirus can be misleading. In some circumstances (e.g., areas where two or more closely related arboviruses occur, or, in imported arboviral disease cases), it may be epidemiologically important to attempt to identify the infecting virus by conducting cross neutralization tests using an appropriate battery of closely related viruses. This is essential, for example, in determining that antibodies detected against West Nile virus are not the result of an infection with St. Louis encephalitis or dengue virus, or vice versa. Because dengue fever and West Nile fever can be clinically indistinguishable, the importance of a recent travel history and appropriate serologic testing cannot be overemphasized. In some persons, West Nile virus-specific serum IgM antibody can wane slowly

and be detectable for more than one year following infection. Therefore, in areas where West Nile virus has circulated in the recent past, the co-existence of West Nile virus-specific IgM antibody and illness in a given case may be coincidental and unrelated. In those areas, the testing of serially collected serum specimens assumes added importance.

YELLOW FEVER

SUBMIT A REPORT WITHIN 24 HOURS

For more information on control measures, see [Arizona Administrative Code R9-6-392](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

A mosquito-borne, viral illness characterized by acute onset and constitutional symptoms followed by a brief remission and a recurrence of fever, hepatitis, albuminuria, and other symptoms and, in some cases, renal failure, shock, and generalized hemorrhages.

Laboratory Criteria for Diagnosis

- Fourfold or greater rise in yellow fever antibody titer with no history of recent yellow fever immunization and cross-reactions to other flaviviruses ruled out, OR
- Demonstration of yellow fever virus, antigen, or genome in tissue, blood, or other body fluid

Case Classification

Confirmed: A clinically compatible illness that is laboratory confirmed.

Probable: A clinically compatible illness with supportive serology (stable elevated antibody titer to yellow fever virus, e.g., ≥ 32 by complement fixation, ≥ 256 by immunofluorescence assay, ≥ 320 by hemagglutination inhibition, ≥ 160 by neutralization, or a positive serologic result by IgM-capture enzyme immunoassay. Cross-reactive serologic reactions to other flaviviruses must be ruled out, and there must be no history of yellow fever immunization).

YERSINIOSIS

SUBMIT A REPORT WITHIN 24 HOURS IF

- An outbreak is detected
- If a case or suspect case is a food handler or works in a childcare establishment or a health care institution

For more information on control measures, see [Arizona Administrative Code R9-6-393](#). To report a case, complete a [Communicable Disease Investigations Form](#) and report the case to your [local health department](#).

Clinical Description

An acute bacterial enteric disease typically manifested by acute febrile diarrhea and enterocolitis. Bloody diarrhea is reported in approximately 25% of patients with *Yersinia enterocolitidis*. Mesenteric lymphadenitis mimicking appendicitis especially in older children and adults has also been noted.

Laboratory Criteria for Diagnosis

Isolation of *Y. enterocolitica* or *Y. pseudotuberculosis* from a clinical specimen

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed

Probable: A clinically compatible case that is epidemiologically linked to a probable or confirmed case

Case Definitions for Non-Reportable Communicable Morbidities of Public Health Significance

AFRICAN TICK BITE FEVER

Clinical Description

A tick-borne illness caused by *Rickettsia africae*, a pathogen endemic to several countries in sub-Saharan Africa, and to Guadeloupe in the Caribbean. Clinical disease generally occurs within 1-15 days (median, 4 days) following the bite of an infecting tick.

The illness is characterized by acute onset of fever, and is accompanied by single or multiple eschars. Regional lymphadenopathy and a maculopapular rash also occur in about half of all patients.

Laboratory Criteria for Diagnosis

- Confirmed
 - A four-fold or greater change in IgG antibody titer to spotted fever group rickettsia antigen in paired serum specimens; OR
 - Demonstration of spotted fever group rickettsiae in a biopsy specimen by using an immunohistochemical stain; OR
 - Detection of DNA of *R. africae* in a clinical specimen by using PCR; OR
 - Isolation of *R. africae* from a clinical specimen cell culture
- Probable
 - A single supportive IgG antibody titer to spotted fever group rickettsiae (cutoff titers are determined by individual laboratories)

Case Classification

A clinically compatible illness in a person with travel to an *R. africae*-endemic region within three weeks of illness onset

GENITAL WARTS

Clinical Description

An infection characterized by the presence of visible, exophytic (raised) growths on the internal or external genitalia, perineum, or perianal region

Laboratory Criteria for Diagnosis

- Histopathologic changes characteristic of human papillomavirus infection in specimens obtained by biopsy or exfoliative cytology OR
- Demonstration of virus by antigen or nucleic acid detection in a lesion biopsy

Case Classification

- Confirmed: A clinically compatible case that is laboratory confirmed
- Probable: A clinically compatible case without histopathologic diagnosis and without microscopic or serologic evidence that the growth is the result of secondary syphilis

Comment

Genital warts should be reported only once per patient. The first diagnosis for a patient with no previous diagnosis should be reported.

GRANULOMA INGUINALE (*Calymmatobacterium granulomatis*) (GI)

Clinical Description

A slowly progressive ulcerative disease of the skin and lymphatics of the genital and perianal area caused by infection with *Calymmatobacterium granulomatis*. A clinically compatible case would have one or more painless or minimally painful granulomatous lesions in the anogenital area.

Laboratory Criteria for Diagnosis

Demonstration of intracytoplasmic Donovan bodies in Wright or Giemsa-stained smears or biopsies of granulation tissue

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed

MUCOPURULENT CERVICITIS (MPC)

Clinical Description

Cervical inflammation that is not the result of infection with [Neisseria gonorrhoeae](#) or [Trichomonas vaginalis](#).

Cervical inflammation is defined by the presence of one of the following criteria:

- Mucopurulent secretion (from the endocervix) that is yellow or green when viewed on a white, cotton-tipped swab (positive swab test)
- Induced endocervical bleeding (bleeding when the first swab is placed in the endocervix)

Laboratory Criteria for Diagnosis

No evidence of *N. gonorrhoeae* by culture, Gram stain, or antigen or nucleic acid detection, and no evidence of *T. vaginalis* on wet mount

Case Classification

Confirmed: A clinically compatible case in a female who does not have either gonorrhea or trichomoniasis

Comment

Mucopurulent cervicitis (MPC) is a clinical diagnosis of exclusion. The syndrome may result from infection with any of several agents (see [Chlamydia trachomatis, Genital Infections](#)). If gonorrhea, trichomoniasis, and chlamydia are excluded, a clinically compatible illness should be classified as MPC. An illness in a female that meets the case definition of MPC and *C. trachomatis* infection should be classified as chlamydia.

NONGONOCOCCAL URETHRITIS (NGU)

Clinical Description

Urethral inflammation that is not the result of infection with *Neisseria gonorrhoeae*. Urethral inflammation may be diagnosed by the presence of one of the following criteria:

- A visible abnormal urethral discharge, OR
- A positive leukocyte esterase test from a male aged less than 60 years who does not have a history of kidney disease or bladder infection, prostate enlargement, urogenital anatomic anomaly, or recent urinary tract instrumentation, OR
- Microscopic evidence of urethritis (greater than or equal to 5 white blood cells per high-power field) on a Gram stain of a urethral smear

Laboratory Criteria for Diagnosis

No evidence of *N. gonorrhoeae* infection by culture, Gram stain, or antigen or nucleic acid detection

Case Classification

Confirmed: a clinically compatible case in a male in whom gonorrhea is not found, either by culture, Gram stain, or antigen or nucleic acid detection

Comment

Nongonococcal urethritis (NGU) is a clinical diagnosis of exclusion. The syndrome may result from infection with any of several agents (see [Chlamydia trachomatis, Genital Infection](#)). If gonorrhea and chlamydia are excluded, a clinically compatible illness should be classified as NGU. An illness in a male that meets the case definition of NGU and *C. trachomatis* infection should be classified as chlamydia.

PEDICULOSIS

Clinical Description

Infestation of the hairy parts of the body with adult or larval lice or their eggs.

Criteria for Diagnosis

Recovery of crawling lice, or eggs (nits) on hair within 1/2 inch of scalp for head lice.

PELVIC INFLAMMATORY DISEASE (PID)

Clinical Description

A clinical syndrome resulting from the ascending spread of microorganisms from the vagina and endocervix to the endometrium, fallopian tubes, and/or contiguous structures. In a female who has lower abdominal pain and who has not been diagnosed as having an established cause other than pelvic inflammatory disease (PID) (e.g., ectopic pregnancy, acute appendicitis, and functional pain), all the following clinical criteria must be present:

- Lower abdominal tenderness, AND
- Tenderness with motion of the cervix, AND
- Adnexal tenderness

In addition to the preceding criteria, at least one of the following findings must also be present:

- Meets the surveillance case definition of *C. trachomatis* infection or gonorrhea
- Temperature greater than 100.4°F (greater than 38.0°C)
- Leukocytosis greater than 10,000 white blood cells/mm³
- Purulent material in the peritoneal cavity obtained by culdocentesis or laparoscopy
- Pelvic abscess or inflammatory complex detected by bimanual examination or by sonography
- Patient is a sexual contact of a person known to have gonorrhea, chlamydia, or nongonococcal urethritis

Case Classification

Confirmed: A case that meets the clinical case definition

Comment

For reporting purposes, a clinician's report of PID should be counted as a case.