



TEXAS DEPARTMENT OF STATE HEALTH SERVICES

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Infectious Disease Control Unit

# Epi Case Criteria Guide, 2009

## Epi Case Criteria Guide, 2009

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**Encephalitis/Meningitis Notes:**

- 1) Any non-viral infection diagnosed as meningitis should be entered as [Bacterial meningitis, other](#) with the following exceptions.  
[Granulomatous Amebic Meningoencephalitis \(GAE\)](#), [Group A \*Streptococcus\* \(\*Strep pyogenes\*\)](#), [Group B \*Streptococcus\* \(\*Strep agalactiae\*\)](#),  
[Haemophilus influenzae type b](#), [Listeria monocytogenes](#), [Neisseria meningitidis](#), [Primary Amebic Meningoencephalitis \(PAM\)](#), and  
[Streptococcus pneumoniae](#).
- 2) Any infection diagnosed as encephalitis other than those caused by an arbovirus should be entered as [Encephalitis, Nonarboviral](#) with any associated organism noted in the comment field.
- 3) Isolation of an organism from the CSF is an indicator of encephalitis or meningitis and the case should be entered as noted above.



## Introduction

This document provides infectious disease information for surveillance and data entry staff. It contains a table with condition codes, condition names, and case criteria to aid in the classification and coding of conditions. It is organized alphabetically by condition name. **Conditions that are specified as reportable in Texas in Title 25, Texas Administrative Code, Chapter 97, Subchapter A, Control of Communicable Diseases are in bold type.** You can move about this document by clicking on the item in the table of contents to go to the table and on the condition codes to go back to the table of contents, or by selecting links between table entries.

## Definition of Terms

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

**Confirmed case:** A case that is classified as confirmed for 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.

**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.

**Normally sterile site:** Invasive diseases typically cause significant morbidity and mortality.

Normally sterile sites include:

- blood (obtained aseptically)
- cerebrospinal fluid (CSF)
- pericardial fluid
- pleural fluid (obtained aseptically)
- peritoneal fluid (ascites)
- amniotic fluid (intact amnion)
- bone or bone marrow
- joint fluid (from any specific joint when the joint surface is intact (no abscess or significant break in the skin) including ankle, knee, wrist, elbow, shoulder)
- internal body sites where the specimen is collected during surgery or aspirate from any of the following; brain, heart, liver, spleen, vitreous fluid, kidney, pancreas, lymph node or ovary
- tissue, fluid or other material obtained during surgery

Normally sterile sites do not include:

- anatomical areas of the body that normally harbor either resident or transient flora (bacteria) including mucous membranes (throat, vagina) and skin
- abscesses or localized soft tissue infections

Exceptions:

- Group A *Streptococcus*
  - the recovery of the organism from **any** site (including non-sterile sites) in a case of [streptococcal toxic shock syndrome](#)
  - the recovery of the organism from necrotizing fasciitis (extensively damaged tissue, usually muscle obtained during surgery)
- Group B *Streptococcus*
  - the recovery of the organism from the placenta, cord blood or amniotic fluid (ruptured amnion) in the case of fetal death



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

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

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

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## Condition Names, Condition Codes, Case Definition/Classification and Lab Confirmation Tests

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Amebiasis<sup>1</sup></b>  <a href="#">11040</a></p>	<p>Infection of the large intestine by <i>Entamoeba histolytica</i> that may result in an illness of variable severity ranging from mild, chronic diarrhea to fulminant dysentery. Infection also may be asymptomatic. Extraintestinal infection also can occur (e.g., hepatic absces)</p> <p><b>Confirmed, intestinal amebiasis:</b> A clinically compatible illness that is laboratory confirmed</p> <p><b>Confirmed, extraintestinal amebiasis:</b> 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 <i>E. histolytica</i> as measured by indirect hemagglutination or other reliable immunodiagnostic test (e.g., enzyme-linked immunosorbent assay)</p>	<p><i>Intestinal amebiasis:</i></p> <ul style="list-style-type: none"> <li>▪ Demonstration of cysts or trophozoites of <i>E. histolytica</i> in stool, or</li> <li>▪ Demonstration of trophozoites in tissue biopsy or ulcer scrapings by culture or histopathology</li> </ul> <p><i>Extraintestinal amebiasis:</i></p> <ul style="list-style-type: none"> <li>▪ Demonstration of <i>E. histolytica</i> trophozoites in extraintestinal tissue</li> </ul>
<p><b>Anaplasma phagocytophilum</b>  <a href="#">11090</a></p> <p>New code as of 1/1/08.            Replaced event code 11085, <a href="#">Ehrlichiosis, human granulocytic (HGE)</a></p>	<p>A tick-borne illness characterized by acute onset of fever and one or more of the following signs or symptoms: headache, myalgia, malaise, anemia, leucopenia, thrombocytopenia, or elevated hepatic transaminases. Nausea, vomiting, or rash may be present in some cases. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><b>Confirmed:</b> A clinically compatible illness that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible illness with serological evidence of IgG or IgM antibody reactive (<math>\geq 1:128</math>) with <i>A. phagocytophilum</i> antigen by IFA, ELISA, or dot-ELISA</p> <p><b>Suspect:</b> A case with laboratory evidence of past/present infection with <i>A. phagocytophilum</i> (e.g., laboratory report) but no available clinical information</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of a four-fold change in IgG-specific antibody titer to <i>A. phagocytophilum</i> antigen by indirect immunofluorescence assay (IFA) in paired serum samples (one taken in first week of illness and a second taken 2-4 weeks later), or</li> <li>▪ Detection of <i>A. phagocytophilum</i> DNA in a clinical specimen by PCR, or</li> <li>▪ Demonstration of anaplasma antigen in a biopsy/autopsy sample by IHC, or</li> <li>▪ Isolation of <i>A. phagocytophilum</i> from a clinical specimen in cell culture.</li> </ul>
<p><b>Anthrax</b>  <a href="#">10350</a></p>	<p>An illness with acute onset characterized by several distinct clinical forms, including the following:</p> <p><b>Cutaneous:</b> A skin lesion evolving during a period of 2-6 days from a papule, through a vesicular stage, to a depressed black eschar.</p> <p><b>Inhalation:</b> A brief prodrome resembling a viral respiratory illness, followed by hypoxia and dyspnea, with radiographic evidence of mediastinal widening</p> <p><b>Intestinal:</b> Severe abdominal distress followed by fever and signs of septicemia</p> <p><b>Oropharyngeal:</b> Mucosal lesion in the oral cavity or oropharynx, cervical adenopathy and edema, and fever</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Bacillus anthracis</i> from a clinical specimen, or</li> <li>▪ Anthrax electrophoretic immunotransblot (EITB) reaction to the protective antigen and/or lethal factor bands in one or more serum samples obtained after onset of symptoms, or</li> <li>▪ Demonstration of <i>B. anthracis</i> in a clinical specimen by immunofluorescence</li> </ul> <p>Note: All <a href="#">Bacillus anthracis</a> isolates must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive</b>  See virus-specific codes below</p> <p><a href="#">Encephalitis, Cache Valley</a>  <a href="#">California Serogroup</a>  <a href="#">Eastern Equine (EEE)</a>  <a href="#">Powassan</a>  <a href="#">St Louis (SLE)</a>  <a href="#">Venezuelan Equine (VEE)</a>  <a href="#">Western Equine (WEE)</a>  <a href="#">West Nile</a>  <a href="#">Dengue Fever</a>  <a href="#">Dengue Hemorrhagic Fever</a>  <a href="#">West Nile Fever</a></p> <p><a href="#">Table of Contents</a></p>	<p>Arboviral infections may be asymptomatic or may result in febrile illnesses of variable severity sometimes associated with central nervous system (CNS) involvement. When the CNS is affected, clinical syndromes include aseptic meningitis, myelitis and encephalitis, which are clinically indistinguishable from similar syndromes caused by other viruses. Arboviral meningitis is usually characterized by fever, headache, stiff neck, and pleocytosis in cerebrospinal fluid. Arboviral myelitis is usually characterized by fever and acute bulbar or limb paresis or flaccid paralysis. Arboviral encephalitis is usually characterized by fever, headache, and altered mental status ranging from confusion to coma with or without additional signs of brain dysfunction. Less common neurological syndromes can include cranial and peripheral neuritis or other neuropathies, including Guillain-Barré syndrome.</p> <p>Non-neuroinvasive syndromes caused by these usually neurotropic arboviruses can rarely include myocarditis, pancreatitis, or hepatitis. In addition, they may cause febrile illnesses (e.g., West Nile fever [WNF]) that are non-localized, self-limited illnesses with headache, myalgias, arthralgias, and sometimes accompanied by skin rash or lymphadenopathy. Laboratory-confirmed arboviral illnesses lacking documented fever can occur, and overlap among the various clinical syndromes is common.</p> <p>Cases of arboviral disease are classified either as neuroinvasive or non-neuroinvasive, according to the following criteria:</p> <p>Neuroinvasive: 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); pleocytosis (increased white blood cell concentration in cerebrospinal fluid [CSF]) associated with illness clinically compatible with meningitis (e.g., headache or stiff neck)</p> <p>Non-neuroinvasive: Documented fever, as measured by the patient or clinician; absence of neuroinvasive disease (above), and; absence of a more likely clinical explanation for the illness</p> <p><b>Confirmed:</b> A clinically compatible case with level one lab result  <b>Probable:</b> A clinically compatible case with level two lab result</p>	<p><i>Level One Criteria</i></p> <ul style="list-style-type: none"> <li>▪ Four-fold or greater change in virus-specific serum antibody titer, or</li> <li>▪ Isolation of virus from or demonstration of specific viral antigen or genomic sequences in tissue, blood, CSF, or other body fluid, or</li> <li>▪ Virus-specific immunoglobulin M (IgM) antibodies demonstrated in CSF by antibody-capture enzyme immunoassay (EIA), or</li> <li>▪ 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)</li> </ul> <p><i>Level Two Criteria</i></p> <ul style="list-style-type: none"> <li>▪ Stable (less than or equal to a two-fold change) but elevated titer of virus-specific serum antibodies, or</li> <li>▪ Virus-specific 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</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<b>Aseptic meningitis</b> <a href="#">10010</a>	<p>A syndrome characterized by acute onset of meningeal symptoms (stiff neck, fever, and headache), cerebrospinal fluid pleocytosis (excessive lymphocytes), with no laboratory evidence of bacterial or fungal organisms. Aseptic meningitis is a syndrome of multiple etiologies, but many cases are caused by a viral agent.</p> <p><b>Confirmed:</b> A clinically compatible illness diagnosed by a physician as aseptic meningitis, with no laboratory evidence of bacterial or fungal meningitis; or a viral isolate from cerebrospinal fluid; or a viral isolate from blood with a clinically compatible illness diagnosed by a physician</p> <p><a href="#">See Encephalitis/Meningitis Note</a></p>	<p><i>Laboratory Confirmation:</i></p> <ul style="list-style-type: none"> <li>▪ A viral isolate from cerebrospinal fluid, or</li> <li>▪ A viral isolate from blood with physician diagnosis of aseptic meningitis</li> </ul> <p><i>Supportive of Clinical Diagnosis:</i></p> <ul style="list-style-type: none"> <li>▪ No growth in CSF or blood cultures</li> <li>▪ CSF with test results characteristic of viral meningitis</li> </ul>
<b>Bacterial meningitis, other</b> <a href="#">10650</a>	<p>Bacterial meningitis manifests most commonly with fever, headache, and a stiff neck; the disease may progress rapidly to shock and death. However, other manifestations may be observed.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case diagnosed by a physician as bacterial meningitis without culture confirmation</p> <p><a href="#">See Encephalitis/Meningitis Note</a></p>	<ul style="list-style-type: none"> <li>▪ Isolation of a bacterial species, fungus, or parasite from the cerebrospinal fluid or a clinically compatible case accompanied by a positive blood culture</li> </ul>
<b>Botulism, foodborne</b> <a href="#">10530</a>	<p>Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed or that occurs among persons who ate the same food as persons who have laboratory confirmed botulism</p> <p><b>Probable:</b> A clinically compatible case with a history of ingestion of a food item known to carry a risk for the botulism toxin</p>	<ul style="list-style-type: none"> <li>▪ Detection of botulinum toxin in serum, stool, or patient's food, or</li> <li>▪ Isolation of <i>Clostridium botulinum</i> from stool</li> </ul> <p>Note: All <a href="#">Clostridium botulinum</a> isolates must be submitted to the DSHS laboratory.</p>
<b>Botulism, infant</b> <a href="#">10540</a>	<p>An illness of infants, characterized by constipation, poor feeding, and “failure to thrive” that may be followed by progressive weakness, impaired respiration, and death.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed, occurring in a child aged less than 1 year</p>	<ul style="list-style-type: none"> <li>▪ Detection of botulinum toxin in stool or serum, or</li> <li>▪ Isolation of <i>Clostridium botulinum</i> from stool</li> </ul> <p>Note: All <a href="#">Clostridium botulinum</a> isolates must be submitted to the DSHS laboratory</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<b>Botulism, other unspecified</b> <a href="#">10548</a>	<p>Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed in a patient aged greater than or equal to 1 year who has no history of ingestion of suspect food and has no wounds</p>	<ul style="list-style-type: none"> <li>▪ Detection of botulinum toxin in clinical specimen, or</li> <li>▪ Isolation of <i>Clostridium botulinum</i> from clinical specimen</li> </ul> <p>Note: All <a href="#">Clostridium botulinum</a> isolates must be submitted to the DSHS laboratory</p>
<b>Botulism, wound<sup>1</sup></b> <a href="#">10549</a>	<p>An illness resulting from toxin produced by <i>Clostridium botulinum</i> that has infected a wound. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed in a patient who has no suspected exposure to contaminated food and who has a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms</p>	<ul style="list-style-type: none"> <li>▪ Detection of botulinum toxin in serum, or</li> <li>▪ Isolation of <i>Clostridium botulinum</i> from wound</li> </ul> <p>Note: All <a href="#">Clostridium botulinum</a> isolates must be submitted to the DSHS laboratory</p>
<b>Brucellosis</b> <a href="#">10020</a>	<p>An illness characterized by acute or insidious onset of fever, night sweats, undue fatigue, anorexia, weight loss, headache, and arthralgia.</p> <p><b>Confirmed:</b> A clinically compatible illness that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case or that has supportive serology (i.e., <i>Brucella</i> agglutination titer of greater than or equal to 160 in one or more serum specimens obtained after onset of symptoms)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Brucella</i> spp. from a clinical specimen, or</li> <li>▪ Fourfold or greater rise in <i>Brucella</i> agglutination titer between acute- and convalescent-phase serum specimens obtained greater than or equal to 2 weeks apart and studied at the same laboratory, or</li> <li>▪ Demonstration by immunofluorescence of <i>Brucella</i> spp. in a clinical specimen</li> </ul> <p>Note: All <a href="#">Brucella species</a> isolates must be submitted to the DSHS laboratory.</p>
<b>Campylobacteriosis</b> <a href="#">11020</a>	<p>An infection that may result in diarrheal illness of variable severity.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Campylobacter</i> from any clinical specimen</li> </ul>
<b>Chickenpox (See Varicella)</b> <a href="#">10030</a>	<p><a href="#">See Varicella</a></p>	

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Cholera (toxigenic <i>Vibrio cholerae</i> O1 or O139)</b>  <a href="#">10470</a></p>	<p>An illness characterized by diarrhea and/or vomiting; severity is variable.</p> <p><b>Confirmed:</b> A clinically compatible illness that is laboratory confirmed</p> <p><i>Comment:</i> Illnesses caused by strains of <i>V. cholerae</i> other than toxigenic <i>V. cholerae</i> O1 or O139 should not be reported as cases of cholera. (See <a href="#">Vibrio parahaemolyticus</a>, <a href="#">Vibrio spp., non-toxigenic, other or unspecified</a>, and <a href="#">Vibrio vulnificus</a>)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of toxigenic (i.e., cholera toxin-producing) <i>Vibrio cholerae</i> O1 or O139 from stool or vomitus, or</li> <li>▪ Serologic evidence of recent infection</li> </ul> <p>Note: All <a href="#">Vibrio species</a> isolates must be submitted to the DSHS laboratory</p>
<p>Coccidioidomycosis  <a href="#">11900</a></p>	<p>Infection may be asymptomatic or may produce an acute or chronic disease. Although the disease initially resembles an influenza-like febrile illness primarily involving the bronchopulmonary system, dissemination can occur to multiple organ systems. Illness is characterized by one or more of the following: influenza-like signs and symptoms (e.g., fever, chest pain, cough, myalgia, arthralgia, and headache); pneumonia or other pulmonary lesion, diagnosed by chest radiograph; erythema nodosum or erythema multiforme rash; involvement of bones, joints, or skin by dissemination; meningitis; involvement of viscera and lymph nodes</p> <p><b>Confirmed:</b> A case that meets the clinical case definition and is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Culture, histopathologic, or molecular evidence of presence of <i>Coccidioides immitis</i>, or</li> <li>▪ Positive serologic test for coccidioidal antibodies in serum, cerebrospinal fluid or other body fluids by 1) detection of coccidioidal immunoglobulin M (IGM) by immunodiffusion, enzyme immunoassay (EIA), latex agglutination, or tube precipitin, or 2) detection of coccidioidal immunoglobulin G (IgG) by immunodiffusion, EIA, or complement fixation, or</li> <li>▪ Coccidioidal skin-test conversion from negative to positive after onset of clinical signs and symptoms</li> </ul>
<p><b><a href="#">Contaminated Sharps Injury</a></b><sup>2</sup></p>	<p>Any <a href="#">sharps injury</a> that occurs with a sharp used or encountered in a health care setting that is contaminated with human blood or body fluids. Contaminated sharps injuries in private facilities are reported to OSHA and those in Texas public facilities (government entities) are reported to DSHS Infectious Disease Control Unit. Both source person and injured employee should be tested for HIV, HBV, and HCV. For health care worker HIV risk assessment and follow-up refer to the <a href="#">Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HIV and Recommendations for Postexposure Prophylaxis September 20, 2005</a>. For health care worker HBV and HCV risk assessment and follow-up refer to the <a href="#">Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis</a>.</p>	<p>See referenced U.S. Public Health Service Guidelines for recommended follow-up testing.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Creutzfeldt-Jakob Disease (CJD)</b><sup>3,4</sup>  <a href="#">80060</a></p>	<p>Creutzfeldt-Jakob disease (CJD) is a brain disorder that usually occurs in people over the age of 60. Symptoms include rapidly progressive dementia, behavioral changes, confusion, as well as motor problems. Patients may lose their balance or seem uncoordinated — they may have difficulty walking or have muscle jerks and spasms. There is no known treatment; most people with CJD die within 3 to 12 months from onset of symptoms.</p> <p>CJD type is based on pathology and clinical presentation: sporadic, variant, iatrogenic, familial.</p> <p>Neuropathological criteria for CJD and other human transmissible spongiform encephalopathies can be summarized as follows:</p> <p><i>Creutzfeldt-Jakob disease:</i> Sporadic, iatrogenic (recognized risk) or familial (same disease in first degree relative or disease-associated PrP gene mutation):</p> <ul style="list-style-type: none"> <li>◆ Spongiform encephalopathy in cerebral and/or cerebellar cortex and/or subcortical grey matter; and/or</li> <li>◆ Encephalopathy with prion protein (PrP) immunoreactivity (plaque and/or diffuse synaptic and/or patchy/perivascular types)</li> </ul> <p><i>Variant CJD:</i></p> <ul style="list-style-type: none"> <li>◆ Spongiform encephalopathy with abundant PrP deposition, in particular multiple fibrillary PrP plaque surrounded by a halo of spongiform vacuoles (florid plaques, daisy-like plaques) and other PrP plaques, and</li> <li>◆ amorphous pericellular and perivascular PrP deposits especially prominent in the cerebellar molecular layer</li> </ul> <p>See WHO recommended case definitions for Sporadic, Iatrogenic, Familial, and Variant CJD, at <a href="http://www.who.int/csr/resources/publications/surveillance/whocdscsr992.pdf">http://www.who.int/csr/resources/publications/surveillance/whocdscsr992.pdf</a></p>	<p>Neuropathology is necessary for the confirmation of CJD: the use of cerebral biopsy in living patients is to be discouraged unless its purpose is to arrive at an alternative diagnosis of a treatable disorder. Autopsy (or postmortem biopsy of the brain where autopsy is not possible) is strongly encouraged and is necessary to accurately diagnose any suspect case of CJD.</p> <p>Note: The National Prion Disease Pathology Surveillance Center (NPDPSC) assists clinicians in the diagnosis of prion disease. The NPDPSC assists clinicians by analyzing cerebrospinal fluid, blood, and brain tissue. NPDPSC provides free autopsy services for suspect cases of CJD through their autopsy network. Information about diagnostic services, protocols for various CJD testing, and specimen submission can be obtained at <a href="http://www.cjdsurveillance.com/">http://www.cjdsurveillance.com/</a></p> <p>Physicians are strongly encouraged to confirm the diagnosis of CJD by arranging for an autopsy following the death of the person suspected of having CJD. This is especially important if the person had an onset at age less than 55. Please contact the center above for assistance or specimen submission.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Cryptosporidiosis</b> <a href="#">11580</a></p>	<p>An illness caused by the protozoan <i>Cryptosporidium</i> and characterized by diarrhea, abdominal cramps, loss of appetite, low-grade fever, nausea, and vomiting. Infected persons may be asymptomatic. The disease can be prolonged and life-threatening in severely immunocompromised persons.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed</p> <p><b>Probable:</b> A case with a diarrheal illness (<math>\geq 3</math> loose stools in a 24-hr period) that is epi-linked to a confirmed case by one of the following means:</p> <ul style="list-style-type: none"> <li>▪ Household or other close contact to a lab-confirmed case with onset of symptoms within 1 month (before or after)</li> <li>▪ Exposure to an outbreak at a body of water or water facility involving at least 2 lab-confirmed cases and onset of symptoms within one month (before or after) of one or more of these cases</li> </ul>	<p>Detection of a member of the genus <i>Cryptosporidium</i> by one of the following methods:</p> <ul style="list-style-type: none"> <li>▪ Organisms in stool, intestinal fluid, or tissue samples or biopsy specimens, or</li> <li>▪ Antigens in stool or intestinal fluid, or</li> <li>▪ Nucleic acid by PCR in stool, intestinal fluid, or tissue samples or biopsy specimens</li> </ul>
<p><b>Cyclosporiasis</b> <a href="#">11575</a></p>	<p>An illness of variable severity caused by the protozoan <i>Cyclospora cayetanensis</i> and commonly characterized by watery diarrhea, 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.</p> <p><b>Confirmed:</b> A laboratory-confirmed case with or without clinical symptoms</p>	<p>Detection—in symptomatic or asymptomatic persons— of <i>Cyclospora</i>:</p> <ul style="list-style-type: none"> <li>▪ Oocysts in stool by microscopic examination, or in intestinal fluid or small bowel biopsy specimens, or</li> <li>▪ Demonstration of sporulation, or DNA (by polymerase chain reaction) in stool, duodenal/jejunal aspirates or small bowel biopsy specimens</li> </ul>
<p><b>Cysticercosis</b><sup>5</sup> (Also see <i>Taenia solium</i>) <a href="#">12031</a></p>	<p>Cysticercosis is an infection caused by the larval form of the pork tapeworm, <i>Taenia solium</i>. Infection occurs when the tapeworm eggs are ingested, hatch into larvae, and migrate to tissues where they form cysticerci (cysts). The symptoms of cysticercosis reflect the development of cysticerci in various sites. When cysticerci are found in the brain, the condition is called neurocysticercosis, which can cause diverse manifestations including seizures, mental disturbances, focal neurologic deficits, and signs of space-occupying intracerebral lesions. Death can occur suddenly. Extracerebral cysticercosis can cause ocular, cardiac, or spinal lesions with associated symptoms. Asymptomatic subcutaneous nodules and calcified intramuscular nodules can be encountered.</p> <p>Note: <a href="#">Also see <i>Taenia solium</i></a></p> <p><b>Confirmed:</b> Laboratory confirmation of the presence of cysticercus in tissue</p>	<p>Presumptive diagnosis of neurocysticercosis is usually made by MRI or CT brain scans. Blood tests are available to help diagnose an infection, but may not always be accurate. If surgery is necessary, confirmation of the diagnosis can be made by demonstrating the cysticercus in the tissue involved.</p> <p>Note: Demonstration of <i>Taenia solium</i> eggs and proglottids in the feces diagnoses taeniasis and not cysticercosis. While suggestive, it does not necessarily prove that cysticercosis is present. Persons who are found to have eggs or proglottids in their feces should be evaluated serologically since autoinfection, resulting in cysticercosis, can occur.</p>



Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Dengue Fever</b> <a href="#">10680</a></p>	<p>An acute febrile illness characterized by frontal headache, retro-ocular pain, muscle and joint pain, and rash. The principal vector is the <i>Aedes aegypti</i> mosquito and transmission usually occurs in tropical or subtropical areas. Severe manifestations (e.g., dengue hemorrhagic fever and dengue shock syndrome) are rare but may be fatal.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case with supportive serologic findings (a reciprocal IgG antibody titer of greater than or equal to 1280 or a positive IgM antibody test on a single acute (late)- or convalescent-phase serum specimen to one or more dengue virus antigens)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of dengue virus from serum and/or autopsy tissue samples, or</li> <li>▪ Demonstration of a fourfold or greater rise or fall in reciprocal immunoglobulin G (IgG) or immunoglobulin M (IgM) antibody titers to one or more dengue virus antigens in paired serum samples, or</li> <li>▪ Demonstration of dengue virus antigen in autopsy tissue or serum samples by immunohistochemistry or by viral nucleic acid detection</li> </ul>
<p><b>Dengue Hemorrhagic Fever</b> <a href="#">10685</a></p>	<p>Dengue hemorrhagic fever is defined as an acute febrile illness with minor or major bleeding phenomena, thrombocytopenia (less than or equal to 100,000/mm<sup>3</sup>), and evidence of plasma leakage documented by hemoconcentration (hematocrit increased by greater than or equal to 20%) or other objective evidence of increased capillary permeability.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case with supportive serologic findings (a reciprocal IgG antibody titer of greater than or equal to 1280 or a positive IgM antibody test on a single acute (late)- or convalescent-phase serum specimen to one or more dengue virus antigens)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of dengue virus from serum and/or autopsy tissue samples, or</li> <li>▪ Demonstration of a fourfold or greater rise or fall in reciprocal immunoglobulin G (IgG) or immunoglobulin M (IgM) antibody titers to one or more dengue virus antigens in paired serum samples, or</li> <li>▪ Demonstration of dengue virus antigen in autopsy tissue or serum samples by immunohistochemistry or by viral nucleic acid detection</li> </ul>
<p><b>Diphtheria<sup>6</sup></b> <a href="#">10040</a></p>	<p>An upper respiratory tract illness characterized by sore throat, low-grade fever, and an adherent membrane of the tonsil(s), pharynx, and/or nose.</p> <p><b>Confirmed:</b> A clinically compatible case that is either laboratory confirmed or epidemiologically linked to a laboratory-confirmed case</p> <p><b>Probable:</b> A clinically compatible case that is not laboratory confirmed and is not epidemiologically linked to a laboratory-confirmed case</p> <p>Note: Cutaneous diphtheria should not be reported. All diphtheria isolates, regardless of association with disease, should be sent to the DSHS laboratory.</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Corynebacterium diphtheriae</i> from a clinical specimen, or</li> <li>▪ Histopathologic diagnosis of diphtheria</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Ebola (Viral Hemorrhagic Fever)</b>  <a href="#">11630</a></p>	<p>Severe acute viral illness, usually with sudden onset of fever, malaise, myalgia and headache, followed by pharyngitis, vomiting, diarrhea and maculopapular rash. In severe and fatal forms, the hemorrhagic diathesis is often accompanied by hepatic damage, renal failure, CNS involvement and terminal shock with multi-organ dysfunction. Laboratory findings usually show lymphopenia, severe thrombocytopenia and transaminase elevation (AST&gt;ALT), sometimes with hyperamylasemia, and elevated creatinine and blood urea nitrogen levels during the final renal failure stage..</p> <p><b>Confirmed:</b> A clinically compatible case with supporting laboratory evidence  <b>Probable:</b> A clinically compatible illness epi-linked to a confirmed case  <b>Suspect:</b> A clinically compatible illness with a history of contact with primates</p>	<p>Diagnosis is usually through a combination of assays detecting Ebolavirus antigen or RNA and antibody IgM or IgG.</p> <ul style="list-style-type: none"> <li>▪ RT-PCR or ELISA antigen detection in blood, serum or organ homogenates</li> <li>▪ Virus isolation in cell culture or suckling mice (must be undertaken in a BSL-4 laboratory)</li> <li>▪ ELISA detection of Ebolavirus-specific IgM and IgG antibody in serum (the presence of IgM antibody suggesting recent infection)</li> <li>▪ Virus visualized in liver, spleen, skin and other tissue sections by electron microscopy</li> <li>▪ Postmortem diagnosis through immunohistochemical examination of formalin-fixed skin biopsy or autopsy</li> </ul>
<p><b>Ehrlichia chaffeensis</b>  <a href="#">11088</a></p> <p>New code as of 1/1/08.  Replaced event code <a href="#">11086</a>,  <a href="#">Ehrlichiosis, human monocytic (HME)</a></p>	<p>A tick-borne illness characterized by acute onset of fever and one or more of the following signs or symptoms: headache, myalgia, malaise, anemia, leucopenia, thrombocytopenia, or elevated hepatic transaminases. Nausea, vomiting, or rash may be present in some cases. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><b>Confirmed:</b> A clinically compatible illness that is laboratory confirmed  <b>Probable:</b> A clinically compatible illness with serological evidence of IgG or IgM antibody reactive (<math>\geq</math>1:128) with <i>E. chaffeensis</i> antigen by IFA, ELISA, or dot-ELISA  <b>Suspect:</b> A case with laboratory evidence of past/present infection with <i>E. chaffeensis</i> (e.g., laboratory report) but no available clinical information</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of a four-fold change in IgG-specific antibody titer to <i>E. chaffeensis</i> antigen by indirect immunofluorescence assay (IFA) in paired serum samples (one taken in first week of illness and a second taken 2-4 weeks later), or</li> <li>▪ Detection of <i>E. chaffeensis</i> DNA in a clinical specimen by PCR, or</li> <li>▪ Demonstration of ehrlichial antigen in a biopsy/autopsy sample by IHC, or</li> <li>▪ Isolation of <i>E. chaffeensis</i> from a clinical specimen in cell culture.</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b><i>Ehrlichia ewingii</i></b> <a href="#">11089</a></p> <p>New code as of 1/1/08. Previously included in event code <a href="#">11087</a>, <a href="#">Ehrlichiosis, human other or unspecified</a></p>	<p>A tick-borne illness characterized by acute onset of fever and one or more of the following signs or symptoms: headache, myalgia, malaise, anemia, leucopenia, thrombocytopenia, or elevated hepatic transaminases. Nausea, vomiting, or rash may be present in some cases. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><b>Confirmed:</b> A clinically compatible illness that is laboratory confirmed</p> <p><b>Suspect:</b> A case with laboratory evidence of past/present infection with <i>E. ewingii</i> (e.g., laboratory report) but no available clinical information</p>	<ul style="list-style-type: none"> <li>■ Detection of <i>E. ewingii</i> DNA in a clinical specimen by PCR</li> </ul> <p>Note: Because the organism has never been cultured, antigens are not available. Thus, <i>E. ewingii</i> infections may only be diagnosed by molecular detection methods.</p>
<p><b>Ehrlichiosis/Anaplasmosis – Undetermined</b> <a href="#">11091</a></p> <p>New code as of 1/1/08. Replaced event code <a href="#">11087</a>, <a href="#">Ehrlichiosis, human, other or unspecified</a></p>	<p>A tick-borne illness characterized by acute onset of fever and one or more of the following signs or symptoms: headache, myalgia, malaise, anemia, leucopenia, thrombocytopenia, or elevated hepatic transaminases. Nausea, vomiting, or rash may be present in some cases. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><b>Probable:</b> A clinically compatible illness with serological evidence of IgG or IgM antibody reactive (<math>\geq 1:128</math>) with <i>Ehrlichia spp.</i> by IFA, ELISA, or dot-ELISA, OR identification of morulae in white cells by microscopic examination in the absence of other supportive lab results.</p> <p><b>Suspect:</b> A case with laboratory evidence of past/present infection with undetermined <i>Ehrlichia/Anaplasma spp.</i> but no available clinical information.</p> <p>Note: For ehrlichiosis/anaplasmosis, an undetermined case can only be classified as probable. This occurs when a case has compatible clinical criteria with laboratory evidence to support infection, but not with sufficient clarity to identify the organism as <i>E. chaffeensis</i>, <i>A. phagocytophilum</i>, or <i>E. ewingii</i>. This may include the identification of morulae in white cells by microscopic examination in the absence of other supportive laboratory results.</p>	

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p>Ehrlichiosis, human granulocytic (HGE) – Discontinued (See <b>Anaplasma</b>) 11085</p> <p><b>As of 1/1/08 reportable under <a href="#">11090, Anaplasma phagocytophilum</a></b></p>	<p>Tick-borne illness caused by <i>E. phagocytophila</i> characterized by acute onset of fever, headache, myalgia, and/or malaise. Nausea, vomiting, or rash may be present in some cases. Clinical laboratory findings may include thrombocytopenia, leukopenia, and/or elevated liver enzymes. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><i>Confirmed:</i> A clinically compatible illness that is laboratory confirmed. <i>Probable:</i> A clinically compatible illness with either a single positive IFA titer (based on cutoff titers established by the laboratory performing the test) or the visualization of morulae in leukocytes</p>	<ul style="list-style-type: none"> <li>▪ Four-fold change in antibody titer to <i>E. phagocytophila</i> antigen by IFA in paired serum samples, or</li> <li>▪ Positive PCR assay and confirmation of <i>E. phagocytophila</i> DNA, or</li> <li>▪ Identification of morulae in leukocytes, and a positive IFA titer to <i>E. phagocytophila</i> antigen (based on cutoff titers established by the laboratory performing the assay), or</li> <li>▪ Immunostaining of <i>E. phagocytophila</i> antigen in a biopsy or autopsy sample, or</li> <li>▪ Culture of <i>E. phagocytophila</i> from a clinical specimen</li> </ul>
<p>Ehrlichiosis, human monocytic Discontinued – (See <b>E. Chaffeensis</b>) 11086 -</p> <p><b>As of 1/1/08, reportable under <a href="#">11088, Ehrlichia chaffeensis</a></b></p>	<p>A tick-borne illness characterized by acute onset of fever, headache, myalgia, and/or malaise. Nausea, vomiting, or rash may be present in some cases. Clinical laboratory findings may include thrombocytopenia, leukopenia, and/or elevated liver enzymes. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><i>Confirmed:</i> A clinically compatible illness that is laboratory confirmed. <i>Probable:</i> A clinically compatible illness with either a single positive IFA titer (based on cutoff titers established by the laboratory performing the test) or the visualization of morulae in leukocytes</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of a four-fold change in antibody titer to <i>E. chaffeensis</i> antigen by indirect immunofluorescence assay (IFA) in paired serum samples, or</li> <li>▪ Positive polymerase chain reaction (PCR) assay and confirmation of <i>E. chaffeensis</i> DNA, or</li> <li>▪ Identification of morulae in leukocytes, and a positive IFA titer to <i>E. chaffeensis</i> antigen (based on cutoff titers established by the laboratory performing the assay), or</li> <li>▪ Immunostaining of <i>E. chaffeensis</i> antigen in a biopsy or autopsy sample, or</li> <li>▪ Culture of <i>E. chaffeensis</i> from a clinical specimen</li> </ul>
<p>Ehrlichiosis, human, other or unspecified agent – Discontinued (See <b>Ehrlichiosis/Anaplasmosis Undetermined</b>) 11087</p> <p><b>As of 1/1/08, reportable under, <a href="#">11091, Ehrlichiosis/Anaplasmosis – Undetermined</a></b></p>	<p>A tick-borne illness characterized by acute onset of fever, headache, myalgia, and/or malaise. Nausea, vomiting, or rash may be present in some cases. Clinical laboratory findings may include thrombocytopenia, leukopenia, and/or elevated liver enzymes. Intracytoplasmic bacterial aggregates (morulae) may be visible in the leukocytes of some patients.</p> <p><i>Confirmed:</i> A clinically compatible illness that is laboratory confirmed <i>Probable:</i> A clinically compatible illness with either a single positive IFA titer (based on cutoff titers established by the laboratory performing the test) or the visualization of morulae in leukocytes</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of a four-fold change in antibody titer to more than one <i>Ehrlichia</i> species by IFA in paired serum samples, in which a dominant reactivity cannot be established, or</li> <li>▪ Identification of an <i>Ehrlichia</i> species other than <i>E. chaffeensis</i> or <i>E. phagocytophila</i> by PCR, immunostaining, or culture</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<b>Encephalitis (Arboviral), Cache Valley</b> <a href="#">10054</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis/meningitis (Arboviral), California serogroup</b> <a href="#">10054</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis (Arboviral), Eastern Equine (EEE)</b> <a href="#">10053</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis (Arboviral), Powassan</b> <a href="#">10057</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis (Arboviral), St. Louis</b> <a href="#">10051</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis (Arboviral), Venezuelan equine (VEE)</b> <a href="#">10055</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis (Arboviral), West Nile</b> <a href="#">10056</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive
<b>Encephalitis (Arboviral), Western Equine (WEE)</b> <a href="#">10052</a>	See Case Definition/Case Classification for <a href="#">Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See <a href="#">Lab Confirmation Tests for Arbovirus</a> , Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Encephalitis, Nonarboviral</b>  <a href="#">10050</a></p>	<p>Encephalitis is an inflammation of the brain, usually caused by a direct viral infection or a hypersensitivity reaction to a virus or foreign protein (including vaccine). An inflammation of the brain's covering, or meninges, is called meningitis (see Aseptic and Bacterial, Other Meningitis guides).  Clinical description: An illness in which encephalitis is the major manifestation. Symptoms are due to direct invasion and replication of the infectious agent in the central nervous system, resulting in objective clinical evidence of cerebral or cerebellar dysfunction. Postinfectious (or parainfectious) encephalitis is encephalitis or meningoencephalitis that follows or occurs in combination with other viral illnesses that are not central nervous system illnesses, or after vaccine is administered. Symptoms may be due to hypersensitivity reaction.</p> <p><b>Confirmed:</b> A clinically compatible illness diagnosed by a physician as primary encephalitis or a clinically compatible illness diagnosed by a physician as postinfectious (or parainfectious) encephalitis (other than the arboviral encephalities).</p> <p><a href="#">See Encephalitis/Meningitis Note</a></p>	<p>Laboratory studies are important in clinical diagnosis but are not required for reporting purposes.</p>
<p>Enterohemorrhagic  <i>Escherichia coli</i> (EHEC)  O157:H7 – Discontinued  (See <b>STEC</b>)  <a href="#">11560</a></p> <p>Enterohemorrhagic  <i>Escherichia coli</i> (EHEC)  shiga toxin+ (not serogrouped) –  Discontinued (See <b>STEC</b>)  <a href="#">11564</a></p> <p>Enterohemorrhagic  <i>Escherichia coli</i> (EHEC)  shiga toxin+  (serogroup non-O15) –  Discontinued (See <b>STEC</b>)  <a href="#">11562</a></p>	<p><b>Discontinued</b> - As of 1/1/07 reportable under 11563-<i>Escherichia coli</i>, shiga-toxin producing (STEC)</p> <p><a href="#">See STEC</a></p>	

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b><i>Escherichia coli</i>, shiga-toxin producing (STEC)</b>  <a href="#">11563</a></p> <p><i>This code replaced <a href="#">11560</a>, <a href="#">11564</a>, and <a href="#">11562</a> as of 1/1/07</i></p>	<p>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 and the organism may cause extraintestinal infections.</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported</p> <p><b>Probable:</b></p> <ul style="list-style-type: none"> <li>▪ A case with isolation of <i>E. coli</i> O157 from a clinical specimen, without confirmation of H antigen or Shiga toxin production, or</li> <li>▪ a clinically compatible case that is epidemiologically linked to a confirmed or probable case, or</li> <li>▪ identification of an elevated antibody titer to a known Shiga toxin-producing <i>E. coli</i> serotype from a clinically compatible case, or</li> <li>▪ identification of Shiga toxin in a specimen from a clinically compatible case without the isolation of the Shiga toxin-producing <i>E. coli</i></li> </ul> <p><b>Suspect:</b> A case of postdiarrheal HUS or TTP (<a href="#">See Hemolytic uremic syndrome, postdiarrheal</a>).</p> <p><i>Note: Cases meeting the criteria for confirmed or probable STEC and <a href="#">HUS</a> should be reported under each condition.</i></p>	<ul style="list-style-type: none"> <li>▪ Isolation of Shiga toxin-producing <i>Escherichia coli</i> from a clinical specimen. <ul style="list-style-type: none"> <li>○ <i>Escherichia coli</i> O157:H7 isolates may be assumed to be Shiga toxin-producing; for all other <i>E. coli</i> isolates, Shiga toxin production or the presence of Shiga toxin genes must be determined to be considered STEC.</li> <li>○ Shiga-toxin producing - detection of Shiga toxin, Shiga-like toxin, verotoxin, or Shiga toxin genes in stool or enrichment broths by EIA (enzyme immunoassay), PCR, or cell culture methods</li> </ul> </li> </ul> <p>Note: All <a href="#">E.coli O157:H7, isolates or specimens from cases where Shiga-toxin* activity is demonstrated</a> isolates must be submitted to the DSHS laboratory</p>
<p>Giardiasis  <a href="#">11570</a></p>	<p>An illness caused by the protozoan <i>Giardia lamblia</i> and characterized by diarrhea, abdominal cramps, bloating, weight loss, or malabsorption. Infected persons may be asymptomatic.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of <i>G. lamblia</i> cysts in stool, or</li> <li>▪ Demonstration of <i>G. lamblia</i> trophozoites in stool, duodenal fluid, or small-bowel biopsy, or</li> <li>▪ Demonstration of <i>G. lamblia</i> antigen in stool by a specific immunodiagnostic test (e.g., enzyme-linked immunosorbent assay)</li> </ul>
<p><b>Granulomatous amebic meningoencephalitis (GAE)</b>  <a href="#">10096</a></p>	<p>Several species of <i>Acanthamoeba</i> and <i>Balamuthia mandrillaris</i> (leptomyxid amebae) can invade the brain and meninges of immunocopromised individuals, probably after entry through a skin lesion and without involvement of the nasal and olfactory tissues; this causes a granulomatous disease (granulomatous amebic encephaliits) of insidious onset and lasting from 8 days to several months.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p>Note: See also <a href="#">Primary amebic encephalitis (PAM)</a></p>	<ul style="list-style-type: none"> <li>▪ Identification of <i>Acanthamoeba</i>, <i>Balamuthia mandrillaris</i> or other free-living ameba (less frequently <i>Naegleria fowleri</i> organisms)</li> </ul>

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<p><b>Group A <i>Streptococcus</i>, invasive</b> <a href="#">11710</a></p>	<p>Invasive group A streptococcal infections may manifest as any of several clinical syndromes, including pneumonia, <u>bacteremia in association with</u> cutaneous infection (e.g., cellulitis, erysipelas, or infection of a surgical or nonsurgical wound), deep soft-tissue infection (e.g., myositis or necrotizing fasciitis), meningitis, peritonitis, osteomyelitis, septic arthritis, postpartum sepsis (i.e., puerperal fever), neonatal sepsis, and nonfocal bacteremia.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation of Group A <i>Streptococcus</i> (<i>Streptococcus pyogenes</i>) by culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)</li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a></p>
<p><b>Group B <i>Streptococcus</i>, invasive<sup>8</sup></b> <a href="#">11715</a></p>	<p>Group B streptococcus is the most common cause of life-threatening infections, sepsis (blood infection) and meningitis (infection of the fluid and lining around the brain) in newborns. In infants, Group B Streptococcus is characterized by sepsis, respiratory distress, apnea, shock, pneumonia and meningitis, is acquired in utero or during delivery, and occurs more frequently in low birth weight infants.</p> <p>Group B Streptococcus, invasive disease can present in a number of different ways in adults. The most common problems in adults are: bloodstream infections, pneumonia, skin and soft-tissue infections, and bone and joint infections. Rarely in adults, group B streptococcus can cause meningitis.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation of group B streptococci (<i>Streptococcus agalactiae</i>) species by a culture from a normally sterile site</li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a></p>
<p><b><i>Haemophilus influenzae</i> type b, invasive disease</b> <a href="#">10590</a></p>	<p><i>Haemophilus influenzae</i> type b may produce any of several clinical syndromes. Only invasive manifestations, however, are reportable. These include meningitis, bacteremia/septicemia, epiglottitis, pericarditis, osteomyelitis, septic arthritis, and cellulitis.</p> <p><b>Confirmed:</b> A clinically compatible case that is lab confirmed and identified specifically as <i>H. influenzae</i> type b</p> <p><b>Probable:</b> A clinically compatible illness with detection of <i>H. influenzae</i> type b antigen in cerebrospinal fluid (CSF)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>H. influenzae</i> type b from a normally sterile site (e.g., blood or cerebrospinal fluid [CSF] or, less commonly, joint, pleural, or pericardial fluid)</li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a></p>



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<b>Hantavirus infection</b> <a href="#">11610</a>	<p>An acute zoonotic viral disease characterized by fever, myalgias and GI complaints followed by the abrupt onset of respiratory distress and hypotension. The illness progresses rapidly to severe respiratory failure and shock. An elevated hematocrit, hypoalbuminemia and thrombocytopenia are found in most cases. Renal and hemorrhagic manifestations are usually conspicuously absent except in some severe cases.</p> <p><b>Confirmed:</b> A clinically compatible case with confirmatory laboratory results</p>	<p>Diagnosis is made by the demonstration of specific IgM antibodies by using ELISA, Western blot or strip immunoblot techniques. Most patients have IgM antibodies at the time of hospitalization. PCR analysis of autopsy or biopsy tissues and immunohistochemistry are also established diagnostic techniques in specialized laboratories.</p>
<b>Hantavirus pulmonary syndrome</b> <a href="#">11590</a>	<p>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.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Detection of hantavirus-specific immunoglobulin M or rising titers of hantavirus-specific immunoglobulin G, or</li> <li>▪ Detection of hantavirus-specific ribonucleic acid sequence by polymerase chain reaction in clinical specimens, or</li> <li>▪ Detection of hantavirus antigen by immunohistochemistry</li> </ul>
<b>Hemolytic uremic syndrome, postdiarrheal (HUS)</b> <a href="#">11550</a>	<p>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).</p> <p><b>Confirmed:</b> 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</p> <p><b>Probable:</b></p> <ul style="list-style-type: none"> <li>▪ 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</li> <li>▪ An acute illness diagnosed as HUS or TTP, that a) has onset within 3 weeks after onset of an acute or bloody diarrhea and b) meets the laboratory criteria except that microangiopathic changes are not confirmed</li> </ul> <p><i>Note: See <a href="#">Escherichia coli, Shiga-toxin producing (STEC)</a>. Cases meeting the criteria for both conditions should be reported under each condition.</i></p>	<p>The following are both present at some time during the illness:</p> <ul style="list-style-type: none"> <li>▪ Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear and</li> <li>▪ 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)</li> </ul> <p>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/mm<sup>3</sup>, other diagnoses should be considered.</p>

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<b>Hepatitis A, acute</b> <a href="#">10110</a>	<p>An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels.</p> <p><b>Confirmed:</b> A case that meets the clinical case definition (if known) and is laboratory confirmed, or a case that meets the clinical case definition and occurs in a person who has an epidemiological link with a person who has laboratory-confirmed hepatitis A</p>	<ul style="list-style-type: none"> <li>▪ Immunoglobulin M (IgM) antibody to hepatitis A virus (anti- HAV) positive</li> </ul>
<b>Hepatitis B, acute</b> <a href="#">10100</a>	<p>An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels.</p> <p><b>Confirmed:</b> A case that is positive for IgM antibody to hepatitis B core antigen (anti-HBc) or meets the clinical case definition and is hepatitis B surface antigen (HBsAg) positive and anti-HAV IgM negative (if done)</p>	<ul style="list-style-type: none"> <li>▪ IgM antibody to hepatitis B core antigen (anti-HBc) positive, or</li> <li>▪ Meets the clinical case definition and is hepatitis B surface antigen (HBsAg) positive and anti-HAV IgM negative (if done)</li> </ul>
Hepatitis B virus infection, chronic <sup>6</sup> <a href="#">10105</a>	<p>Persons with chronic hepatitis B virus (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.</p> <p><i>Confirmed:</i> A case that is laboratory confirmed  <i>Probable:</i> A case with a single HBsAg or HBeAg or HBV DNA positive lab result when no IgM anti-HBc results are available</p>	<ul style="list-style-type: none"> <li>▪ IgM anti-HBc negative (antibody to HBV core antigen) if done, and</li> <li>▪ Positive on one of the following tests: HBsAg (hepatitis B surface antigen), HBeAg (hepatitis B e antigen), or HBV DNA,</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>▪ HBsAg, HBeAg, or HBV DNA positive two times at least 6 months apart. (Any combination of these tests performed 6 months apart.)</li> </ul>
<b>Hepatitis B virus infection, perinatal</b> <a href="#">10104</a>	<p>Perinatal hepatitis B in the newborn may range from asymptomatic to fulminant hepatitis.</p> <p><b>Confirmed:</b> HBsAg positive in any infant aged &gt;1 through 24 months who was born in the US or in US territories to an HBsAg-positive mother</p>	<ul style="list-style-type: none"> <li>▪ Hepatitis B surface antigen (HBsAg) positive</li> </ul>

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<p><b>Hepatitis C, acute</b><sup>9</sup> <a href="#">10101</a></p>	<p>An acute illness with a) discrete onset of symptoms consistent with acute viral hepatitis (e.g., anorexia, abdominal discomfort, nausea, vomiting), and b) jaundice or abnormal serum alanine aminotransferase levels (ALT level &gt;400 IU/L).</p> <p><b>Confirmed:</b> A case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis C</p> <p><i>Perinatal or Infant Hepatitis C:</i> (birth to two years, if greater than 2 years of age please code as above)</p> <ul style="list-style-type: none"> <li>▪ Hep C Acute, Suspect = Any HCV Ab (EIA, RIBA) positive infant</li> <li>▪ Hep C Acute, Confirmed = Any PCR positive infant</li> </ul> <p><i>Infants should be followed-up and re-classified if needed at around 12- 18 months of age.</i></p>	<ul style="list-style-type: none"> <li>▪ Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay defined and listed by CDC at <a href="http://www.cdc.gov/hepatitis/HCV/LabTesting.htm#section1">http://www.cdc.gov/hepatitis/HCV/LabTesting.htm#section1</a> , or</li> <li>▪ Recombinant immunoblot assay (HCV RIBA) positive, or</li> <li>▪ Nucleic acid testing for hepatitis C virus (NAT for HCV RNA) positive;</li> </ul> <p>And meets the following two criteria</p> <ul style="list-style-type: none"> <li>▪ IgM antibody to hepatitis A virus (IgM anti-HAV) negative, and</li> <li>▪ IgM antibody to hepatitis B core antigen (IgM anti-HBc) negative</li> </ul>
<p>Hepatitis C virus infection, chronic (past or present) <a href="#">10106</a></p>	<p>Most HCV-infected persons are asymptomatic. However, many have chronic liver disease, which can range from mild to severe including cirrhosis and liver cancer.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed and that does not meet the case definition for acute hepatitis C</p> <p><b>Probable:</b> A case that is anti-HCV positive by EIA and has alanine aminotransferase (ALT or SGPT) values above the upper limit of normal (if known), but the anti-HCV EIA result has not been verified by an additional more specific assay or the signal to cutoff ratio is unknown</p>	<ul style="list-style-type: none"> <li>▪ 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</li> <li>▪ Anti-HCV screening-test-positive with a signal to cut-off ratio predictive of a true positive as determined for the particular assay defined and listed by CDC at <a href="http://www.cdc.gov/hepatitis/HCV/LabTesting.htm#section1">http://www.cdc.gov/hepatitis/HCV/LabTesting.htm#section1</a> , or</li> <li>▪ Recombinant immunoblot assay (HCV RIBA) positive, or</li> <li>▪ Nucleic acid testing for hepatitis C virus (NAT for HCV RNA) positive, or</li> <li>▪ Report of HCV genotype</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Hepatitis Delta co- or super-infection, acute (Hepatitis D)</b>  <a href="#">10102</a></p>	<p>An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels.</p> <p><b>Confirmed:</b> A case that meets the clinical case definition and is laboratory confirmed</p> <p>Note: Hepatitis D is a liver disease caused by the hepatitis D virus (HDV), a defective virus that needs the hepatitis B virus to exist. Hepatitis D virus (HDV) is found in the blood of persons infected with the virus. Symptoms include jaundice, fatigue, abdominal pain, loss of appetite, nausea, vomiting, joint pain, and dark urine. HBV-HDV co-infection may cause more severe acute disease and a higher risk (2%-20%) of developing acute liver failure compared with those infected with HBV alone. Progression to cirrhosis is believed to be more common with HBV/HDV chronic infections.</p>	<ul style="list-style-type: none"> <li>▪ HBsAg or IgM anti-HBc positive and antibody to hepatitis delta virus positive</li> </ul>
<p><b>Hepatitis E, acute</b>  <a href="#">10103</a></p>	<p>Hepatitis E is not endemic in the US. Typical clinical signs and symptoms of acute hepatitis E are similar to those of other types of viral hepatitis and include abdominal pain anorexia, dark urine, fever, hepatomegaly, jaundice, malaise, nausea, and vomiting. Other less common symptoms include arthralgia, diarrhea, pruritus, and urticarial rash. The period of infectivity following acute infection has not been determined but virus excretion in stools has been demonstrated up to 14 days after illness onset. In most hepatitis E outbreaks, the highest rates of clinically evident disease have been in young to middle-age adults; lower disease rates in younger age groups may be the result of an icteric and/or subclinical HEV infection. No evidence of chronic infection has been detected in long-term follow-up of patients with hepatitis E. The case fatality rate is low except in pregnant women where it may reach 20% among those infected during the third trimester of pregnancy.</p> <p><b>Confirmed:</b> A case that meets the clinical case description with supportive laboratory evidence (positive IgG antibody, positive IgM antibody, or positive PCR); OR negative tests for other acute hepatitis markers and an epidemiological link to other confirmed cases or travel history to an endemic area during exposure period</p>	<p>No serologic tests to diagnose HEV infection are commercially available in the United States. However, several diagnostic tests are available in research laboratories, including</p> <ul style="list-style-type: none"> <li>▪ Enzyme immunoassays</li> <li>▪ Western blot assays to detect IgM and IgG</li> <li>▪ Anti-HEV in serum, polymerase chain reaction tests to detect HEV RNA in serum and stool</li> <li>▪ Immunofluorescent antibody blocking assays to detect antibody to HEV antigen in serum and liver</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Hepatitis Non-ABC, acute</b> <a href="#">10480</a></p>	<p>An acute illness with a) discrete onset of symptoms and b) jaundice or elevated serum aminotransferase levels.</p> <p><b>Confirmed:</b> A case that meets the clinical case definition and is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Serum aminotransferase levels greater than 2.5 times the upper limit of normal, and</li> <li>▪ IgM anti-HAV negative, and</li> <li>▪ IgM anti-HBc negative (if done) or HBsAg negative, and</li> <li>▪ Anti-HCV negative</li> </ul>
<p>Influenza A - novel viral infections <a href="#">11062</a></p>	<p>An illness compatible with influenza virus infection.</p> <p><i>Confirmed:</i> A case of human infection with a novel influenza A virus confirmed by CDC's influenza laboratory.</p> <p><i>Probable:</i> A case meeting the clinical criteria and epidemiologically linked to a confirmed case, but for which no laboratory testing for influenza virus infection has been performed.</p> <p>Criteria for epidemiologic linkage: a) the patient has had contact with one or more persons who either have or had the disease 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.</p> <p><i>Suspected:</i> A case meeting the clinical criteria, pending laboratory confirmation. Any case of human infection with an influenza A virus that is different from currently circulating human influenza H1 and H3 viruses is classified as a suspected case until the confirmation process is complete.</p> <p>Note: International Health Regulations, referred to as IHR (2005) (<a href="http://www.hhs.gov/news/press/2006pres/20061213.html">http://www.hhs.gov/news/press/2006pres/20061213.html</a>) added human infections with new influenza strains to the list of conditions that Member States must immediately report to WHO.</p>	<ul style="list-style-type: none"> <li>▪ A human case of infection with an influenza A virus subtype that is different from currently circulating human influenza H1 and H3 viruses.</li> <li>▪ Novel subtypes include, but are not limited to, H2, H5, H7, and H9 subtypes.</li> <li>▪ Influenza H1 and H3 subtypes originating from a non-human species or from genetic reassortment between animal and human viruses are also novel subtypes.</li> <li>▪ Novel subtypes will be detected with methods available for detection of currently circulating human influenza viruses at state public health laboratories (e.g., real-time reverse transcriptase polymerase chain reaction [RT-PCR]).</li> <li>▪ Non-human influenza viruses include avian subtypes (e.g., H5, H7, or H9 viruses), swine and other mammalian subtypes.</li> <li>▪ Confirmation that an influenza A virus represents a novel virus will be performed by CDC's influenza laboratory.</li> </ul>

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<p>Influenza, human isolates,<sup>10</sup>  <a href="#">11060</a></p>	<p>The flu is a contagious respiratory illness caused by influenza viruses. It can cause mild to severe illness, and at times can lead to death. Symptoms of flu include: fever (usually high), headache, extreme tiredness, dry cough, sore throat, runny or stuffy nose, and muscle aches. Stomach symptoms, such as nausea, vomiting, and diarrhea, also can occur but are more common in children than adults. Complications of flu can include bacterial pneumonia, ear infections, sinus infections, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes.</p> <p><i>Confirmed:</i> Case that is clinically compatible and laboratory confirmed  Note: See Influenza-associated pediatric mortality below for reporting of Influenza-associated deaths in all persons aged &lt;18 years.</p>	<ul style="list-style-type: none"> <li>▪ Influenza virus isolation in tissue cell culture from respiratory specimens;</li> <li>▪ Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens;</li> <li>▪ Immunofluorescent antibody staining (direct or indirect) of respiratory specimens;</li> <li>▪ Rapid influenza diagnostic testing of respiratory specimens;</li> <li>▪ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera</li> </ul>
<p><b>Influenza-associated pediatric mortality</b>  <a href="#">11061</a></p>	<p>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 &lt;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; or after review and consultation there is an alternative agreed upon cause of death.</p> <p><i>Confirmed:</i> A death meeting the clinical case definition that is laboratory confirmed</p>	<p>Laboratory testing for influenza virus infection may be done on pre- or post-mortem clinical specimens, and include identification of influenza A or B virus infections by a positive result by at least one of the following:</p> <ul style="list-style-type: none"> <li>▪ Influenza virus isolation in tissue cell culture from respiratory specimens;</li> <li>▪ Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens;</li> <li>▪ Immunofluorescent antibody staining (direct or indirect) of respiratory specimens;</li> <li>▪ Rapid influenza diagnostic testing of respiratory specimens;</li> <li>▪ Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens;</li> <li>▪ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera</li> </ul>

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<p><b>Legionellosis</b> <a href="#">10490</a></p>	<p>Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires disease, which is characterized by fever, myalgia, cough, clinical or radiological pneumonia, and Pontiac fever, a milder illness without pneumonia.</p> <p><b>Confirmed:</b> A clinically compatible case that meets at least one of the confirmatory laboratory criteria</p> <p><i>Travel-associated:</i> 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</p>	<ul style="list-style-type: none"> <li>▪ Isolation of any <i>Legionella</i> organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid, or</li> <li>▪ Detection of <i>Legionella pneumophila</i> serogroup 1 antigen in urine using validated reagents, or</li> </ul> <p>Demonstration of seroconversion by a fourfold or greater rise in specific serum antibody titer between paired acute and convalescent phase serum specimens to <i>Legionella pneumophila</i> serogroup 1 using validated reagents</p>
<p><b>Leishmaniasis</b> <a href="#">80550</a></p>	<p>Leishmaniasis is a polymorphic protozoan disease of skin and mucous membranes. The disease starts with a macule then a papule that enlarges and typically becomes an indolent ulcer in the absence of bacterial infection. Lesions may be single or multiple, occasionally nonulcerative and diffuse. Lesions may heal spontaneously within weeks to months, or last for a year or more. In some individuals, certain strains can disseminate to cause mucosal lesions (espundia), even years after the primary cutaneous lesion has healed. These sequelae, which involve nasopharyngeal tissues, are characterized by progressive tissue destruction and often scanty presence of parasites and can be severely disfiguring. Recurrence of cutaneous lesions after apparent cure may occur as ulcers, papules or nodules at or near the healed original ulcer. Mode of transmission to humans is through the infective bite of female sandflies.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Microscopic identification of the nonmotile, intracellular form (amastigote) in stained specimens from lesions, or</li> <li>▪ Culture of the motile, extracellular form (promastigote) on suitable media, or</li> <li>▪ An intradermal (Montenegro) test with leishmanin, an antigen derived from the promastigotes is usually positive in established disease, or</li> <li>▪ Serological (IFA or ELISA) may be useful for diagnosis of mucosal leishmaniasis</li> </ul>
<p><b>Listeriosis</b> <a href="#">10640</a></p>	<p>In adults, invasive disease caused by <i>Listeria monocytogenes</i> 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.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>L. monocytogenes</i> from a normally sterile site, e.g., blood or cerebrospinal fluid (CSF) or, less commonly, joint, pleural, or pericardial fluid), or</li> <li>▪ In the setting of miscarriage or stillbirth, isolation of <i>L. monocytogenes</i> from placental or fetal tissue, or</li> <li>▪ In the setting of infection present at birth, isolation of <i>L. monocytogenes</i> from mother's blood</li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a> All <a href="#">Listeria monocytogenes</a> isolates must be submitted to the DSHS laboratory</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Lyme disease</b> <a href="#">11080</a></p>	<p>A systemic, tickborne disease with protean manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The best clinical marker for the disease is the initial skin lesion, erythema migrans (EM), which occurs in 60%-80% of patients.</p> <p><b>Confirmed:</b> A case with a physician-diagnosed EM that is greater than or equal to 5 cm in size with a known exposure*, OR a case of physician-diagnosed EM of any size with laboratory evidence of infection, OR a case with at least one late manifestation** that has laboratory evidence of infection.</p> <p>*Exposure is defined as having been (less than or equal to 30 days prior to onset of EM) in wooded, brushy, or grassy areas in a county in which Lyme disease is endemic. (Currently, there are no Texas counties that are considered to be endemic for Lyme disease.) A history of tick bite is not required</p> <p>**For purposes of surveillance, late manifestations include any of the following when an alternate explanation is not found:</p> <ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ Nervous system. Any 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 demonstration of antibody production against <i>Borrelia burgdorferi</i> in the cerebrospinal fluid (CSF), evidenced by a higher titer of antibody in CSF than in serum.</li> <li>▪ Cardiovascular system. Acute onset of high-grade (2nd-degree or 3rd-degree) atrioventricular conduction defects that resolve in days to weeks and are sometimes associated with myocarditis.</li> </ul> <p><b>Probable:</b> Any other case of physician-diagnosed Lyme disease that has laboratory evidence of infection.</p> <p><b>Suspect:</b> A case of EM with no known exposure and no laboratory evidence of infection, OR a case with laboratory evidence of infection, but no clinical information available.</p> <p>Note: Lyme disease reports will not be considered cases if the medical provider specifically states this is <i>not</i> a case of Lyme disease, or the only symptom listed is "tick bite" or "insect bite."</p>	<ul style="list-style-type: none"> <li>▪ Positive culture for <i>Borrelia burgdorferi</i>, or</li> <li>▪ Demonstration of IgM or IgG antibodies to <i>B. burgdorferi</i> in serum or cerebrospinal fluid (CSF) using a two-tiered approach - a sensitive enzyme immunoassay (EIA) or immunofluorescence assay (IFA) test, followed by Western Blot confirmatory test.</li> </ul>



Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Malaria</b> <a href="#">10130</a></p>	<p>Signs and symptoms are variable; however, most patients experience fever. In addition to fever, common associated symptoms include headache, back pain, chills, sweats, myalgia, nausea, vomiting, diarrhea, and cough. Untreated <i>Plasmodium falciparum</i> infection can lead to coma, renal failure, pulmonary edema, and death. The diagnosis of malaria should be considered for any person who has these symptoms and who has traveled to an area in which malaria is endemic. Asymptomatic parasitemia can occur among persons who have been long-term residents of areas in which malaria is endemic.</p> <p><b>Confirmed:</b> An episode of laboratory confirmed malaria parasitemia 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</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of malaria parasites in blood films</li> <li>▪ Detection of malaria parasite (<i>Plasmodium</i> species) -specific nucleic acid by PCR</li> </ul>
<p><b>Measles (rubeola)</b> <a href="#">10140</a></p>	<p>An illness characterized by all of the following: a generalized rash lasting at least 3 days; a temperature <math>\geq 101.0^{\circ}</math> F (<math>\geq 38.3^{\circ}</math> C); and cough, coryza, or conjunctivitis.</p> <p><b>Confirmed:</b> A case that meets the clinical case definition and is laboratory-confirmed or epidemiologically linked to a laboratory-confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Positive serologic test for measles immunoglobulin M antibody, or</li> <li>▪ Significant rise in measles antibody level by any standard serologic assay, or</li> <li>▪ Isolation of measles virus from a clinical specimen, or</li> <li>▪ Detection of measles-virus-specific nucleic acid by PCR</li> </ul>
<p><b>Meningococcal disease (<i>Neisseria meningitidis</i>)</b> <a href="#">10150</a></p>	<p>Meningococcal disease manifests most commonly as meningitis and/or meningococcemia that may progress rapidly to purpura fulminans, shock, and death. However, other manifestations might be observed.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> <u>A clinically compatible case</u> that has one of the following:</p> <ul style="list-style-type: none"> <li>▪ <i>N. meningitidis</i> DNA using a validated polymerase chain reaction (PCR), obtained from a normally sterile site; or</li> <li>▪ <i>N. meningitidis</i> antigen by immunohistochemistry (IHC) on formalin-fixed tissue; or</li> <li>▪ <i>N. meningitidis</i> antigen by latex agglutination of CSF; or</li> <li>▪ Clinical purpura fulminans in the absence of a positive blood culture; or</li> <li>▪ Clinically compatible case with gram negative diplococci from a normally sterile site (e.g., blood or CSF)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Neisseria meningitidis</i> from a normally sterile site</li> </ul> <p>Note: All <a href="#">Neisseria meningitidis</a> isolates from normally sterile sites must be submitted to the DSHS laboratory for typing and molecular analysis See <a href="#">Normally Sterile Site</a></p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Mumps</b> <a href="#">10180</a></p>	<p>An illness with acute onset of unilateral or bilateral tender, self-limited swelling of the parotid or other salivary gland, lasting greater than or equal to 2 days, and without other apparent cause.</p> <p><b>Confirmed:</b> A case that meets the clinical case definition and is either laboratory-confirmed or is epidemiologically linked to a confirmed case</p> <p><b>Probable:</b> A case that meets the clinical case definition, has noncontributory or no serologic or viral testing, and is not epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of mumps virus from clinical specimen, or</li> <li>▪ Significant rise between acute- and convalescent-phase titers in serum mumps immunoglobulin G (IgG) antibody level by any standard serologic assay, or</li> <li>▪ Positive serologic test for mumps immunoglobulin M (IgM) antibody, or</li> <li>▪ Detection of mumps-virus-specific nucleic acid by PCR</li> </ul> <p>Note: An elevated serum amylase is not confirmatory for mumps</p>
<p>Norovirus<sup>11</sup> <a href="#">10996</a></p> <p><b>Outbreaks are reportable.</b> See <a href="#">Report of Outbreak of Suspected Viral Gastroenteritis, CDC</a>.</p>	<p>Norovirus infection usually presents as acute-onset vomiting, watery non-bloody diarrhea with abdominal cramps, and nausea. Low-grade fever also occasionally occurs, and vomiting is more common in children. Dehydration is the most common complication, especially among the young and elderly, and may require medical attention. Symptoms usually last 24 to 60 hours. Recovery is usually complete and there is no evidence of any serious long-term sequelae. Studies with volunteers given stool filtrates have shown that asymptomatic infection may occur in as many as 30% of infections, although the role of asymptomatic infection in norovirus transmission is not well understood.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p>Note: Sequencing of norovirus strains found in clinical and environmental samples has greatly helped in conducting epidemiologic investigations.</p>	<ul style="list-style-type: none"> <li>▪ Polymerase chain reaction (PCR) can be used to test stool and emesis samples, as well as environmental swabs in special studies. Identification of the virus can be best made from stool specimens taken within 48 to 72 hours after onset of symptoms. Virus can sometimes be found in stool samples taken as late as 2 weeks after recovery.</li> <li>▪ Direct and immune electron microscopy of fecal specimens</li> <li>▪ Fourfold increase of specific antibodies in acute- and convalescent-phase blood samples</li> </ul> <p>Note: Enzyme-linked immunosorbent assays for detection of virus in stools have been developed but await evaluation further evaluation regarding sensitivity and specificity.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Pertussis</b> <a href="#">10190</a></p>	<p>For endemic or sporadic cases, 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). In outbreak settings of 3 or more cases including at least 1 laboratory-confirmed case, the case definition used can be modified to a "cough illness lasting at least 14 days."</p> <p><b>Confirmed:</b> A person with an acute cough illness of any duration who is culture positive, or who meets the case definition and is either PCR positive or is epi-linked to a laboratory confirmed case</p> <p><b>Probable:</b> Meets the clinical case definition and is not laboratory confirmed (not tested or tests are negative) nor epi-linked to a laboratory confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Bordetella pertussis</i> from clinical specimen or</li> <li>▪ Positive polymerase chain reaction (PCR) assay for <i>B. pertussis</i></li> </ul> <p>Note: Because <i>B. pertussis</i> can be difficult to culture, a negative culture result does not rule out pertussis.</p>
<p><b>Plague</b> <a href="#">10440</a></p>	<p>Plague is transmitted to humans by fleas or by direct exposure to infected tissues or respiratory droplets; the disease is characterized by fever, chills, headache, malaise, prostration, and leukocytosis that manifests in one or more of the following principal clinical forms:</p> <ul style="list-style-type: none"> <li>▪ Regional lymphadenitis (bubonic plague)</li> <li>▪ Septicemia without an evident bubo (septicemic plague)</li> <li>▪ Plague pneumonia, resulting from hematogenous spread in bubonic or septicemic cases (secondary pneumonic plague) or inhalation of infectious droplets (primary pneumonic plague)</li> <li>▪ Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague)</li> </ul> <p><b>Confirmed:</b> A clinically compatible case with confirmatory laboratory result:</p> <p><b>Probable:</b> A clinically compatible case with a presumptive laboratory results</p> <ul style="list-style-type: none"> <li>▪ Elevated serum antibody titer(s) to <i>Yersinia pestis</i> fraction 1 (F1) antigen (without documented fourfold or greater change) in a patient with no history of plague vaccination, or</li> <li>▪ Detection of F1 antigen in a clinical specimen by fluorescent assay</li> </ul> <p><b>Suspected:</b> A clinically compatible case without presumptive or confirmatory laboratory results</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Yersinia. pestis</i> from a clinical specimen, or</li> <li>▪ Fourfold or greater change in serum antibody titer to <i>Y. pestis</i> F1 antigen</li> </ul> <p>Note: See <a href="#">Yersiniosis</a> for other <i>Yersinia</i> isolates All <a href="#">Yersinia pestis</a> isolates must be submitted to the DSHS laboratory</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Poliomyelitis, paralytic</b> <a href="#">10410</a></p>	<p>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</p> <p><b>Confirmed:</b> A case that meets the clinical case definition in which the patient has a neurological deficit 60 days after onset of initial symptoms, has died, or has unknown follow-up status</p> <p><b>Probable:</b> A case that meets the clinical case definition</p> <p>Note: All suspected cases of paralytic poliomyelitis are reviewed by a panel of expert consultants at the Centers for Disease Control and Prevention (CDC) before final case classification occurs.</p>	<ul style="list-style-type: none"> <li>▪ Isolation of wild-type poliovirus type 1, 2, or 3 from a clinical specimen (stool or CSF)</li> </ul>
<p>Poliovirus infection, nonparalytic <a href="#">10405</a></p>	<p>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.</p> <p><b>Confirmed:</b> Poliovirus isolate identified in appropriate clinical specimen, with confirmatory typing and sequencing performed by the CDC Poliovirus Laboratory</p> <p>Note: This case definition applies only to poliovirus infections found in asymptomatic persons or those with mild, nonparalytic disease. Isolation of polioviruses from persons with acute paralytic poliomyelitis should continue to be reported as “paralytic poliomyelitis.”</p>	<p>Laboratory evidence: Polioviruses are among the most rapidly evolving of all RNA viruses. During community circulation, cVDPVs often recombine with other species C enteroviruses. Because polioviruses accumulate nucleotide changes at a constant rate of mutation (approximately 1% per year), the time of replication can be inferred from the degree of divergence. Poliovirus isolates are characterized according to their genetic properties and all vaccine-related poliovirus isolates should be evaluated by genomic sequencing to determine degree of divergence from the parent Sabin strains. In particular, sequencing should be performed on the virus capsid protein coding region (VP1) of the poliovirus genome to identify the virus as VDPV, and analysis of recombination with other polioviruses or species C enteroviruses should be determined.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Primary Amebic Meningoencephalitis (PAM)</b> <a href="#">80750</a></p>	<p>Primary amebic meningoencephalitis (PAM) is usually caused by <i>Naegleria fowleri</i> and occurs in healthy children and adults who usually have had recent fresh water exposure. The free-living ameboflagellate invades the brain and meninges via the nasal mucosa and olfactory nerve; it causes a typical syndrome of fulminate pyogenic meningoencephalitis (primary amoebic meningoencephalitis with severe frontal headache, occasional olfactory hallucinations, nausea, vomiting, high fever, nuchal rigidity, and somnolence) and death, usually within 10 days.</p> <p><b>Confirmed:</b> Clinical symptoms of meningoencephalitis and laboratory confirmation</p> <p>Note: See also <a href="#">Granulomatous amebic meningoencephalitis (GAE)</a></p>	<ul style="list-style-type: none"> <li>▪ Identification of <i>Naegleria fowleri</i>, or less frequently <i>Acanthamoeba</i>, or <i>Balamuthia mandrillaris</i> organisms</li> </ul>
<p><b>Q Fever</b> <a href="#">10255</a> - Discontinued</p>	<p>As of January 1, 2008, code 10255 for Q fever was retired and new codes for Q fever acute (see code <a href="#">10257</a>) and Q fever, chronic (see code <a href="#">10258</a>) should be used for reporting.</p>	
<p><b>Q Fever, Acute</b> <a href="#">10257</a></p> <p>Previously included in event code <a href="#">10255, Q fever</a></p>	<p>Q fever is a zoonotic disease caused by the rickettsia <i>Coxiella burnetii</i>. Exposure to Q fever is usually via aerosol and may be unknown (especially for chronic infection). Direct contact with animals is not required, and variable incubation periods may be dose dependent. Acute infection is characterized by acute onset of fever accompanied by rigors, myalgia, malaise, severe retrobulbar headache, acute hepatitis, pneumonia, elevated liver enzyme levels, fatigue, night sweats, dyspnea, confusion, nausea, diarrhea, vomiting, abdominal pain, vomiting, non-productive cough, or chest pain. Asymptomatic infections may also occur.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed.</p> <p><b>Probable:</b> A clinically compatible case with a single supportive IgG-specific antibody titer to <i>C. burnetii</i> Phase II antigen of <math>\geq 1:128</math> by IFA, OR serological evidence of elevated IgG or IgM antibody titer to <i>C. burnetii</i> by ELISA, dot-ELISA, or LA.</p>	<ul style="list-style-type: none"> <li>▪ Serological evidence of a fourfold change in IgG-specific antibody titer to <i>C. burnetii</i> Phase II antigen by IFA between paired serum samples (one taken during the first week of illness and a second 3-6 weeks later), or</li> <li>▪ Detection of <i>C. burnetii</i> DNA in a clinical specimen by polymerase chain reaction (PCR) assay, or</li> <li>▪ Demonstration of <i>C. burnetii</i> antigen in a clinical specimen by immunohistochemical (IHC) methods, or</li> <li>▪ Isolation of <i>C. burnetii</i> from a clinical specimen in cell culture</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Q Fever, Chronic</b> <a href="#">10258</a></p> <p>Previously included in event code <a href="#">10255, Q fever</a></p>	<p>Chronic Q fever is characterized by a <i>Coxiella burnetii</i> 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.</p> <p><i>Clinical evidence:</i> Chronic hepatitis, osteomyelitis, osteoarthritis, or pneumonitis (in the absence of other known etiology); suspected infection of a vascular aneurysm or vascular prosthesis; or newly recognized, culture-negative endocarditis (particularly in a patient with previous valvulopathy or compromised immune system).</p> <p><b>Confirmed:</b> A clinically compatible case of chronic illness that is laboratory confirmed.</p> <p><b>Probable:</b> A clinically compatible case of chronic illness with an antibody titer to <i>C. burnetii</i> Phase I IgG antigen that is <math>\geq 1:128</math> and <math>&lt; 1:800</math> by IFA.</p>	<ul style="list-style-type: none"> <li>▪ Serological evidence of IgG antibody to <i>C. burnetii</i> Phase I antigen of <math>\geq 1:800</math> by IFA (while Phase II IgG titer will be elevated, Phase I titer is higher than Phase II), or</li> <li>▪ Detection of <i>C. burnetii</i> DNA in a clinical specimen by polymerase chain reaction (PCR) assay, or</li> <li>▪ Demonstration of <i>C. burnetii</i> antigen in a clinical specimen by immunohistochemical (IHC) methods, or</li> <li>▪ Isolation of <i>C. burnetii</i> from a clinical specimen in cell culture</li> </ul>
<p><b>Rabies, animal</b> <a href="#">10340</a></p>	<p>All warm-blooded animals, including humans, are susceptible to rabies. In Texas, skunks, bats, coyotes, and foxes are the most commonly infected animals. Domestic dogs, cats, and livestock usually acquire rabies infections from wild animals.</p> <p>Medical authorities distinguish on the basis of clinical signs, between "furious" and "dumb" rabies. In the furious variety, the "mad dog" symptoms are pronounced. The animal is irritable and will snap and bite at real or imaginary objects. It may run for miles and attack anything in its path. The animal is extremely vicious and violent. Paralysis sets in shortly, usually affecting the hind legs first. Death follows four to seven days after the onset of clinical signs. In dumb rabies, the prominent symptoms are drowsiness and paralysis of the lower jaw. The animal may appear to have a bone lodged in its throat, sometimes causing owners to force open an animal's mouth to investigate and become unwittingly exposed to rabies. Animals with dumb rabies have no tendency to roam but will snap at movement. They are completely insensitive to pain, and usually become comatose and die from three to ten days after first symptoms appear.</p> <p><b>Confirmed:</b> A case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ A positive direct fluorescent antibody test (preferably performed on central nervous system tissue)</li> <li>▪ Isolation of rabies virus (in cell culture or in a laboratory animal)</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<b>Rabies, human</b> <a href="#">10460</a>	<p>Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days after the first symptom.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ 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</li> <li>▪ Isolation (in cell culture or in a laboratory animal) of rabies virus from saliva, cerebrospinal fluid (CSF), or central nervous system tissue, or</li> <li>▪ Identification of a rabies-neutralizing antibody titer greater than or equal to 5 (complete neutralization) in the serum or CSF of an unvaccinated person</li> </ul>
<b>Relapsing fever</b> <a href="#">10845</a>	<p>A systemic spirochetal disease in which periods of fever lasting 2-9 days alternate with afebrile periods of 2-4 days; the number of relapses varies from 1 to 10 or more. Each febrile period terminates by crisis. The total duration of the louseborne disease averages 13-16 days; the tickborne disease usually lasts longer. Transitory petechial rashes are common during the initial febrile period. The overall case-fatality rate in untreated cases is between 2% and 10%.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of the infectious agent (<i>Borrelia</i> spp) in dark-field preparations of fresh blood or stained thick or thin blood films, or</li> <li>▪ Intraperitoneal inoculation of laboratory rats or mice with blood taken during the febrile period, or</li> </ul> <p>Blood culture in special media.</p>
<b>Rocky Mountain spotted fever</b> <a href="#">10250</a>	<p>Rocky Mountain spotted fever (RMSF) is an illness caused by <i>Rickettsia rickettsii</i>, a bacterial pathogen transmitted to humans through contact with ticks. Disease onset averages one week following a tick bite. Age specific illness is highest for children. 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.</p> <p>Clinical evidence: Any reported acute onset of fever and one or more of the following: rash, headache, myalgia, anemia, thrombocytopenia, nausea/vomiting, malaise, neurologic signs, or any hepatic transaminase elevation.</p> <p><b>Confirmed:</b> Clinically compatible case that is laboratory confirmed.</p> <p><b>Probable:</b> Clinically compatible case with serological evidence of elevated IgM antibody reactive with <i>R. rickettsii</i> antigen by IFA, enzyme-linked immunosorbent assay (ELISA), dot-ELISA, or latex agglutination (LA). DSHS uses IFA IgM testing cutoff of <math>\geq 1:128</math> for routine diagnostic testing.</p>	<ul style="list-style-type: none"> <li>▪ Serological evidence of an elevation (fourfold change) in serum antibody titer reactive with <i>Rickettsia rickettsii</i> antigens between paired serum specimens (one taken in the first week of illness and a second 2-4 weeks later), as measured by a standardized immunofluorescence assay (IFA) conducted in a commercial, state, or reference laboratory, or</li> <li>▪ Demonstration of spotted fever group antigen in a biopsy/autopsy specimen by IHC, or</li> <li>▪ Detection of <i>R. rickettsii</i> DNA in a clinical specimen by the polymerase chain reaction (PCR assay), or</li> <li>▪ Isolation of <i>R. rickettsii</i> from a clinical specimen in cell culture</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Rubella</b> <a href="#">10200</a></p>	<p>An illness that has all the following characteristics: Acute onset of generalized maculopapular rash, temperature &gt;99°F (37.2°C), if measured, and arthralgia/arthritis, lymphadenopathy, or conjunctivitis.</p> <p><b>Confirmed:</b> A case that is clinically compatible and is laboratory confirmed or epidemiologically linked to a laboratory-confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of rubella virus, or</li> <li>▪ Significant rise between acute- and convalescent-phase titers in serum rubella immunoglobulin G (IgG) antibody level by any standard serologic assay, or</li> <li>▪ Positive serologic test for rubella immunoglobulin M (IgM) antibody, or</li> <li>▪ Detection of rubella-virus-specific nucleic acid by PCR</li> </ul>
<p><b>Rubella, congenital syndrome</b> <a href="#">10370</a></p>	<p>An illness of newborns resulting from rubella infection <i>in utero</i> and characterized by signs or symptoms from the following categories:</p> <p>(a) Cataracts/congenital glaucoma, congenital heart disease (most commonly patent ductus arteriosus, peripheral pulmonary artery stenosis), hearing loss, pigmentary retinopathy</p> <p>(b) Purpura, splenomegaly, jaundice, microcephaly, mental retardation, meningoencephalitis, and radiolucent bone disease</p> <p><b>Confirmed:</b> A clinically consistent case that is laboratory confirmed</p> <p><b>Probable:</b> A case that is not laboratory confirmed and that has any two complications listed in (a) of the clinical case definition or one complication from (a) and one from (b), and lacks evidence of any other etiology</p>	<ul style="list-style-type: none"> <li>▪ Isolation of rubella virus, or</li> <li>▪ Demonstration of rubella-specific immunoglobulin M (IgM) antibody, or</li> <li>▪ 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), or</li> <li>▪ Detection of rubella-virus-specific nucleic acid by PCR</li> </ul>
<p><b>Salmonellosis</b> <a href="#">11000</a></p>	<p>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.</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Salmonella</i> (except <i>S. Typhi</i>)* from a clinical specimen</li> </ul> <p style="text-align: center;">*<a href="#">S. Typhi</a> is reportable as Typhoid Fever</p>



Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Severe acute respiratory syndrome (SARS)</b><sup>12,13</sup>  <a href="#">88730</a></p>	<p>Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). In general, SARS begins with a high fever (temperature greater than 100.4°F [<math>&gt;38.0^{\circ}\text{C}</math>]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia.</p> <p><b>Clinical Criteria:</b> <i>Early illness:</i> Presence of two or more of the following features: fever (might be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, rhinorrhea. <i>Mild-to-moderate respiratory illness:</i> Temperature of <math>&gt;100.4^{\circ}\text{F}</math> (<math>&gt;38^{\circ}\text{C}</math>) and one or more clinical findings of lower respiratory illness (e.g., cough, shortness of breath, difficulty breathing). <i>Severe respiratory illness:</i> 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.</p> <p><b>Epidemiologic Criteria:</b> <i>Possible exposure to SARS-associated coronavirus (SARS-CoV):</i> 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 with 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. <i>Likely exposure to SARS-CoV:</i> One or more of the following exposures in the 10 days before onset of symptoms: close contact with a confirmed case of SARS-CoV disease, or close contact with a person with mild-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</p> <p><i>Confirmed case of SARS-CoV disease:</i> A person who has a clinically compatible illness (i.e., early, mild-to-moderate, or severe) that is laboratory confirmed</p> <p><i>Probable case of SARS-CoV disease:</i> A person who meets the clinical criteria for severe respiratory illness and the epidemiologic criteria for likely exposure to SARS-CoV</p>	<ul style="list-style-type: none"> <li>▪ Detection of any of the following by a validated test, with confirmation in a reference laboratory: <ul style="list-style-type: none"> <li>○ Serum antibodies to SARS-CoV in a single serum specimen, or</li> <li>○ A four-fold or greater increase in SARS-CoV antibody titer between acute- and convalescent-phase serum specimens tested in parallel, or</li> <li>○ Negative SARS-CoV antibody test result on acute-phase serum and positive SARS-CoV antibody test result on convalescent-phase serum tested in parallel, or</li> </ul> </li> <li>▪ Isolation in cell culture of SARS-CoV from a clinical specimen, with confirmation using a test validated by CDC, or</li> <li>▪ Detection of SARS-CoV RNA by RT-PCR validated by CDC, with confirmation in a reference laboratory, from <ul style="list-style-type: none"> <li>○ Two clinical specimens from different sources, or</li> <li>○ Two clinical specimens collected from the same source on two different days</li> </ul> </li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
Shiga toxin-producing <i>Escherichia coli</i> (STEC) (See <i>Escherichia coli</i> ) <a href="#">11563</a>	<a href="#">See <i>Escherichia coli</i>, shiga-toxin producing (STEC)</a>	
Shigellosis <a href="#">11010</a>	<p>An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections may occur.</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis. When available, O antigen serotype characterization should be reported</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Shigella</i> from a clinical specimen</li> </ul>
Smallpox, <sup>14</sup> <a href="#">11800</a>	<p>Clinical case definition: An illness with acute onset of fever <math>\geq 101^{\circ}\text{F}</math> (<math>\geq 38.3^{\circ}\text{C}</math>) followed by a rash characterized by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause.</p> <p><b>Confirmed:</b> A 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</p> <p><b>Probable:</b> A case that meets the clinical case definition, or a case that does not meet the clinical case definition but is clinically consistent with smallpox and has an epidemiological link to a confirmed case of smallpox. Examples of clinical presentations of smallpox that would not meet the ordinary type (pre-event) clinical case definition are: a) hemorrhagic type, b) flat type, and c) variola sine eruptione. See <a href="#">Guide A: Smallpox Surveillance and Case Reporting; Contact Identification, Tracing, Vaccination, and Surveillance; and Epidemiologic Investigation</a> for full descriptions of atypical smallpox presentations.</p> <p><b>Suspected:</b> A case with a generalized, acute vesicular or pustular rash illness with fever preceding development of rash by 1-4 days</p> <p><b>Exclusion Criteria:</b> 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.</p>	<ul style="list-style-type: none"> <li>▪ Polymerase chain reaction (PCR) identification of variola DNA in a clinical specimen, or</li> <li>▪ Isolation of smallpox (variola) virus from a clinical specimen (Level D laboratory only; confirmed by variola PCR)</li> </ul> <p>Note: Laboratory diagnostic testing for variola virus should be conducted in a CDC Laboratory Response Network (LRN) laboratory utilizing LRN-approved PCR tests and protocols for variola virus. Initial confirmation of a smallpox outbreak requires additional testing at CDC.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><i>Staphylococcus aureus</i>, coagulase-positive, methicillin-or oxacillin-resistant (MRSA)<sup>15</sup> <a href="#">11661</a></p>	<p>Infection with a strain of <i>Staphylococcus aureus</i> resistant to antibiotics such as oxacillin, penicillin and amoxicillin. Although methicillin is no longer commercially available in the United States, the term methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) continues to be used to describe strains resistant to penicillins.</p> <p>In the community most MRSA infections are skin infections that may appear as pustules or boils which often are red, swollen, painful, or have pus or other drainage. These skin infections commonly occur at sites of visible skin trauma, such as cuts and abrasions, and areas of the body covered by hair (e.g., back of neck, groin, buttock, armpit, beard area of men). <a href="http://www.cdc.gov/ncidod/dhqp/ar_mrsa_in_schools.html#1">http://www.cdc.gov/ncidod/dhqp/ar_mrsa_in_schools.html#1</a></p> <p>MRSA occurs most frequently among patients who undergo invasive medical procedures or who have weakened immune systems and are being treated in hospitals and healthcare facilities such as nursing homes and dialysis centers. MRSA in healthcare settings commonly causes serious and potentially life threatening infections, such as bloodstream infections, surgical site infections, or pneumonia. <a href="http://www.cdc.gov/ncidod/dhqp/ar_MRSA_spotlight_2006.html">http://www.cdc.gov/ncidod/dhqp/ar_MRSA_spotlight_2006.html</a></p> <p>For epidemiological purposes, it is useful to classify MRSA cases based on the origin of the infection. (Klevens, et al. JAMA. 2007. 298(15): 1763-1771)</p> <ul style="list-style-type: none"> <li>▪ Healthcare-associated, hospital-onset: Cases with positive culture obtained &gt;48 hours after hospital admission (may also have risk factors)</li> <li>▪ Healthcare-associated, community-onset: Cases identified &lt;48 hours after admission with at least 1 of the following risk factors: invasive device at time of admission; history of MRSA infection or colonization; history of surgery, hospitalization, dialysis, or residence in a long term care facility in 12 months preceding culture.</li> <li>▪ Community-associated: Cases with community-onset and none of the above risk factors documented.</li> </ul> <p><i>Confirmed:</i> A case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Staphylococcus aureus</i> that shows resistance to oxacillin or ceftiofur by a reliable susceptibility test methodology from a clinical specimen. Resistance can be determined by <ul style="list-style-type: none"> <li>○ ceftiofur or oxacillin disk screen test,</li> <li>○ positive latex agglutination test for PBP2a, or</li> <li>○ growth on a plate containing 6 µg/ml of oxacillin in Mueller-Hinton agar supplemented with NaCl (4% w/v; 0.68 mol/L).</li> </ul> </li> <li>▪ Nucleic acid amplification tests, such as the polymerase chain reaction (PCR), can be used to detect the <i>mecA</i> gene, which mediates oxacillin resistance in staphylococci.</li> </ul> <p>Note: Methicillin is no longer commercially available in the United States. Oxacillin maintains its activity during storage better than methicillin and is more likely to detect heteroresistant strains. However, ceftiofur is an even better inducer of the <i>mecA</i> gene and disk diffusion tests using ceftiofur give clearer endpoints and are easier to read than tests with oxacillin. <a href="http://www.cdc.gov/ncidod/dhqp/ar_lab_mrsa.html">http://www.cdc.gov/ncidod/dhqp/ar_lab_mrsa.html</a></p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b><i>Staphylococcus aureus</i>, coagulase-positive, vancomycin resistant (VRSA)</b>  <a href="#">11665</a></p>	<p><i>Staphylococcus aureus</i> can produce a variety of syndromes with clinical manifestations including skin and soft tissue lesions, empyema, pyarthrosis, bloodstream infection, pneumonia, osteomyelitis, septic arthritis, endocarditis, sepsis, and meningitis.</p> <p><b>Confirmed:</b> A clinically compatible case of vancomycin-resistant <i>Staphylococcus aureus</i> that is laboratory-confirmed (MIC: <math>\geq 16</math> <math>\mu\text{g/ml}</math>)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Staphylococcus aureus</i> from any body site, and</li> <li>▪ High-level resistance of the <i>Staphylococcus aureus</i> isolate to vancomycin (MIC: <math>\geq 16</math> <math>\mu\text{g/ml}</math>), detected and defined according to CLSI approved standards and recommendations</li> </ul> <p><a href="http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_labFAQ.html">http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_labFAQ.html</a></p> <p>Note: All <a href="#">Staphylococcus aureus isolates with a vancomycin MIC greater than 2 <math>\mu\text{g/mL}</math></a> isolates must be submitted to the DSHS laboratory</p>
<p><b><i>Staphylococcus aureus</i>, vancomycin intermediate susceptibility (VISA)</b>  <a href="#">11663</a></p>	<p><i>Staphylococcus aureus</i> can produce a variety of syndromes with clinical manifestations including skin and soft tissue lesions, empyema, pyarthrosis, bloodstream infection, pneumonia, osteomyelitis, septic arthritis, endocarditis, sepsis, and meningitis.</p> <p><b>Confirmed:</b> A clinically compatible case of vancomycin-resistant <i>Staphylococcus aureus</i> that is laboratory-confirmed (MIC: 4-8 <math>\mu\text{g/ml}</math>)</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Staphylococcus aureus</i> from any body site, and</li> <li>▪ Intermediate-level resistance (MIC: 4-8 <math>\mu\text{g/ml}</math>) of the <i>Staphylococcus aureus</i> isolate to vancomycin, detected and defined according to CLSI approved standards and recommendations</li> </ul> <p><a href="http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_labFAQ.html">http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_labFAQ.html</a></p> <p>Note: All <a href="#">Staphylococcus aureus isolates with a vancomycin MIC greater than 2 <math>\mu\text{g/mL}</math></a> isolates must be submitted to the DSHS laboratory</p>
<p><b><i>Streptococcus</i>, Group A, invasive (<i>Streptococcus pyogenes</i>) See Group A Strep)</b>  <a href="#">11710</a></p>	<p><a href="#">See Group A Streptococcus, invasive (GAS)</a></p>	<ul style="list-style-type: none"> <li>▪ See Group A Streptococcus, invasive</li> </ul>
<p><b><i>Streptococcus</i>, Group B, invasive (<i>Streptococcus agalactiae</i>) (See Group B Strep)</b>  <a href="#">11715</a></p>	<p><a href="#">See Group B Streptococcus, invasive</a></p>	<p>See Group B Streptococcus, invasive</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><i>Streptococcus</i>, other, invasive, beta-hemolytic (non-group A, non-group B)<sup>16</sup></p> <p><a href="#">11716</a></p>	<p>Non-A, non-B beta-hemolytic <i>Streptococcus</i> consists primarily of Group C and G <i>Streptococcus</i>. There are four different classification systems for <i>Streptococcus</i>. Clinical (pyogenic, oral, enteric), hemolysis (alpha-hemolysis, beta-hemolysis, gamma-hemolysis), serological (Lancefield: A-H and K-U), and biochemical (physiological). Lancefield groups A, B, C, and G are typically beta-hemolytic. Of these, only invasive group A and B are reportable in Texas. <i>Streptococcus pneumoniae</i>, which is also reportable, is alpha-hemolytic.</p> <p><i>Streptococcus</i> group C can be found as normal human flora. It has also been associated with various infections, including sinusitis, pharyngitis, meningitis, pneumonia, intra-abdominal abscesses, endocarditis, osteomyelitis, toxic shock syndrome-like illness, and primary bacteremia.</p> <p>Large colony-forming group G <math>\beta</math>-hemolytic streptococci (GGS) were first isolated in patients with puerperal sepsis. GGS are known to be commensals and pathogens in domestic animals. In humans, they may colonize the pharynx, skin, gastrointestinal and female genital tract. In recent years, GGS have been reported with increasing frequency as the cause of a variety of human infections, such as pharyngitis, cellulitis, meningitis, endocarditis, and sepsis. Bacteremia attributable to GGS has been related to underlying conditions, such as alcoholism, diabetes mellitus, malignancy, intravenous substance abuse, or breakdown of the skin.</p> <p><i>Confirmed:</i> A case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation <i>Streptococcus</i> other than <i>S. pyogenes</i> (group A), <i>S. agalactiae</i> (group B), or <i>S. pneumoniae</i> by a culture from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid)</li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a></p>
<p><i>Streptococcus pneumoniae</i>, invasive, drug-resistant</p> <p><a href="#">11720</a> (Enter invasive <i>Strep pneumo</i> cases under 11717-see below)</p>	<p><i>Streptococcus pneumoniae</i> causes many clinical syndromes, depending on the site of infection (e.g., pneumonia, bacteremia, or meningitis).</p> <p><i>Confirmed:</i> A clinically compatible case that is laboratory confirmed</p> <p><i>Probable:</i> A clinically compatible case caused by laboratory-confirmed culture of <i>S. pneumoniae</i> identified as "nonsusceptible" (i.e., an oxacillin zone size of less than 20 mm) when oxacillin screening is the only method of antimicrobial susceptibility testing performed</p> <p>Note: Enter all invasive <i>Streptococcus pneumoniae</i> cases as <a href="#">Streptococcus pneumoniae, invasive disease, code 11717</a>.</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>S. pneumoniae</i> from a normally sterile site, that is "nonsusceptible" (i.e., intermediate- or high-level resistance of the <i>S. pneumoniae</i> isolate to at least one antimicrobial agent currently approved for use in treating pneumococcal infection) <ul style="list-style-type: none"> <li>○ The National Committee for Clinical Laboratory Standards recommends that isolates found to be resistant by oxacillin screening should undergo further susceptibility testing by using a quantitative MIC method acceptable for penicillin, extended-spectrum cephalosporins, and other drugs as clinically indicated</li> </ul> </li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a></p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b><i>Streptococcus pneumoniae</i>, invasive disease</b>  <a href="#">11717</a></p>	<p><i>Streptococcus pneumoniae</i> causes many clinical syndromes, depending on the site of infection (e.g., pneumonia, bacteremia, or meningitis).</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>S. pneumoniae</i> from a normally sterile site</li> </ul> <p>Note: See <a href="#">Normally Sterile Site</a></p>
<p><b><i>Taenia solium</i> and undifferentiated <i>Taenia</i> infection</b> (Also see <b>Cysticercosis</b>)  <a href="#">12031</a></p>	<p>Taeniasis is an intestinal infection with the adult stage of the pork (<i>Taenia solium</i>) or beef (<i>Taenia saginata</i>) tapeworms. Clinical manifestations of infection with adult worm, if present, are variable and may include nervousness, insomnia, anorexia, weight loss, abdominal pain and digestive disturbances; many infections are asymptomatic. Taeniasis is usually a nonfatal infection, but the larval stage of <i>T. solium</i> may cause fatal cysticercosis.</p> <p>Note: <a href="#">Also see Cysticercosis</a></p> <p><b>Confirmed:</b> Laboratory confirmation of the presence of <i>T. solium</i> proglottids, eggs, or antigens in a clinical specimen</p> <p><b>Probable:</b> Laboratory confirmation of the presence of undifferentiated <i>Taenia</i> spp. tapeworm proglottids or eggs in a clinical specimen.</p>	<p>Infection with an adult tapeworm is diagnosed by identification of proglottids (segments), eggs or antigens of the worm in the feces or on anal swabs. Eggs of <i>T. Solium</i> and <i>T. saginata</i> cannot be differentiated morphologically. Specific diagnosis is based on the morphology of the scolex (head) and/or gravid proglottids.</p>
<p><b>Tetanus</b>  <a href="#">10210</a></p>	<p>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.</p> <p><b>Confirmed:</b> A clinically compatible case, as reported by a health-care professional</p>	<p>None</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p>Streptococcal Toxic-shock syndrome  <a href="#">11700</a></p>	<p>Streptococcal toxic-shock syndrome (STSS) is a severe illness associated with invasive or noninvasive group A streptococcal infection. 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:</p> <p>1) Hypotension defined by a systolic blood pressure less than or equal to 90 mm Hg for adults or less than the fifth percentile by age for children aged less than 16 years. and</p> <p>2) Multi-organ involvement characterized by two or more of the following:</p> <ul style="list-style-type: none"> <li>▪ <i>Renal Impairment:</i> Creatinine greater than or equal to 2 mg/dL (greater than or equal to 177 µmol/L) for adults or greater than or equal to twice the upper limit of normal for age. In patients with preexisting renal disease, a greater than twofold elevation over the baseline level</li> <li>▪ <i>Coagulopathy:</i> Platelets less than or equal to 100,000/mm<sup>3</sup> (less than or equal to 100 x 10<sup>6</sup>/L) or disseminated intravascular coagulation, defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products</li> <li>▪ <i>Liver Involvement:</i> Alanine aminotransferase, aspartate aminotransferase, or total bilirubin levels greater than or equal to twice the upper limit of normal for the patient's age. In patients with preexisting liver disease, a greater than twofold increase over the baseline level</li> <li>▪ <i>Acute Respiratory Distress Syndrome:</i> Defined by acute onset of diffuse pulmonary infiltrates and hypoxemia in the absence of cardiac failure or by evidence of diffuse capillary leak manifested by acute onset of generalized edema, or pleural or peritoneal effusions with hypoalbuminemia</li> <li>▪ A generalized erythematous macular rash that may desquamate</li> <li>▪ Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene.</li> </ul> <p><i>Confirmed:</i> A case that meets the clinical case definition and with isolation of group A <i>Streptococcus</i> (<i>S. pyogenes</i>) (GAS) from a <a href="#">normally sterile site</a></p> <p><i>Probable:</i> A case that meets the clinical case definition in the absence of another identified etiology for the illness and with isolation of group A <i>Streptococcus</i> from a <a href="#">nonsterile site</a></p> <p>Note: Enter all invasive group A <i>Streptococcus</i> cases as <a href="#">Group A Streptococcus, invasive disease</a>, code 11710.</p>	<ul style="list-style-type: none"> <li>▪ Isolation of group A <i>Streptococcus</i> (<i>Streptococcus pyogenes</i>) by culture from a clinical specimen</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p>Toxic-shock syndrome, other than Streptococcal (Formerly named Toxic shock syndrome, Staphylococcal)</p> <p><a href="#">10520</a></p>	<p>An illness with the following clinical manifestations:</p> <ul style="list-style-type: none"> <li>▪ Fever: temperature greater than or equal to 102.0°F (greater than or equal to 38.9°C)</li> <li>▪ Rash: diffuse macular erythroderma</li> <li>▪ Desquamation: 1-2 weeks after onset of illness, particularly on the palms and soles</li> <li>▪ 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; orthostatic drop in diastolic blood pressure greater than or equal to 15 mm Hg from lying or sitting to standing, orthostatic syncope, or orthostatic dizziness</li> <li>▪ Multisystem involvement (three or more of the following) <ul style="list-style-type: none"> <li>○ Gastrointestinal: vomiting or diarrhea at onset of illness</li> <li>○ Muscular: severe myalgia or creatine phosphokinase level at least twice the upper limit of normal</li> <li>○ Mucous membrane: vaginal, oropharyngeal, or conjunctival hyperemia;</li> <li>○ 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</li> <li>○ Hepatic: total bilirubin, alanine aminotransferase enzyme, or aspartate aminotransferase enzyme levels at least twice the upper limit of normal for laboratory</li> <li>○ Hematologic: platelets less than 100,000/mm<sup>3</sup></li> <li>○ Central nervous system: disorientation or alterations in consciousness without focal neurologic signs when fever and hypotension are absent</li> </ul> </li> </ul> <p><i>Confirmed:</i> 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</p> <p><i>Probable:</i> A case which meets the laboratory criteria and in which four of the five clinical findings described above are present</p>	<ul style="list-style-type: none"> <li>▪ If obtained, negative result for blood, throat, or cerebrospinal fluid cultures (except blood culture may be positive for <i>Staphylococcus aureus</i>)</li> <li>▪ No rise in titer to Rocky Mountain spotted fever, leptospirosis, or measles</li> </ul>



Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Trichinellosis (Trichinosis)</b> <a href="#">10270</a></p>	<p>A disease caused by ingestion of <i>Trichinella</i> larvae. The disease has variable clinical manifestations. Common signs and symptoms among symptomatic persons include eosinophilia fever, myalgia, and periorbital edema.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> <li>▪ Demonstration of <i>Trichinella</i> larvae in tissue obtained by muscle biopsy, or</li> <li>▪ Positive serologic test for <i>Trichinella</i></li> </ul>
<p><b>Tularemia</b> <a href="#">10230</a></p>	<p>Clinical diagnosis is supported by evidence or history of a tick or deerfly bite, exposure to tissues of a mammalian host of <i>Francisella tularensis</i>, or exposure to potentially contaminated water. Illness is characterized by several distinct forms, including the following:</p> <ul style="list-style-type: none"> <li>▪ Ulceroglandular: cutaneous ulcer with regional lymphadenopathy</li> <li>▪ Glandular: regional lymphadenopathy with no ulcer</li> <li>▪ Oculoglandular: conjunctivitis with preauricular lymphadenopathy</li> <li>▪ Oropharyngeal: stomatitis or pharyngitis or tonsillitis and cervical lymphadenopathy</li> <li>▪ Intestinal: intestinal pain, vomiting, and diarrhea</li> <li>▪ Pneumonic: primary pleuropulmonary disease</li> <li>▪ Typhoidal: febrile illness without early localizing signs and symptoms</li> </ul> <p><b>Confirmed:</b> A clinically compatible case with confirmatory laboratory results</p> <p><b>Probable:</b> A clinically compatible case with laboratory results indicative of presumptive infection:</p> <ul style="list-style-type: none"> <li>▪ Elevated serum antibody titer(s) to <i>F. tularensis</i> antigen (without documented fourfold or greater change) in a patient with no history of tularemia vaccination, or</li> <li>▪ Detection of <i>F. tularensis</i> in a clinical specimen by fluorescent assay</li> </ul>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>F. tularensis</i> in a clinical specimen, or</li> <li>▪ Fourfold or greater change in serum antibody titer to <i>F. tularensis</i> antigen</li> </ul> <p>Note: All <i>Francisella tularensis</i> isolates must be submitted to the DSHS laboratory</p>
<p><b>Typhoid fever (caused by <i>Salmonella</i> Typhi)</b> <a href="#">10240</a></p>	<p>An illness caused by <i>Salmonella</i> 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 <i>S. Typhi</i> may be prolonged.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case in an outbreak</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>S. Typhi</i> from blood, stool, or other clinical specimen</li> </ul> <p>Note: See <a href="#">Salmonellosis</a> for other <i>Salmonella</i> isolates</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b>Typhus fever, (endemic fleaborne, Murine)</b>  <a href="#">10260</a></p>	<p>Murine typhus is a rickettsial disease, whose course resembles that of louseborne typhus, but is milder. Variable onset, often sudden and marked by headache, chills, prostration, fever and general pains. A macular eruption appears on the fifth to sixth day, initially on the upper trunk, followed by spread to the entire body, but usually not to the face, palms or soles. Toxemia is usually pronounced, and the disease terminates by rapid defervescence after about 2 weeks of fever. The case-fatality rate for all ages is less than 1% but increases with age. Absence of louse infestation, geographic and seasonal distribution and sporadic occurrence of the disease help to differentiate it from louseborne typhus.</p> <p><b>Confirmed:</b> Clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> Clinically compatible case with supportive laboratory results:</p> <ul style="list-style-type: none"> <li>▪ IFA serologic titer of <math>\geq 128</math>, or</li> <li>▪ a single CF of <math>\geq 16</math>, or</li> <li>▪ other supportive serology (single titer <math>\geq 128</math> by an LA, IHA, or MA test)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fourfold or greater rise in antibody titer to <i>Rickettsia typhi</i> or <i>Rickettsia felis</i> antigen by IFA, complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination antibody (IHA) test in acute – and convalescent – phase specimens ideally taken at least 3 weeks apart, or</li> <li>▪ Positive PCR assay to <i>R. typhi</i> or <i>R. felis</i>, or</li> <li>▪ Demonstration of positive IF of skin lesion (biopsy) or organ tissue (autopsy), or</li> <li>▪ Isolation of <i>R. typhi</i> or <i>R. felis</i> from clinical specimen</li> <li>▪ In South Texas areas where murine typhus is endemic, clinically compatible cases with IgM titers of <math>\geq 1:1024</math> are considered confirmed cases. IgG results alone will not be considered.</li> </ul> <p>Note: The IF test is most commonly used for laboratory confirmation, but it does not discriminate between louse-borne and murine typhus unless the sera are differentially absorbed with the respective rickettsial antigen prior to testing.</p>
<p><b>Typhus fever, (epidemic louseborne, R. prowazekii)</b>  <a href="#">10265</a></p>	<p>A rickettsial disease with variable onset; often sudden and marked by headache, chills, prostration, fever and general pains. A macular eruption appears on the 5th to 6th day, initially on the upper trunk, followed by spread to the entire body, but usually not to the face, palms or soles. The eruption is often difficult to observe on black skin. Toxaemia is usually pronounced, and the disease terminates by rapid defervescence after about 2 weeks of fever.</p> <p><b>Confirmed:</b> Clinically compatible case that is laboratory confirmed</p> <p><b>Probable:</b> Clinically compatible case with supportive laboratory results:</p> <ul style="list-style-type: none"> <li>▪ IFA serologic titer of <math>\geq 128</math>, or</li> <li>▪ a single CF of <math>\geq 16</math>, or</li> <li>▪ other supportive serology (single titer <math>\geq 128</math> by an LA, IHA, or MA test)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fourfold or greater rise in antibody titer to <i>Rickettsia prowazekii</i> antigen by IFA, complement fixation (CF), latex agglutination (LA), microagglutination (MA), or indirect hemagglutination antibody (IHA) test in acute – and convalescent – phase specimens ideally taken at least 3 weeks apart, or</li> <li>▪ Positive PCR assay to <i>R. prowazekii</i>, or</li> <li>▪ Demonstration of positive IF of skin lesion (biopsy) or organ tissue (autopsy), or</li> <li>▪ Isolation of <i>R. prowazekii</i> from clinical specimen</li> </ul> <p>Note: The IF test is most commonly used for laboratory confirmation, but it does not discriminate between louse-borne and murine typhus unless the sera are differentially absorbed with the respective rickettsial antigen prior to testing.</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<b>Varicella</b> <a href="#">10030</a>	<p>An illness with acute onset of diffuse (generalized) papulovesicular rash without other apparent cause. In vaccinated persons who develop varicella more than 42 days after vaccination (breakthrough disease), the disease is almost always mild with fewer than 50 skin lesions and shorter duration of illness. The rash may also be atypical in appearance (maculopapular with few or no vesicles).</p> <p><b>Confirmed:</b> A case that meets the clinical case definition with or without laboratory confirmation</p>	<ul style="list-style-type: none"> <li>▪ Isolation of varicella-zoster virus (VZV) from a clinical specimen, or</li> <li>▪ Direct fluorescent antibody (DFA), or</li> <li>▪ Polymerase chain reaction (PCR), or</li> <li>▪ Significant rise in serum varicella immunoglobulin G (IgG) antibody level by any standard serologic assay</li> </ul>
<b><i>Vibrio parahaemolyticus</i><sup>1,7</sup></b> <a href="#">11541</a>	<p>An intestinal disorder characterized by watery diarrhea and abdominal cramps in the majority of cases, and sometimes with nausea, vomiting, fever and headache. Occasionally, a dysentery-like illness is observed with bloody or mucoid stools, high fever and high WBC count. Typically, it is a disease of moderate severity lasting 1-7 days; systemic infection and death rarely occur.</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis</p> <p><b>Probable:</b> A clinically compatible, symptomatic case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Vibrio parahaemolyticus</i> from a clinical specimen, or</li> <li>▪ Identification of 10<sup>5</sup> or more organisms per gram of an epidemiologically incriminated food (usually seafood)</li> </ul> <p>Note: For <i>Vibrio cholerae</i> isolates, see <a href="#">Cholera</a> All <a href="#">Vibrio species</a> isolates must be submitted to the DSHS laboratory</p>
<b><i>Vibrio</i> spp., non-toxigenic, other or unspecified</b> <a href="#">11540</a>	<p>An infection of variable severity characterized by diarrhea and vomiting, primary septicemia, or wound infections. Asymptomatic infections may occur, and the organism may cause extraintestinal infections</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis</p> <p><b>Probable:</b> A clinically compatible, symptomatic case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Vibrio</i> spp. other than <i>V. parahaemolyticus</i>, <i>V. vulnificus</i>, and toxigenic <i>Vibrio cholerae</i> O1 or O139 from a clinical specimen, or</li> <li>▪ Identification of 10<sup>5</sup> or more organisms per gram of an epidemiologically incriminated food (usually seafood)</li> </ul> <p>Note: For <i>Vibrio cholerae</i> isolates, see <a href="#">Cholera</a> All <a href="#">Vibrio species</a> isolates must be submitted to the DSHS laboratory</p>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<p><b><i>Vibrio vulnificus</i></b> <a href="#">11542</a></p>	<p>Infection with <i>Vibrio vulnificus</i> produces septicemia in persons with chronic liver disease, chronic alcoholism or hemochromatosis; or those who are immunosuppressed. The disease appears 12 hours to 3 days after eating raw or undercooked seafood, especially oysters. One third of patients are in shock when they present for care or develop hypotension within 12 hours after hospital admission. Three quarters of patients have distinctive bullous skin lesions; thrombocytopenia is common and there is often evidence of disseminated intravascular coagulation. <i>V. vulnificus</i> can also infect wounds sustained in coastal or estuarine waters; wounds range from mild, self-limited lesions to rapidly progressive cellulitis and myositis that can mimic clostridial myonecrosis in the rapidity of spread and destructiveness.</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis  <b>Probable:</b> A clinically compatible, symptomatic case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>▪ Isolation of <i>Vibrio vulnificus</i> from a clinical specimen, or</li> <li>▪ Identification of 10<sup>5</sup> or more organisms per gram of an epidemiologically incriminated food (usually seafood)</li> </ul> <p>Note: For <i>Vibrio cholerae</i> isolates, see <a href="#">Cholera</a>  All <a href="#">Vibrio species</a> isolates must be submitted to the DSHS laboratory</p>
<p><b>Viral Hemorrhagic Fever</b> (See <b>Ebola</b>)</p>	<p>See Case Definition/Case Classification for <a href="#">Ebola</a> (the only viral hemorrhagic fever that currently has a condition code)</p>	<p>See Lab Confirmation Test for <a href="#">Ebola</a> (the only viral hemorrhagic fever that currently has a condition code)</p>
<p><b>West Nile fever</b> <a href="#">10049</a></p>	<p>See Case Definition/Case Classification for <a href="#">Arbovirus</a>, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive</p>	<p>See <a href="#">Lab Confirmation Tests for Arbovirus</a>, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive</p>
<p><b>Yellow fever</b> <a href="#">10660</a></p>	<p>A mosquito-borne viral illness characterized by acute onset and constitutional symptoms followed by a brief remission and a recurrence of symptoms, fever, hepatitis, albuminuria, and, in some instances, renal failure, shock, and generalized hemorrhages.</p> <p><b>Confirmed:</b> A clinically compatible case that is laboratory confirmed  <b>Probable:</b> A clinically compatible case with supportive serology:</p> <ul style="list-style-type: none"> <li>▪ Stable elevated antibody titer to yellow fever virus, e.g. <ul style="list-style-type: none"> <li>○ Greater than or equal to 32 by complement fixation, or</li> <li>○ Greater than or equal to 256 by immunofluorescence assay, or</li> <li>○ Greater than or equal to 320 by hemagglutination inhibition, or</li> <li>○ Greater than or equal to 160 by neutralization, or</li> </ul> </li> <li>▪ Positive serologic result by immunoglobulin M-capture enzyme immunoassay</li> </ul> <p>Cross-reactive serologic reactions to other flaviviruses must be excluded, and the patient must not have a history of yellow fever vaccination.</p>	<ul style="list-style-type: none"> <li>▪ Fourfold or greater rise in yellow fever antibody titer in a patient who has no history of recent yellow fever vaccination and</li> <li>▪ Cross-reactions to other flaviviruses have been excluded, or</li> <li>▪ Demonstration of yellow fever virus, antigen, or genome in tissue, blood, or other body fluid</li> </ul>

Condition/Code	Case Definition/Case Classification	Lab Confirmation Tests
<b>Yersiniosis</b> (Also see <b>Plague</b> ) <a href="#">11565</a>	<p>An illness characterized by diarrhea (sometimes bloody), fever, and abdominal pain; an appendicitis-like syndrome and systemic infections may occur.</p> <p><b>Confirmed:</b> A case that meets the laboratory criteria for diagnosis</p> <p><b>Probable:</b> A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> <li>Isolation of <i>Yersinia</i> (except <i>Y. pestis</i>)* in a clinical specimen</li> </ul> <p>* <i>Y. pestis</i> is reportable as <a href="#">Plague</a></p> <p>Note: All <a href="#">Yersinia pestis</a> isolates must be submitted to the DSHS laboratory</p>

The case definitions and criteria are partially or fully taken from the following sources as noted:

<sup>1</sup> Centers for Disease Control and Prevention web ([http://www.cdc.gov/ncphi/diss/nmdss/casedef/case\\_definitions.htm](http://www.cdc.gov/ncphi/diss/nmdss/casedef/case_definitions.htm))

<sup>2</sup> Texas Administrative Code, Chapter 96, Bloodborne Pathogen Control [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac\\_view=4&ti=25&pt=1&ch=96&rl=Y](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=4&ti=25&pt=1&ch=96&rl=Y)

<sup>3</sup> Texas DSHS, IDCU, *Creutzfeldt Jakob Disease (CJD) FAQ* at <http://www.dshs.state.tx.us/idcu/disease/creutzfeldt-jakob/faqs/>

<sup>4</sup> WHO Recommended Surveillance Standards, 2nd ed: pp 35-37 at <http://www.who.int/csr/resources/publications/surveillance/whocdscsr992.pdf>

<sup>5</sup> CDC, Parasitic Disease Information at [www.cdc.gov/ncidod/dpd/parasites/cysticercosis](http://www.cdc.gov/ncidod/dpd/parasites/cysticercosis)

<sup>6</sup> *Vaccine-Preventable Disease Guidelines*: [http://www.dshs.state.tx.us/idcu/health/vaccine\\_preventable\\_diseases/resources/vpd\\_guide.pdf](http://www.dshs.state.tx.us/idcu/health/vaccine_preventable_diseases/resources/vpd_guide.pdf)

<sup>7</sup> Heymann DL. *Control of Communicable Diseases Manual*, 18th ed. Washington, DC: American Public Health Association; 2004

<sup>8</sup> CDC, *Group B Strep Prevention*, General Public, *FAQs and Adult Disease*, <http://www.cdc.gov/groupbstrep>

<sup>9</sup> *Perinatal Hepatitis C appendix* in the *DSHS Perinatal Hepatitis B Prevention Manual* for cases in children less than 2 years of age

<sup>10</sup> CDC, *Key Facts about Influenza and the Influenza Vaccine* at <http://www.cdc.gov/flu/keyfacts.htm>

<sup>11</sup> National Center for Infectious Diseases Respiratory and Enteric Viruses Branch, *Norovirus, Technical Fact Sheet* at

<http://www.cdc.gov/ncidod/dvrd/revb/gastro/norovirus-factsheet.htm>

<sup>12</sup> *Severe Acute Respiratory Syndrome (SARS), Appendix B1: Revised CSTE SARS Surveillance Case Definition* at

<http://www.cdc.gov/ncidod/sars/guidance/b/app1.htm>

<sup>13</sup> *Severe Acute Respiratory Syndrome (SARS), Appendix F8—Guidelines for Laboratory Diagnosis of SARS-CoV Infection* at

<http://www.cdc.gov/ncidod/sars/guidance/f/app8.htm>

<sup>14</sup> CDC Emergency Preparedness and Response Smallpox Case Definitions <http://www.bt.cdc.gov/agent/smallpox/diagnosis/casedefinition.asp>

<sup>15</sup> CDC MRSA home page [http://www.cdc.gov/ncidod/dhqp/ar\\_mrsa.html](http://www.cdc.gov/ncidod/dhqp/ar_mrsa.html)

<sup>16</sup> Wikipedia, *Streptococcus* <http://en.wikipedia.org/wiki/Streptococcus>

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