Arizona Department of Health Services

Case Definitions for Reportable Communicable Morbidities

2012

TABLE OF CONTENTS

(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/pdf/casedefinitions.pdf;

CDC's National Notifiable Diseases Surveillance System at http://www.cdc.gov/osels/ph_surveillance/nndss/nndsshis.htm;

The introduction to any of the ADHS Infectious Disease annual reports posted at http://www.azdhs.gov/phs/oids/data/index.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 Portal (HSP), 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.

AMEBIASIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-305: Amebiasis

A local health agency shall:

1. Exclude an amebiasis case or suspect case from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until:
    a. Treatment with an amebicide is initiated, and
    b. Two successive stool specimens negative for amoebae are obtained from specimens collected at least 24 hours apart;
2. Conduct an epidemiologic investigation of each reported amebiasis case or suspect case; and
3. For each amebiasis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/amebiasis_form.pdf

ANTHRAX (β)
(Bacillus anthracis)

SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-306: Anthrax

Local health agency shall:

1. Upon receiving a report under R9-6-202 of an anthrax case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported anthrax case or suspect case;
3. For each anthrax case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that an isolate from each anthrax case is submitted to the Arizona State Laboratory.

Environmental control measures: A local health agency shall provide or arrange for sterilization by dry heating or incineration of objects contaminated by Bacillus anthracis

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/anthrax.pdf

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

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 & evidence of pleocytosis.

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.

CONTROL MEASURES
Arizona Administrative Code R9-6-307: Aseptic Meningitis (Viral)

A local health agency shall:
1. Conduct an epidemiologic investigation of each reported outbreak of aseptic meningitis; and
2. For each outbreak of aseptic meningitis, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-202(E).

INVESTIGATION FORMS
None

BASIDIOBOLOMYCOSIS SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-308: Basidiobolomycosis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported basidiobolomycosis case or suspect case; and
2. For each basidiobolomycosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/basidio_form.pdf

BOTULISM, FOODBORNE (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 botulinum 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 case that is laboratory confirmed or that occurs among persons who ate the same food as persons with laboratory confirmed botulism.
- Probable: A clinically compatible case with an epidemiologic link to a suspect food item (e.g. home-canned foods)

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

CONTROL MEASURES
Arizona Administrative Code R9-6-309: Botulism, Foodborne

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a botulism case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported botulism case or suspect case; and
3. For each botulism case:
    a. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
    b. Ensure that a specimen from each botulism case is submitted to the Arizona State Laboratory; and
    c. In consultation with the Department, determine if treatment of the botulism case is required.

Environmental control measures: An individual in possession of:

1. Food known to be contaminated by Clostridium botulinum shall boil the contaminated food for 10 minutes and then discard it, and
2. Utensils known to be contaminated by Clostridium botulinum shall boil the contaminated utensils for 10 minutes before reuse or disposal.

INVESTIGATION FORMS
- http://www.azdhs.gov/phs/oids/pdf/forms/adultbotulism.pdf

BOTULISM, INFANT (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

An illness of 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 botulinum toxin in stool or serum, OR
- Isolation of *Clostridium botulinum* from stool

Case Classification

- Confirmed: A clinically compatible case that is laboratory-confirmed, occurring among children aged less than 1 year.

CONTROL MEASURES

Arizona Administrative Code R9-6-309: Botulism

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a botulism case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported botulism case or suspect case; and
3. For each botulism case:
    a. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
    b. Ensure that a specimen from each botulism case is submitted to the Arizona State Laboratory; and
    c. In consultation with the Department, determine if treatment of the botulism case is required.

Environmental control measures: An individual in possession of:

1. Food known to be contaminated by Clostridium botulinum shall boil the contaminated food for 10 minutes and then discard it, and
2. Utensils known to be contaminated by Clostridium botulinum shall boil the contaminated utensils for 10 minutes before reuse or disposal

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/infantbotulism.pdf

BOTULISM, WOUND (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

An illness resulting from toxin produced *by Clostridium botulinum* that has infected a wound. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Laboratory Criteria for Diagnosis

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

Case Classification

- Confirmed: A clinically compatible illness that is laboratory confirmed in a patient who has no suspected exposure to contaminated food and who has either a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms, or a history of injection drug use within the 2 weeks before onset of symptoms.
- Probable: A clinically compatible case in a patient who has no suspected exposure to contaminated food and who has either a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms, or a history of injection drug use within the 2 weeks before onset of symptoms.

CONTROL MEASURES

Arizona Administrative Code R9-6-309: Botulism

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a botulism case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported botulism case or suspect case; and
3. For each botulism case:
    a. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
    b. Ensure that a specimen from each botulism case is submitted to the Arizona State Laboratory; and
    c. In consultation with the Department, determine if treatment of the botulism case is required.

Environmental control measures: An individual in possession of:

1. Food known to be contaminated by Clostridium botulinum shall boil the contaminated food for 10 minutes and then discard it, and
2. Utensils known to be contaminated by Clostridium botulinum shall boil the contaminated utensils for 10 minutes before reuse or disposal

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/adultbotulism.pdf

BOTULISM, OTHER (β)	SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 botulinum 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-309: Botulism

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a botulism case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported botulism case or suspect case; and
3. For each botulism case:
    a. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
    b. Ensure that a specimen from each botulism case is submitted to the Arizona State Laboratory; and
    c. In consultation with the Department, determine if treatment of the botulism case is required.

Environmental control measures: An individual in possession of:

1. Food known to be contaminated by Clostridium botulinum shall boil the contaminated food for 10 minutes and then discard it, and
2. Utensils known to be contaminated by Clostridium botulinum shall boil the contaminated utensils for 10 minutes before reuse or disposal

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/adultbotulism.pdf

BRUCELLOSIS (β) SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-310: Brucellosis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported brucellosis case or suspect case;
2. For each brucellosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
3. Ensure that an isolate from each brucellosis case is submitted to the Arizona State Laboratory

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/BrucellosisCaseInvestigation.pdf

BURKHOLDERIA MALLEI and B. PSEUDOMALLEI	REPORTABLE BY LABORATORIES ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-351: Melioidosis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported melioidosis case or suspect case;
2. For each melioidosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
3. Ensure that an isolate from each melioidosis case is submitted to the Arizona State Laboratory

INVESTIGATION FORMS

None

CAMPYLOBACTERIOSIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description
An infection that may result in diarrheal illness of variable severity

Laboratory Criteria for Diagnosis
- Confirmed: Isolation of *Campylobacter* spp. from any clinical specimen
- Suspect: Detection of *Campylobacter* spp. in a clinical specimen using non-culture based laboratory methods

Case Classification
- Confirmed: A case that is laboratory confirmed.
- Probable: A clinically compatible illness that is epidemiologically linked to a confirmed case.
- Suspect: A case that meets the suspect laboratory criteria for diagnosis

CONTROL MEASURES

Arizona Administrative Code R9-6-311 Campylobacteriosis

A local health agency shall:

1. Exclude a campylobacteriosis case or suspect case from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until:
   a. A culture negative for Campylobacter spp. is obtained from a stool specimen, or
   b. Diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported campylobacteriosis case or suspect case; and
3. For each campylobacteriosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_campy.doc

CHAGAS DISEASE	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-312: Chagas Infection & Related Disease (American Trypanosomiasis)

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Chagas infection or disease case or suspect case; and
2. For each Chagas infection or disease case:
    a. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
    b. Provide to the Chagas infection or disease case or ensure that another person provides to the Chagas infection or disease case health education that includes:
        i. The treatment options for Chagas infection or disease,
        ii. Where the Chagas infection or disease case may receive treatment for Chagas infection or disease, and
        iii. For women of childbearing age, the risks of transmission of Chagas infection or disease to a fetus.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/ChagasDiseaseCaseInvestigationForm.pdf

CHANCROID	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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:
  - 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
  - The clinical presentation of the ulcer(s) is not typical disease caused by HSV (herpes simplex virus) or HSV culture is negative.

CONTROL MEASURES

Arizona Administrative Code R9-6-313: Chancroid (Haemophilus ducreyi)

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported chancroid case or suspect case;
2. For each chancroid case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
3. Comply with the requirements specified in R9-6-1103 concerning treatment and health education for a chancroid case.

Contact control measures:

1. When a chancroid case has named a contact, a local health agency shall comply with the requirements specified in R9-6-1103 concerning notification, testing, treatment, and health education for the contact.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cdr_form.pdf

CHLAMYDIA TRACHOMATIS INFECTION SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 L_1, L_2, or L_3 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 L_1, L_2, or L_3, 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

CONTROL MEASURES

Arizona Administrative Code R9-6-314: Chlamydia Infection, Sexually Transmitted

Case control measures:

1. The Department shall review each chlamydia infection case report for completeness, accuracy, and need for follow-up.

2. A local health agency shall comply with the requirements specified in R9-6-1103 concerning treatment and health education for a chlamydia infection case that seeks treatment from the local health agency.

Contact control measures:

1. If an individual who may have been exposed to chlamydia through sexual contact with a chlamydia infection case seeks treatment for symptoms of chlamydia infection from a local health agency, the local health agency shall comply with the requirements specified in R9-6-1103 concerning treatment and health education for the individual.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cdr_form.pdf

CHOLERA (β)	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 1 WORKING DAY.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-315: Cholera

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a cholera case or suspect case, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
2. Exclude a cholera case or suspect case from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until two successive cultures negative for Vibrio cholerae are obtained from stool specimens collected at least 24 hours apart and at least 48 hours after discontinuing antibiotics;
3. Conduct an epidemiologic investigation of each reported cholera case or suspect case; and
4. For each cholera case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures:

1. A local health agency shall provide follow-up for each cholera contact for five calendar days after exposure.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cholera_form.pdf

COCCIDIOIDOMYCOSIS
(Valley fever)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

Infection may be asymptomatic or may produce an acute or chronic disease. Although the disease initially resembles an influenza-like illness or pneumonia-like febrile illness primarily involving the bronchopulmonary system, dissemination can occur to multiple organ systems. An illness is typically characterized by one or more of the following:

- Influenza-like signs and symptoms, including fever, chest pain, cough, myalgia, arthralgia, headache
- Pneumonia or other pulmonary lesion, diagnosed 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 *Coccidioides* species, OR
- Immunologic evidence of infection
    1. Serologic (testing of serum, cerebrospinal fluid (CSF), or other body fluid) by:
        a. Detection of coccidioidal IgM by immunodiffusion, enzyme immunoassay (EIA), latex agglutination, or tube precipitin, OR
        b. Detection of coccidioidal IgG by immunodiffusion, enzyme immunoassay (EIA), or complement fixation (for complement fixation, titers from blood must be ≥ 1:4; for immunodiffusion or when the specimen is CSF, any titer is considered positive).
    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.

CONTROL MEASURES

Arizona Administrative Code R9-6-316 Coccidioidomycosis (Valley Fever)

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported outbreak of coccidioidomycosis; AND
2. For each outbreak of coccidioidomycosis, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-202(E).

INVESTIGATION FORMS

None

COLORADO TICK FEVER	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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).

CONTROL MEASURES

Arizona Administrative Code R9-6-317 Colorado Tick Fever

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Colorado tick fever case or suspect case; and
2. For each Colorado tick fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/ticks/forms/2010_tbrd_crf.pdf

CONJUNCTIVITIS, ACUTE REPORT OUTBREAKS ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES
Arizona Administrative Code R9-6-318 Conjunctivitis

An administrator of a school or child care establishment, either personally or through a representative, shall exclude an acute conjunctivitis case from attending the school or child care establishment until the symptoms of acute conjunctivitis subside or treatment for acute conjunctivitis is initiated and maintained for 24 hours.

Outbreak control measures

A local health agency shall:
1. Conduct an epidemiologic investigation of each reported conjunctivitis outbreak; AND
2. For each conjunctivitis outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F).

INVESTIGATION FORMS
- http://www.azdhs.gov/phs/oids/pdf/forms/outbreakreport.pdf

CREUTZFELDT-JAKOB DISEASE SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 (NPDPSC) 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 NPDPSC.
    - 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-319 Creutzfeldt-Jakob Disease

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Creutzfeldt-Jakob disease case or suspect case; and
2. For each Creutzfeldt-Jakob disease case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cjdform.pdf

CRYPTOSPORIDIOSIS (Cryptosporidium parvum)	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical description

A gastrointestinal illness characterized by diarrhea with a duration of 72 hours or more, abdominal cramping, fever, nausea, vomiting or anorexia.

Laboratory criteria for diagnosis

- Confirmed: The detection of Cryptosporidium organisms or DNA in stool, intestinal fluid, tissue samples, biopsy specimens, or other biological sample.*
- Probable*:* The detection of *Cryptosporidium* antigen by immunodiagnostic methods OR a case that meets the clinical criteria and is epidemiologically linked to a confirmed case. **

* The confirmed laboratory criteria include detection of *Cryptosporidium* by established laboratory methods (e.g., direct fluorescent antibody [DFA] test, enzyme immunoassay [EIA], or polymerase chain reaction [PCR]).

** Test results known to be obtained with commercially-available immunochromatographic card tests are limited to meeting "probable" case criteria due to a recent report of unacceptably high rates of false-positive results (Clin Infect Dis. 2010 Apr 15;50(8):e53-55).

Case classification

- Confirmed: A case that meets the clinical description and the respective criteria for laboratory-confirmation as described above.
- Probable: A case that meets the clinical description and has probable criteria for laboratory diagnosis or that is epidemiologically linked to a confirmed case.

CONTROL MEASURES

Arizona Administrative Code R9-6-320 Cryptosporidiosis (Cryptosporidium parvum)

A local health agency shall:

1. Exclude a cryptosporidiosis case or suspect case with diarrhea from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported cryptosporidiosis case or suspect case; and
3. For each cryptosporidiosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_crypto.doc - Individual Case
- http://www.azdhs.gov/phs/oids/pdf/forms/outbreakreport.pdf - Outbreak Report

CYCLOSPORAISIS
(Cyclopora cayetanensis)

SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

An illness of variable severity caused by the protozoan parasite *Cyclospora 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 *Cyclospora* 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-321 Cyclospora Infection

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Cyclospora infection case or suspect case; and
2. For each Cyclospora infection case submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

CYSTICERCOSIS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-322 Cysticercosis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported cysticercosis case or suspect case; and
2. For each cysticercosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

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

SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Laboratory criteria for diagnosis

- Confirmed
  - 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.
- 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 (≤100,000 cells per mm3)
- Evidence of plasma leakage shown by hemoconcentration (an increase in hematocrit ≥20% above average for age or a decrease in hematocrit ≥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 (<20mm 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

CONTROL MEASURES

Arizona Administrative Code R9-6-323 Dengue

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported dengue case or suspect case; and
2. For each dengue case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/dengueform.pdf

DIARRHEA, NAUSEA, OR VOMITING REPORT OUTBREAKS ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-324: Diarrhea, Nauseau, or Vomiting

Environmental control measures: A local health agency shall:

1. Conduct a sanitary inspection or ensure that a sanitary inspection is conducted of each water, sewage, or food preparation facility associated with an outbreak of diarrhea, nausea, or vomiting.

Outbreak control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported outbreak of diarrhea, nausea, or vomiting;
2. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F) for:
    a. Each suspected foodborne illness outbreak,
    b. Each suspected waterborne illness outbreak, and
    c. Each outbreak of viral gastroenteritis

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/outbreakreport.pdf

DIPHTHERIA (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES
Arizona Administrative Code R9-6-325 Diphtheria

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall:
    a. Isolate and institute droplet precautions for a pharyngeal diphtheria case or suspect case until:
        i. Two successive sets of cultures negative for Cornyebacterium diphtheriae are obtained from nose and throat specimens collected from the case or suspect case at least 24 hours apart and at least 24 hours after cessation of treatment; or
        ii. Fourteen calendar days after initiation of treatment; and
    b. Isolate and institute contact precautions for a cutaneous diphtheria case or suspect case until:
        i. Two successive sets of cultures negative for Cornyebacterium diphtheriae are obtained from skin specimens collected from the case or suspect case at least 24 hours apart and at least 24 hours after cessation of treatment; or
        ii. Fourteen calendar days after initiation of treatment.
2. A local health agency shall:

a. Upon receiving a report under R9-6-202 of a diphtheria case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
b. Conduct an epidemiologic investigation of each reported diphtheria case or suspect case; and
c. For each diphtheria case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall:

1. Exclude each diphtheria contact from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a school or child care establishment until a set of cultures negative for Cornyebacterium diphtheriae is obtained from the contact's nose and throat specimens;
2. In consultation with the Department, quarantine a contact of a diphtheria case, if indicated, until two successive sets of cultures negative for Cornyebacterium diphtheriae are obtained from nose and throat specimens collected from the contact at least 24 hours apart;
3. Offer each previously immunized diphtheria contact a vaccine containing diphtheria toxoid; and
4. Offer each unimmunized diphtheria contact the primary vaccine series and treatment.

INVESTIGATION FORMS

None

EHRLICHIOSIS / ANAPLASMOSIS SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 anaplasmal 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-326 Ehrlichioses (Ehrlichiosis and Anaplasmosis)

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported ehrlichiosis or anaplasmosis case or suspect case; and
2. For each ehrlichiosis or anaplasmosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/ticks/forms/2010_tbrd_crf.pdf

EMERGING OR EXOTIC DISEASE SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-327 Emerging or Exotic Disease

Case control measures: A local health agency shall:

1. Upon receiving a report under R9-6-202 of an emerging or exotic disease case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. In consultation with the Department, isolate an emerging or exotic disease case or suspect case as necessary to prevent transmission;
3. Conduct an epidemiologic investigation of each reported emerging or exotic disease case or suspect case; and
4. For each emerging or exotic disease case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency, in consultation with the Department,

1. Shall quarantine an emerging or exotic disease contact as necessary to prevent transmission.

INVESTIGATION FORMS

None

ENCEPHALITIS, VIRAL or PARASITIC SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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)

CONTROL MEASURES

Arizona Administrative Code R9-6-328 Viral or Parasitic

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a viral or parasitic encephalitis case or suspect case, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported viral or parasitic encephalitis case or suspect case; and
3. For each encephalitis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

ENTEROHEMORRHAGIC ESCHERICHIA COLI
E. coli O157:H7 or Shiga toxin-producing E. coli

SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

For more information on control measures, see Arizona Administrative Code R9-6-329 Enterohemorrhagic Escherichia coli

Case control measures: A local health agency shall:

1. Exclude an enterohemorrhagic Escherichia coli case or suspect case with diarrhea from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until:
   a. Two successive cultures negative for enterohemorrhagic Escherichia coli are obtained from stool specimens collected from the case at least 24 hours apart and at least 48 hours after discontinuing antibiotics, or
   b. Diarrhea has resolved;

2. Conduct an epidemiologic investigation of each reported enterohemorrhagic Escherichia coli case or suspect case; and
3. For each enterohemorrhagic Escherichia coli case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall

1. Exclude an enterohemorrhagic Escherichia coli contact with diarrhea of unknown cause from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until diarrhea has resolved.

Environmental control measures: A local health agency shall:

1. If an animal located in a private residence is suspected to be the source of infection for an enterohemorrhagic Escherichia coli case or outbreak, provide health education for the animal's owner about enterohemorrhagic Escherichia coli and the risks of becoming infected with enterohemorrhagic Escherichia coli; and
2. If an animal located in a setting other than a private residence is suspected to be the source of infection for an enterohemorrhagic Escherichia coli case or outbreak:
    a. Provide health education for the animal's owner about enterohemorrhagic Escherichia coli and the risks of becoming infected with enterohemorrhagic Escherichia coli, and
    b. Require the animal's owner to provide information to individuals with whom the animal may come into contact about enterohemorrhagic Escherichia coli and methods to reduce the risk of transmission.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/EColiHUSLongform2010.pdf

ENTEROTOXIGENIC ESCHERICHIA COLI (ETEC)	SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-330 Enterotoxigenic Escherichia coli

Case control measures: A local health agency shall:

1. Exclude an enterotoxigenic Escherichia coli case or suspect case with diarrhea from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until:
    a. Two successive cultures negative for enterotoxigenic Escherichia coli are obtained from stool specimens collected from the case at least 24 hours apart and at least 48 hours after discontinuing antibiotics, or
    b. Diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported enterotoxigenic Escherichia coli case or suspect case; and
3. For each enterotoxigenic Escherichia coli case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall

1. Exclude an enterotoxigenic Escherichia coli contact with diarrhea of unknown cause from working as a food handler until diarrhea has resolved.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/EColiHUSLongform2010.pdf

FOODBORNE DISEASE OUTBREAK SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-324 Diarrhea, Nausea, or Vomiting

Environmental control measures: A local health agency shall

1. Conduct a sanitary inspection or ensure that a sanitary inspection is conducted of each water, sewage, or food preparation facility associated with an outbreak of diarrhea, nausea, or vomiting.

Outbreak control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported outbreak of diarrhea, nausea, or vomiting;
2. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F) for:
    a. Each suspected foodborne illness outbreak,
    b. Each suspected waterborne illness outbreak, and
    c. Each outbreak of viral gastroenteritis

INVESTIGATION FORMS:

- Foodborne Outbreak: http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_spn_frk.pdf
- Norovirus: http://www.azdhs.gov/phs/oids/pdf/forms/norovirus.pdf

GIARDIASIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical description:
An illness caused by the protozoan *Giardia lamblia* (aka *G. intestinalis* or *G. duodenalis*) and characterized by gastrointestinal symptoms such as diarrhea, abdominal cramps, bloating, weight loss, or malabsorption.

Laboratory criteria for diagnosis:
Laboratory-confirmed giardiasis shall be defined as the detection of *Giardia* organisms, antigen, or DNA in stool, intestinal fluid, tissue samples, biopsy specimens or other biological sample.

Case classification
- Confirmed: a case that meets the clinical description and the criteria for laboratory confirmation as described above. When available, molecular characterization (e.g., assemblage designation) should be reported.
- Probable: a case that meets the clinical description and that is epidemiologically linked to a confirmed case.

Classification Table

Criterion	Confirmed	Probable
Clinical Evidence		
Diarrhea		O
Abdominal cramps		O
Vomiting		O
Fever		O
Nausea		O
Anorexia		O
Healthcare record contains a diagnosis of giardiasis		S
Laboratory Evidence		
Giardia organisms in stool, intestinal fluid, tissue samples or biopsy specimens	S	
Giardia antigens in stool or intestinal fluid	S	
Giardia-specific nucleic acid in stool, intestinal fluid, tissue samples or biopsy specimens.	S	
Epidemiologic Evidence		
Contact of a confirmed case of Giardiasis		O
Member of a risk group as defined by the public health authorities during an outbreak		O

S = This criterion alone is sufficient to classify a case.
O = At least one of these “O” (optional) criteria in each category (e.g., clinical evidence and laboratory evidence) in the same column – in conjunction with all “N” criteria in the same column- is required to classify a case.

CONTROL MEASURES

Arizona Administrative Code R9-6-331 Giardiasis

Case control measures: A local health agency shall

1. Exclude a giardiasis case or suspect case from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until:
    1. Two successive stool specimens negative for Giardia lamblia are obtained from specimens collected from the case at least 24 hours apart; or
    2. Treatment for giardiasis is initiated and diarrhea has resolved.

Contact control measures: A local health agency shall

1. Exclude a giardiasis contact with diarrhea of unknown cause from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until diarrhea has resolved.

Outbreak control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported giardiasis outbreak;
2. For each giardiasis case involved in an outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
3. For each giardiasis outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_giardia.doc

GONORRHEA	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104: Gonorrhea

Case control measures:

1. The Department shall review each gonorrhea case report for completeness, accuracy, and need for follow-up.
2. For the prevention of gonorrheal ophthalmia, a physician, physician assistant, registered nurse practitioner, or midwife attending the birth of an infant in this state shall treat the eyes of the infant immediately after the birth with one of the following, unless treatment is refused by the parent or guardian:

a. Erythromycin ophthalmic ointment 0.5%, or
b. Tetracycline ophthalmic ointment 1%.

3. A local health agency shall comply with the requirements specified in R9-6-1103 concerning treatment and health education for a gonorrhea case that seeks treatment from the local health agency.

Contact control measures: If an individual who may have been exposed to gonorrhea through sexual contact with a gonorrhea case seeks treatment for symptoms of gonorrhea from a local health agency, the local health agency shall comply with the requirements specified in R9-6-1103 concerning treatment and health education for the individual.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cdr_form.pdf

HAEMOPHILUS INFLUENZAE (Invasive Disease)	SUBMIT A REPORT WITHIN 24 HOURS *Haemophilus influenzae*, type b, isolated from a normally sterile site is a 24 hour lab reportable

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-333 *Haemophilus influenzae*: Invasive Disease

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and institute droplet precautions for a *Haemophilus influenzae* meningitis or epiglottitis case or suspect case for 24 hours after the initiation of treatment.
2. A local health agency shall:
    a. Conduct an epidemiologic investigation of each reported *Haemophilus influenzae* invasive disease case or suspect case; and
    b. For each *Haemophilus influenzae* invasive disease case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall

1. Evaluate the level of risk of transmission from each contact's exposure to a *Haemophilus influenzae* invasive disease case and, if indicated, shall provide or arrange for each contact to receive immunization or treatment

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/hflu_form.pdf

HANSEN'S DISEASE (LEPROSY) SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITIONS

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-334 Hansen's Disease (Leprosy)

Case control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Hansen's disease case or suspect case; AND
2. For each Hansen's disease case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: In consultation with the Department, a local health agency shall

1. Examine contacts of a Hansen's disease case, if indicated, for signs and symptoms of leprosy at six-to-twelve month intervals for five years after the last exposure to an infectious case.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/HansenInvestForm-Fillable.pdf

HANTAVIRUS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-335 Hantavirus Infection

A local health agency shall:

1. Provide or arrange for a hantavirus infection case or, if the case is a child or incapacitated adult, the parent or guardian of the case to receive health education about reducing the risks of becoming reinfected with or of having others become infected with hantavirus;
2. Conduct an epidemiologic investigation of each reported hantavirus infection case or suspect case; and
3. For each hantavirus infection case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/ncidod/diseases/hanta/hps/noframes/phys/specimen/casereport.pdf

HEMOLYTIC UREMIC SYNDROME
POST-DIARRHEAL (HUS, TTP)

SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-336 Hemolytic Uremic Syndrome

Case control measures: A local health agency shall:

1. Exclude a hemolytic uremic syndrome case or suspect case from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until:
    a. Two successive cultures negative for enterohemorrhagic Escherichia coli and Shigella spp. are obtained from stool specimens collected from the case at least 24 hours apart and at least 48 hours after discontinuing antibiotics, or
    b. Diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported hemolytic uremic syndrome case or suspect case; and
3. For each hemolytic uremic syndrome case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall

1. Exclude a hemolytic uremic syndrome contact with diarrhea of unknown cause from working as a food handler until diarrhea has resolved

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/EColiHUSLongform2010.pdf

HEPATITIS A (β)	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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)

CONTROL MEASURES
Arizona Administrative Code R9-6-337 Hepatitis A

Case control measures: A local health agency shall:

1. Exclude a hepatitis A case or suspect case from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment during the first 14 calendar days of illness or for seven calendar days after onset of jaundice;
2. Conduct an epidemiologic investigation of each reported hepatitis A case or suspect case; and
3. For each hepatitis A case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall:

1. Exclude a hepatitis A contact with symptoms of hepatitis A from working as a food handler during the first 14 calendar days of illness or for seven calendar days after onset of jaundice;
2. For 45 calendar days after exposure, monitor a food handler who was a contact of a hepatitis A case during the infectious period for symptoms of hepatitis A; and
3. Evaluate the level of risk of transmission from each contact's exposure to a hepatitis A case and, if indicated, provide or arrange for each contact to receive prophylaxis and immunization.

INVESTIGATION FORMS
http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_hav.doc

HEPATITIS B, ACUTE (ß) SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.)

CONTROL MEASURES
Arizona Administrative Code R9-6-338 Hepatitis B and Hepatitis D

Case control measures: A local health agency shall:
1. Evaluate a health care provider identified as the source of hepatitis B virus transmission in the work place and, if indicated, ensure reassignment of the health care provider to a position where the occupational risk of transmission is eliminated;
2. Conduct an epidemiologic investigation of each reported case or suspect case of hepatitis B or hepatitis B co-infected with hepatitis D; and
3. For each acute case of hepatitis B or hepatitis B co-infected with hepatitis D or case of perinatal hepatitis B, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

The operator of a blood bank, blood center, or plasma center shall notify a donor of a test result with significant evidence suggestive of hepatitis B, as required under A.R.S. § 32-1483 and 21 CFR 630.6.

Contact control measures: A local health agency shall:

1. Refer each non-immune hepatitis B contact to a health care provider for prophylaxis and initiation of the hepatitis B vaccine series, and
2. Provide health education related to the progression of hepatitis B disease and the prevention of transmission of hepatitis B infection to each non-immune hepatitis contact

INVESTIGATION FORMS

http://www.azdhs.gov/phs/oids/epi/pdf/frm_hbv.doc

HEPATITIS B, CHRONIC SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 of the above laboratory criteria for diagnosis
- Probable: A case with a single HBsAg positive or HBV DNA positive or HBeAg positive lab result and does not meet the case definition for acute hepatitis B

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 hepatocellullar 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-338 Hepatitis B and Hepatitis D

Case control measures: A local health agency shall:

1. Evaluate a health care provider identified as the source of hepatitis B virus transmission in the work place and, if indicated, ensure reassignment of the health care provider to a position where the occupational risk of transmission is eliminated;

2. Conduct an epidemiologic investigation of each reported case or suspect case of hepatitis B or hepatitis B co-infected with hepatitis D; and
3. For each acute case of hepatitis B or hepatitis B co-infected with hepatitis D or case of perinatal hepatitis B, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

The operator of a blood bank, blood center, or plasma center shall notify a donor of a test result with significant evidence suggestive of hepatitis B, as required under A.R.S. § 32-1483 and 21 CFR 630.6.

Contact control measures: A local health agency shall:

1. Refer each non-immune hepatitis B contact to a health care provider for prophylaxis and initiation of the hepatitis B vaccine series, and
2. Provide health education related to the progression of hepatitis B disease and the prevention of transmission of hepatitis B infection to each non-immune hepatitis contact

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frm_hbv_chron.doc

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

SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINTION

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.

CONTROL MEASURES
Arizona Administrative Code R9-6-338 Hepatitis B and Hepatitis D

Case control measures: A local health agency shall:

1. Evaluate a health care provider identified as the source of hepatitis B virus transmission in the work place and, if indicated, ensure reassignment of the health care provider to a position where the occupational risk of transmission is eliminated;
2. Conduct an epidemiologic investigation of each reported case or suspect case of hepatitis B or hepatitis B co-infected with hepatitis D; and
3. For each acute case of hepatitis B or hepatitis B co-infected with hepatitis D or case of perinatal hepatitis B, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

The operator of a blood bank, blood center, or plasma center shall notify a donor of a test result with significant evidence suggestive of hepatitis B, as required under A.R.S. § 32-1483 and 21 CFR 630.6.

Contact control measures: A local health agency shall:

1. Refer each non-immune hepatitis B contact to a health care provider for prophylaxis and initiation of the hepatitis B vaccine series, and
2. Provide health education related to the progression of hepatitis B disease and the prevention of transmission of hepatitis B infection to each non-immune hepatitis contact

INVESTIGATION FORMS
None

HEPATITIS C, ACUTE (β) SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-339 Hepatitis C

Case control measures:

1. A local health agency shall:
    a. Conduct an epidemiologic investigation of each reported acute hepatitis C case or suspect case; and
    b. For each acute hepatitis C case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).
2. The Department shall provide health education related to the progression of hepatitis C disease and the prevention of transmission of hepatitis C infection to each reported non-acute hepatitis C case or suspect case.

INVESTIGATION FORMS

Acute: http://www.azdhs.gov/phs/oids/pdf/forms/frm_hcv.doc

HEPATITIS C, CHRONIC or past infection	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 aminotranferase (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 (≥85%). Chronic liver disease develops in most (≥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.

CONTROL MEASURES

Arizona Administrative Code R9-6-339 Hepatitis C

Case control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported acute hepatitis C case or suspect case; and
2. For each acute hepatitis C case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

The Department shall provide health education related to the progression of hepatitis C disease and the prevention of transmission of hepatitis C infection to each reported non-acute hepatitis C case or suspect case.

INVESTIGATION FORMS

- Chronic: http://www.azdhs.gov/phs/oids/pdf/forms/frm_hcv_chron.doc

HEPATITIS D	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-338 Hepatitis B and Hepatitis D

Case control measures: A local health agency shall:

1. Evaluate a health care provider identified as the source of hepatitis B virus transmission in the work place and, if indicated, ensure reassignment of the health care provider to a position where the occupational risk of transmission is eliminated;
2. Conduct an epidemiologic investigation of each reported case or suspect case of hepatitis B or hepatitis B co-infected with hepatitis D; and
3. For each acute case of hepatitis B or hepatitis B co-infected with hepatitis D or case of perinatal hepatitis B, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

The operator of a blood bank, blood center, or plasma center shall notify a donor of a test result with significant evidence suggestive of hepatitis B, as required under A.R.S. § 32-1483 and 21 CFR 630.6.

Contact control measures: A local health agency shall:

1. Refer each non-immune hepatitis B contact to a health care provider for prophylaxis and initiation of the hepatitis B vaccine series, and
2. Provide health education related to the progression of hepatitis B disease and the prevention of transmission of hepatitis B infection to each non-immune hepatitis contact

INVESTIGATION FORMS

- Acute: http://www.azdhs.gov/phs/oids/pdf/forms/frm_hbv.doc
- Chronic: http://www.azdhs.gov/phs/oids/pdf/forms/frm_hbv_chron.doc

HEPATITIS E	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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)

CONTROL MEASURES

Arizona Administrative Code R9-6-340 Hepatitis E

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported hepatitis E case or suspect case; and
2. For each hepatitis E case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D)

INVESTIGATION FORMS

None

HERPES GENITALIS SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES
Arizona Administrative Code R9-6-313, R9-6-1101 thru R9-6-1104:

ARTICLE 11. STD-RELATED TESTING AND NOTIFICATION

R9-6-1101. Definitions
In this Article, unless otherwise specified:

1. "Primary syphilis" means the initial stage of syphilis infection characterized by the appearance of one or more open sores in the genital area, anus, or mouth of an infected individual.
2. "Secondary syphilis" means the stage of syphilis infection occurring after primary syphilis and characterized by a rash that does not itch, fever, swollen lymph glands, and fatigue in an infected individual.
3. "Sexually transmitted diseases" means the same as in A.R.S. § 13-1415.
4. "STD" means a sexually transmitted disease or other disease that may be transmitted through sexual contact.

R9-6-1102. Health Care Provider Requirements
When a laboratory report for a test ordered by a health care provider for a subject indicates that the subject is infected with an STD, the ordering health care provider or the ordering health care provider's designee shall:

1. Describe the test results to the subject;
2. Provide or arrange for the subject to receive the following information about the STD for which the subject was tested:
   a. A description of the disease or syndrome caused by the STD, including its symptoms;

b. Treatment options for the STD and where treatment may be obtained;
c. A description of how the STD is transmitted to others;
d. A description of measures to reduce the likelihood of transmitting the STD to others and that it is necessary to continue the measures until the infection is eliminated;
e. That it is necessary for the subject to notify individuals who may have been infected by the subject that the individuals need to be tested for the STD;
f. The availability of assistance from local health agencies or other resources; and
g. The confidential nature of the subject's test results;

3. Report the information required in R9-6-202 to a local health agency; and

4. If the subject is pregnant and is a syphilis case, inform the subject of the requirement in R9-6-375 that the subject obtain serologic testing for syphilis three months, six months, and one year after initiating treatment for syphilis.

R9-6-1103. Local Health Agency Requirements

A. For each STD case, a local health agency shall:
1. Comply with the requirements in:
a. R9-6-313(A)(1) and (2) for each chancroid case reported to the local health agency, and
b. R9-6-375(A)(2)(a) through (c) for each syphilis case reported to the local health agency;
2. Offer or arrange for treatment for each STD case that seeks treatment from the local health agency for symptoms of:
a. Chancroid,
b. Chlamydia infection,
c. Gonorrhea, or
d. Syphilis;
3. Provide information about the following to each STD case that seeks treatment from the local health agency:
a. A description of the disease or syndrome caused by the applicable STD, including its symptoms;
b. Treatment options for the applicable STD;
c. A description of measures to reduce the likelihood of transmitting the STD to others and that it is necessary to continue the measures until the infection is eliminated; and
d. The confidential nature of the STD case's test results; and
4. Inform the STD case that:
a. A chlamydia or gonorrhea case must notify each individual, with whom the chlamydia or gonorrhea case has had sexual contact within 60 days preceding the onset of chlamydia or gonorrhea symptoms up to the date the chlamydia or gonorrhea case began treatment for chlamydia or gonorrhea infection, of the need for the individual to be tested for chlamydia or gonorrhea; and
b. The Department or local health agency will notify, as specified in subsection (B), each contact named by a chancroid or syphilis case.

B. For each contact named by a chancroid or syphilis case, the Department or a local health agency shall:
1. Notify the contact named by a chancroid or syphilis case of the contact's exposure to chancroid or syphilis and of the need for the contact to be tested for:
a. Chancroid, if the chancroid case has had sexual contact with the contact within 10 days preceding the onset of chancroid symptoms up to the date the chancroid case began treatment for chancroid infection; or
b. Syphilis, if the syphilis case has had sexual contact with the contact within:
i. 90 days preceding the onset of symptoms of primary syphilis up to the date the syphilis case began treatment for primary syphilis infection;

ii. Six months preceding the onset of symptoms of secondary syphilis up to the date the syphilis case began treatment for secondary syphilis infection; or
iii. 12 months preceding the date the syphilis case was diagnosed with syphilis if the syphilis case cannot identify when symptoms of primary or secondary syphilis began;

2. Offer or arrange for each contact named by a chancroid or syphilis case to receive testing and, if appropriate, treatment for chancroid or syphilis; and
3. Provide information to each contact named by a chancroid or syphilis case about:
a. The characteristics of the applicable STD,
b. The syndrome caused by the applicable STD,
c. Measures to reduce the likelihood of transmitting the applicable STD, and
d. The confidential nature of the contact's test results.

C. For each contact of a chlamydia or gonorrhea case who seeks treatment from a local health agency for symptoms of chlamydia or gonorrhea, the local health agency shall:
1. Offer or arrange for treatment for chlamydia or gonorrhea;
2. Provide information to each contact of a chlamydia or gonorrhea case about:
a. The characteristics of the applicable STD,
b. The syndrome caused by the applicable STD,
c. Measures to reduce the likelihood of transmitting the applicable STD, and
d. The confidential nature of the contact's test results.

R9-6-1104. Court-ordered STD-related Testing

A. A health care provider who receives the results of a test, ordered by the health care provider to detect an STD and performed as a result of a court order issued under A.R.S. § 13-1210, shall comply with the requirements in 9 A.A.C. 6, Article 8.

B. A health care provider who receives the results of a test, ordered by the health care provider to detect an STD and performed as a result of a court order issued under A.R.S. § 32-3207, shall comply with the requirements in 9 A.A.C. 6, Article 9.

C. When a court orders a test under A.R.S. § 13-1415 to detect a sexually-transmitted disease, the prosecuting attorney who petitioned the court for the order shall provide to the Department:
1. A copy of the court order, including an identifying number associated with the court order;
2. The name and address of the victim; and
3. The name and telephone number of the prosecuting attorney or the prosecuting attorney's designee.

D. A person who tests a specimen of blood or another body fluid from a subject to detect a sexually-transmitted disease as authorized by a court order issued under A.R.S. § 13-1415 shall:
1. Be a certified laboratory, as defined in A.R.S. § 36-451;
2. Use a test approved by the U.S. Food and Drug Administration for use in STD-related testing; and
3. Report the test results for each subject to the submitting entity within five working days after obtaining the test results.

E. A submitting entity that receives the results of a test to detect a sexually-transmitted disease that was performed as a result of a court order issued under A.R.S. § 13-1415 shall:
1. Notify the Department within five working days after receiving the results of the test to detect a sexually-transmitted disease;
2. Provide to the Department:
a. A written copy of the court order,
b. A written copy of the results of the test to detect a sexually-transmitted disease, and
c. The name and telephone number of the submitting entity or submitting entity's designee; and
3. Either:

a. Comply with the requirements in:
i. R9-6-802(A)(2)(a) and (b), R9-6-802(D), and R9-6-802(F) through (J) for a subject who is not incarcerated or detained; and
ii. R9-6-802(B), R9-6-802(D) through (G), and R9-6-802(J) for a subject who is incarcerated or detained; or
b. Provide to the Department or the local health agency in whose designated service area the subject is living:
i. The name and address of the subject;
ii. A written copy of the results of the test to detect a sexually-transmitted disease, if not provided as specified in subsection (E)(2)(b); and
iii. Notice that the submitting entity did not provide notification as specified in subsection (E)(3)(a).

F. If the Department or a local health agency is notified by a submitting entity as specified in subsection (E)(3)(b), the Department or local health agency shall comply with the requirements in:
1. R9-6-802(A)(2)(a) and (b), R9-6-802(D), and R9-6-802(F) through (J) for a subject who is not incarcerated or detained; and
2. R9-6-802(B), R9-6-802(D) through (G), and R9-6-802(J) for a subject who is incarcerated or detained.

G. When the Department receives the results of a test to detect a sexually-transmitted disease that was performed for a subject as a result of a court order issued under A.R.S. § 13-1415, the Department shall:
1. Provide to the victim:
a. A description of the results of the test to detect the sexually-transmitted disease,
b. The information specified in R9-6-802(D), and
c. A written copy of the test results for the sexually-transmitted disease; or
2. Provide to the local health agency in whose designated service area the victim is living:
a. The name and address of the victim,
b. A written copy of the results of the test to detect the sexually-transmitted disease, and
c. Notice that the Department did not provide notification as specified in subsection (G)(1).

H. If a local health agency is notified by the Department as specified in subsection (G)(2), the local health agency shall:
1. Provide to the victim:
a. A description of the results of the test to detect the sexually-transmitted disease;
b. The information specified in R9-6-802(D); and
c. A written copy of the test results for the sexually-transmitted disease; or
2. If the local health agency is unable to locate the victim, notify the Department that the local health agency did not inform the victim of the results of the test to detect the sexually-transmitted

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cdr_form.pdf

HUMAN IMMUNODEFICIENCY VIRUS (HIV) (β)	SUBMIT A REPORT WITHIN 5 WORKING DAYS

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/μL 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/μL or CD4+ T-lymphocyte percentage of total lymphocytes of 14--28.

HIV Infection, Stage 3 (AIDS)
CD4+ T-lymphocyte count of <200 cells/μL 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/μL 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.¶¶

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 (*1,3,13*). 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

http://www.azdhs.gov/phs/oids/pdf/forms/cdr_form.pdf

INFLUENZA REPORTABLE BY LABORATORIES ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 predicative 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.

CONTROL MEASURES

INVESTIGATION FORMS

None

INFLUENZA-ASSOCIATED PEDIATRIC MORTALITY	SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-342 Influenza-Associated Mortality in a Child

A local health agency shall:

1. Confirm that influenza was the cause of death for each reported case or suspect case of influenza-associated mortality in a child; and
2. For each case of influenza-associated mortality in a child, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(C).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/pedfludeath_form.pdf

KAWASAKI SYNDROME SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-343 Kawasaki Syndrome

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Kawasaki syndrome case or suspect case; and
2. For each Kawasaki syndrome case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/KawasakiInvestForm-Fillable.pdf

LEGIONELLOSIS (Legionnaires' disease)	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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, immunohistochemstry (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.

CONTROL MEASURES

Arizona Administrative Code R9-6-344 Legionellosis (Legionnaires' Disease)

Case control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported legionellosis case or suspect case; and
2. For each legionellosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Environmental control measures: The owner of a water, cooling, or ventilation system that is determined by the Department or a local health agency to have caused a case of Legionella infection shall disinfect the system before resuming its use

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/legionella_form.pdf

LEPTOSPIROSIS SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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).

CONTROL MEASURES

Arizona Administrative Code R9-6-345 Leptospirosis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported leptospirosis case or suspect case; and
2. For each leptospirosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frm_lepto.pdf

LISTERIOSIS (Listeria monocytogenes) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 fluorescent antibody testing or polymerase chain reaction to diagnose invasive listeriosis has not been established.

CONTROL MEASURES

Arizona Administrative Code R9-6-346 Listeriosis

Case control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported listeriosis case or suspect case;
2. For each listeriosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
3. Ensure that an isolate from each listeriosis case is submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/listeria_form.pdf

LYME DISEASE SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 *erythema migrans* (EM), the initial skin legion that occurs in 60%-80% of patients.

Erythema migrans (EM)

For purpose of surveillance, EM is defined as a 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 reach greater than or equal to 5 cm in size across its largest diameter. Secondary lesions also may 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, mildly 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. Local reactions to insect bites and stings are often misidentified as EM. As a result, it is important to get additional information about the lesion, including (1) general description (shape and color), (2) was it itchy, painful, or warm to-the-touch, (3) when did the lesion first appear, (4) how many days did it persist, and (5) how large did it expand.

Late Manifestations

For the purposes of surveillance, 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 *Borrelia burgdorferi* in the CSF (cerebrospinal fluid), evidenced by a higher titer of antibody in CSF than in serum.
  - Headaches, fatigue, paresthesia, or mild stiff necks alone are not criteria for neurologic involvement.
- Cardiovascular system
  - Acute onset, high-grade (2nd degree or 3rd degree) atrioventricular conduction defects that resolve in days to weeks and are sometimes associated with myocarditis.

- Palpitations, bradycardia, bundle branch block, or myocarditis alone are not criteria for cardiovascular involvement.

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 confirmed cases have been acquired in the county or in which established populations of a known tick vector are infected with *B. burgdorferi.* Some 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 using established criteria [1], where:
  - Positive *IgM is sufficient only when ≤30 days from symptom onset or
  - Positive *IgG is sufficient at any point during illness
- Single-tier IgG immunoblot seropositivity using established criteria [1-4]
- CSF antibody positive for *Borrelia burgdorferi* by Enzyme Immunoassay (EIA) or Immunofluorescence Assay (IFA), when the titier is higher than it was in the serum.

*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 where there is:
    - Laboratory evidence of infection and
    - Known exposure (as defined above) and
    - EM
  - A case where there is:
    - Laboratory evidence of infection and
    - Recent travel or exposure in an area where vector ticks (*Ixodes sp.)* are known to occur and
    - EM
  - A case where there is:
    - At least one late manifestation and
    - Laboratory evidence of infection and
    - Recent or past exposure (as defined above)
- Probable**:
  - A physician-diagnosed case where there is :
  - Laboratory evidence of infection (as defined above) and
  - Travel to Lyme disease endemic counties or areas where vector ticks (*Ixodes sp.)* are known to appear.
- Suspect:
  - A case where there is:
    - EM
    - No known exposure (as defined above)
    - No laboratory evidence of infection (as defined above)
  - A case where there is:

- Laboratory evidence of infection
- No clinical information available (laboratory 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".

CONTROL MEASURES

Arizona Administrative Code R9-6-347 Lyme Disease

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Lyme disease case or suspect case; and
2. For each Lyme disease case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frm_lyme.pdf

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LYMPHOCYTIC CHORIOMENINGITIS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-348 Lymphocytic Choriomeningitis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported lymphocytic choriomeningitis case or suspect case; and
2. For each lymphocytic choriomeningitis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

MALARIA SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-349 Malaria

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported malaria case or suspect case; and
2. For each malaria case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/malaria/resources/pdf/report/malaria_form.pdf
- http://www.cdc.gov/malaria/resources/pdf/report/survellianceformcoverletter2.pdf

MEASLES (rubeola) (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-350 Measles (Rubeola)

Case control measures:

1. An administrator of a school or child care establishment, either personally or through a representative, shall:
    a. Exclude a measles case from the school or child care establishment and from school- or child-care-establishment-sponsored events from the onset of illness through the fourth calendar day after the rash appears; and
    b. Exclude a measles suspect case from the school or child care establishment and from school- or child-care-establishment-sponsored events until evaluated and determined to be noninfectious by a physician, physician assistant, or registered nurse practitioner.
2. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and institute airborne precautions for a measles case from onset of illness through the fourth calendar day after the rash appears.
3. A local health agency shall:
    a. Upon receiving a report under R9-6-202 or R9-6-203 of a measles case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
    b. Conduct an epidemiologic investigation of each reported measles case or suspect case;
    c. For each measles case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
    d. Ensure that specimens from each measles case, as required by the Department, are submitted to the Arizona State Laboratory.

Contact control measures:

1. When a measles case has been at a school or child care establishment, the administrator of the school or child care establishment, either personally or through a representative, shall:
    a. Consult with the local health agency to determine who shall be excluded and how long each individual shall be excluded from the school or child care establishment, and
    b. Comply with the local health agency's recommendations for exclusion.
2. A local health agency shall provide or arrange for immunization of each non-immune measles contact within 72 hours after last exposure, if possible.
3. An administrator of a health care institution shall ensure that a paid or volunteer full-time or part-time worker at a health care institution does not participate in the direct care of a measles case or suspect case unless the worker is able to provide evidence of immunity to measles through one of the following:
    a. A record of immunization against measles with two doses of live virus vaccine given on or after the first birthday and at least one month apart;
    b. A statement signed by a physician, physician assistant, registered nurse practitioner, state health officer, or local health officer affirming serologic evidence of immunity to measles; or

c. Documentary evidence of birth before January 1, 1957.

INVESTIGATION FORMS

- Measles CDC Investigation Form: http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix08-2-mea-wrsht.pdf
- ADHS Rash Illness Investigation Form: http://www.azdhs.gov/phs/oids/pdf/forms/frmvpd_rash.doc

MENINGOCOCCAL INVASIVE DISEASE (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

Meningococcal disease presents most commonly as meningitis and/or meningococcemia 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-352 Meningococcal Invasive Disease

Case control measures

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and institute droplet precautions for a meningococcal invasive disease case for 24 hours after the initiation of treatment.
2. A local health agency shall:
   a. Upon receiving a report under R9-6-202 or R9-6-203 of a meningococcal invasive disease case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
   b. Conduct an epidemiologic investigation of each reported meningococcal invasive disease case or suspect case;
   c. For each meningococcal invasive disease case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
   d. Ensure that an isolate from each meningococcal invasive disease case is submitted to the Arizona State Laboratory.

Contact control measures: A local health agency shall:

1. Evaluate the level of risk of transmission from each contact's exposure to a meningococcal invasive disease case and, if indicated, provide or arrange for each contact to receive prophylaxis

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/mening_form.pdf

METHICILLIN-RESISTANT STAPHYLOCOCCUS AUREUS (INVASIVE) REPORTABLE BY LABORATORIES ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES
Arizona Administrative Code R9-6-204

Clinical Laboratory Director Reporting Requirements

A. Except as specified in subsection (D), a director of a clinical laboratory that obtains a test result described in Table 3 or that receives a specimen for detection of an infectious agent or toxin listed in Table 3 shall, either personally or through a representative, submit a report and, if applicable, an isolate or a specimen to the Department within the time limitation and as specified in Table 3 and subsection (B) or (C).
B. Except as provided in Table 3 and as specified in subsection (D), for each test result for a subject for which a report is required by subsection (A) and Table 3, a clinical laboratory director shall ensure the report includes:
    1. The name and address of the laboratory;
    2. The name and telephone number of the director of the clinical laboratory;
    3. The name and, if available, the address and telephone number of the subject;
    4. The date of birth of the subject;
    5. The gender of the subject;
    6. The laboratory identification number;
    7. The specimen type;
    8. The date of collection of the specimen;
    9. The date of the result of the test;
    10. The type of test completed on the specimen;
    11. The test result, including quantitative values if available; and

12. The ordering health care provider's name, address, and telephone number.

C. For each specimen for which an immediate report is required by subsection (A) and Table 3, a clinical laboratory director shall submit a report that includes:
   1. The name and, if available, the address and telephone number of the subject;
   2. The date of birth of the subject;
   3. The gender of the subject;
   4. The laboratory identification number;
   5. The specimen type;
   6. The date of collection of the specimen;
   7. The type of test ordered on the specimen; and
   8. The ordering health care provider's name, address, and telephone number.

D. When the Arizona State Laboratory obtains a test result from anonymous HIV testing sent to the Arizona State Laboratory as described in R9-6-1005, the director of the Arizona State Laboratory shall, either personally or through a representative:
   1. Submit a report to the Department within five working days after obtaining a positive test result; and
   2. Include in the report the following information:
   a. The laboratory identification number of the subject;
   b. The date of birth, gender, race, and ethnicity of the subject;
   c. The date the specimen was collected;
   d. The type of tests completed on the specimen;
   e. The test results, including quantitative values if available; and
   f. The name, address, and telephone number of the person who submitted the specimen to the Arizona State Laboratory.

E. The Department shall supply the director of each clinical laboratory with forms that may be used by the clinical laboratory when making a report required under subsection (A) or (D) and Table 3.

F. A clinical laboratory director shall submit a report by telephone; in a document sent by fax, delivery service, or mail; or through an electronic reporting system authorized by the Department. Except as provided in Table 3, each report shall contain the information required under subsection (B), (C), or (D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/mrsa_form.pdf

MUMPS	SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 laboratory confirmed
- Probable: A case that meets the clinical case definition with a positive test for serum anti-mumps IgM antibody or a case without laboratory confirmation and is epidemiologically linked to another probable or confirmed case or linkage to a group/community defined by public health during an outbreak of mumps.
- Suspect: A case with clinically compatible illness or that meets the clinical case definition without laboratory testing or a case with a positive laboratory tests for mumps and no mumps clinical symptoms.

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-353 Mumps

Case control measures:

An administrator of a school or child care establishment, either personally or through a representative, shall:

1. Exclude a mumps case from the school or child care establishment for five calendar days after the onset of glandular swelling; and
2. Exclude a mumps suspect case from the school or child care establishment and from school- or child-care-establishment-sponsored events until evaluated and determined to be noninfectious by a physician, physician assistant, or registered nurse practitioner.

A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall:

1. Isolate and institute droplet precautions with a mumps case for five calendar days after the onset of glandular swelling.

A local health agency shall:

1. Upon receiving a report under R9-6-202 or R9-6-203 of a mumps case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;

2. Conduct an epidemiologic investigation of each reported mumps case or suspect case;
3. For each mumps case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that specimens from each mumps case, as required by the Department, are submitted to the Arizona State Laboratory.

Contact control measures:

When a mumps case has been at a school or child care establishment, the administrator of the school or child care establishment, either personally or through a representative, shall:

1. Consult with the local health agency to determine who shall be excluded and how long each individual shall be excluded from the school or child care establishment, and
2. Comply with the local health agency's recommendations for exclusion.

An administrator of a health care institution shall

1. Ensure that a paid or volunteer full-time or part-time worker at a health care institution does not participate in the direct care of a mumps case or suspect case unless the worker is able to provide evidence of immunity to mumps through one of the following:
    a. A record of immunization against mumps with two doses of live virus vaccine given on or after the first birthday and at least one month apart; or
    b. A statement signed by a physician, physician assistant, registered nurse practitioner, state health officer, or local health officer affirming serologic evidence of immunity to mumps.

A local health agency shall determine which contacts will be:

1. Excluded from a school or child care establishment, and
2. Advised to obtain an immunization against mumps

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix10-2-mum-wrsht.pdf

REPORTABLE BY LABORATORIES ONLY

NOROVIRUS

See Diarrhea, Nausea, Vomiting

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-354 Norovirus

Outbreak control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported norovirus outbreak; and
2. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F).

Environmental control measures: A local health agency shall

1. Conduct a sanitary inspection or ensure that a sanitary inspection is conducted of each water, sewage, or food preparation facility associated with a norovirus outbreak.

LABORATORY CONTROL MEASURES

Arizona Administrative Code R9-6-204 Clinical Laboratory Director Reporting Requirements:

A. Except as specified in subsection (D), a director of a clinical laboratory that obtains a test result described in Table 3 or that receives a specimen for detection of an infectious agent or toxin listed in Table 3 shall, either personally or through a representative, submit a report and, if applicable, an isolate or a specimen to the Department within the time limitation and as specified in Table 3 and subsection (B) or (C).
B. Except as provided in Table 3 and as specified in subsection (D), for each test result for a subject for which a report is required by subsection (A) and Table 3, a clinical laboratory director shall ensure the report includes:
    1. The name and address of the laboratory;
    2. The name and telephone number of the director of the clinical laboratory;
    3. The name and, if available, the address and telephone number of the subject;
    4. The date of birth of the subject;
    5. The gender of the subject;
    6. The laboratory identification number;
    7. The specimen type;
    8. The date of collection of the specimen;
    9. The date of the result of the test;

10. The type of test completed on the specimen;
11. The test result, including quantitative values if available; and
12. The ordering health care provider's name, address, and telephone number.

C. For each specimen for which an immediate report is required by subsection (A) and Table 3, a clinical laboratory director shall submit a report that includes:
    1. The name and, if available, the address and telephone number of the subject;
    2. The date of birth of the subject;
    3. The gender of the subject;
    4. The laboratory identification number;
    5. The specimen type;
    6. The date of collection of the specimen;
    7. The type of test ordered on the specimen; and
    8. The ordering health care provider's name, address, and telephone number.
D. When the Arizona State Laboratory obtains a test result from anonymous HIV testing sent to the Arizona State Laboratory as described in R9-6-1005, the director of the Arizona State Laboratory shall, either personally or through a representative:
    1. Submit a report to the Department within five working days after obtaining a positive test result; and
    2. Include in the report the following information:
        a. The laboratory identification number of the subject;
        b. The date of birth, gender, race, and ethnicity of the subject;
        c. The date the specimen was collected;
        d. The type of tests completed on the specimen;
        e. The test results, including quantitative values if available; and
        f. The name, address, and telephone number of the person who submitted the specimen to the Arizona State Laboratory.
E. The Department shall supply the director of each clinical laboratory with forms that may be used by the clinical laboratory when making a report required under subsection (A) or (D) and Table 3.
F. A clinical laboratory director shall submit a report by telephone; in a document sent by fax, delivery service, or mail; or through an electronic reporting system authorized by the Department. Except as provided in Table 3, each report shall contain the information required under subsection (B), (C), or (D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/norovirus.pdf

PERTUSSIS (WHOOPING COUGH) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-356 Pertussis (Whooping Cough)

Case control measures:

An administrator of a school or child care establishment, either personally or through a representative, shall:

1. Exclude a pertussis case from the school or child care establishment for 21 calendar days after the date of onset of cough or for five calendar days after the date of initiation of antibiotic treatment for pertussis; and
2. Exclude a pertussis suspect case from the school or child care establishment until evaluated and determined to be noninfectious by a physician, physician assistant, or registered nurse practitioner.

An administrator of a health care institution, either personally or through a representative, shall:

1. Exclude a pertussis case from working at the health care institution for 21 calendar days after the date of onset of cough or for five calendar days after the date of initiation of antibiotic treatment for pertussis; and
2. Exclude a pertussis suspect case from working at the health care institution until evaluated and determined to be noninfectious by a physician, physician assistant, or registered nurse practitioner.

A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall

1. Isolate and initiate droplet precautions for a pertussis case for five calendar days after the date of initiation of antibiotic treatment for pertussis.

A local health agency shall:

a. Conduct an epidemiologic investigation of each reported pertussis case or suspect case; and
b. For each pertussis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures:

1. When a pertussis case has been at a school or child care establishment, the administrator of the school or child care establishment, either personally or through a representative, shall:
2. Consult with the local health agency to determine who shall be excluded and how long each individual shall be excluded from the school or child care establishment, and
3. Comply with the local health agency's recommendations for exclusion.
4. A local health agency shall identify contacts of a pertussis case and, if indicated, shall provide or arrange for a contact to receive antibiotic prophylaxis.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/pert_form.pdf

PLAGUE (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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).

CONTROL MEASURES

Arizona Administrative Code R9-6-357 Plague

Case control measures:

A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall:

1. Isolate and institute droplet precautions for a pneumonic plague case or suspect case until 72 hours of antibiotic therapy have been completed with favorable clinical response.

An individual handling the body of a deceased plague case shall use droplet precautions.

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a plague case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;

2. Conduct an epidemiologic investigation of each reported plague case or suspect case;
3. For each plague case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that an isolate from each plague case is submitted to the Arizona State Laboratory.

Contact control measures:

A local health agency shall

1. Provide follow-up to pneumonic plague contacts for seven calendar days after last exposure to a pneumonic plague case.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frm_plague.pdf

POLIOMYELITIS (Paralytic) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 BI 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 BI 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

CONTROL MEASURES

Arizona Administrative Code R9-6-358 Poliomyelitis

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a poliomyelitis case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported poliomyelitis case or suspect case;
3. For each poliomyelitis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that specimens from each poliomyelitis case, as required by the Department, are submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix14-2-polio-wrsht.pdf

POLIO (NONPARALYTIC) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 community[1]. 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 2000[2]. 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 country[3]. 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-358 Poliomyelitis

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a poliomyelitis case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported poliomyelitis case or suspect case;
3. For each poliomyelitis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that specimens from each poliomyelitis case, as required by the Department, are submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix14-2-polio-wrsht.pdf

PSITTACOSIS (Chlamydia psittaci) (Ornithosis) SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 *Chlamydophila 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 Ciembor, CR Gregory, KDE Everett, BW Ritchie, JM Winchell 2008 Genotyping of Chlamydophila psittaci by real-time PCR and high resolution melt analysis. J. Clin. Microbiol. 47:175-181

CONTROL MEASURES

Arizona Administrative Code R9-6-359 Psittacosis (Ornithosis)

Case control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported psittacosis case or suspect case; and
2. For each psittacosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Environmental control measures: A local health agency shall:

1. If a bird infected with Chlamydia psittaci or Chlamydophila psittaci is located in a private residence:
    a. Provide health education for the bird's owner about psittacosis and the risks of becoming infected with psittacosis, and
    b. Advise the bird's owner to obtain treatment for the bird; and
2. If a bird infected with Chlamydia psittaci or Chlamydophila psittaci is located in a setting other than a private residence:
    a. Provide health education for the bird's owner about psittacosis and the risks of becoming infected with psittacosis,
    b. Ensure that the bird is treated or destroyed and any contaminated structures are disinfected, and
    c. Require the bird's owner to isolate the bird from contact with members of the public and from other birds until treatment of the bird is completed or the bird is destroyed.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frm_psitacos.pdf

Q FEVER (Coxiella burnetii) SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 ≥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 ≥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 ≥ 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 ≥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).

CONTROL MEASURES

Arizona Administrative Code R9-6-360 Q-Fever

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a Q fever case or suspect case, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported Q fever case or suspect case; and
3. For each Q fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frm_qfever.pdf

RABIES, ANIMAL REPORT IMMEDIATELY

Report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

http://www.azsos.gov/public_services/Title_09/9-06.htm

REPORTING

- http://www.azdhs.gov/phs/oids/vector/rabies/index.htm
- Manual: http://www.azdhs.gov/phs/oids/vector/rabies/manual.htm
- Animal Bite or Exposure Form: http://www.azdhs.gov/phs/oids/pdf/forms/frm_rabiesexpsr.doc

RABIES, HUMAN (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES
Arizona Administrative Code R9-6-361 Rabies in a Human

Case control measures: A local health agency shall:

1. Upon receiving a report under R9-6-202 of a human rabies case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported human rabies case or suspect case; and
3. For each human rabies case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall evaluate the level of risk of transmission from each contact's exposure to a human rabies case and, if indicated, provide or arrange for each contact to receive prophylaxis.

INVESTIGATION FORMS
None

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

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-362 Relapsing Fever (Borreliosis)

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported borreliosis case or suspect case; and
2. For each borreliosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

RESPIRATORY SYNCYTIAL VIRUS (RSV) REPORTABLE BY LABORATORIES ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

INVESTIGATION FORMS

None

REYE SYNDROME SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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/mm^3 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

CONTROL MEASURES

Arizona Administrative Code R9-6-363 Reye Syndrome

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Reye syndrome case or suspect case; and
2. For each Reye syndrome case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

ROCKY MOUNTAIN SPOTTED FEVER & OTHER SPOTTED FEVER RICKETTSIOSES SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 ≥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).

CONTROL MEASURES

Arizona Administrative Code R9-6-364 Rocky Mountain Spotted Fever

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported Rocky Mountain spotted fever case or suspect case; and
2. For each Rocky Mountain spotted fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/ticks/forms/2010_tbrd_crf.pdf

RUBELLA (German measles)	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 1 WORKING DAY.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-365 Rubella (German Measles)

Case control measures:

An administrator of a school or child care establishment, either personally or through a representative, shall:

1. Exclude a rubella case from the school or child care establishment and from school- or child-care-establishment-sponsored events from the onset of illness through the seventh calendar day after the rash appears; and
2. Exclude a rubella suspect case from the school or child care establishment and from school- or child-care-establishment-sponsored events until evaluated and determined to be noninfectious by a physician, physician assistant, or registered nurse practitioner.

A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall

1. Isolate and institute droplet precautions for a rubella case through the seventh calendar day after the rash appears.

A local health agency shall:

1. Upon receiving a report under R9-6-202 or R9-6-203 of a rubella case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported rubella case or suspect case;
3. For each rubella case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that specimens from each rubella case, as required by the Department, are submitted to the Arizona State Laboratory.

Contact control measures:

An administrator of a health care institution shall ensure that a paid or volunteer full-time or part-time worker at a health care institution does not participate in the direct care of a rubella case or suspect case or of a patient who is or may be pregnant unless the worker first provides evidence of immunity to rubella consisting of:

1. A record of immunization against rubella given on or after the first birthday, or

2. A statement signed by a physician, physician assistant, registered nurse practitioner, state health officer, or local health officer affirming serologic evidence of immunity to rubella.

When a rubella case has been at a school or child care establishment, the administrator of the school or child care establishment, either personally or through a representative, shall:

1. Consult with the local health agency to determine who shall be excluded and how long each individual shall be excluded from the school or child care establishment, and
2. Comply with the local health agency's recommendations for exclusion.

A local health agency shall provide or arrange for immunization of each non-immune rubella contact within 72 hours after last exposure, if possible.

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix16-2-rubella-wrsh.pdf
- http://www.azdhs.gov/phs/oids/pdf/forms/frmvpd_rash.doc

RUBELLA syndrome, congenital (β) SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-366 Rubella Syndrome, Congenital

Case control measures:

A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and implement contact precautions for an infant congenital rubella syndrome case until:

1. The infant congenital rubella syndrome case reaches one year of age, or
2. Two successive negative virus cultures are obtained from the infant congenital rubella syndrome case after the infant congenital rubella syndrome case reaches three months of age.

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a congenital rubella syndrome case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported congenital rubella syndrome case or suspect case;
3. For each congenital rubella syndrome case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
4. Ensure that specimens from each congenital rubella syndrome case, as required by the Department, are submitted to the Arizona State Laboratory.

Contact control measures: An administrator of a health care institution shall

1. Ensure that a paid or volunteer full-time or part-time worker at a health care institution who is known to be pregnant does not participate in the direct care of a congenital rubella syndrome case or suspect case unless the worker first provides evidence of immunity to rubella that complies with R9-6-365(B)(1).

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix17-rubella-syn.pdf

SALMONELLOSIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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
- Confirmed: Isolation of *Salmonella* from a clinical specimen
- Suspect: Detection of *Salmonella* from a clinical specimen using a non-culture based method

Case Classification
- Confirmed**:** A case that is laboratory confirmed.
- Probable**:** A clinically compatible illness that is epidemiologically linked to a confirmed case.
- Suspect: A case that meets the suspect laboratory criteria diagnosis

CONTROL MEASURES

Arizona Administrative Code R9-6-367 Salmonellosis

Case control measures: A local health agency shall:
1. Exclude a salmonellosis case with diarrhea from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until either of the following occurs:
    a. Two successive cultures negative for Salmonella spp. are obtained from stool specimens collected at least 24 hours apart, or
    b. Diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported salmonellosis case or suspect case; and
3. For each salmonellosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall:
1. Exclude a salmonellosis contact with diarrhea of unknown cause from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until either of the following occurs:
    a. Two successive cultures negative for Salmonella spp. are obtained from stool specimens collected at least 24 hours apart, or
    b. Diarrhea has resolved.

Environmental control measures: A local health agency shall:
1. If an animal infected with Salmonella spp. is located in a private residence, provide health education for the animal's owner about salmonellosis and the risks of becoming infected with Salmonella spp.; and

2. If an animal infected with Salmonella spp. is located in a setting other than a private residence:
    a. Provide health education for the animal's owner about salmonellosis and the risks of becoming infected with Salmonella spp., and
    b. Require the animal's owner to provide information to individuals with whom the animal may come into contact about salmonellosis and methods to reduce the risk of transmission.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/salmonellaform.pdf

SCABIES	REPORT OUTBREAKS ONLY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-368 Scabies

Case control measures: An administrator of a school or child care establishment, either personally or through a representative, shall:

1. Exclude a scabies case from the school or child care establishment until treatment for scabies is completed.
2. Exclude a scabies case from participating in the direct care of a patient or resident until treatment for scabies is completed.
3. Ensure that a scabies case receives treatment for scabies and that the case's clothing and personal articles are disinfested.

Contact control measures: An administrator of a school, child care establishment, health care institution, or shelter, either personally or through a representative, shall:

1. Advise a scabies contact with symptoms of scabies to obtain examination and, if necessary, treatment.

Outbreak control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported scabies outbreak;
2. Provide health education regarding prevention, control, and treatment of scabies to individuals affected by the outbreak;
3. When a scabies outbreak occurs in a health care institution, notify the licensing agency of the outbreak; and
4. For each scabies outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-202(E).

INVESTIGATION FORMS

None

SEVERE ACUTE RESPIRATORY SYNDROME (SARS) (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-369 Severe Acute Respiratory Syndrome

Case control measures. A local health agency shall:
1. Upon receiving a report under R9-6-202 of a severe acute respiratory syndrome case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. In consultation with the Department, ensure the isolation of and the institution of both airborne precautions and contact precautions for a severe acute respiratory syndrome case or suspect case to prevent transmission;
3. Conduct an epidemiologic investigation of each reported severe acute respiratory syndrome case or suspect case; and

4. For each severe acute respiratory syndrome case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency, in consultation with the Department, shall:

1. Quarantine a severe acute respiratory syndrome contact as necessary to prevent transmission0

INVESTIGATION FORMS

None

SHIGELLOSIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

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

Laboratory Criteria for Diagnosis

- Confirmed: Isolation of *Shigella* species from a clinical specimen
- Suspect: Detection of *Shigella* from a clinical specimen using a non-culture based method

Case Classification

- Confirmed**:** A case that is laboratory confirmed.
- Probable**:** A clinically compatible illness that is epidemiologically linked to a confirmed case.
- Suspect: A case that meets the suspect laboratory criteria for diagnosis

CONTROL MEASURES

Arizona Administrative Code R9-6-370 Shigellosis

Case control measures: A local health agency shall:

1. Exclude a shigellosis case with diarrhea from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until either of the following occurs:
    a. Two successive cultures negative for Shigella spp. are obtained from stool specimens collected at least 24 hours apart and at least 48 hours after discontinuing antibiotics, or
    b. Treatment is maintained for 24 hours and diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported shigellosis case or suspect case; and
3. For each shigellosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency shall:

1. Exclude a shigellosis contact with diarrhea of unknown cause from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until:
    a. Two successive cultures negative for Shigella spp. are obtained from stool specimens collected at least 24 hours apart, or
    b. Treatment has been maintained for 24 hours and diarrhea has resolved.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_shigel.doc

SMALLPOX (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

An illness with acute onset of fever ≥101º F (≥38.3 º 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."

CONTROL MEASURES

Arizona Administrative Code R9-6-371 Smallpox

Case control measures: A local health agency shall:

1. Upon receiving a report under R9-6-202 of a smallpox case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
2. In consultation with the Department:
    a. Ensure the isolation of and the institution of both airborne precautions and contact precautions for a smallpox case or suspect case to prevent transmission; and
    b. Conduct an epidemiologic investigation of each reported smallpox case or suspect case; and
3. For each smallpox case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures: A local health agency, in consultation with the Department, shall:

1. Quarantine a smallpox contact as necessary to prevent transmission; and
2. Monitor the contact for smallpox symptoms, including fever, each day for 21 calendar days after last exposure.

INVESTIGATION FORMS

- http://emergency.cdc.gov/agent/smallpox/response-plan

STREPTOCOCCAL GROUP A: INVASIVE DISEASE (β)	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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:
    - Renal impairment: Creatinine two mg/dl (≥177 μmol/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 two-fold elevation over the baseline level.
    - Coagulopathy: Platelets 100,000/mm^3 (100 x 10^6/L) or disseminated intravascular coagulation defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products.
    - 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.
    - 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.
    - A generalized erythematous macular rash that may desquamate.
    - 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-372 Streptococcal Group A Infection

Non-invasive streptococcal group A infection:

1. Case control measures: An administrator of a school, child care establishment, or health care institution or a person in charge of a food establishment, either personally or through a representative, shall
    a) Exclude a streptococcal group A infection case with streptococcal lesions or streptococcal sore throat from working as a food handler, attending or working in a school, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution for 24 hours after the initiation of treatment for streptococcal infection.

Invasive streptococcal group A infection:

- Outbreak control measures: A local health agency shall:
    a) Conduct an epidemiologic investigation of each reported outbreak of streptococcal group A invasive infection;
    b) For each streptococcal group A invasive infection case involved in an outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
    c) For each outbreak of streptococcal group A invasive infection, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/strep_groupa_form.pdf

STREPTOCOCCAL GROUP B: INVASIVE DISEASE	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-373 Streptococcal Group B Infection in an Infant Younger Than 90 Days of Age

Case control measures: A local health agency shall:

1. Confirm the diagnosis of streptococcal group B infection for each reported case or suspect case of streptococcal group B infection in an infant younger than 90 days of age; and
2. For each case of streptococcal group B infection in an infant younger than 90 days of age, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(C)

INVESTIGATION FORMS

None

STREPTOCOCCUS PNEUMONIAE: INVASIVE DISEASE SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-374 Streptococcus pneumoniae Infection

A local health agency shall:

1. If a reported Streptococcus pneumoniae infection case or suspect case is five or more years of age:
    a. Confirm the diagnosis of Streptococcus pneumoniae infection for each reported Streptococcus pneumoniae infection case or suspect case who is five or more years of age; and

b. For each Streptococcus pneumoniae infection case who is five or more years of age, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(C); and

2. If a reported Streptococcus pneumoniae infection case or suspect case is under five years of age:
    a. Conduct an epidemiologic investigation for each reported Streptococcus pneumoniae infection case or suspect case who is under five years of age; and
    b. For each Streptococcus pneumoniae infection case who is under five years of age, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix13-strep-pneu.pdf

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

SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-375 Syphilis

A. Case control measures:
   1. A syphilis case shall obtain serologic testing for syphilis three months, six months, and one year after initiating treatment.
   2. A local health agency shall:
      a. Conduct an epidemiologic investigation of each reported syphilis case or suspect case, confirming the stage of the disease;
      b. For each syphilis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
      c. If the syphilis case is pregnant, ensure that the syphilis case obtains the serologic testing for syphilis required in subsection (A)(1); and
      d. Comply with the requirements specified in R9-6-1103 concerning treatment and health education for a syphilis case.
   3. The operator of a blood bank, blood center, or plasma center shall notify a donor of a test result with significant evidence suggestive of syphilis, as required under A.R.S. § 32-1483 and 21 CFR 630.6.

B. Contact control measures: When a syphilis case has named a contact, a local health agency shall comply with the requirements specified in R9-6-1103 concerning notification, testing, treatment, and health education for the contact.

C. Outbreak control measures: A local health agency shall:
   1. Conduct an epidemiologic investigation of each reported syphilis outbreak; and
   2. For each syphilis outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cdr_form.pdf

SYPHILIS, CONGENITAL SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-375 Syphilis

A. Case control measures:

1. A syphilis case shall obtain serologic testing for syphilis three months, six months, and one year after initiating treatment.
2. A local health agency shall:
    a. Conduct an epidemiologic investigation of each reported syphilis case or suspect case, confirming the stage of the disease;
    b. For each syphilis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
    c. If the syphilis case is pregnant, ensure that the syphilis case obtains the serologic testing for syphilis required in subsection (A)(1); and
    d. Comply with the requirements specified in R9-6-1103 concerning treatment and health education for a syphilis case.
3. The operator of a blood bank, blood center, or plasma center shall notify a donor of a test result with significant evidence suggestive of syphilis, as required under A.R.S. § 32-1483 and 21 CFR 630.6.

B. Contact control measures: When a syphilis case has named a contact, a local health agency shall comply with the requirements specified in R9-6-1103 concerning notification, testing, treatment, and health education for the contact.

C. Outbreak control measures: A local health agency shall:
1. Conduct an epidemiologic investigation of each reported syphilis outbreak; and
2. For each syphilis outbreak, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F).

INVESTIGATION FORMS

None

TAENIASIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-376 Taeniasis

Case control measures: A local health agency shall:

1. Exclude a taeniasis case with Taenia spp. from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until free of infestation;
2. Conduct an epidemiologic investigation of each reported taeniasis case; and
3. For each taeniasis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

TETANUS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-377 Tetanus

Case control measures: A local health agency shall:
1. Conduct an epidemiologic investigation of each reported tetanus case or suspect case; and
2. For each tetanus case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix18-2-tet-wrsht.pdf

TOXIC-SHOCK SYNDROME SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

For Toxic Shock Syndrome (not Streptococcal):

An illness with the following clinical manifestations:

- Fever: Temperature ≥38.9°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 <5th 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/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:

- Fever: temperature greater than or equal to 102.0°F (greater than or equal to 38.9°C)
- Rash: diffuse macular erythroderma
- Desquamation: 1-2 weeks after onset of rash
- Hypotension: systolic blood pressure less than or equal to 90 mm Hg for adults or less than fifth percentile by age for children aged less than 16 years
- Multisystem involvement (three or more of the following organ systems):
    - Gastrointestinal: vomiting or diarrhea at onset of illness
    - Muscular: severe myalgia or creatine phosphokinase level at least twice the upper limit of normal
    - 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 (greater than or equal to 5 leukocytes per high-power field) in the absence of urinary tract infection
    - Hepatic: total bilirubin, alanine aminotransferase enzyme, or asparate aminotransferase enzyme levels at least twice the upper limit of normal for laboratory
    - Hematologic: platelets less than 100,000/mm^3

- Central nervous system: disorientation or alterations in consciousness without focal neurologic signs when fever and hypotension are absent

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:

Negative results on the following tests, if obtained:

- Blood or cerebrospinal fluid cultures blood culture may be positive for *Staphylococcus aureus*)
- negative serologies for Rocky Mountain spotted fever, leptospirosis, or measles

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:

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

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%.

CONTROL MEASURES

Arizona Administrative Code R9-6-378 Toxic Shock Syndrome

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported toxic shock syndrome case or suspect case; and
2. For each toxic shock syndrome case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/toxicshock.pdf

TRICHINOSIS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-379 Trichinosis

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported trichinosis case or suspect case; and
2. For each trichinosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

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.

CASE DEFINITION

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.

CONTROL MEASURES
Arizona Administrative Code R9-6-380 Tuberculosis

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and institute airborne precautions for an individual with infectious active tuberculosis or a suspect case until:
   a. At least three successive sputum smears collected at least eight hours apart, at least one of which is taken in the morning as soon as possible after the individual awakens from sleep, are negative for acid-fast bacilli;
   b. Anti-tuberculosis treatment is initiated with multiple antibiotics;
   c. Clinical signs and symptoms of active tuberculosis are improved; and
   d. For a case of multi-drug resistant active tuberculosis, a tuberculosis control officer has approved the release of the case from airborne precautions.
2. An administrator of a health care institution, either personally or through a representative, shall notify a local health agency at least one working day before discharging a tuberculosis case or suspect case.
3. A local health agency shall:
   a. Exclude an individual with infectious active tuberculosis or a suspect case from working, unless the individual's work setting has been approved by a tuberculosis control officer, until:
      i. At least three successive sputum smears collected at least eight hours apart, at least one of which is taken first thing in the morning as soon as possible after the individual awakens from sleep, are negative for acid-fast bacilli;
      ii. Anti-tuberculosis treatment is initiated with multiple antibiotics;
      iii. Clinical signs and symptoms of active tuberculosis are improved; and
      iv. For a case of multi-drug resistant active tuberculosis, a tuberculosis control officer has approved the release of the case from airborne precautions;
   b. Conduct an epidemiologic investigation of each reported tuberculosis case or suspect case;
   c. For each tuberculosis case or suspect case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
   d. Ensure that an isolate from each tuberculosis case is submitted to the Arizona State Laboratory; and
   e. Comply with the requirements specified in R9-6-1202.

Contact control measures:

1. A contact of an individual with infectious active tuberculosis shall allow a local health agency to evaluate the contact's tuberculosis status.
2. A local health agency shall comply with the tuberculosis contact control measures specified in R9-6-1202.

An individual is not a tuberculosis case if the individual has a positive result from an approved test for tuberculosis but does not have clinical signs or symptoms of disease.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frmtb_rvct.pdf
- http://www.azdhs.gov/phs/oids/pdf/forms/frmtb_rvctaddem.doc
- http://www.azdhs.gov/phs/oids/pdf/forms/frmtb_regist.doc
- http://www.azdhs.gov/phs/oids/pdf/forms/frmtb_ij_notific.doc
- http://www.azdhs.gov/phs/oids/pdf/forms/frmtb_ij_fu.doc

TULAREMIA (β)	SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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).

CONTROL MEASURES

Arizona Administrative Code R9-6-381 Tularemia

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate a pneumonic tularemia case until 72 hours of antibiotic therapy have been completed with favorable clinical response.
2. A local health agency shall:
    a. Upon receiving a report under R9-6-202 of a tularemia case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
    b. Conduct an epidemiologic investigation of each reported tularemia case or suspect case;
    c. For each tularemia case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
    d. Ensure that an isolate from each tularemia case is submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

None

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

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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*.)

CONTROL MEASURES

Arizona Administrative Code R9-6-382 Typhoid Fever

Case control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported typhoid fever case or suspect case;
2. For each typhoid fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D);
3. Exclude a typhoid fever case from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until:
    a. At least one month after the date of onset of illness, and
    b. After three successive cultures negative for Salmonella typhi have been obtained from stool specimens collected at least 24 hours apart and at least 48 hours after cessation of antibiotic therapy;
4. If a culture from a typhoid fever case who has received antibiotic therapy is positive for Salmonella typhi, enforce the exclusions specified in subsection (A)(3) until three successive cultures negative for Salmonella typhi are obtained from stool specimens collected at least one month apart and 12 or fewer months after the date of onset of illness;

5. If a positive culture is obtained on a stool specimen collected at least 12 months after onset of illness from a typhoid fever case who has received antibiotic therapy, redesignate the case as a carrier; and
6. Exclude a typhoid fever carrier from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until three successive cultures negative for Salmonella typhi have been obtained from stool specimens collected at least one month apart, at least one by purging.

Contact control measures: A local health agency shall

1. Exclude a typhoid fever contact from working as a food handler, caring for children in or attending a child care establishment, or caring for patients or residents in a health care institution until two successive cultures negative for Salmonella typhi are obtained from stool specimens collected at least 24 hours apart.

INVESTIGATION FORMS

- http://www.cdc.gov/nationalsurveillance/PDFs/typhi-surveillance-form.pdf

TYPHUS FEVER SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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.

CONTROL MEASURES

Arizona Administrative Code R9-6-383 Typhus Fever

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported typhus fever case or suspect case; and
2. For each typhus fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

UNEXPLAINED DEATH WITH HISTORY OF FEVER	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Deaths meeting any of the following criteria should be reported:

- Hospital/facility or patient-reported death with no known cause AND with a history of fever (>38.0C) OR a temperature of <36C within 48 hours of death. Please refer to protocol for any clarification.

• CONTROL MEASURES

Arizona Administrative Code R9-6-384 Unexplained Death with a History of Fever

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a case or suspect case of unexplained death with a history of fever, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported case or suspect case of unexplained death with a history of fever; and
3. For each case of unexplained death with a history of fever, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(E).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/unex_form.pdf

VACCINIA-RELATED ADVERSE EVENT SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 then 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

CONTROL MEASURES

Arizona Administrative Code R9-6-385 Vaccinia-related Adverse Event

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported case or suspect case of a vaccinia-related adverse event; and
2. For each case of a vaccinia-related adverse event, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

VANCOMYCIN-INTERMEDIATE STAPHYLOCOCCUS AUREUS (VISA), or VANCOMYCIN-RESISTANT STAPHYLOCOCCUS AUREUS (VRSA)	SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-387 Vancomycin-Resistant Staphylococcus epidermidis

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and implement contact precautions for a case or suspect case of vancomycin-resistant Staphylococcus epidermidis.
2. A local health agency shall:
    a. Upon receiving a report under R9-6-202 of a case or suspect case of vancomycin-resistant Staphylococcus epidermidis, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;

b. Conduct an epidemiologic investigation of each reported case or suspect case of vancomycin-resistant Staphylococcus epidermidis;
c. For each case of vancomycin-resistant Staphylococcus epidermidis, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
d. Ensure that an isolate from each case of vancomycin-resistant Staphylococcus epidermidis is submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/VISA-VRSA_Form.pdf

VANCOMYCIN-RESISTANT STAPHYLOCOCCUS EPIDERMIDIS (VRSE) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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

CONTROL MEASURES

Arizona Administrative Code R9-6-387 Vancomycin-Resistant Staphylococcus epidermidis

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and implement contact precautions for a case or suspect case of vancomycin-resistant Staphylococcus epidermidis.
2. A local health agency shall:
    a. Upon receiving a report under R9-6-202 of a case or suspect case of vancomycin-resistant Staphylococcus epidermidis, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
    b. Conduct an epidemiologic investigation of each reported case or suspect case of vancomycin-resistant Staphylococcus epidermidis;
    c. For each case of vancomycin-resistant Staphylococcus epidermidis, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
    d. Ensure that an isolate from each case of vancomycin-resistant Staphylococcus epidermidis is submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

- None

VARICELLA (Chickenpox) and VARICELLA DEATHS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

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.

CASE DEFINITION

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 that 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 (lgG) 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-388 Varicella (Chickenpox)

Case control measures:

1. An administrator of a school or child care establishment, either personally or through a representative, shall exclude a varicella case from the school or child care establishment and from school- or child-care-establishment-sponsored events until lesions are dry and crusted.
2. An administrator of a health care institution, either personally or through a representative, shall isolate and implement airborne precautions for a varicella case until the case is no longer infectious.
3. A local health agency shall:
    a. Conduct an epidemiologic investigation of each reported case of death due to varicella infection; and
    b. For each reported case of death due to varicella infection, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

Contact control measures:

1. When a varicella case has been at a school or child care establishment, the administrator of the school or child care establishment, either personally or through a representative, shall:
    a. Consult with the local health agency to determine who shall be excluded and how long each individual shall be excluded from the school or child care establishment, and
    b. Comply with the local health agency's recommendations for exclusion.
2. A local health agency shall determine which contacts of a varicella case will be:
    a. Excluded from a school or child care establishment, and
    b. Advised to obtain an immunization against varicella.

INVESTIGATION FORMS

- Death Investigation Form: http://www.cdc.gov/vaccines/pubs/surv-manual/appx/appendix19-2-varicella-wrsh.pdf
- Outbreak Reporting Form (School and Childcare Facilities Only): http://www.azdhs.gov/phs/oids/pdf/forms/VaricellaReportingForm_ADHS.pdf

VIBRIO INFECTION	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

An infection of variable severity characterized by watery diarrhea, 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 case that is epidemiologically linked to a confirmed case.

Comment

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

CONTROL MEASURES

Arizona Administrative Code R9-6-389 Vibrio Infection

Case control measures: A local health agency shall:

1. Exclude a Vibrio infection case or suspect case from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until either of the following occurs:
    a. Two successive cultures negative for Vibrio spp. are obtained from stool specimens collected at least 24 hours apart, or
    b. Diarrhea has resolved;
2. Conduct an epidemiologic investigation of each reported Vibrio infection case or suspect case; and
3. For each Vibrio infection case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/cholera_form.pdf

VIRAL HEMORRHAGIC FEVER (β) SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

- 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, myalagia, headache to bleeding/hemorrhaging from vascular abnormalities to shock and death. There are four RNA viral families that cause VHF:

- Arenaviridea family (Lassa fever, Argentina HF, Bolvian HF, Venezuelan HF, Brazilian HF);
- Bunyaviridae family (Rift Valley fever, Crimean-Congo HF, Hantavirus, Korean HF);
- Filovirdae (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.

CONTROL MEASURES

Arizona Administrative Code R9-6-390 Viral Hemorrhagic Fever

Case control measures:

1. A diagnosing health care provider or an administrator of a health care institution, either personally or through a representative, shall isolate and implement both droplet precautions and contact precautions for a viral hemorrhagic fever case or suspect case for the duration of the illness.
2. A local health agency shall:
    a. Upon receiving a report under R9-6-202 of a viral hemorrhagic fever case or suspect case, notify the Department within 24 hours after receiving the report and provide to the Department the information contained in the report;
    b. Conduct an epidemiologic investigation of each reported viral hemorrhagic fever case or suspect case;
    c. For each viral hemorrhagic fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
    d. Ensure that specimens from each viral hemorrhagic fever case are submitted to the Arizona State Laboratory.

Contact control measures: A local health agency, in consultation with the Department, shall quarantine a viral hemorrhagic fever contact as necessary to prevent transmission.

INVESTIGATION FORMS

None

WATERBORNE DISEASE OUTBREAK SUBMIT A REPORT WITHIN 24 HOURS

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.

If Suspected Norovirus, complete Suspected Viral Gastroenteritis Outbreak Form.

CASE DEFINITION

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 (WBDOSS).

Although not reported through NORS, the WBDOSS 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.

CONTROL MEASURES

Arizona Administrative Code R9-6-324 Diarrhea, Nausea, or Vomiting

Environmental control measures: A local health agency shall

1. Conduct a sanitary inspection or ensure that a sanitary inspection is conducted of each water, sewage, or food preparation facility associated with an outbreak of diarrhea, nausea, or vomiting.

Outbreak control measures: A local health agency shall:

1. Conduct an epidemiologic investigation of each reported outbreak of diarrhea, nausea, or vomiting;
2. Submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(F) for:
    a. Each suspected foodborne illness outbreak,
    b. Each suspected waterborne illness outbreak, and
    c. Each outbreak of viral gastroenteritis.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/frmfb_water.pdf

WEST NILE VIRUS	SUBMIT A REPORT WITHIN 5 WORKING DAYS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Includes: California Serogroup Viruses, (i.e., California encephalitis, Jamestown Canyon, Keystone, La Crosse, Snowshoe hare, and Trivittatus viruses), Eastern Equine Encephalitis Virus, Powassan Virus, St. Louis Encephalitis Virus, West Nile Virus, Western Equine Encephalitis Virus

Background

Arthropod-borne viruses (arboviruses) are transmitted to humans primarily through the bites of infected mosquitoes, ticks, sand flies, or midges. Other modes of transmission for some arboviruses include blood transfusion, organ transplantation, perinatal transmission, consumption of unpasteurized dairy products, breast feeding, and laboratory exposures.
More than 130 arboviruses are known to cause human disease. Most arboviruses of public health importance belong to one of three virus genera: *Flavivirus*, *Alphavirus*, and *Bunyavirus*.

Clinical description

Most arboviral infections are asymptomatic. Clinical disease ranges from mild febrile illness to severe encephalitis. For the purposes of surveillance and reporting, based on their clinical presentation, arboviral disease cases are often categorized into two primary groups: neuroinvasive disease and non-neuroinvasive disease.

Neuroinvasive disease: Many arboviruses cause neuroinvasive disease such as aseptic meningitis, encephalitis, or acute flaccid paralysis (AFP). These illnesses are usually characterized by the acute onset of fever with stiff neck, altered mental status, seizures, limb weakness, cerebrospinal fluid (CSF) pleocytosis, or abnormal neuroimaging. AFP may result from anterior ("polio") myelitis, peripheral neuritis, or post-infectious peripheral demyelinating neuropathy (i.e., Guillain-Barré syndrome). Less common neurological manifestations, such as cranial nerve palsies, also occur.

Non-neuroinvasive disease: Most arboviruses are capable of causing an acute systemic febrile illness (e.g., West Nile fever) that may include headache, myalgias, arthralgias, rash, or gastrointestinal symptoms. Rarely, myocarditis, pancreatitis, hepatitis, or ocular manifestations such as chorioretinitis and iridocyclitis can occur.

Clinical criteria for diagnosis

A clinically compatible case of arboviral disease is defined as follows:

Neuroinvasive disease:

- Fever (≥100.4°F or 38°C) as reported by the patient or a health-care provider, **AND**
- Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician, **AND**
- Absence of a more likely clinical explanation.

Non-neuroinvasive disease

- Fever (≥100.4°F or 38°C) as reported by the patient or a health-care provider, **AND**
- Absence of neuroinvasive disease, **AND**
- Absence of a more likely clinical explanation.

Laboratory criteria for diagnosis

- Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, OR
- Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, OR
- Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, OR
- Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred, OR
- Virus-specific IgM antibodies in CSF or serum.

Case classification

Confirmed:

- Neuroinvasive disease
  A case that meets the above clinical criteria for neuroinvasive disease and one or more the following laboratory criteria for a confirmed case:
  - Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, **OR**
  - Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, **OR**
  - Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
  - Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred.

- Non-neuroinvasive disease
  A case that meets the above clinical criteria for non-neuroinvasive disease and one or more of the following laboratory criteria for a confirmed case:
  - Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, **OR**
  - Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, **OR**
  - Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
  - Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred.

Probable:

- Neuroinvasive disease
  A case that meets the above clinical criteria for neuroinvasive disease and the following laboratory criteria:
  - Virus-specific IgM antibodies in CSF or serum but with no other testing.
  - Non-neuroinvasive disease
    A case that meets the above clinical criteria for non-neuroinvasive disease and the laboratory criteria for a probable case:
  - Virus-specific IgM antibodies in CSF or serum but with no other testing.

Comment

Interpreting arboviral laboratory results

- **Serologic cross-reactivity.** In some instances, arboviruses from the same genus produce cross-reactive antibodies. In geographic areas where two or more closely-related arboviruses occur, serologic testing for more than one virus may be needed and results compared to determine the specific causative virus. For example, such testing might be needed to distinguish antibodies resulting from infections within genera, e.g., flaviviruses such as West Nile, St. Louis encephalitis, Powassan, Dengue, or Japanese encephalitis viruses.
- **Rise and fall of IgM antibodies.** For most arboviral infections, IgM antibodies are generally first detectable at 3 to 8 days after onset of illness and persist for 30 to 90 days, but longer persistence has been documented (e.g, up to 500 days for West Nile virus). Serum collected within 8 days of illness onset may not have detectable IgM and testing should be repeated on a convalescent-phase sample to rule out arboviral infection in those with a compatible clinical syndrome.
- **Persistence of IgM antibodies.** Arboviral IgM antibodies may be detected in some patients months or years after their acute infection. Therefore, the presence of these virus-specific IgM antibodies may signify a past infection and be unrelated to the current acute illness. Finding virus-specific IgM antibodies in CSF or a fourfold or greater change in virus-specific antibody titers between acute- and convalescent-phase serum specimens provides additional laboratory evidence that the arbovirus was the likely cause of the patient's recent illness. Clinical and epidemiologic history also should be carefully considered.
- **Persistence of IgG and neutralizing antibodies.** Arboviral IgG and neutralizing antibodies can persist for many years following a symptomatic or asymptomatic infection. Therefore, the presence of these antibodies alone is only evidence of previous infection and clinically compatible cases with the presence of IgG, but not IgM, should be evaluated for other etiologic agents.
- **Arboviral serologic assays.** Assays for the detection of IgM and IgG antibodies commonly include enzyme-linked immunosorbent assay (ELISA), microsphere immunoassay (MIA), or immunofluorescence assay (IFA). These assays provide a presumptive diagnosis and should have confirmatory testing performed. Confirmatory testing involves the detection of arboviral-specific neutralizing antibodies utilizing assays such as plaque reduction neutralization test (PRNT).
- **Other information to consider.** Vaccination history, detailed travel history, date of onset of symptoms, and knowledge of potentially cross-reactive arboviruses known to circulate in the geographic area should be considered when interpreting results.

Imported arboviral diseases

Human disease cases due to Dengue or Yellow fever viruses are nationally notifiable to CDC using specific case definitions. However, many other exotic arboviruses (e.g., Chikungunya, Japanese encephalitis, Tick-borne encephalitis, Venezuelan equine encephalitis, and Rift Valley fever viruses) are important public health risks for the United States as competent vectors exist that could allow for sustained transmission upon establishment of imported arboviral pathogens. Health-care providers and public health officials should maintain a high index of clinical suspicion for cases of potentially exotic or unusual arboviral etiology, particularly in international travelers. If a suspected case occurs, it should be reported to the appropriate local/state health agencies and CDC.

CONTROL MEASURES

Arizona Administrative Code R9-6-391 West Nile Virus-related Syndromes

A local health agency shall:

1. Conduct an epidemiologic investigation of each reported West Nile virus-related syndrome case or suspect case; and
2. For each case of West Nile virus-related syndrome, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

- http://www.westnileaz.com/pdf/ArboviralCaseInvestigationForm.pdf

YELLOW FEVER	SUBMIT A REPORT WITHIN 24 HOURS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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).

CONTROL MEASURES

Arizona Administrative Code R9-6-392 Yellow Fever

A local health agency shall:

1. Upon receiving a report under R9-6-202 of a yellow fever case or suspect case, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
2. Conduct an epidemiologic investigation of each reported yellow fever case or suspect case; and
3. For each yellow fever case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D).

INVESTIGATION FORMS

None

YERSINIOSIS	SUBMIT A REPORT WITHIN 24 HOURS IF AN OUTBREAK IS DETECTED OR IF SUSPECT CASE IS A FOOD HANDLER, WORKS IN A CHILDCARE ESTABLISHMENT, OR WORKS IN A HEALTHCARE INSTITUTION. OTHERWISE, SUBMIT A REPORT WITHIN 5 WORKING DAYS.

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

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 enterocolitis*. 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

CONTROL MEASURES

Arizona Administrative Code R9-6-393 Yersiniosis (Enteropathogenic Yersinia)

A local health agency shall:

1. Exclude a yersiniosis case or suspect case from working as a food handler, caring for patients or residents in a health care institution, or caring for children in or attending a child care establishment until either of the following occurs:
    a. Two successive cultures negative for enteropathogenic Yersinia are obtained from stool specimens collected at least 24 hours apart and at least 48 hours after discontinuing antibiotics, or
    b. Diarrhea has resolved;
2. Upon receiving a report under R9-6-202 of a yersiniosis case or suspect case, notify the Department within one working day after receiving the report and provide to the Department the information contained in the report;
3. Conduct an epidemiologic investigation of each reported yersiniosis case or suspect case;
4. For each yersiniosis case, submit to the Department, as specified in Article 2, Table 4, the information required under R9-6-206(D); and
5. Ensure that an isolate from each yersiniosis case is submitted to the Arizona State Laboratory.

INVESTIGATION FORMS

- http://www.azdhs.gov/phs/oids/pdf/forms/yersiniosis_form.pdf

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CASE DEFINITIONS FOR NON-REPORTABLE COMMUNICABLE MORBIDITIES OF PUBLIC HEALTH SIGNIFICANCE

BABESIOSIS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

Babesiosis is a parasitic disease caused by intraerythrocytic protozoa of the *Babesia* genus (*Babesia microti* and other species). *Babesia* are transmitted in nature through the bites of infected ticks but can also be acquired through contaminated blood components from asymptomatic parasitemic donors or, more rarely, transplacentally. *Babesia* infection can range from subclinical to life-threatening. Clinical manifestations, if any, can include hemolytic anemia and nonspecific influenza-like signs and symptoms (e.g., fever, chills, sweats, headache, myalgia, arthralgia, malaise, fatigue, generalized weakness). Splenomegaly, hepatomegaly, or jaundice may be evident. In addition to signs of hemolytic anemia, laboratory findings may include thrombocytopenia, proteinuria, hemoglobinuria, and elevated levels of liver enzymes, blood urea nitrogen, and creatinine. Risk factors for severe babesiosis include asplenia, advanced age, and other causes of impaired immune function (e.g., HIV, malignancy, corticosteroid therapy). Some immunosuppressive therapies or conditions may mask or modulate the clinical manifestations (e.g., the patient may be afebrile). Severe cases can be associated with marked thrombocytopenia, disseminated intravascular coagulation, hemodynamic instability, acute respiratory distress, myocardial infarction, renal failure, hepatic compromise, altered mental status, and death.

Clinical evidence

For the purposes of surveillance:

- Objective: one or more of the following: fever, anemia, or thrombocytopenia.
- Subjective: one or more of the following: chills, sweats, headache, myalgia, or arthralgia.

Epidemiologic evidence for transfusion transmission

For the purposes of surveillance, epidemiologic linkage between a transfusion recipient and a blood donor is demonstrated if all of the following criteria are met:

(a) In the transfusion recipient:

i. Received one or more red blood cell (RBC) or platelet transfusions within one year before the collection date of a specimen with laboratory evidence of *Babesia* infection; **and**

ii. At least one of these transfused blood components was donated by the donor described below; **and**

iii. Transfusion-associated infection is considered at least as plausible as tickborne transmission; **and**

(b) In the blood donor:

i. Donated at least one of the RBC or platelet components that was transfused into the above recipient; **and**

ii. The plausibility that this blood component was the source of infection in the recipient is considered equal to or greater than that of blood from other involved donors. (More than one plausible donor may be linked to the same recipient.)

Laboratory criteria for diagnosis
For the purposes of surveillance:
Laboratory confirmatory:

- Identification of intraerythrocytic *Babesia* organisms by light microscopy in a Giemsa, Wright, or Wright-Giemsa–stained blood smear; **or**
- Detection of *Babesia microti* DNA in a whole blood specimen by polymerase chain reaction (PCR); **or**
- Detection of *Babesia* spp. genomic sequences in a whole blood specimen by nucleic acid amplification; **or**
- Isolation of *Babesia* organisms from a whole blood specimen by animal inoculation.

Laboratory supportive:

- Demonstration of a *Babesia microti* Indirect Fluorescent Antibody (IFA) total immunoglobulin (Ig) or IgG antibody titer of greater than or equal to (≥) 1:256 (or ≥1:64 in epidemiologically linked blood donors or recipients); **or**
- Demonstration of a *Babesia microti* Immunoblot IgG positive result; **or**
- Demonstration of a *Babesia divergens* IFA total Ig or IgG antibody titer of greater than or equal to (≥) 1:256; **or**
- Demonstration of a *Babesia duncani* IFA total Ig or IgG antibody titer of greater than or equal to (≥) 1:512.

Case classification

- Confirmed: A case that has confirmatory laboratory results and meets at least one of the objective or subjective clinical evidence criteria, regardless of the mode of transmission (can include clinically manifest cases in transfusion recipients or blood donors).
- Probable:
  (a) a case that has supportive laboratory results and meets at least one of the objective clinical evidence criteria (subjective criteria alone are not sufficient); **or**
  (b) a case that is in a blood donor or recipient epidemiologically linked to a confirmed or probable babesiosis case (as defined above) **and:**
    i. has confirmatory laboratory evidence but does not meet any objective or subjective clinical evidence criteria; **or**
    ii. has supportive laboratory evidence and may or may not meet any subjective clinical evidence criteria but does not meet any objective clinical evidence criteria.
- Suspected: A case that has confirmatory or supportive laboratory results, but insufficient clinical or epidemiologic information is available for case classification (e.g., only a laboratory report was provided).

Comment
The validity of the diagnosis of babesiosis is highly dependent on the laboratory that performs the testing. For example, differentiation between *Plasmodium* and *Babesia* organisms on peripheral blood smears can be difficult. Confirmation of the diagnosis of babesiosis by a reference laboratory is strongly encouraged, especially for patients without residence in or travel to areas known to be endemic for babesiosis.

A positive *Babesia* IFA result for immunoglobulin M (IgM) is insufficient for diagnosis and case classification of babesiosis in the absence of a positive IFA result for IgG (or total Ig). If the IgM result is positive but the IgG result is negative, a follow-up blood specimen drawn at least one

week after the first should be tested. If the IgG result remains negative in the second specimen, the IgM result likely was a false positive.
When interpreting IFA IgG or total Ig results, it is helpful to consider factors that may influence the relative magnitude of *Babesia* titers (e.g., timing of specimen collection relative to exposure or illness onset, the patient's immune status, the presence of clinically manifest versus asymptomatic infection). In immunocompetent persons, active or recent *Babesia* infections that are symptomatic are generally associated with relatively high titers (although antibody levels may be below the detection threshold early in the course of infection); titers can then persist at lower levels for more than a year. In persons who are immunosuppressed or who have asymptomatic *Babesia* infections, active infections can be associated with lower titers.

Babesia microti is the most frequently identified agent of human babesiosis in the United States; most reported tick-borne cases have been acquired in parts of northeastern and north-central regions. Sporadic U.S. cases caused by other *Babesia* agents include *B. duncani* (formerly the WA1 parasite) and related organisms (CA1-type parasites) in several western states as well as parasites characterized as "*B. divergens* like" (MO1 and others) in various states. Serologic and molecular tests available for *B. microti* infection do not typically detect these other *Babesia* agents.

Blood-borne transmission of *Babesia* is not restricted by geographic region or season. The epidemiologic linkage criteria for transfusion transmission that are described here provide a low threshold for asymptomatic donor or recipient cases to be considered probable cases for surveillance purposes and are not intended to be regulatory criteria. Transfusion investigations entail laboratory testing for evidence of *Babesia* infection in recipients and donors as well as epidemiologic assessments of the plausibilities of blood- and tick-borne transmission.

CONTROL MEASURES

None

INVESTIGATION FORMS

None

AFRICAN TICK BITE FEVER

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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. Clinic 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

INVESTIGATION FORMS
http://www.cdc.gov/ticks/forms/2010_tbrd_crf.pdf

ARBOVIRUSES

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

Includes: California Serogroup Viruses, (i.e., California encephalitis, Jamestown Canyon, Keystone, La Crosse, Snowshoe hare, and Trivittatus viruses), Eastern Equine Encephalitis Virus, Powassan Virus, St. Louis Encephalitis Virus, West Nile Virus, Western Equine Encephalitis Virus

Background

Arthropod-borne viruses (arboviruses) are transmitted to humans primarily through the bites of infected mosquitoes, ticks, sand flies, or midges. Other modes of transmission for some arboviruses include blood transfusion, organ transplantation, perinatal transmission, consumption of unpasteurized dairy products, breast feeding, and laboratory exposures.
More than 130 arboviruses are known to cause human disease. Most arboviruses of public health importance belong to one of three virus genera: *Flavivirus*, *Alphavirus*, and *Bunyavirus*.

Clinical description

Most arboviral infections are asymptomatic. Clinical disease ranges from mild febrile illness to severe encephalitis. For the purposes of surveillance and reporting, based on their clinical presentation, arboviral disease cases are often categorized into two primary groups: neuroinvasive disease and non-neuroinvasive disease.

Neuroinvasive disease: Many arboviruses cause neuroinvasive disease such as aseptic meningitis, encephalitis, or acute flaccid paralysis (AFP). These illnesses are usually characterized by the acute onset of fever with stiff neck, altered mental status, seizures, limb weakness, cerebrospinal fluid (CSF) pleocytosis, or abnormal neuroimaging. AFP may result from anterior ("polio") myelitis, peripheral neuritis, or post-infectious peripheral demyelinating neuropathy (i.e., Guillain-Barré syndrome). Less common neurological manifestations, such as cranial nerve palsies, also occur.

Non-neuroinvasive disease: Most arboviruses are capable of causing an acute systemic febrile illness (e.g., West Nile fever) that may include headache, myalgias, arthralgias, rash, or gastrointestinal symptoms. Rarely, myocarditis, pancreatitis, hepatitis, or ocular manifestations such as chorioretinitis and iridocyclitis can occur.

Clinical criteria for diagnosis

A clinically compatible case of arboviral disease is defined as follows:

Neuroinvasive disease:

- Fever (≥100.4°F or 38°C) as reported by the patient or a health-care provider, **AND**
- Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician, **AND**
- Absence of a more likely clinical explanation.

Non-neuroinvasive disease

- Fever (≥100.4°F or 38°C) as reported by the patient or a health-care provider, **AND**
- Absence of neuroinvasive disease, **AND**
- Absence of a more likely clinical explanation.

Laboratory criteria for diagnosis

- Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, **OR**
- Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, **OR**
- Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
- Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred, **OR**
- Virus-specific IgM antibodies in CSF or serum.

Case classification

Confirmed:

- Neuroinvasive disease
  A case that meets the above clinical criteria for neuroinvasive disease and one or more the following laboratory criteria for a confirmed case:
  - Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, **OR**
  - Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, **OR**
  - Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
  - Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred.
- Non-neuroinvasive disease
  A case that meets the above clinical criteria for non-neuroinvasive disease and one or more of the following laboratory criteria for a confirmed case:
  - Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, **OR**
  - Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, **OR**
  - Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
  - Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred.

Probable:

- Neuroinvasive disease
  A case that meets the above clinical criteria for neuroinvasive disease and the following laboratory criteria:
    - Virus-specific IgM antibodies in CSF or serum but with no other testing.
    - Non-neuroinvasive disease
      A case that meets the above clinical criteria for non-neuroinvasive disease and the laboratory criteria for a probable case:
    - Virus-specific IgM antibodies in CSF or serum but with no other testing.

Comment

Interpreting arboviral laboratory results

- **Serologic cross-reactivity.** In some instances, arboviruses from the same genus produce cross-reactive antibodies. In geographic areas where two or more closely-related arboviruses

occur, serologic testing for more than one virus may be needed and results compared to determine the specific causative virus. For example, such testing might be needed to distinguish antibodies resulting from infections within genera, e.g., flaviviruses such as West Nile, St. Louis encephalitis, Powassan, Dengue, or Japanese encephalitis viruses.

- **Rise and fall of IgM antibodies.** For most arboviral infections, IgM antibodies are generally first detectable at 3 to 8 days after onset of illness and persist for 30 to 90 days, but longer persistence has been documented (e.g, up to 500 days for West Nile virus). Serum collected within 8 days of illness onset may not have detectable IgM and testing should be repeated on a convalescent-phase sample to rule out arboviral infection in those with a compatible clinical syndrome.
- **Persistence of IgM antibodies.** Arboviral IgM antibodies may be detected in some patients months or years after their acute infection. Therefore, the presence of these virus-specific IgM antibodies may signify a past infection and be unrelated to the current acute illness. Finding virus-specific IgM antibodies in CSF or a fourfold or greater change in virus-specific antibody titers between acute- and convalescent-phase serum specimens provides additional laboratory evidence that the arbovirus was the likely cause of the patient's recent illness. Clinical and epidemiologic history also should be carefully considered.
- **Persistence of IgG and neutralizing antibodies.** Arboviral IgG and neutralizing antibodies can persist for many years following a symptomatic or asymptomatic infection. Therefore, the presence of these antibodies alone is only evidence of previous infection and clinically compatible cases with the presence of IgG, but not IgM, should be evaluated for other etiologic agents.
- **Arboviral serologic assays.** Assays for the detection of IgM and IgG antibodies commonly include enzyme-linked immunosorbent assay (ELISA), microsphere immunoassay (MIA), or immunofluorescence assay (IFA). These assays provide a presumptive diagnosis and should have confirmatory testing performed. Confirmatory testing involves the detection of arboviral-specific neutralizing antibodies utilizing assays such as plaque reduction neutralization test (PRNT).
- **Other information to consider.** Vaccination history, detailed travel history, date of onset of symptoms, and knowledge of potentially cross-reactive arboviruses known to circulate in the geographic area should be considered when interpreting results.

Imported arboviral diseases

Human disease cases due to Dengue or Yellow fever viruses are nationally notifiable to CDC using specific case definitions. However, many other exotic arboviruses (e.g., Chikungunya, Japanese encephalitis, Tick-borne encephalitis, Venezuelan equine encephalitis, and Rift Valley fever viruses) are important public health risks for the United States as competent vectors exist that could allow for sustained transmission upon establishment of imported arboviral pathogens. Health-care providers and public health officials should maintain a high index of clinical suspicion for cases of potentially exotic or unusual arboviral etiology, particularly in international travelers. If a suspected case occurs, it should be reported to the appropriate local/state health agencies and CDC.

INVESTIGATION FORMS

http://www.westnileaz.com/pdf/ArboviralCaseInvestigationForm.pdf

GENITAL WARTS

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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 (Calymmotabacterium granulomatis) (GI)

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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

INFLUENZA-ASSOCIATED HOSPITALIZATIONS	SUBMIT A REPORT WITHIN 1 WORKING DAY

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

CASE DEFINITION

Clinical Description

An influenza-associated hospitalization is defined for surveillance purposes as a hospital admission 14 days or less *after* influenza identification by an appropriate laboratory or rapid diagnostic test or a hospital admission 3 days or less *before* influenza identification by an appropriate laboratory or rapid diagnostic test.

Laboratory Criteria for Diagnosis

See laboratory criteria for Influenza.

Case Classification

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

MUCOPURULENT CERVICITIS (MPC)

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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)

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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)

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

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^{o}F (greater than 38.0^{o}C)
- Leukocytosis greater than 10,000 white blood cells/mm^{3}
- 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.

NON-NOTIFIABLE INFECTIONS CAUSED BY FREE-LIVING AMEBAE (NAEGLERIA FOWLERI, BALAMUTHIA MANDRILLARIS, AND ANCANTHAMOEBA SPP.)

To report a case, complete a Communicable Disease Investigations Form and report the case to your local health department.

Clinical Description

1) *Naegleria fowleri* Causing Primary Amebic Meningoencephalitis (PAM)
N. fowleri is a free-living ameboflagellate that invades the brain and meninges via the nasal mucosa and olfactory nerve to cause acute, fulminant hemorrhagic meningoencephalitis (primary amebic meningoencephalitis – PAM), primarily in healthy children and young adults with a recent history of exposure to warm fresh water. Initial signs and symptoms of PAM begin 1 to 14 days after infection and include sudden onset of headache, fever, nausea, vomiting, and stiff neck accompanied by positive Kernig's and Brudzinski's signs. In some cases, abnormalities in taste or smell, nasal obstruction and nasal discharge might be seen. Other symptoms might include photophobia, mental-state abnormalities, lethargy, dizziness, loss of balance, other visual disturbances, hallucinations, delirium, seizures, and coma. After the onset of symptoms, the disease progresses rapidly and usually results in death within 3 to 7 days. Although a variety of treatments have been shown to be active against amebae *in vitro* and have been used to treat infected persons, most infections have still been fatal.

Laboratory criteria for diagnosis
Laboratory-confirmed *N. fowleri* infection is defined as the detection of *N. fowleri*
- Organisms in CSF, biopsy, or tissue specimens, or
- Nucleic acid (e.g,. polymerase chain reaction) in CSF, biopsy, or tissue specimens, or
- Antigen (e.g., direct fluorescent antibody) in CSF, biopsy, or tissue specimens.

Comment
N. fowleri might cause clinically similar illness to bacterial meningitis, particularly in its early stages. Definitive diagnosis by a reference laboratory might be required. Unlike *Balamuthia mandrillaris* and *Acanthamoeba spp.*, *Naegleria fowleri* is commonly found in CSF.

2) *Balamuthia mandrillaris* Disease
B. mandrillaris is an opportunistic free-living ameba that can invade the brain through the blood, probably from a primary infection in the skin (from ulcers or dermatitis), sinuses, or via organ transplantation. The incubation period is not well-characterized but has been observed to range from 2 weeks to months or possibly years. Once in the brain, the amebae can cause meningoencephalitis and/or granulomatous amebic encephalitis (GAE). *B. mandrillaris* GAE often has a slow, insidious onset and develops into a subacute or chronic disease lasting several weeks to months; however, *B. mandrillaris* infections associated with organ transplantation have an especially rapid clinical course. *B. mandrillaris* GAE affects both immunocompetent persons and persons who are immunosuppressed from a variety of causes (e.g., HIV/AIDS, organ transplantation). Initial symptoms of *B. mandrillaris* GAE might include headache, photophobia, and stiff neck accompanied by positive Kernig's and Brudzinski's signs. Other symptoms might include nausea, vomiting, low-grade fever, muscle aches, weight loss, mental-state abnormalities, lethargy, dizziness, loss of balance, cranial nerve palsies, other visual disturbances, hemiparesis, seizures, and coma. Painless skin lesions appearing as plaques a few millimeters thick and one to several centimeters wide have been observed in some patients, especially patients outside the

U.S., preceding the onset of neurologic symptoms by 1 month to approximately 2 years. Once the disease progresses to neurologic infection, it is generally fatal within weeks or months; however, a few patients have survived this infection.

Laboratory criteria for diagnosis
Laboratory-confirmed *B. mandrillaris* infection is defined as the detection of *B. mandrillaris*

- Organisms in CSF, biopsy, or tissue specimens, or
- Nucleic acid (e.g,. polymerase chain reaction) in CSF, biopsy, or tissue specimens, or
- Antigen (e.g., direct fluorescent antibody) in CSF, biopsy, or tissue specimens.

Comment
B. mandrillaris and *Acanthamoeba spp.* can cause clinically similar illnesses and might be difficult to differentiate using commonly available laboratory procedures. Definitive diagnosis by a reference laboratory might be required. A negative test on CSF does not rule out *B. mandrillaris* infection because the organism is not commonly present in the CSF.

3) *Acanthamoeba* Disease (excluding keratitis)
The genus *Acanthamoeba* includes several species of opportunistic free-living amebae that might invade the brain through the blood, probably from a primary infection in the skin (from ulcers or dermatitis) or sinuses. Once in the brain, the amebae cause granulomatous amebic encephalitis (GAE). *Acanthamoeba* GAE has a slow and insidious onset and develops into a subacute or chronic disease lasting several weeks to months. *Acanthamoeba* GAE affects both immunocompetent persons and persons who are immunosuppressed from a variety of causes (e.g., HIV/AIDS, organ transplantation). Initial symptoms of *Acanthamoeba* GAE might include headache, photophobia, and stiff neck accompanied by positive Kernig's and Brudzinski's signs. Other symptoms might include nausea, vomiting, low-grade fever, muscle aches, weight loss, mental-state abnormalities, lethargy, dizziness, loss of balance, cranial nerve palsies, other visual disturbances, hemiparesis, seizures, and coma. Once the disease progresses to neurologic infection, it is generally fatal within weeks or months. However, a few patients have survived this infection.

Laboratory criteria for diagnosis
Laboratory-confirmed *Acanthamoeba spp*. infections (excluding keratitis) are defined as the detection of *Acanthamoeba spp*.

- Organisms in CSF, biopsy, or tissue specimens, or
- Nucleic acid (e.g,. polymerase chain reaction) in CSF, biopsy, or tissue specimens, or
- Antigen (e.g., direct fluorescent antibody) in CSF, biopsy, or tissue specimens.

Comment
Acanthamoeba and *B. mandrillaris* can cause clinically similar illnesses and might be difficult to differentiate using commonly available laboratory procedures. Definitive diagnosis by a reference laboratory might be required. Several species of *Acanthamoeba* are associated with infection (i.e., *A. castellanii, A. culbertsoni, A. hatchetti, A. healyi, A. polyphaga, A. rhysodes, A. astonyxis, A. lenticulata and A. divionensis*). A negative test on CSF does not rule out *Acanthamoeba* infection because the organism is not commonly present in the CSF.

4) *Acanthamoeba* keratitis
Acanthamoeba keratitis is a local infection of the cornea (outer layer of the visual pathway of the eye) caused by a microscopic, free-living ameba belonging to the genus *Acanthamoeba*. Symptoms include foreign body sensation, photophobia, decreased visual acuity, tearing, pain, and redness of the eye. It occurs most typically among healthy, contact lens users, but can occur

in anyone. Although treatable with topical medications, affected individuals are at risk for permanent visual impairment or blindness. *Acanthamoeba* organisms are ubiquitous in nature and can be found in bodies of water (e.g., lakes and oceans), soil, and air.

Laboratory criteria for diagnosis
Laboratory-confirmed *Acanthamoeba spp*. keratitis infections are defined as the detection of *Acanthamoeba spp*.

- Organisms in corneal scraping, or biopsy specimens, or
- Nucleic acid (e.g., polymerase chain reaction) in corneal scraping, or biopsy specimens,or
- Antigen (e.g., direct fluorescent antibody) in corneal scraping, or biopsy specimens.

Case Classification

- Confirmed: A clinically compatible illness that is laboratory confirmed. When available, species designation and molecular characterization (e.g. genotype) should be documented.
- Probable: A clinically compatible illness with positive identification of Acanthamoeba trophozoites or cysts using confocal microscopy

Comment

INVESTIGATION FORMS
http://www.azdhs.gov/phs/oids/pdf/forms/Free-livingAmebaCaseReport.pdf