

TEXAS DEPARTMENT OF STATE HEALTH SERVICES

Infectious Disease Control Unit



Epi Case Criteria Guide, 2014

Epi Case Criteria Guide, 2014

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REVISIONS MADE FROM THE 2013 TO THE 2014 EPI CASE CRITERIA GUIDE

Diseases notifiable in 2014 (not notifiable in the 2013 guide) (*Title 25, Texas Administrative Code, Chapter 97, Subchapter A, Control of Communicable Diseases*):

- Carbapenem-resistant *Enterobacteriaceae**
- Multi-drug resistant *Acinetobacter**

**See Multi-drug resistant organisms (MDRO). CRE and MDR-A reporting is covered and encouraged as a rare or exotic disease and will be specified by Texas Administrative Code (TAC) rule with an estimated effective date of April, 2014.*

Changes in nomenclature:

- Severe acute respiratory syndrome (SARS).....TO.....Novel Coronavirus Causing Severe Respiratory Disease

Disease specific revisions: description of condition (DC), case criteria (C), laboratory confirmation tests (L)

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| <ul style="list-style-type: none"> ▪ <i>Anaplasma phagocytophilum</i> DC & C ▪ Anthrax DC ▪ Arbovirus..... DC & L ▪ Babesiosis..... DC & C ▪ Chagas disease, chronic indeterminate.....DC & C & L ▪ Chagas disease, chronic symptomatic DC & C ▪ Creutzfeldt-Jakob disease..... DC, C & L ▪ Cysticercosis DC & L ▪ Variant Creutzfeldt-Jakob disease..... DC & C ▪ Dengue fever..... C ▪ HCV C | <ul style="list-style-type: none"> ▪ Influenza A-novel/variant viral infections C & L ▪ Malaria L ▪ Measles..... C & L ▪ Novel coronavirusDC & C ▪ PertussisDC & C ▪ Salmonellosis.....C ▪ Shigellosis.....C ▪ <i>Streptococcus</i>, invasive group A (GAS)..... DC & C ▪ <i>Streptococcus</i>, invasive group B (GBS)C ▪ Trichinellosis.....C ▪ Typhus fever (endemic fleaborne, Murine)L |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

NOTE: The following are not notifiable (unless they meet the inclusion criteria of a reportable disease including outbreaks, exotic diseases, and unusual expression of disease) and have been included in the 2014 guide for ease of access to their case definition:

- | | | |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ Influenza, human isolates ▪ Norovirus | <ul style="list-style-type: none"> ▪ <i>Staphylococcus aureus</i>, coagulase-positive, methicillin-or oxacillin-resistant (MRSA) | <ul style="list-style-type: none"> ▪ Streptococcal toxic-shock syndrome |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|



TABLE OF CONTENTS

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 specified as reportable in [Title 25, Texas Administrative Code, Chapter 97, Subchapter A, Control of Communicable Diseases](#) are in **bold type**. Click on a condition in the table of contents to go to the text and on the condition code to move back.

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DEFINITION OF TERMS

Clinically compatible case: Medical history and/or signs and symptoms 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 can 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 Confirmation Tests. While other laboratory methods can be used in clinical diagnosis, only those listed are accepted as laboratory confirmation for national and state reporting purposes.

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

Suspect case: A case that is classified as suspect for reporting purposes

Normally sterile site: Invasive diseases typically cause significant morbidity and mortality. Sterile sites include:

- Blood (excluding cord blood)
- Bone or bone marrow
- Cerebrospinal fluid (CSF)
- Pericardial fluid
- Peritoneal fluid
- Pleural fluid

The following are also considered sterile sites when certain other criteria are met:

- Internal body sites (brain, heart, liver, spleen, vitreous fluid, kidney, pancreas, lymph node or ovary) when the specimen is collected aseptically during a surgical procedure
- Joint fluid when the joint surface is intact (no abscess or significant break in the skin)

Normally sterile sites do not include:

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

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ABBREVIATIONS

Laboratory Test Abbreviations

CF – Complement fixation
CLSI- Clinical and Laboratory Standards Institute
CSF – Cerebrospinal fluid
DFA – Direct fluorescent antibody
DNA – Deoxyribonucleic acid
EEG - Electroencephalogram
EIA – Enzyme immuno assay
ELISA – Enzyme-linked immunosorbent assay
HA – Hemagglutination
HI – Hemagglutination inhibition
ID – Immunodiffusion
IFA – Indirect fluorescent antibody test
IgG – Immunoglobulin G
IgM – Immunoglobulin M
IHA – Indirect hemagglutination
IHC – Immunohistochemistry
LA – Latex agglutination
MA - Microagglutination
MIC – Minimum inhibitory concentration
MRI – Magnetic resonance imaging
NAT – Nucleic acid testing
PCR – Polymerase chain reaction
PRNT – Plaque reduction neutralization test
RIBA – Recombinant immunoblot assay
RIPA – Radio-immune precipitation assay
rRT-PCR – Real-time reverse transcriptase polymerase chain reaction
WB – Western blot

Hepatitis Test Markers

Hepatitis A – HAV
Anti-HAV – hepatitis A antibody
Anti-HAV IgM– hepatitis A IgM antibody
Hepatitis B – HBV
HBcAb or anti-HBc – hepatitis B core antibody
HBc IgM or anti-HBc IgM – hepatitis B core IgM antibody
HBsAb or anti-HBs – hepatitis B surface antibody
HBsAg – hepatitis B surface antigen
HBeAb or anti-HBe – hepatitis B e antibody
HBeAg – hepatitis B e antigen
HBsAg – hepatitis B surface antigen
Hepatitis C – HCV
Anti HCV – hepatitis C antibody
HCV RNA – hepatitis C nucleic acid
HCV NAT – hepatitis C nucleic acid testing
HCV RIBA – hepatitis C recombinant immunoblot assay
Hepatitis D – HDV
Anti-HDV – hepatitis D antibody
Hepatitis E – HEV
Anti-HEV IgM – hepatitis E IgM antibody

Other Abbreviations:

ALT - Alanine transaminase
ARDS - Acute Respiratory Distress Syndrome
AST –Aspartate transaminase
CDC – Centers for Disease Control and Prevention
DSHS –Department of State Health Services
EAIDB – Emerging and Acute Infectious Disease Branch
FDA – Food and Drug Administration
ILI – Influenza-Like Illness
NDM-1 - New Delhi Metallo-beta-lactamase-1
NPDPS - The National Prion Disease Pathology Surveillance Center
TAC- Texas Administrative Code
VHF – Viral hemorrhagic fever

NOTES

Rickettsia Classification

The classification of *Rickettsia* into three groups (spotted fever, typhus, and scrub typhus) was based on serology. This grouping has since been confirmed by DNA sequencing except for *R. felis* which is genetically more closely related to the spotted fever group *Rickettsia*. The human pathogens are included in the following conditions. [Spotted fever rickettsiosis](#) is defined by antigenic group (spotted fever group) and vector (tick). [Murine typhus](#) contains flea-borne species of both the typhus (*Rickettsia typhi*) and spotted fever groups (*Rickettsia felis*). [Epidemic typhus](#) (*Rickettsia prowazekii*) belongs to the typhus group and is louseborne. Scrub typhus (*Orientia tsutsugamushi*, formerly classified as *Rickettsia tsutsugamushi*), a scrub typhus group species transmitted by mites, and rickettsialpox (*Rickettsia akari*), a spotted fever group species transmitted by mites, are not reportable. A table classifying Rickettsial species known to cause disease in humans by antigenic group, disease, primary vector, and reservoir occurrence can be found in the Centers for Disease Control and Prevention, *Traveler's Health Yellow Book* at <http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-5/rickettsial-and-related-infections.aspx>.

Streptococcus Classification

Streptococci are facultatively anaerobic, gram-positive organisms that often occur as chains or pairs. There are four different classification systems for *Streptococcus* species, clinical (pyogenic, oral, enteric), hemolysis (alpha-hemolysis, beta-hemolysis, gamma-hemolysis), serological (Lancefield: A-H and K-U), and biochemical (physiological).

Lancefield group

Streptococci are subdivided into groups by antibodies that recognize surface antigens. The serologic reactivity of "cell wall" polysaccharide "C" antigens was described by Rebecca Lancefield. Twenty group-specific antigens were established, Lancefield A-H and K-U. Clinically significant Lancefield groups include A, B, C, F, and G. Some streptococci such as *Streptococcus pneumoniae* and the viridans streptococci are Lancefield group nontypeable.

Hemolytic reaction

The type of hemolytic reaction displayed on blood agar has also been used to classify the streptococci. Beta-hemolysis is associated with complete lysis of red cells surrounding the colony, whereas alpha-hemolysis is a partial or "green" hemolysis associated with reduction of red cell hemoglobin. Nonhemolytic colonies have been termed gamma-hemolytic. The property of hemolysis is not very reliable for the absolute identification of streptococci, but it is widely used in rapid screens for identification.

Reportable *Streptococcus*

[Group A *Streptococcus*](#) (GAS, *Streptococcus pyogenes*) - Lancefield Group A streptococci are nearly always beta-hemolytic.

[Group B *Streptococcus*](#) – (GBS, *Streptococcus agalactiae*) Lancefield Group B streptococci are usually beta-hemolytic, but can also be alpha or gamma hemolytic.

[Streptococcus pneumoniae](#) - (pneumococcus) - Most strains of *S. pneumoniae* are alpha-hemolytic but can cause β -hemolysis during anaerobic incubation. They are nontypeable by Lancefield group.

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CASE CRITERIA

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Amebiasis 11040</p>	<p>Infection of the large intestine by <i>Entamoeba histolytica</i> can vary in severity, ranging from an asymptomatic infection to mild, chronic diarrhea to fulminant dysentery. Extraintestinal infection can occur (e.g., hepatic abscess).</p> <p>Confirmed, intestinal amebiasis: A clinically compatible illness that is laboratory confirmed</p> <p>Suspect, intestinal amebiasis: A clinically compatible case with <i>E. histolytica</i> detected in stool by use of an antigen-based fecal immunoassay</p> <p>Confirmed, extra-intestinal amebiasis:</p> <ul style="list-style-type: none"> ▪ A case with demonstration of the organism, <i>E. histolytica</i>, in at least one extra-intestinal tissue sample, OR ▪ A symptomatic person (with clinical or radiographic findings consistent with extra-intestinal infection) and demonstration of specific antibody against <i>E. histolytica</i> as measured by reliable immunodiagnostic test (e.g. EIA) and PCR based assays 	<p>Intestinal amebiasis</p> <ul style="list-style-type: none"> ▪ Demonstration of cysts or trophozoites of <i>E. histolytica</i> in stool, OR ▪ Demonstration of trophozoites in tissue biopsy or ulcer scrapings by culture or histopathology <p>Extra-intestinal amebiasis</p> <ul style="list-style-type: none"> ▪ Demonstration of <i>E. histolytica</i> trophozoites in extraintestinal tissue
<p>Amebic meningitis/encephalitis, other 10096</p>	<p>There are three amebae, other than <i>Naegleria fowleri</i>, that are known to cause human amebic central nervous system (CNS) infections: <i>Balamuthia mandrillaris</i>, <i>Acanthamoeba</i> spp., and <i>Sappinia</i> spp. Typically, on presentation the clinical picture is of subacute or chronic encephalitis with longer incubation periods and illness durations (weeks to months) and these infections occur more frequently in immune compromised hosts. Possible routes of exposure include skin breaks/ulcers and entry via the respiratory tract. Amebic encephalitis can present with personality and behavioral changes, depressed mental status, fever, photophobia, seizures, cranial nerve dysfunction, and visual loss. The incubation period and duration of illness are slow and insidious, lasting several weeks to months. The disease Granulomatous Amebic Encephalitis (GAE) fits in this category and the known causal agents include <i>Balamuthia mandrillaris</i> and <i>Acanthamoeba</i> spp. <i>Sappinia</i> has been implicated in one case of amebic encephalitis.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>See also Amebic meningoencephalitis, primary (PAM)</p>	<p>In CSF, biopsy, or tissue specimens detection of free-living amebic organisms (other than <i>Naegleria fowleri</i>) by:</p> <ul style="list-style-type: none"> ▪ Microscopic examination, OR ▪ Detection of nucleic acid (e.g., PCR), OR ▪ Detection of antigen (e.g., DFA) <p>Contact DSHS epidemiologist for meningitis (amebic) at 800-252-8239 if suspected. DSHS will assist in coordinating specimen and/or electronic images submission to the CDC for verification. Collection & shipping procedures can be found at: http://www.cdc.gov/parasites/acanthamoeba/ and http://www.cdc.gov/parasites/balamuthia/</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Amebic meningoencephalitis, primary (PAM) 80750</p>	<p><i>Naegleria fowleri</i> is the causal agent of primary amebic meningitis (PAM). Incubation period: 1 to 14 days. Duration of illness: 1- 14 days. Presenting signs and symptoms: fever, nausea, vomiting, and meningeal irritation (the triad of 1. nuchal rigidity (neck stiffness), 2. photophobia (intolerance of bright light), and 3. severe headache). Physical examination might reveal positive meningeal signs (Kernig’s sign, Brudzinski’s sign, and nuchal rigidity). Lethargy, dizziness, loss of balance, mental status abnormalities, visual disturbances, hallucinations, delirium, seizures, and coma have been reported. Abnormalities in taste or smell, nasal obstruction, and nasal discharge might occur. Mean survival period is 3 to 7 days. Although a variety of treatments have been shown to be active against amebae in vitro and have been used to treat infected persons, most infections have still been fatal.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed See also Amebic meningitis/encephalitis, other</p>	<p>Confirmed presence of <i>Naegleria fowleri</i> in CSF, biopsy, or tissue specimens via:</p> <ul style="list-style-type: none"> ▪ Microscopic examination, OR ▪ Detection of nucleic acid (e.g., PCR), OR ▪ Detection of antigen (e.g., DFA) <p>Contact DSHS epidemiologist for meningitis (amebic) at 800-252-8239 if suspected. DSHS will assist in coordinating specimen and/or electronic images submission to the CDC for verification. Collection & shipping procedures can be found at: http://www.cdc.gov/parasites/naegleria/diagnosis-hcp.html</p>
<p><i>Anaplasma phagocytophilum</i> 11090</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, leukopenia, thrombocytopenia, or elevated hepatic transaminases. Nausea, vomiting, or rash can be present in some cases.</p> <p>Confirmed: A clinically compatible illness that is laboratory confirmed</p> <p>Probable: A clinically compatible illness with serological evidence of IgG or IgM antibody reactive ($\geq 1:128$) with <i>A. phagocytophilum</i> antigen by IFA, ELISA, or dot-ELISA or identification of morulae in the cytoplasm of neutrophils or eosinophils by microscopic examination</p> <p>Suspect: 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"> ▪ 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 ▪ Detection of <i>A. phagocytophilum</i> DNA in a clinical specimen by PCR, OR ▪ Demonstration of anaplasma antigen in a biopsy/autopsy sample by IHC, OR ▪ Isolation of <i>A. phagocytophilum</i>, from a clinical specimen in cell culture

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Anthrax 10350</p>	<p>An illness with acute onset characterized by several distinct clinical forms, including the following:</p> <p><i>Cutaneous:</i> A skin lesion evolving during a period of 2-6 days from a papule, through a vesicular stage, to a depressed black eschar. Fever, malaise, and lymphadenopathy can accompany the lesion.</p> <p><i>Inhalation:</i> A prodrome resembling a viral respiratory illness, followed by hypoxia and dyspnea, or acute respiratory distress syndrome (ARDS) with resulting cyanosis and shock. Radiographic evidence of mediastinal widening or pleural effusion is common.</p> <p><i>GastroIntestinal:</i> Severe abdominal pain and tenderness, nausea, vomiting, hematemesis, bloody diarrhea, anorexia, fever and septicemia.</p> <p><i>Oropharyngeal:</i> Mucosal lesion in the oral cavity or oropharynx, with cervical adenopathy, edema, pharyngitis, fever, and possible septicemia.</p> <p><i>Meningeal:</i> Fever, convulsions, coma or meningeal signs. This syndrome is usually secondary to the above syndromes.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Probable: A clinically compatible illness that does not meet the confirmed case definition, but does meet one of the following criteria:</p> <ul style="list-style-type: none"> ▪ Epidemiologic-link to a documented anthrax environmental exposure, OR ▪ Evidence of <i>B. anthracis</i> DNA, OR ▪ Positive result on serum specimen tests using the Quick ELISA Anthrax-PA kit, OR ▪ Detection of Lethal Factor (LF) in clinical serum specimens by LF mass spectrometry, OR ▪ Positive result on testing of culture from clinical specimens with the RedLine Alert test 	<ul style="list-style-type: none"> ▪ Culture and identification of <i>B. anthracis</i> from clinical specimens by the Laboratory Response Network, OR ▪ Detection of <i>B. anthracis</i> antigens in tissues by IHC using both <i>B. anthracis</i> cell wall and capsule monoclonal antibodies, OR ▪ Evidence of four-fold rise in antibodies or antigen between acute and convalescent sera using CDC IgG ELISA testing, OR ▪ Documented anthrax environmental exposure AND evidence of <i>B. anthracis</i> DNA <p>Note: As required by TAC, all <i>Bacillus anthracis</i> isolates must be submitted to the DSHS laboratory.</p>
<p>Antibiotic resistant isolates (Table of Contents link)</p>	<p>Unexpected or unusual susceptibility results should be discussed with the DSHS Emerging and Infectious Disease staff or the DSHS laboratory staff. See http://www.cdc.gov/drugresistance/ for additional information on resistance mechanisms and antibiotic stewardship.</p>	<p>For more information: http://www.cdc.gov/drugresistance/training.html http://www.dshs.state.tx.us/lab/default.shtm</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Arbovirus, neuroinvasive (encephalitis/meningitis) and non-neuroinvasive</p> <p>Neuroinvasive Disease 10058 Encephalitis, Cache Valley 10054 Encephalitis/Meningitis, California* 10053 Encephalitis, Eastern equine (EEE) 10059 Encephalitis, Japanese 10057 Encephalitis, Powassan 10051 Encephalitis, St. Louis (SLE) 10055 Encephalitis, Venezuelan equine (VEE) 10056 Encephalitis, West Nile (WNNND) 10052 Encephalitis, Western equine (WEE)</p> <p>Non-neuroinvasive Disease 10066 Cache Valley Virus 10061 California serogroup virus* 10062 Eastern equine encephalitis virus 10068 Japanese Encephalitis Virus 10063 Powassan virus 10064 St. Louis encephalitis virus 10067 Venezuelan equine encephalitis Virus 10049 West Nile Fever 10065 Western equine encephalitis virus</p>	<p>For the purposes of surveillance and reporting, based on their clinical presentation, arboviral disease cases are often categorized into two primary groups: neuroinvasive disease and non-neuroinvasive disease.</p> <p>Many arboviruses cause neuroinvasive disease such as aseptic meningitis, encephalitis, or acute flaccid paralysis (AFP). These illnesses are usually characterized by the acute onset of fever with stiff neck, altered mental status, seizures, limb weakness, cerebrospinal fluid (CSF) pleocytosis, or abnormal neuroimaging. Less common neurological manifestations, such as cranial nerve palsies, also occur. Most arboviruses are capable of causing an acute systemic febrile illness (e.g., West Nile fever) that can include headache, myalgias, arthralgias, rash, or gastrointestinal symptoms.</p> <p>Clinical evidence of neuroinvasive disease:</p> <ul style="list-style-type: none"> ▪ Meningitis, encephalitis, acute flaccid paralysis, or other acute signs of central or peripheral neurologic dysfunction, as documented by a physician, AND ▪ Absence of a more likely clinical explanation <p>Clinical evidence of non-neuroinvasive disease:</p> <ul style="list-style-type: none"> ▪ Fever or chills as reported by the patient or a health-care provider, AND ▪ Absence of neuroinvasive disease, AND ▪ Absence of a more likely clinical explanation. <p>Neuroinvasive: Confirmed: A clinically compatible case (meets neuroinvasive clinical evidence criteria) with laboratory confirmation</p> <p>Probable: A clinically compatible case (meets neuroinvasive clinical evidence criteria) with virus-specific IgM antibodies in CSF or serum but no other testing</p> <p>Non-neuroinvasive: Confirmed: A clinically compatible case (meets non-neuroinvasive clinical evidence criteria) with laboratory confirmation</p> <p>Probable: A clinically compatible case (meets non-neuroinvasive clinical evidence criteria) with virus-specific IgM antibodies in serum but no other testing</p>	<p>Neuroinvasive</p> <ul style="list-style-type: none"> ▪ Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, OR ▪ Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, OR ▪ Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, OR ▪ Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for arboviruses endemic to the region where exposure occurred <p>Non-neuroinvasive</p> <ul style="list-style-type: none"> ▪ Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, or other body fluid, excluding CSF, OR ▪ Four-fold or greater change in virus-specific quantitative antibody titers in paired sera, OR ▪ Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen <p>*Note: California encephalitis/meningitis refers to all California serogroup viruses. California serogroup includes California encephalitis, Jamestown Canyon, Keystone, La Crosse, snowshoe hare, and trivittatus viruses.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Babesiosis 12010</p>	<p>Babesiosis is a parasitic disease of the <i>Babesia</i> genus. Infection can range from subclinical to life-threatening. Clinical manifestations can include hemolytic anemia and nonspecific influenza-like signs and symptoms (e.g., fever, chills, sweats, headache, myalgia, arthralgia, malaise, fatigue, and generalized weakness), splenomegaly, hepatomegaly, or jaundice. Laboratory findings can include thrombocytopenia, proteinuria, hemoglobinuria, and elevated levels of liver enzymes, blood urea nitrogen, and creatinine. Severe cases can be associated with marked thrombocytopenia, disseminated intravascular coagulation, hemodynamic instability, acute respiratory distress, myocardial infarction, renal failure, hepatic compromise, altered mental status, and death.</p> <p><u>Objective Clinical Criteria:</u> 1) fever; 2) anemia; 3) thrombocytopenia</p> <p><u>Subjective Clinical Criteria:</u> 1) sweats, 2) headache, 3) myalgia, 4) arthralgia, 5) chills</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed AND meets at least one objective clinical criterion OR one subjective clinical criterion</p> <p>Probable: A case that:</p> <ul style="list-style-type: none"> ▪ Has at least one supportive laboratory result (criteria listed below) AND meets at least one objective clinical criterion (subjective clinical criteria alone are not sufficient) <ul style="list-style-type: none"> ▪ IFA total immunoglobulin (Ig) or IgG titer: <ul style="list-style-type: none"> ▪ <i>Babesia microti</i>: $\geq 1:256$ ($\geq 1:64$ in epidemiologically linked blood donors or recipients) ▪ <i>Babesia divergens</i>: $\geq 1:256$ ▪ <i>Babesia duncani</i>: $\geq 1:512$ ▪ Immunoblot IgG: <i>Babesia microti</i>: positive result, OR ▪ Is a blood donor or recipient epidemiologically linked to a confirmed or probable babesiosis case, AND ▪ Has confirmatory laboratory evidence but does not satisfy objective or subjective clinical criterion, OR ▪ Satisfies the supportive laboratory criteria (same as above) <p>Suspect: A case that has confirmatory or supportive laboratory results, but insufficient clinical or epidemiological information is available for case classification</p>	<p>At least one of the following must be met:</p> <ul style="list-style-type: none"> ▪ Identification of intraerythrocytic <i>Babesia</i> organisms by light microscopy in a Giemsa, Wright, or Wright-Giemsa–stained blood smear, OR ▪ Detection of <i>Babesia microti</i> DNA in a whole blood specimen by polymerase chain reaction (PCR), OR ▪ Detection of <i>Babesia</i> spp. genomic sequences in a whole blood specimen by nucleic acid amplification, OR ▪ Isolation of <i>Babesia</i> organisms from a whole blood specimen by animal inoculation

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Botulism, foodborne 10530	<p>Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis can progress rapidly.</p> <p><i>Confirmed:</i> 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><i>Probable:</i> 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"> ▪ Detection of botulinum toxin in serum, stool, or patient's food, OR ▪ Isolation of <i>Clostridium botulinum</i> from stool <p>Note: As required by TAC all <i>Clostridium botulinum</i> isolates must be submitted to the DSHS laboratory.</p>
Botulism, infant 10540	<p>An illness of infants, characterized by constipation, poor feeding, and “failure to thrive” that can be followed by progressive weakness, impaired respiration, and death.</p> <p><i>Confirmed:</i> A clinically compatible case that is laboratory confirmed, occurring in a child aged less than 1 year</p>	<ul style="list-style-type: none"> ▪ Detection of botulinum toxin in stool or serum, <p>OR</p> <ul style="list-style-type: none"> ▪ Isolation of <i>Clostridium botulinum</i> from stool <p>Note: As required by TAC all <i>Clostridium botulinum</i> isolates must be submitted to the DSHS laboratory.</p>
Botulism, other unspecified 10548	<p>Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis can progress rapidly.</p> <p><i>Confirmed:</i> 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"> ▪ Detection of botulinum toxin in clinical specimen, <p>OR</p> <ul style="list-style-type: none"> ▪ Isolation of <i>Clostridium botulinum</i> from clinical specimen <p>Note: As required by TAC all <i>Clostridium botulinum</i> isolates must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Botulism, wound 10549	<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 can progress rapidly.</p> <p>Confirmed: 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, or a history of injection drug use within the 2 weeks before onset of symptoms</p> <p>Probable: A clinically compatible case in a patient who has no suspected exposure to contaminated food and who has either a history of a fresh, contaminated wound during the 2 weeks before onset of symptoms, or a history of injection drug use within the 2 weeks before onset of symptoms</p>	<ul style="list-style-type: none"> ▪ Detection of botulinum toxin in serum, <p>OR</p> <ul style="list-style-type: none"> ▪ Isolation of <i>Clostridium botulinum</i> from wound <p>Note: As required by TAC all <i>Clostridium botulinum</i> isolates must be submitted to the DSHS laboratory.</p>
Brucellosis 10020	<p>An illness characterized by acute or insidious onset of fever and one or more of the following: night sweats, fatigue, anorexia, weight loss, headache, arthralgia, myalgia, meningitis, arthritis/spondylitis, or focal organ involvement (endocarditis, orchitis/epididymitis, hepatomegaly, splenomegaly).</p> <p>Confirmed: A clinically compatible illness that is laboratory confirmed</p> <p>Probable: A clinically compatible case with at least one of the following:</p> <ul style="list-style-type: none"> ▪ Epidemiologically linked to a confirmed human or animal brucellosis case, OR ▪ <i>Brucella</i> total antibody titer \geq 160 by standard tube agglutination test (SAT) or by <i>Brucella</i> microagglutination test (BMAT) in one or more serum specimens obtained after onset of symptoms, OR ▪ Detection of <i>Brucella</i> DNA in a clinical specimen by PCR assay 	<ul style="list-style-type: none"> ▪ Culture and identification of <i>Brucella</i> spp. from clinical specimens, <p>OR</p> <ul style="list-style-type: none"> ▪ 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 <p>Note: As required by TAC, all <i>Brucella</i> species isolates must be submitted to the DSHS laboratory.</p>
California encephalitis virus - (see Arbovirus)	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Tests for Arbovirus, Neuroinvasive and Non-neuroinvasive

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Campylobacteriosis 11020</p>	<p>An infection that can result in diarrheal illness of variable severity.</p> <p>Confirmed: A case that is laboratory confirmed</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case</p> <p>Suspect: A case with <i>Campylobacter</i> spp. detected, in a clinical specimen, by use of culture independent laboratory methods (non-culture based)</p> <p>Note: The use of culture independent methods as standalone tests for the direct detection of <i>Campylobacter</i> in stool appears to be increasing. Data available about the performance characteristics of these assays indicates there is variability in the sensitivity, specificity and positive predictive value of these assays depending on the test (EIA test format -lateral flow or –microplate) and manufacturer. It is therefore useful to collect information on which type of EIA test and manufacturer are used to diagnose a case. Culture confirmation, of culture independent (e.g., EIA) test positive specimens, is ideal.</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Campylobacter</i> spp. in a clinical specimen
<p>Carbapenem-resistant <i>Enterobacteriaceae</i> (CRE)</p>	<p>See case definition for Multi-drug resistant organisms</p>	

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Chagas disease, acute 12041</p>	<p>Chagas disease is a parasitic infection caused by <i>Trypanosoma cruzi</i>. The acute phase is characterized by the first 8 weeks of infection, detectable parasitemia, and asymptomatic (most common) or symptomatic manifestations of disease which can include any of the following:</p> <ul style="list-style-type: none"> ▪ Fever, malaise, rash, body aches, headache, loss of appetite, vomiting, diarrhea, hepatomegaly, splenomegaly, lymphadenopathy, Chagoma (nodular swelling at site of inoculation), Romaña’s sign (unilateral swelling of the eyelid) and rarely, acute myocarditis and/or meningoencephalitis. <p>Confirmed: A case (asymptomatic or symptomatic) that has confirmatory laboratory testing</p> <p>Probable: A clinically compatible case with supportive laboratory testing* and documented exposure within 8 weeks of illness onset or diagnosis</p> <p>*Supportive laboratory testing includes:</p> <ul style="list-style-type: none"> ▪ Positive diagnostic serology for <i>T. cruzi</i> antibodies <p>OR</p> <ul style="list-style-type: none"> ▪ Positive blood donor screening test PLUS a positive supplemental test 	<ul style="list-style-type: none"> ▪ Identification of <i>T. cruzi</i> by microscopy including: <ul style="list-style-type: none"> ▪ Microscopic examination of <i>T. cruzi</i> by: <ul style="list-style-type: none"> ▪ Wet mount – motile trypanosomes <p>OR</p> <ul style="list-style-type: none"> ▪ Thick & thin smears - Giemsa stain <p>OR</p> <ul style="list-style-type: none"> ▪ Isolation of the agent by <ul style="list-style-type: none"> ▪ Culture (specialized media - NNN, LIT) <p>OR</p> <ul style="list-style-type: none"> ▪ Inoculation into mice, <p>OR</p> <ul style="list-style-type: none"> ▪ Xenodiagnoses <p>OR</p> <ul style="list-style-type: none"> ▪ Detection of <i>T. cruzi</i> DNA by polymerase chain reaction (PCR) <p>Note: There is no gold standard for screening or diagnosis. No single supportive test has the sensitivity and specificity to be relied on alone.</p> <p>Congenital infections are considered acute up to 8 weeks of age; and can be diagnosed by confirmatory tests. Infants < 9 months & epidemiologically-linked need to be retested after 9 months of age.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Chagas disease, chronic indeterminate 12043</p>	<p>Following the acute phase, most infected people enter into a prolonged, asymptomatic form of disease (called “chronic indeterminate”) during which few or no parasites are found in the blood. During this time, most people are unaware of their infection. Many people remain asymptomatic for life and never develop chronic Chagas-related symptoms.</p> <p>Confirmed: An asymptomatic case >9 months of age with confirmatory lab results obtained more than 8 weeks after documented exposure or symptom onset</p> <p>Probable: An asymptomatic case >9 months of age with supportive laboratory testing* obtained more than 8 weeks after documented exposure or symptom onset</p> <p>*Supportive laboratory testing includes:</p> <ul style="list-style-type: none"> ▪ Positive diagnostic serology for <i>T. cruzi</i> antibodies <p>OR</p> <ul style="list-style-type: none"> ▪ Positive blood donor screening test PLUS a positive supplemental test <p>Note: Women with chronic indeterminate disease can transmit infection to their unborn babies. Infants <9 months of age with a mother from an endemic area, in absence of direct detection of the organism, cannot be classified or ruled out due to maternal antibodies; perform serology at 9 months of age and classify based on presence or absence of symptoms as chronic symptomatic or chronic indeterminate case definition.</p>	<ul style="list-style-type: none"> ▪ Antibody specific to <i>T. cruzi</i> detected by TWO or more distinct diagnostic tests. <p>Note: There is no gold standard for screening or diagnosis. Presence of <i>T. cruzi</i> in circulating blood is unlikely during the chronic phase (higher false negatives using microscopy or isolation methods). No single supportive test has the sensitivity and specificity to be relied on alone, thus two different methods or antibodies specific to <i>T. cruzi</i> are used.</p> <p>Chronic indeterminate cases generally come to light due to testing of blood donations by blood collection centers. Donors with a positive screening test can no longer donate blood, regardless of additional test results. Patients informed of positive test results on their donations at a blood collection center should be encouraged to inform their healthcare provider of test results and provide them with the CDC informational fact sheet: http://www.cdc.gov/parasites/chagas/resources/onepage.pdf</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Chagas disease, chronic symptomatic 12042</p>	<p>Much like the chronic indeterminate phase, the chronic symptomatic phase of disease (more than 8 weeks post infection) is characterized by undetectable parasitemia. However, an estimated 20 - 30% of infected people will develop debilitating and sometimes life-threatening medical problems over the course of their lives. Complications of chronic Chagas disease may include: heart rhythm abnormalities that can cause sudden death, a dilated heart that doesn't pump blood well and/or a dilated esophagus or colon, leading to difficulties with eating or passing stool.</p> <p>Confirmed: A physician- diagnosed case of chronic Chagas disease in a patient > 9 months of age with confirmatory laboratory results obtained more than 8 weeks after documented exposure or symptom onset</p> <p>Probable: A physician diagnosed case of chronic Chagas disease > 9 months of age with supportive laboratory results*obtained more than 8 weeks after a documented exposure or symptom onset</p> <p>* Supportive laboratory testing includes:</p> <ul style="list-style-type: none"> ▪ Positive diagnostic serology for <i>T. cruzi</i> antibodies <p>OR</p> <ul style="list-style-type: none"> ▪ Positive blood donor screening test PLUS a positive supplemental test 	<ul style="list-style-type: none"> ▪ Antibody specific to <i>T. cruzi</i> detected by TWO or more distinct diagnostic tests. <p>Note: There is no gold standard for screening or diagnosis. Presence of <i>T. cruzi</i> in circulating blood is unlikely during the chronic phase (higher false negatives using microscopy or isolation methods). No single supportive test has the sensitivity and specificity to be relied on alone, thus two different methods or antibodies specific to <i>T. cruzi</i> are used.</p> <p>Donors with a positive screening test can no longer donate blood, regardless of additional test results. Patients informed of positive test results on their donations at a blood collection center should be encouraged to inform their healthcare provider of test results & provide them with the CDC informational fact sheet; http://www.cdc.gov/parasites/chagas/resources/onepage.pdf</p>
<p>Chickenpox - (see Varicella)</p>	<p>See Varicella</p>	
<p>Cholera (toxigenic <i>Vibrio cholerae</i> O1 or O139) 10470</p>	<p>An illness characterized by diarrhea and/or vomiting; severity is variable.</p> <p>Confirmed: A clinically compatible illness that is laboratory confirmed</p> <p>Note: 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 Vibrio parahaemolyticus, Vibrio vulnificus, and Vibriosis, other or unspecified)</p>	<ul style="list-style-type: none"> ▪ Isolation of toxigenic (i.e., cholera toxin-producing) <i>Vibrio cholerae</i> O1 or O139 from stool or vomitus, OR ▪ Serologic evidence of recent infection <p>Note: As required by TAC all <i>Vibrio</i> species isolates must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Contaminated sharps injury (Table of Contents - link)</p>	<p>Any sharps injury 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 http://stacks.cdc.gov/view/cdc/20711 (updated 2013). For health care worker HBV and HCV risk assessment and follow-up refer to the Updated U.S. Public Health Service Guidelines for the Management of Occupational Exposures to HBV, HCV, and HIV and Recommendations for Postexposure Prophylaxis (updated 2001).</p>	<p>See referenced U.S. Public Health Service Guidelines for recommended follow-up testing.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Creutzfeldt-Jakob disease (CJD) 80060</p> <p>(continued on next page)</p>	<p>Creutzfeldt-Jakob disease (CJD) is a human prion disease described as rapidly progressive, invariably fatal, and neurodegenerative. Human prion diseases include sporadic forms of disease (sporadic CJD, sporadic Fatal Insomnia, Variably Protease-Sensitive Prionopathy), genetic or familial forms of disease (familial CJD, Familial Fatal Insomnia, and Gerstmann-Sträussler-Scheinker disease) and acquired forms of disease (iatrogenic CJD and variant CJD). Classical sporadic CJD presentation consists of rapidly progressive dementia, visual abnormalities, myoclonus, or cerebellar dysfunction (where both balance abnormalities and muscle incoordination are seen which commonly present as gait, speech, and swallowing disorders). Most patients eventually develop pyramidal and extrapyramidal dysfunction such as abnormal reflexes (hyperreflexia), spasticity, tremors, and rigidity. Akinetic mutism appears late in the disease. Median duration of illness is 4 months; the duration of illness rarely exceeds 12 months.</p> <p>For purposes of surveillance, CJD notification also includes Kuru, Gerstmann-Sträussler-Scheinker (GSS) disease, fatal familial insomnia (FFI), sporadic fatal insomnia (sFI), Variably Protease-Sensitive Prionopathy (VPSPr) and any novel prion disease affecting humans.</p> <p>Sporadic CJD (sCJD): Confirmed: Satisfactory confirmatory test finding on autopsy or biopsy tissue</p> <p>Probable: Rapidly progressive dementia AND at least two of the following clinical features:</p> <ul style="list-style-type: none"> a) Myoclonus b) Visual Or Cerebellar Signs c) Pyramidal/Extrapyramidal Signs d) Akinetic Mutism <p>AND satisfying at least 1 of the supportive laboratory criteria, AND absence of routine investigations indicating an alternative diagnosis</p> <p>Possible: Progressive dementia AND at least two of the following clinical features:</p> <ul style="list-style-type: none"> a) Myoclonus b) Visual Or Cerebellar Signs c) Pyramidal / Extrapyramidal Signs d) Akinetic mutism <p>WITH a duration of illness < 2 years, AND the absence of supportive laboratories, AND the absence of routine investigations indicating an alternative diagnosis</p>	<p>Confirmatory Laboratory Criteria - sporadic, genetic, & iatrogenic CJD Diagnosis by standard neuropathological techniques AND/OR Immunohistochemistry AND/OR Western blot AND/OR Presence of scrapie-associated fibrils from biopsy or autopsy obtained brain tissue</p> <p>Supportive Laboratory Criteria - sporadic, genetic, & iatrogenic CJD</p> <ul style="list-style-type: none"> ▪ CSF 14-3-3 protein: ELISA reported as elevated or above normal limits or Western blot reported positive. If 14-3-3 protein is the only supportive test used in determining classification, then duration of illness must be < 2 years. ▪ RT-QuIC: Positive ▪ Tau protein: Positive ▪ EEG: Reported as “typical of” or “consistent with” sporadic CJD or the report indicates the presence of generalized bi- or triphasic “periodic sharp wave complexes” (PSWC) at a frequency of 1-2 per second. No limit on duration of illness. ▪ MRI: High signal abnormalities in the caudate nucleus and/or putamen on diffusion-weighted imaging (DWI) or fluid attenuated inversion recovery (FLAIR). No limitation on duration of illness. <p>(continued on next page– see Exclusion Criteria.)</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>CJD (continued on next page)</p>	<p>Iatrogenic CJD (iCJD): <i>Confirmed:</i> Progressive cerebellar syndrome in a recipient of human cadaveric-derived pituitary hormone OR meets sCJD criteria WITH a recognized exposure risk (e.g., dura matter grafts)</p> <p>Familial CJD (fCJD): A classification of <i>confirmed</i> or <i>probable</i> requires that the criteria for sCJD are met plus the presence of a confirmed or probable CJD classification in a first degree relative AND/OR a neuropsychiatric disorder plus fCJD-specific PRNP gene mutation are present.</p> <p>Familial Fatal Insomnia (FFI): Meets the fCJD classification criteria AND pathology demonstrates thalamic atrophy AND/OR presence of a FFI-specific PRNP gene mutation</p> <p>Sporadic Fatal Insomnia (sFI): Classification follows FFI criteria but is not epi-linked (no 1st degree relatives with evidence of disease). On pathology the glycosylation pattern is similar to sCJD rather than to FFI.</p> <p>Gerstmann-Sträussler-Scheinker disease (GSS): A family with dominantly inherited progressive ataxia and/or dementia and one of a variety of PRNP mutations. Confirmatory Laboratory Criteria: Encephalo(myelo)pathy with multi-centric PrP plaques AND thalamic degeneration WITH a background of variable spongiform change in cerebrum</p> <p>Kuru: Spongiform encephalopathy epidemiologically linked to the Fore population of Papua New- Guinea</p>	<p>Exclusion Criterion: On neurohistopathological analysis of whole brain autopsy tissue, the absence of findings consistent with prion disease (negative results) is sufficient to “rule out” possible and probable cases and reclassify as “Not a Case”.</p> <p>Notes: Whole brain autopsy and neuropathology is the only way to confirm or rule-out prion disease. Biopsy tissue can only confirm presence of prion disease but is not sufficient to rule-out prion disease. Autopsy or postmortem biopsy (when autopsy is not possible) is strongly encouraged, while biopsy on living patients should be reserved for diagnosing treatable diseases. The National Prion Disease Pathology Surveillance Center (NPDPS) performs analysis on CSF, blood, and brain tissue. They provide free transport, shipping, and autopsy services for suspected cases of CJD (the family must initiate contact). Physicians are strongly encouraged to confirm the diagnosis of CJD by discussing & arranging autopsy with the NPDPS and family members. Autopsy is “highly suggested” for all cases with onset age under 55 years or physician diagnosed CJD.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>CJD</p> <p>(continued on next page)</p>	<p>Variant CJD (vCJD) is characterized by epidemiologic exposure to the causative agent of bovine spongiform encephalopathy (BSE) through consumption of contaminated meat, a prolonged incubation period of ~ 8 years (possibly decades), and presence of a neuropsychiatric disease that is progressive and invariably fatal. Median age at onset of symptoms is 28 years. Clinical presentation: early psychiatric symptoms (anxiety/depression), paraesthesia, delayed development of neurologic signs (> 4 months), and duration of illness lasting over 6 months.</p> <p>Confirmed: Confirmatory laboratory criteria are met</p> <p>Suspect*: The following criteria are met:</p> <ul style="list-style-type: none"> a) Current age or age at death <55 years (a brain autopsy is recommended, however, for all physician-diagnosed CJD cases) b) Psychiatric symptoms at illness onset AND/OR persistent painful sensory symptoms (frank pain and/or dysesthesia) c) Dementia AND development >4 months after illness onset of at least two of the following five neurologic signs: poor coordination, myoclonus, chorea, hyperreflexia, or visual signs. (If persistent painful sensory symptoms exist, >4 months delay in the development of the neurologic signs is not required.) d) A normal or an abnormal EEG, BUT NOT the diagnostic EEG changes often seen in classic CJD e) Duration of illness of over 6 months f) Routine investigations of the patient do not suggest an alternative, non-CJD diagnosis g) No history of receipt of cadaveric human pituitary growth hormone or a dura mater graft h) No history of CJD in a first degree relative or PRNP gene mutation in the patient <p>OR</p> <ul style="list-style-type: none"> ▪ Presence of “bilateral pulvinar high signal” or “pulvinar sign” or “symmetrical, bilateral high signal in the posterior thalamic nuclei” on MRI, AND ▪ Presence of all of the following: a progressive neuropsychiatric disorder, d, e, f, & g of the above criteria AND four of the following five criteria: <ul style="list-style-type: none"> ▪ Early psychiatric symptoms (anxiety, apathy, delusions, depression, withdrawal) ▪ Persistent painful sensory symptoms (frank pain and/or dysesthesia, and/or paraesthesia) ▪ Ataxia ▪ Myoclonus or chorea or dystonia ▪ Dementia <p>*A history of possible exposure to bovine spongiform encephalopathy (BSE) such as residence or travel to a BSE-affected country after 1980 increases the index of suspicion for a variant CJD diagnosis.</p>	<p>Confirmatory Laboratory Criteria – vCJD (brain tissue)</p> <ul style="list-style-type: none"> ▪ Numerous widespread kuru-type amyloid plaques surrounded by vacuoles in both the cerebellum and cerebrum (i.e., florid plaques) AND ▪ Spongiform change and extensive prion protein deposition shown by immunohistochemistry throughout the cerebellum and cerebrum <p>Supportive Laboratory Criteria - vCJD</p> <ul style="list-style-type: none"> ▪ EEG with normal or abnormal findings BUT WITHOUT findings consistent with sporadic CJD (absence of “periodic sharp wave complexes” - PSWC), OR EEG not reported or performed ▪ Presence of “bilateral pulvinar high signal” OR “pulvinar sign” OR “symmetrical, bilateral high signal in the posterior thalamic nuclei” on MRI (relative to other deep gray-matter nuclei) <p>Notes: Whole brain autopsy and neuropathology is the only way to confirm or rule-out prion disease. Biopsy tissue can only confirm presence of prion disease but is not sufficient to rule-out prion disease. Autopsy or postmortem biopsy (when autopsy is not possible) is strongly encouraged, while biopsy on living patients should be reserved for diagnosing treatable diseases. The National Prion Disease Pathology Surveillance Center (NPDPSC) performs analysis on CSF, blood, and brain tissue. They provide free transport, shipping, and autopsy services for suspected cases of CJD (the family must initiate contact). Physicians are strongly encouraged to confirm the diagnosis of CJD by discussing & arranging autopsy with the NPDPSC and family members. Autopsy is “highly suggested” for all cases with onset age under 55 years or physician diagnosed CJD.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Cryptosporidiosis 11580	<p>An illness caused by the protozoan <i>Cryptosporidium</i> and characterized by diarrhea and/or abdominal cramps that can be accompanied by loss of appetite, low-grade fever, nausea, and vomiting. Infected persons can be asymptomatic. The disease can be prolonged and life-threatening in severely immunocompromised persons.</p> <p>Confirmed: A case that is laboratory confirmed</p> <p>Probable:</p> <ul style="list-style-type: none"> ▪ A case with <i>Cryptosporidium</i> antigen detected by a screening test method such as, the immunochromatographic card/rapid card test or a laboratory test of unknown method, OR ▪ A clinically compatible case that is epidemiologically linked to a confirmed case by one of the following means: <ul style="list-style-type: none"> ▪ Household or other close contact to a lab-confirmed case with onset of symptoms within 1 month (before or after), OR ▪ 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 	<ul style="list-style-type: none"> ▪ Detection of <i>Cryptosporidium</i> organisms or DNA in stool, intestinal fluid, tissue samples, biopsy specimens, or other biological sample by certain laboratory methods with a high positive predictive value (PPV), e.g., DFA, PCR, EIA, or light microscopy of stained specimen
Cyclosporiasis 11575	<p>An illness of variable severity caused by the protozoan <i>Cyclospora cayentanensis</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 can be noted. Relapses and asymptomatic infections can occur.</p> <p>Confirmed: A laboratory-confirmed case with or without clinical symptoms</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> ▪ Detection—in symptomatic or asymptomatic persons— of <i>Cyclospora</i>: <ul style="list-style-type: none"> ▪ Oocysts in stool by microscopic examination, or in intestinal fluid/aspirate or intestinal biopsy specimens, OR ▪ Demonstration of sporulation, or DNA (by PCR) in stool, intestinal fluid/aspirate or intestinal biopsy specimens

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Cysticercosis (also see <i>Taenia solium</i>) 12031</p>	<p>Cysticercosis is an infection (tissue) 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. Subcutaneous cysticerci may be visible or palpable.</p> <p>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>Confirmed: Laboratory confirmation of the presence of cysticercus in tissue</p> <p>Note: Also see <i>Taenia solium</i></p>	<ul style="list-style-type: none"> ▪ Diagnosis of neurocysticercosis is usually made by MRI or CT brain scans in order to identify the presence of cysticerci. If surgery is necessary, confirmation of the diagnosis can be made by demonstrating the cysticercus in the tissue involved (biopsy). ▪ X-rays can identify calcified cysticerci in tissues other than the brain. <p>Note: Blood tests are available to help diagnose an infection, but are not always accurate. 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	Laboratory Confirmation Tests
<p>Dengue fever (DF) 10680</p>	<p>Dengue fever (DF) is an acute febrile illness characterized by the presence of fever and two or more of the following: retro-orbital or ocular pain, headache, rash, myalgia, arthralgia, leucopenia or hemorrhagic manifestations (e.g., positive tourniquet test; petechiae; purpura/ecchymosis; epistaxis; gum bleeding; blood in vomitus, urine, or stool; or vaginal bleeding), but NOT meeting the case definition of Dengue hemorrhagic fever.</p> <p>Confirmed: A clinically compatible case with confirmatory lab results</p> <p>Probable: A clinically compatible case with the following laboratory criteria: Dengue specific IgM antibodies present in serum (for MAC ELISA P/N ratio must be >2)</p> <p>Suspect: A clinically compatible case that is epidemiologically-linked to a confirmed case</p> <p>Exposure: Travel to a dengue endemic country or presence at location with ongoing outbreak within previous two weeks of dengue-like illness, or association in time and place with a confirmed or probable dengue case</p>	<ul style="list-style-type: none"> ▪ Isolation of dengue virus from tissue, blood, CSF, or other fluid, OR ▪ Demonstration of specific dengue virus antigen or genomic sequences in tissue, blood, CSF, or other body fluid by PCR, IHC or IFA, OR ▪ Seroconversion from negative dengue IgM in an acute phase specimen (≤ 5 days after symptom onset) to positive IgM in a convalescent-phase specimen (collected ≥ 5 days after symptom onset), OR ▪ Demonstration of a ≥ 4-fold rise in IgG antibody titer or hemagglutination inhibition (HAI) titer to dengue virus antigens in paired acute and convalescent serum samples, OR ▪ Demonstration of a ≥ 4-fold rise in a plaque reduction neutralization test (PRNT) end point titer between dengue viruses and other flaviviruses tested in a convalescent serum sample, OR ▪ Dengue-specific IgM antibodies demonstrated in CSF
<p>Dengue hemorrhagic fever (DHF) 10685</p>	<p>Dengue hemorrhagic fever (DHF) is characterized by all of the following:</p> <ul style="list-style-type: none"> ▪ Fever lasting from 2-7 days ▪ Evidence of hemorrhagic manifestation or a positive tourniquet test ▪ Thrombocytopenia ($\leq 100,000$ cells per mm³) ▪ Evidence of plasma leakage shown by hemoconcentration (an increase in hematocrit >20% above average for age or a decrease in hematocrit >20% of baseline following fluid replacement therapy), OR pleural effusion, ascites, or hypoproteinemia. <p>Confirmed, Probable, & Suspect: For case definitions, refer to clinical description above and apply to case classification criteria and exposure note for Dengue Fever (DF), Condition Code 10680</p>	<p>See laboratory confirmation criteria for Dengue Fever (DF), Condition Code 10680</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Dengue shock syndrome (DSS) 10685	<p>Dengue shock syndrome has all of criteria for DHF, plus circulatory failure, as evidenced by the following:</p> <ul style="list-style-type: none"> ▪ Rapid and weak pulse and narrow pulse pressure (<20mm Hg), OR ▪ Age-specific hypotension, cold, clammy skin, and restlessness <p><i>Confirmed, Probable, & Suspect:</i> For case definitions, refer to clinical description above and apply to case classification criteria and exposure note for Dengue Hemorrhagic Fever, Condition Code 10685</p>	<p>See laboratory confirmation criteria for Dengue Fever (DF), Condition Code 10680</p>
Diphtheria 10040	<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><i>Confirmed:</i> A clinically compatible case that is either laboratory confirmed, OR 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"> ▪ Isolation of <i>Corynebacterium diphtheriae</i> from a clinical specimen, OR ▪ Histopathologic diagnosis of diphtheria
Eastern equine encephalitis virus (EEE) - (see Arbovirus)	<p>See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive</p>	<p>See Lab Confirmation Tests for Arbovirus, Neuroinvasive and Non-neuroinvasive.</p>
Ehrlichia chaffeensis 11088	<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, leukopenia, thrombocytopenia, or elevated hepatic transaminases. Nausea, vomiting, or rash can be present in some cases. Intracytoplasmic bacterial aggregates (morulae) can be visible in the leukocytes of some patients.</p> <p><i>Confirmed:</i> A clinically compatible illness that is laboratory confirmed</p> <p><i>Probable:</i> A clinically compatible illness with serological evidence of IgG or IgM antibody reactive (\geq1:128) with <i>E. chaffeensis</i> antigen by IFA, ELISA, or dot-ELISA</p> <p><i>Suspect:</i> 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"> ▪ 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 ▪ Detection of <i>E. chaffeensis</i> DNA in a clinical specimen by PCR, OR ▪ Demonstration of ehrlichial antigen in a biopsy/autopsy sample by IHC, OR ▪ Isolation of <i>E. chaffeensis</i> from a clinical specimen in cell culture

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p><i>Ehrlichia ewingii</i> 11089</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 can be present in some cases. Intracytoplasmic bacterial aggregates (morulae) can be visible in the leukocytes of some patients.</p> <p>Confirmed: A clinically compatible illness that is laboratory confirmed</p> <p>Suspect: 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"> ▪ Detection of <i>E. ewingii</i> DNA in a clinical specimen by PCR <p>Note: Because the organism has never been cultured, antigens are not available. Thus, <i>E. ewingii</i> infections can only be diagnosed by molecular detection methods.</p>
<p>Ehrlichiosis/Anaplasmosis – undetermined 11091</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 can be present in some cases. Intracytoplasmic bacterial aggregates (morulae) can be visible in the leukocytes of some patients.</p> <p>Probable: A clinically compatible illness with serological evidence of IgG or IgM antibody reactive ($\geq 1:128$) 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>Suspect: 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 can include the identification of morulae in white cells by microscopic examination in the absence of other supportive laboratory results.</p>	<p>Not applicable - See note</p>
<p>Encephalitis, arboviral</p>	<p>See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis)</p>	<p>See Lab Confirmation Tests for Arbovirus, Neuroinvasive (Encephalitis/meningitis)</p>
<p><i>Escherichia coli</i>, Shiga toxin-producing (STEC)</p>	<p>See Shiga toxin-producing Escherichia coli (STEC)</p>	
<p>Group A <i>Streptococcus</i>, invasive (GAS)</p>	<p>See Streptococcus, invasive group A (GAS)</p>	

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Group B <i>Streptococcus</i>, invasive (GBS)	See Streptococcus, Invasive group B (GBS)	
Granulomatous amebic encephalitis (GAE)	See Amebic meningitis/encephalitis, other	
<i>Haemophilus influenzae</i> type b, invasive disease 10590	<p><i>Haemophilus influenzae</i> type b can 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>Confirmed: A clinically compatible case that is lab confirmed and identified specifically as <i>H. influenzae</i> type b</p> <p>Probable: A clinically compatible illness with detection of <i>H. influenzae</i> type b antigen in cerebrospinal fluid (CSF). (Antigen test results in urine or serum are unreliable for diagnosis of <i>H. influenzae</i> disease.)</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>H. influenzae</i> type b from a normally sterile site (e.g., blood, cerebrospinal fluid [CSF], or less commonly, joint, pleural, or pericardial fluid) <p>See Normally Sterile Site</p> <p>Note: <i>Haemophilus influenzae</i> that is not typed or is not type b is not reportable as <i>H. flu</i> type b. Serotyping of isolates can be performed at the DSHS laboratory.</p>
Hantavirus infection 11610	<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>Confirmed: A clinically compatible case with confirmatory laboratory results</p>	<p>Diagnosis is made by the demonstration of specific IgM antibodies 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>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Hantavirus pulmonary syndrome 11590</p>	<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>Clinical evidence: Illness characterized by one or more of the following:</p> <ul style="list-style-type: none"> ▪ A febrile illness (temperature greater than 101.0° F), with <ul style="list-style-type: none"> ▪ Bilateral diffuse interstitial edema, OR ▪ Clinical diagnosis of acute respiratory distress syndrome (ARDS), OR ▪ Radiographic evidence of noncardiogenic pulmonary edema, OR ▪ Unexplained respiratory illness resulting in death in a previously healthy person, OR ▪ An unexplained respiratory illness resulting in death, with an autopsy examination demonstrating noncardiogenic pulmonary edema without an identifiable cause. <p><i>Confirmed:</i> A clinically compatible case (meets clinical evidence criteria) with confirmatory laboratory results</p>	<ul style="list-style-type: none"> ▪ Detection of hantavirus-specific immunoglobulin M or rising titers of hantavirus-specific immunoglobulin G, OR ▪ Detection of hantavirus-specific ribonucleic acid sequence by PCR in clinical specimens, OR ▪ Detection of hantavirus antigen by IHC
<p>Hemolytic uremic syndrome, postdiarrheal (HUS) 11550</p>	<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 can have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal).</p> <p><i>Confirmed:</i> 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><i>Probable:</i></p> <ul style="list-style-type: none"> ▪ An acute illness diagnosed as HUS or TTP that meets the laboratory criteria in a patient who does not have a clear history of acute or bloody diarrhea in preceding 3 weeks, OR ▪ An acute illness diagnosed as HUS or TTP, that 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 <p>Note: See Shiga toxin-producing Escherichia coli (STEC). Cases meeting the criteria for both conditions should be reported under each condition.</p>	<p>The following are both present at some time during the illness:</p> <ul style="list-style-type: none"> ▪ Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear, AND ▪ Renal injury (acute onset) evidenced by either hematuria, proteinuria, or elevated creatinine level (i.e., greater than or equal to 1.0 mg/dL in a child aged less than 13 years or greater than or equal to 1.5 mg/dL in a person aged greater than or equal to 13 years, or greater than or equal to 50% increase over baseline) <p>Note: A low platelet count can usually, but not always, be detected early in the illness, but it can then become normal or even high. If a platelet count obtained within 7 days after onset of the acute gastrointestinal illness is not less than 150,000/mm³, other diagnoses should be considered.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Hepatitis A, acute 10110	<p>An acute illness with at least one of the following a) discrete onset of symptoms (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), b) jaundice or c) elevated serum aminotransferase levels (>100 IU/L).</p> <p>Confirmed: A case that meets the clinical case definition and is laboratory confirmed, OR a case that meets the clinical case definition and occurs in a person who has an epidemiological link with a person who has laboratory-confirmed hepatitis A</p>	<ul style="list-style-type: none"> ▪ Immunoglobulin M (IgM) antibody to hepatitis A virus (anti-HAV IgM) positive
Hepatitis B, acute 10100	<p>An acute illness with at least one of the following a) discrete onset of symptoms*(e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), b) jaundice or c) elevated serum aminotransferase levels >100 IU/L.</p> <p>Confirmed: A case that meets the clinical case definition is laboratory confirmed, and is not known to have chronic hepatitis B**</p> <p>*A documented negative hepatitis B surface antigen (HBsAg) laboratory test result within 6 months prior to a positive test result (i.e., HBsAg, hepatitis B “e” antigen [HBeAg], or hepatitis B virus nucleic acid testing [HBV NAT] including genotype) does not require an acute clinical presentation to meet the surveillance case definition.</p> <p>**A person should be considered chronically infected if hepatitis B antigen tests (HBsAg, HBeAg, and/or nucleic acid tests) have been positive for 6 months or longer or if the patient has a history of chronic hepatitis B diagnosis.</p>	<ul style="list-style-type: none"> ▪ IgM antibody to hepatitis B core antigen (anti-HBc IgM) positive, OR ▪ Hepatitis B surface antigen (HBsAg) positive
Hepatitis B virus infection, perinatal 10104	<p>Perinatal hepatitis B (HBV) in the newborn can range from asymptomatic to fulminant hepatitis.</p> <p>Confirmed: HBsAg positive in any infant aged >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"> ▪ Hepatitis B surface antigen (HBsAg) positive

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Hepatitis C, acute 10101</p>	<p>An acute illness with discrete onset of symptoms* consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), and a) jaundice or b) abnormal serum alanine aminotransferase levels (ALT level >400 IU/L).</p> <p>Confirmed: A case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis C (HCV)</p> <p>*A documented negative HCV antibody laboratory test result followed within 6 months by a positive test (as described in the laboratory criteria for diagnosis) result does not require an acute clinical presentation to meet the surveillance case definition.</p> <p>Perinatal or Infant Hepatitis C: (birth to two years, if greater than 2 years of age please code as above)</p> <p>Confirmed: Any PCR positive infant. (Testing at 12-18 months is recommended to determine whether infection is resolved or chronic)</p> <p>Suspect: Any HCV Ab (EIA, RIBA) positive infant. Due to maternal antibody infants should be followed-up and re-classified at around 12- 18 months of age based on follow-up laboratory testing</p>	<ul style="list-style-type: none"> ▪ 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 http://www.cdc.gov/hepatitis/HCV/LabTesting.htm , OR ▪ Recombinant immunoblot assay (HCV RIBA) positive, OR ▪ Nucleic acid testing (NAT) for HCV RNA positive (including genotype); <p>AND, if done, meets the following two criteria:</p> <ul style="list-style-type: none"> ▪ IgM antibody to hepatitis A virus (IgM anti-HAV) negative, AND ▪ IgM antibody to hepatitis B core antigen (IgM anti-HBc) negative
<p>Hepatitis E, acute 10103</p>	<p>Typical clinical signs and symptoms of acute hepatitis E virus (HEV) are similar to those of other types of acute 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 can be the result of anicteric 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 can reach 20% among those infected during the third trimester of pregnancy.</p> <p>Confirmed: A case that meets the clinical case description and is laboratory confirmed</p> <p>Probable: A case that meets the clinical case description with supportive laboratory evidence (positive IgM antibody from labs other than CDC), 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>	<ul style="list-style-type: none"> ▪ IgM anti-HEV from CDC laboratory or PCR positive from reference laboratory <p>Note: No FDA approved tests to diagnose HEV infection are available in the United States.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Influenza, human isolates - [outbreaks only] 11060	<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, headache, extreme tiredness, dry cough, sore throat, runny or stuffy nose, and muscle aches. Stomach symptoms (nausea, vomiting, and diarrhea) 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>Confirmed: Case that is clinically compatible and laboratory confirmed</p> <p>Note: Influenza is not a reportable condition in Texas. See Influenza A, novel/variant infection for reporting of novel/variant strains. See Influenza-associated pediatric mortality for reporting of influenza-associated deaths in all persons aged <18 years.</p>	<ul style="list-style-type: none"> ▪ Influenza virus isolation in tissue cell culture from respiratory specimens, OR ▪ Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens, OR ▪ Immunofluorescent antibody staining (direct or indirect) of respiratory specimens, OR ▪ Rapid influenza diagnostic testing of respiratory specimens, OR ▪ Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens, OR ▪ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Influenza A – novel/variant 11062</p>	<p>An illness compatible with influenza virus infection (fever >100 degrees Fahrenheit, with cough and/or sore throat)</p> <p>Confirmed: A case of human infection with a laboratory confirmed novel/variant influenza A virus</p> <p>Probable: A case meeting the clinical criteria and epidemiologically linked to a confirmed case, but for which no confirmatory laboratory testing for novel/variant influenza virus infection has been performed or test results are inconclusive for a novel/variant influenza A virus infection</p> <p><u>Criteria for epidemiologic linkage:</u> 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 can be considered epidemiologically linked to a laboratory-confirmed case if at least one case in the chain of transmission is laboratory confirmed.</p> <p>Suspect: A case meeting the clinical criteria in which influenza A has been detected but is 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 suspect case until the confirmation process is complete.</p> <p>Typically, sporadic novel/variant influenza cases will have a history of either close contact with ill animals known to transmit novel subtypes of influenza A (such as wild birds or poultry, swine or other mammals) OR travel, within 14 days, to any country where a novel influenza A virus (such as highly pathogenic avian influenza A H5N1) has been recently identified in animals or people.</p>	<p>Identification of an influenza A virus subtype or strain that is different from currently circulating human influenza H1 and H3 strains as confirmed by CDC’s influenza laboratory, by public health laboratories using CDC-approved protocols for that specific strain, or by labs using FDA-approved tests for specific strains.</p> <ul style="list-style-type: none"> ▪ Novel/variant subtypes include, but are not limited to, H2, H5, H7, and H9 subtypes. ▪ Influenza H1 and H3 subtypes originating from a non-human species or from genetic re-assortment between animal and human viruses are also novel/variant subtypes or strains. ▪ Methods available for detection of currently circulating human influenza viruses at public health laboratories (e.g., rRT-PCR) will also detect suspected novel/variant subtypes and strains. ▪ Initial confirmation that a specific influenza A virus represents a novel/variant virus will be performed by CDC’s influenza laboratory. ▪ Currently, only viral isolation, RT-PCR, gene sequencing, or a 4-fold rise in strain-specific serum antibody titers are considered confirmatory for case classification purposes.

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Influenza-associated pediatric mortality 11061</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 <18 years should be reported.</p> <p>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 of age or older, or after review and consultation there is an alternative agreed upon cause of death which is unrelated to an infectious process (For example, a child with a positive influenza test whose death clearly resulted from trauma after a car accident would not qualify as a case. However, a child with a respiratory illness and a positive influenza test whose death is attributed to another infectious cause such as staphylococcal pneumonia would still qualify as a case.).</p> <p>Confirmed: A death meeting the clinical case definition that is laboratory confirmed</p>	<p>Laboratory testing for influenza virus infection can be done on pre- or post-mortem clinical specimens, and may 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"> ▪ Influenza virus isolation in tissue cell culture from respiratory specimens, OR ▪ Reverse-transcriptase polymerase chain reaction (RT-PCR) testing of respiratory specimens, OR ▪ Immunofluorescent antibody staining (direct or indirect) of respiratory specimens, OR ▪ Rapid influenza diagnostic testing of respiratory specimens, OR ▪ Immunohistochemical (IHC) staining for influenza viral antigens in respiratory tract tissue from autopsy specimens, OR ▪ Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera
<p>Legionellosis 10490</p>	<p>Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires' disease, which is characterized by fever, myalgia, cough, and clinical or radiological pneumonia and Pontiac fever, a milder illness without pneumonia.</p> <p>Confirmed: A clinically compatible case that meets at least one of the confirmatory laboratory criteria</p>	<ul style="list-style-type: none"> ▪ Isolation (culture) of any <i>Legionella</i> organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid, OR ▪ Detection of <i>Legionella pneumophila</i> serogroup 1 antigen in urine using validated reagents, OR ▪ 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

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Leishmaniasis 80550</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 can be single or multiple, occasionally nonulcerative and diffuse. Lesions can 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 can 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>Confirmed: A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> ▪ Microscopic identification of the nonmotile, intracellular form (amastigote) in stained specimens from lesions, OR ▪ Culture of the motile, extracellular form (promastigote) on suitable media, OR ▪ An intradermal (Montenegro) test with leishmanin, an antigen derived from the promastigotes is usually positive in established disease, OR ▪ Serological (IFA or ELISA) can be useful for diagnosis of mucosal leishmaniasis
<p>Listeriosis 10640</p>	<p>In adults, invasive disease caused by <i>Listeria monocytogenes</i> manifests most commonly as meningitis or bacteremia; infection during pregnancy can result in fetal loss through miscarriage or stillbirth, or neonatal meningitis or bacteremia. Other manifestations can also be observed.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Note: For fetal or neonatal (≤ 1 month of age) infections, the MOTHER is the case-patient.</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>L. monocytogenes</i> from a normally sterile site, e.g., blood, cerebrospinal fluid (CSF), or less commonly, joint, pleural, or pericardial fluid, OR ▪ In the setting of miscarriage or stillbirth, isolation of <i>L. monocytogenes</i> from placental or fetal tissue, OR ▪ In the setting of pregnancy or live birth, isolation of <i>L. monocytogenes</i> from mother's or neonate's blood or other sterile site, or from placental or amniotic fluid <p>See Normally Sterile Site</p> <p>Note: As required by TAC all <i>Listeria monocytogenes</i> isolates must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Lyme disease <u>11080</u></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).</p> <p>Confirmed: A case with physician-diagnosed EM \geq 5cm in size with an exposure in a high-incidence state* OR A case of physician-diagnosed EM of any size with laboratory confirmation, OR a case with at least one late manifestation** that has laboratory confirmation</p> <p>*Texas is considered a low-incidence state for Lyme disease. Therefore, a positive/equivocal screen is required prior to running IgM/IgG Immunoblots and additional testing is required to accompany an EM.</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"> ▪ 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. ▪ Nervous system: any of the following, alone or in combination: lymphocytic meningitis; cranial neuritis, particularly facial palsy (can 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. ▪ Cardiovascular system: acute onset of high-grade (2nd or 3rd-degree) atrioventricular conduction defects that resolve in days to weeks and are sometimes associated with myocarditis. <p>Probable: Any other case of physician-diagnosed Lyme disease that has laboratory confirmation</p> <p>Suspect: 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"> ▪ Positive culture for <i>Borrelia burgdorferi</i>, OR ▪ IgG immunoblot seropositivity using established criteria*** with <ul style="list-style-type: none"> ▪ Positive/Equivocal EIA or IFA test, AND ▪ Specimen collected > 30 days after symptom onset, OR ▪ IgM immunoblot seropositivity using established criteria*** with <ul style="list-style-type: none"> ▪ Positive/Equivocal EIA or IFA test, AND ▪ Specimen collected \leq30 days prior to symptom onset <p>***Immunoblot interpretation criteria: It was recommended that an IgM immunoblot be considered positive if 2 of the following 3 bands are present: 24 kDa (OspC), 39 kDa (BmpA), and 41 kDa (Fla). It was further recommended that an IgG immunoblot be considered positive if 5 of the following 10 bands are present: 18 kDa, 21 kDa (OspC), 28 kDa, 30 kDa, 39 kDa (BmpA), 41 kDa (Fla), 45 kDa, 58 kDa (not GroEL), 66 kDa, and 93 kDa. http://www.cdc.gov/mmwr/preview/mmwrhtml/00038469.htm (Updated 1995)</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Malaria 10130</p>	<p>The first symptoms of malaria (fever, chills, sweats, headaches, muscle pains, nausea and vomiting) are also found in other disease such as influenza and other common viral infections. In severe malaria (caused by <i>P. falciparum</i>), clinical findings such as confusion, coma, neurologic focal signs, severe anemia, and respiratory difficulties are more striking.</p> <p>Confirmed: A case that is laboratory confirmed 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> <p>Suspect: Detection of <i>Plasmodium</i> species by rapid diagnostic antigen testing (RDT) without confirmation by microscopy or nucleic acid testing in any person <u>diagnosed in the United States</u>, (symptomatic or asymptomatic), regardless of whether the person experienced previous episodes of malaria while outside the country</p> <p>Note: A subsequent attack experienced by the same person but caused by a different <i>Plasmodium</i> species is counted as an additional case. A subsequent attack experienced by the same person and caused by the same species in the U.S. may indicate a relapsing infection or treatment failure caused by drug resistance.</p>	<ul style="list-style-type: none"> ▪ Detection and specific identification of malaria parasite species by microscopy on blood films in a laboratory with appropriate expertise <p>OR</p> <ul style="list-style-type: none"> ▪ Detection of <i>Plasmodium</i> species by nucleic acid test* <p>OR</p> <ul style="list-style-type: none"> ▪ Detection of unspiciated malaria parasite by microscopy on blood films in a laboratory with appropriate expertise <p>* Laboratory-developed malaria PCR tests must fulfill CLIA requirements, including validation studies.</p>
<p>Measles (Rubeola) 10140</p>	<p>An illness characterized by all of the following: a generalized maculopapular rash lasting at least 3 days; a temperature $\geq 101.0^{\circ}\text{F}$ ($>38.3^{\circ}\text{C}$); and cough, coryza, or conjunctivitis.</p> <p>Confirmed: An acute febrile rash illness (temperature can be lower than 101° and rash < 3 days) that is:</p> <ul style="list-style-type: none"> ▪ Laboratory confirmed, OR ▪ Epidemiologically linked to a laboratory confirmed measles case. 	<ul style="list-style-type: none"> ▪ IgG seroconversion or a significant rise in measles immunoglobulin G antibody level by any standard serologic assay *, OR ▪ Isolation of measles virus from a clinical specimen*, OR ▪ Detection of measles-virus-specific nucleic acid by PCR *, OR ▪ A positive serological test for measles immunoglobulin M antibody* not otherwise ruled out by other confirmatory testing or more specific measles testing in a public health laboratory. <p>*Not explained by MMR vaccination during the previous 6-45 days</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Meningococcal disease (<i>Neisseria meningitidis</i>) 10150	<p>Meningococcal disease manifests most commonly as meningitis and/or meningococemia that can progress rapidly to purpura fulminans, shock, and death. However, other manifestations might be observed.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Probable: A clinically compatible case that has one of the following:</p> <ul style="list-style-type: none"> ▪ <i>N. meningitidis</i> nucleic acid detected using a validated polymerase chain reaction (PCR), obtained from a normally sterile site ▪ <i>N. meningitidis</i> antigen by immunohistochemistry (IHC) on formalin-fixed tissue ▪ <i>N. meningitidis</i> antigen by latex agglutination of CSF ▪ Clinical purpura fulminans in the absence of a positive blood culture ▪ Clinically compatible case with gram-negative diplococci from a normally sterile site (e.g., blood or CSF) 	<ul style="list-style-type: none"> ▪ Isolation of <i>Neisseria meningitidis</i> from a normally sterile site, OR ▪ Isolation of <i>Neisseria meningitidis</i> from purpuric lesions <p>See Normally Sterile Site</p> <p>Note: As required by TAC all <i>Neisseria meningitidis</i> isolates from normally sterile sites and/or purpuric lesions must be submitted to the DSHS laboratory for typing and molecular analysis.</p>
MRSA - [outbreaks only]	See Staphylococcus aureus, coagulase-positive, methicillin- or oxacillin-resistant (MRSA)	
Multi-drug resistant <i>Acinetobacter</i> (MDR-A)	See case definition for Multi-drug resistant organisms	

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests																			
<p>Multi-drug resistant organisms (MDRO) Code pending</p> <p><i>(continued on the next page)</i></p>	<p>Carbapenem-resistant <i>Enterobacteriaceae</i> (CRE): Carbapenemase producing <i>Enterobacteriaceae</i> or carbapenem-resistant <i>Enterobacteriaceae</i>, specifically <i>Klebsiella</i> species and <i>Escherichia coli</i>, are gram-negative bacilli that have the ability to break down the carbapenem antibiotic rendering it ineffective. Carbapenem resistance by <i>Enterobacteriaceae</i> can occur by many mechanisms, including the production of a carbapenemase (such as <i>Klebsiella pneumoniae</i> carbapenemase, KPC) which can be transmitted from one <i>Enterobacteriaceae</i> to another or a metallo-beta-lactamase. CRE can also have additional resistance mechanisms that enable them to be non-susceptible to many other classes of commonly used antibiotics. Metallo-beta-lactamases, such as New Delhi metallo-beta-lactamase (NDM), are more common outside the United States but, in rare cases, have been identified in patients with exposure to health care in other countries where these strains are endemic.</p> <p>CRE can cause infections in almost any part of the body including bloodstream infections, ventilator-associated pneumonia, and intra-abdominal abscesses. Based on information from a CDC pilot surveillance system most CRE infections involve the urinary tract, often in people who have a urinary catheter or have urinary retention.</p> <p>Confirmed: <i>Klebsiella</i> species or <i>E. coli</i> from any body site/source that meets the confirmed laboratory criteria for CRE</p> <p>Probable: <i>Klebsiella</i> species or <i>E. coli</i> from any body site/source that is:</p> <ul style="list-style-type: none"> ▪ Positive for carbapenemase production by a phenotypic test (e.g., Modified Hodge Test), OR ▪ Nonsusceptible (i.e., intermediate or resistant) to at least one of the following carbapenems: doripenem, meropenem, or imipenem <table border="1" data-bbox="495 984 1379 1154"> <thead> <tr> <th rowspan="2"></th> <th colspan="3">MIC (µg/mL)</th> </tr> <tr> <th>Susceptible</th> <th>Intermediate</th> <th>Resistant</th> </tr> </thead> <tbody> <tr> <td>Doripenem</td> <td>≤1</td> <td>2</td> <td>≥4</td> </tr> <tr> <td>Imipenem</td> <td>≤1</td> <td>2</td> <td>≥4</td> </tr> <tr> <td>Meropenem</td> <td>≤1</td> <td>2</td> <td>≥4</td> </tr> </tbody> </table> <p>Infection preventionists, clinical laboratorians and clinicians should be aware of the possibility of NDM-1—producing <i>Enterobacteriaceae</i> in patients who have received medical care in the Middle East, South Asia, or other international settings and should specifically inquire about this risk factor when carbapenem-resistant <i>Enterobacteriaceae</i> are identified.</p> <p>Additional information on CRE can be found at: http://www.cdc.gov/HAI/organisms/cre/index.html</p>		MIC (µg/mL)			Susceptible	Intermediate	Resistant	Doripenem	≤1	2	≥4	Imipenem	≤1	2	≥4	Meropenem	≤1	2	≥4	<p>CRE confirmed <i>Klebsiella</i> species and <i>E. coli</i> that possess/contain a gene sequence specific for carbapenemase (a positive PCR test).</p>
	MIC (µg/mL)																				
	Susceptible	Intermediate	Resistant																		
Doripenem	≤1	2	≥4																		
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Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
MDRO (end)	<p>Multi-drug Resistant <i>Acinetobacter</i> (MDR-A) are strictly aerobic gram negative coccobacilli of the <i>Moraxellaceae</i> family and have more than 25 species within the genus. They have an intrinsic resistance factor that enables them to hydrolyze carbapenem, causing resistance to carbapenems and penicillins. Additionally, multi-drug resistant <i>Acinetobacter</i> strains may act to circumvent antibiotics by producing porins, through penicillin-binding protein modifications and production of aminoglycoside modifying enzymes, among other ways. Health care-associated <i>Acinetobacter</i> respiratory tract infections, including ventilator associated pneumonia, catheter related urinary tract infections, bloodstream infections, and wound infections have all been well documented in medical literature. In addition, there have been reports of <i>Acinetobacter</i> meningitis, endocarditis, osteomyelitis, and corneal perforation and infection associated with peritoneal dialysis.</p> <p>Confirmed: <i>Acinetobacter</i> species from any body site/source that meets the confirmed laboratory criteria for MDR-A</p> <p>Note: CRE and MDR-A reporting is covered and encouraged as a rare or exotic disease and will be specified by Texas Administrative Code (TAC) rule with an estimated effective date of April, 2014.</p>	<p>MDR-A confirmed Non-susceptible (i.e., resistant or intermediate) to at least one antibiotic in at least 3 antimicrobial classes of the following 6 antimicrobial classes:</p> <ol style="list-style-type: none"> 1. Beta-Lactam (Piperacillin, Piperacillin/tazobactam) 2. Aminoglycosides (Amikacin, Gentamicin, Tobramycin) 3. Carbapenems (Imipenem, Meropenem, Doripenem) 4. Fluoroquinolones (Ciprofloxacin, Levofloxacin) 5. Cephalosporins (Cefepime, Ceftazidime) 6. Sulbactam (Ampicillin/Sulbactam) <p>Note: There is no requirement to submit isolates to the DSHS lab. Please contact the DSHS MDRO Epidemiologist or the DSHS lab for additional information on available lab support.</p>
<p>Mumps 10180</p>	<p>Acute parotitis or other salivary gland swelling lasting at least 2 days, or orchitis or oophoritis unexplained by another more likely diagnosis</p> <p>Confirmed: A case that has a positive mumps PCR result, OR positive mumps culture, AND either meets the clinical case definition, OR has aseptic meningitis, encephalitis, hearing loss, mastitis, or pancreatitis</p> <p>Probable: A case that meets the clinical case definition, AND</p> <ul style="list-style-type: none"> ▪ Has a positive test for serum anti-mumps immunoglobulin M (IgM) antibody, OR ▪ Has an epidemiologic link to another probable or confirmed case or linkage to a group/community defined by public health during an outbreak of mumps 	<ul style="list-style-type: none"> ▪ Isolation of mumps virus from clinical specimen, OR ▪ Detection of mumps-virus-specific nucleic acid by PCR <p>Note: An elevated serum amylase is not confirmatory for mumps</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Norovirus - [outbreaks only] 10996	<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 can 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 can occur in as many as 30% of infections, although the role of asymptomatic infection in norovirus transmission is not well understood.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Probable: Norovirus can be established as the probable cause of an outbreak if:</p> <ul style="list-style-type: none"> ▪ The mean (or median) illness duration is 12 to 60 hours, and ▪ The mean (or median) incubation period is 24 to 48 hours, and ▪ More than 50% of people have vomiting, and ▪ No bacterial agent is found 	<ul style="list-style-type: none"> ▪ Polymerase chain reaction (PCR) can be used to test stool and emesis samples, as well as environmental swabs in special studies. Identification of norovirus can best be 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. ▪ Detection of norovirus by direct and immune electron microscopy of fecal specimens ▪ Fourfold increase of norovirus antibodies in acute- and convalescent-phase blood samples <p>Note: The etiology of GI outbreaks should be confirmed by submitting specimens to the DSHS Laboratory. Sequencing of norovirus strains found in clinical and environmental samples has greatly helped in conducting epidemiologic investigations.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Novel coronavirus causing severe acute respiratory disease 10575</p>	<p>Severe acute respiratory syndrome (SARS) is a viral respiratory illness caused by a novel coronavirus. SARS was first identified in 2003 with the SARS-associated coronavirus (SARS-CoV). SARS-CoV has not been detected since the 2003 outbreak ended. However, in 2012 a new coronavirus causing an acute severe respiratory disease was detected in countries in or near the Arabian Peninsula (Middle East Respiratory Syndrome coronavirus: MERS-CoV). Symptoms of a novel coronavirus causing an acute respiratory syndrome may include fever ($\geq 100.4^{\circ}\text{F}$) and cough in addition to pneumonia or acute respiratory distress syndrome (ARDS).</p> <p>Clinical criteria for the specific novel coronavirus will be determined by the Centers for Disease Control and Prevention (CDC). Case definitions for confirmed, probable and suspect cases may be redefined based on the specific novel coronavirus. Additionally, CDC may require that patients undergo testing for alternate causes of infection including all clinically indicated tests for community acquired pneumonia, before being considered a probable or suspect case.</p> <p>Confirmed: A person who has laboratory confirmation of infection with a novel coronavirus</p> <p>Probable: A person who meets the criteria for a suspect case with clinical or radiological evidence of pneumonia or ARDS AND is a close contact of a laboratory confirmed case</p> <p>Suspect: A person who meets the clinical criteria, AND 1) has recent travel history to any country where a novel coronavirus has been recently identified in people, OR 2) has had close contact with a symptomatic person who recently traveled to any country where a novel coronavirus has been recently identified in people, OR 3) is a member of a cluster of patients with severe acute respiratory illness (e.g., fever and pneumonia requiring hospitalization) of unknown etiology in which a novel coronavirus is being evaluated, in consultation with state and local health departments</p>	<ul style="list-style-type: none"> ▪ Identification of a novel coronavirus that is different from currently circulating human coronaviruses as confirmed by CDC’s laboratory, by public health laboratories using CDC-approved protocols for a specific novel strain, or by labs using an FDA-approved test for a specific novel strain ▪ Initial confirmation that a specific coronavirus represents a novel virus will be determined by the CDC ▪ Other laboratory confirmation criteria may be defined by CDC for the specific novel coronavirus

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Pertussis 10190</p>	<p>A cough illness lasting at least 14 days AND at least one of the following additional symptoms and without other apparent cause (as reported by a health professional):</p> <ul style="list-style-type: none"> ▪ Paroxysmal coughing, OR ▪ Inspiratory "whoop," OR ▪ Post-tussive vomiting, OR ▪ If under 1 year old, apnea with or without cyanosis. <p>Confirmed: Must meet one of the following criteria:</p> <ul style="list-style-type: none"> ▪ A person with an acute cough illness of any duration who is culture positive, OR ▪ A person who meets the clinical case definition and is PCR positive, OR ▪ A person who meets the clinical case definition and is epidemiologically linked to a laboratory-confirmed case. (This does not include linkage to a patient with a positive laboratory result that does not meet the clinical criteria, i.e., classified as Not a Case.) <p>Probable: A patient must meet one of the following criteria (in the absence of a more likely diagnosis):</p> <ul style="list-style-type: none"> ▪ A person who meets the clinical case definition but is not laboratory confirmed (not tested, tests are negative or tested by serology or DFA), and is not epidemiologically linked to a laboratory-confirmed case. ▪ Is an infant with an acute cough illness of any duration with at least one of the additional symptoms from the clinical criteria AND is either <ul style="list-style-type: none"> ▪ PCR positive, OR ▪ Epidemiologically linked to a laboratory-confirmed case. <p>Note: An illness meeting the clinical case definition should be classified as "probable" rather than "confirmed" if it occurs in a patient who has contact with an infant aged <1 year who is PCR positive for pertussis and has ≥1 sign or symptom and cough duration <14 days (classified as "probable" case).</p>	<ul style="list-style-type: none"> ▪ Isolation (culture) of <i>Bordetella pertussis</i> from a clinical specimen, OR ▪ Positive polymerase chain reaction (PCR) assay for <i>Bordetella pertussis</i>. <p>Note: Because <i>B. pertussis</i> can be difficult to culture, a negative culture result does not rule out pertussis or equivocal (aka indeterminate or borderline). Negative PCR results do not require investigation unless reported as a suspected case by a healthcare provider. Direct fluorescent antibody (DFA) staining of a patient's specimen and serological laboratory results (pertussis IgA, IgG or IgM) are NOT considered confirmatory for pertussis, but should be investigated as soon as possible.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Plague 10440</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"> ▪ Regional lymphadenitis (bubonic plague), OR ▪ Septicemia without an evident bubo (septicemic plague), OR ▪ Plague pneumonia, resulting from hematogenous spread in bubonic or septicemic cases (secondary pneumonic plague) or inhalation of infectious droplets (primary pneumonic plague), OR ▪ Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague) <p>Confirmed: A clinically compatible case with confirmatory laboratory result</p> <p>Probable: A clinically compatible case with a presumptive laboratory result</p> <ul style="list-style-type: none"> ▪ 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 ▪ Detection of F1 antigen in a clinical specimen by fluorescent assay <p>Suspect: A clinically compatible case without presumptive or confirmatory laboratory results</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Yersinia pestis</i> from a clinical specimen, OR ▪ Fourfold or greater change in serum antibody titer to <i>Y. pestis</i> F1 antigen <p>For <i>Yersinia</i> isolates, see Yersiniosis</p> <p>Note: As required by TAC, all <i>Yersinia pestis</i> isolates must be submitted to the DSHS laboratory.</p>
<p>Poliomyelitis, paralytic 10410</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>Confirmed*: 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>Probable*: 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"> ▪ Isolation of poliovirus type 1, 2, or 3 from a clinical specimen (stool or CSF)

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Poliovirusinfection, nonparalytic 10405</p>	<p>Most poliovirus infections are asymptomatic or cause mild febrile disease.</p> <p>Confirmed: Laboratory confirmed poliovirus infection in a person without symptoms of paralytic poliomyelitis.</p>	<ul style="list-style-type: none"> ▪ Poliovirus isolate identified in an appropriate clinical specimen, with confirmatory typing and sequencing performed by the CDC Poliovirus Laboratory
<p>Powassan virus</p>	<p>See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive</p>	<p>See Lab Confirmation Tests for Arbovirus, Neuroinvasive and Non-neuroinvasive.</p>
<p>Primary amebic meningoencephalitis (PAM)</p>	<p>See Amebic meningoencephalitis (PAM)</p>	
<p>Q Fever, acute 10257</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 the source can be unknown (especially for chronic infection). Exposure can be associated with goats, sheep, or other livestock, but direct contact with animals is not required, and variable incubation periods can be dose dependent. Acute infection is characterized by acute onset of fever accompanied by rigors, myalgia, malaise, and severe retrobulbar headache. Symptoms can include fatigue, night sweats, dyspnea, confusion, nausea, diarrhea, abdominal pain, vomiting, non-productive cough, or chest pain. Severe disease can include acute hepatitis, atypical pneumonia, and meningoencephalitis. Pregnant women are at risk for fetal death and abortion. Clinical laboratory findings can include elevated liver enzyme levels, leukocytosis, and thrombocytopenia. Asymptomatic infections can also occur.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Probable: A clinically compatible case with a single supportive IgG-specific antibody titer to <i>C. burnetii</i> Phase II antigen of $\geq 1:128$ 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"> ▪ 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 ▪ Detection of <i>C. burnetii</i> DNA in a clinical specimen by polymerase chain reaction (PCR) assay, OR ▪ Demonstration of <i>C. burnetii</i> antigen in a clinical specimen by immunohistochemical (IHC) methods, OR ▪ Isolation of <i>C. burnetii</i> from a clinical specimen in cell culture

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Q Fever, chronic 10258</p>	<p>Chronic Q fever is characterized by a <i>Coxiella burnetii</i> infection that persists for more than 6 months. Potentially fatal endocarditis can 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>Confirmed: A clinically compatible (meets clinical evidence criteria) case of chronic illness that is laboratory confirmed</p> <p>Probable: A clinically compatible case of chronic illness with an antibody titer to <i>C. burnetii</i> Phase I IgG antigen that is $\geq 1:128$ and $< 1:800$ by IFA</p>	<ul style="list-style-type: none"> ▪ Serological evidence of IgG antibody to <i>C. burnetii</i> Phase I antigen of $\geq 1:800$ by IFA (while Phase II IgG titer will be elevated, Phase I titer is higher than Phase II), OR ▪ Detection of <i>C. burnetii</i> DNA in a clinical specimen by polymerase chain reaction (PCR) assay, OR ▪ Demonstration of <i>C. burnetii</i> antigen in a clinical specimen by immunohistochemical (IHC) methods, OR ▪ Isolation of <i>C. burnetii</i> from a clinical specimen in cell culture
<p>Rabies, animal 10340</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 can 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 can 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>Confirmed: A case that is laboratory confirmed</p>	<ul style="list-style-type: none"> ▪ A positive direct fluorescent rabies antibody test (preferably performed on central nervous system tissue) ▪ Isolation of rabies virus (in cell culture or in a laboratory animal)

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Rabies, human 10460</p>	<p>Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days after the first symptom.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed by testing at a state or federal public health laboratory</p> <p>Note: Laboratory confirmation by all of the methods listed under “Lab Confirmation Tests” is strongly recommended.</p>	<ul style="list-style-type: none"> ▪ Detection of Lyssavirus antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck) by direct fluorescent antibody test (IFA), OR ▪ Isolation (in cell culture or in a laboratory animal) of Lyssavirus from saliva, CSF, or central nervous system tissue, OR ▪ Identification of Lyssavirus specific antibody (i.e., by IFA or complete rabies virus neutralization at 1:5 dilution) in the CSF, OR ▪ Identification of Lyssavirus specific antibody (i.e., by IFA or complete rabies virus neutralization at 1:5 dilution) in the serum of an unvaccinated person, OR ▪ Detection of Lyssavirus viral RNA using reverse transcriptase-polymerase chain reaction (RT-PCR) in saliva, CSF, or tissue
<p>Relapsing fever 10845</p>	<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>Confirmed: A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> ▪ Demonstration of the infectious agent (<i>Borrelia</i> spp) in dark-field preparations of fresh blood or stained thick or thin blood films, OR ▪ Isolation of <i>Borrelia</i> spp by: <ul style="list-style-type: none"> ▪ Intraperitoneal inoculation of laboratory rats or mice with blood taken during the febrile period, OR ▪ Blood culture in special media

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Rubella 10200</p>	<p>An illness that has all the following characteristics: Acute onset of generalized maculopapular rash; temperature $\geq 99^{\circ}\text{F}$ (37.2°C), if measured; and arthralgia/arthritis, lymphadenopathy, or conjunctivitis.</p> <p>Confirmed: A case that is clinically compatible and is laboratory confirmed or epidemiologically linked to a laboratory-confirmed case</p> <p>Note: Serum rubella IgM test results that are false positives have been reported in persons with other viral infections (e.g., acute infection with Epstein-Barr virus [infectious mononucleosis], recent cytomegalovirus infection, and parvovirus infection) or in the presence of rheumatoid factor. Patients who have laboratory evidence of recent measles infection are excluded.</p>	<ul style="list-style-type: none"> ▪ Isolation of rubella virus, OR ▪ Significant rise between acute- and convalescent-phase titers in serum rubella immunoglobulin G (IgG) antibody level* by any standard serologic assay, OR ▪ Positive serologic test for rubella-specific immunoglobulin M (IgM) antibody* not otherwise ruled out by more specific testing in a public health laboratory, OR ▪ Detection of rubella-virus-specific nucleic acid by PCR <p>*Not explained by MMR vaccination during the previous 6-45 days.</p>
<p>Rubella, congenital syndrome 10370</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> <ol style="list-style-type: none"> a) Cataracts/congenital glaucoma, congenital heart disease (most commonly patent ductus arteriosus or peripheral pulmonary artery stenosis), hearing loss, or pigmentary retinopathy b) Purpura, hepatosplenomegaly, jaundice, microcephaly, developmental delay, meingoencephalitis, or radiolucent bone disease <p>Confirmed: A clinically consistent case that is laboratory confirmed</p> <p>Probable: A case that is not laboratory confirmed; 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"> ▪ Isolation of rubella virus, OR ▪ Demonstration of rubella-specific immunoglobulin M (IgM) antibody, OR ▪ Infant rubella antibody level that persists at a higher level and for a longer period than expected from passive transfer of maternal antibody (i.e., rubella titer that does not drop at the expected rate of a twofold dilution per month), OR ▪ Detection of rubella-virus-specific nucleic acid by PCR
<p>Saint Louis encephalitis virus (SLE)</p>	<p>See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive</p>	<p>See Lab Confirmation Tests for Arbovirus, Neuroinvasive and Non-neuroinvasive</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Salmonellosis 11000</p>	<p>An illness of variable severity commonly manifested by diarrhea, fever, abdominal pain, nausea, and vomiting. Asymptomatic infections can occur, and the organism can cause extraintestinal infections.</p> <p>Confirmed: A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case, i.e., a close contact of a confirmed case or member of a risk group as defined by public health authorities during an outbreak</p> <p>Suspect: A case with <i>Salmonella sp.</i> detected, in a clinical specimen, by use of culture independent laboratory methods (non-culture based)</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Salmonella</i> (except <i>S. Typhi</i>)* from a clinical specimen <p>Note: *S. Typhi is reportable as Typhoid Fever</p>
<p>Shiga toxin-producing <i>Escherichia coli</i> (STEC) 11563</p>	<p>An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Illness can be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP); asymptomatic infections also can occur and the organism can cause extraintestinal infections.</p> <p>Confirmed: A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported</p> <p>Probable:</p> <ul style="list-style-type: none"> ▪ A case with isolation of <i>E. coli</i> O157 from a clinical specimen, without confirmation of H antigen or Shiga toxin-production, OR ▪ A clinically compatible case that is epidemiologically linked to a confirmed or probable case, OR ▪ Identification of an elevated antibody titer to a known Shiga toxin-producing <i>E. coli</i> serotype from a clinically compatible case, OR ▪ Identification of Shiga toxin in a specimen from a clinically compatible case without the isolation of the Shiga toxin-producing <i>E. coli</i> <p>Note: Cases meeting confirmed or probable criteria for both STEC and HUS should be reported under each condition.</p>	<ul style="list-style-type: none"> ▪ Isolation of Shiga toxin-producing <i>Escherichia coli</i> from a clinical specimen ▪ <i>Escherichia coli</i> O157:H7 isolates are assumed to be Shiga toxin-producing. Therefore, isolation alone qualifies a case as “confirmed.” ▪ <i>Escherichia coli</i> non-O157:H7 isolates must also have Shiga toxin-production verified in order to qualify the case status as “confirmed.” Shiga toxin can be demonstrated by EIA or PCR testing. ▪ EIA and/or PCR positive results for Shiga toxin-production, in the absence of an isolate, can only qualify a case as “probable.” <p>Note: As required by TAC, all <i>E.coli</i> O157:H7, isolates or specimens from cases where Shiga-toxin activity is demonstrated must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Shigellosis 11010</p>	<p>An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections can occur.</p> <p>Confirmed: A case that meets the laboratory criteria for diagnosis. When available, O antigen serotype characterization should be reported</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case, i.e., a close contact of a confirmed case or member of a risk group as defined by public health authorities during an outbreak</p> <p>Suspect: A case with <i>Shigella</i> detected, in a clinical specimen, by use of culture independent laboratory methods (non-culture based)</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Shigella</i> from a clinical specimen

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Smallpox 11800</p>	<p>An illness with acute onset of fever $\geq 101^{\circ}\text{F}$ ($\geq 38.3^{\circ}\text{C}$) followed by a rash characterized by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause.</p> <p>Confirmed: A case of smallpox that is laboratory confirmed, or a case that meets the clinical case definition and is epidemiologically linked to a laboratory confirmed case</p> <p>Probable: A case that meets the clinical case definition without laboratory confirmation or epidemiological link to a confirmed case, OR a case with an atypical presentation of smallpox (e.g., hemorrhagic type, flat type, and variola sine eruptione) that has an epidemiological link to a confirmed case of smallpox</p> <p>For full descriptions of atypical smallpox presentations see Guide A: Smallpox Surveillance and Case Reporting; Contact Identification, Tracing, Vaccination, and Surveillance; and Epidemiologic Investigation.</p> <p>Suspect: A case with a generalized, acute vesicular or pustular rash illness with fever preceding development of rash by 1-4 days</p> <p>Exclusion Criteria: A case can 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> <p>Note: The smallpox case definition above is to be used only during post-event surveillance. For pre-event surveillance purposes, where the likelihood of smallpox occurring is considered to be extremely low, the suggested approach to surveillance relies on a highly specific clinical case definition, which is focused on identifying a classic case (ordinary type) of smallpox. In the absence of known smallpox disease, the predictive value of a positive smallpox diagnostic test is extremely low, close to zero; therefore, testing to rule out smallpox should be limited to cases that fit the clinical case definition in order to lower the risk of obtaining a false positive test result.</p> <p>The case definition described in Guide A of the Smallpox Response Plan and Guidelines (Version 3) on the CDC bioterrorism preparedness website (URL: http://www.bt.cdc.gov/agent/smallpox/response-plan/index.asp) includes different criteria for a suspect case than the smallpox case definition the Council of State and Territorial Epidemiologists approved for use in the National Notifiable Diseases Surveillance System (NNDSS). The smallpox case definition on the CDC bioterrorism web site is more sensitive and less specific than the case definition for the NNDSS, in that a "Suspect" case is defined as: "a case with febrile rash illness with fever preceding the development of rash by 1-4 days." http://www.bt.cdc.gov/agent/smallpox/diagnosis/casedefinition.asp</p>	<ul style="list-style-type: none"> ▪ Polymerase chain reaction (PCR) identification of variola DNA in a clinical specimen, OR ▪ Isolation of smallpox (variola) virus from a clinical specimen (Level D laboratory only; confirmed by variola PCR) <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	Laboratory Confirmation Tests
<p>Spotted fever rickettsiosis 10250</p>	<p>Spotted fever rickettsioses are a group of tickborne infections caused by some members of the genus <i>Rickettsia</i>. 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 and older adults. Illness is characterized by acute onset of fever, and can 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 can be fatal in as many as 20% of untreated cases, and severe fulminant disease can occur. In addition to RMSF, human illness associated with other spotted fever group <i>Rickettsia</i> species, including infection with <i>Rickettsia parkeri</i>, has also been reported. In these patients, clinical presentation appears similar to, but can be milder than, RMSF; the presence of an eschar at the site of tick attachment has been reported for some other spotted fever rickettsioses.</p> <p><i>Clinical evidence:</i> Any reported acute onset of fever and one or more of the following: rash, eschar, headache, myalgia, anemia, thrombocytopenia, or any hepatic transaminase elevation.</p> <p>Confirmed: Clinically compatible case (meets clinical evidence criteria) that is laboratory confirmed</p> <p>Probable: Clinically compatible case (meets clinical evidence criteria) with serological evidence of elevated IgG or IgM antibody reactive with <i>R. rickettsii</i> or other spotted fever group antigen* by IFA, enzyme-linked immunosorbent assay (ELISA), dot-ELISA, or latex agglutination (LA). DSHS uses IFA IgG testing cutoff of >1:64 for routine diagnostic testing.</p> <p>See Rickettsia Classification</p>	<ul style="list-style-type: none"> ▪ Serological evidence of an elevation (fourfold change) in immunoglobulin G (IgG)-specific antibody titer reactive with <i>Rickettsia rickettsii</i> or other spotted fever group antigen* between paired serum specimens (one taken in the first week of illness and a second 2-4 weeks later), as measured by a standardized indirect immunofluorescence assay (IFA), OR ▪ Detection of <i>R. rickettsii</i> or other spotted fever group DNA* in a clinical specimen by the polymerase chain reaction (PCR assay), OR ▪ Demonstration of spotted fever group antigen* in a biopsy/autopsy specimen by IHC, OR ▪ Isolation of <i>R. rickettsii</i> or other spotted fever group rickettsia* from a clinical specimen in cell culture <p>* Note: Spotted fever group species included are: <i>R. aeschlimannii</i>, <i>R. africae</i>, <i>R. akari</i>, <i>R. australis</i>, <i>R. conorii</i>, <i>R. heilongjiangensis</i>, <i>R. helvetica</i>, <i>R. honei</i>, <i>R. japonica</i>, <i>R. marmionii</i>, <i>R. massiliae</i>, <i>R. parkeri</i>, <i>R. rickettsii</i>, <i>R. sibirica</i>, <i>R. sibirica mongolotimonae</i>, <i>R. slovaca</i>.</p> <p>Spotted fever group species excluded from this condition are: <i>R. felis</i> and <i>R. akari</i>.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p><i>Staphylococcus aureus</i>, coagulase-positive, methicillin-or oxacillin-resistant (MRSA) - [outbreaks only] 11661</p>	<p>Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA) is a type of <i>staphylococcus</i> that is resistant to certain antibiotics called beta-lactams. These antibiotics include methicillin and other more common antibiotics such as oxacillin, penicillin, and amoxicillin.</p> <p>MRSA in healthcare settings usually causes more severe and potentially life-threatening infections, such as bloodstream infections, surgical site infections, or pneumonia. The signs and symptoms will vary by the type and stage of the infection.</p> <p>In the community, most MRSA infections are skin infections that can appear as pustules or boils which often are red, swollen, painful, or have pus or other drainage. They often first look like spider bites or bumps that are red, swollen, and painful. 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). http://www.cdc.gov/mrsa/index.html</p> <p>Confirmed: A case that is laboratory confirmed</p> <p>Note: 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"> ▪ <i>Healthcare-associated, hospital-onset:</i> Cases with positive culture obtained >48 hours after hospital admission (can also have risk factors) ▪ <i>Healthcare-associated, community-onset:</i> Cases identified <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 ▪ <i>Community-associated:</i> Cases with community-onset and none of the above risk factors documented 	<ul style="list-style-type: none"> ▪ Isolation of <i>Staphylococcus aureus</i> that shows resistance to oxacillin or cefoxitin by a reliable susceptibility test methodology from a clinical specimen. Resistance can be determined by <ul style="list-style-type: none"> ▪ Cefoxitin or oxacillin disk screen test, <p>OR</p> <ul style="list-style-type: none"> ▪ Positive latex agglutination test for broad-spectrum beta-lactam (PBP2a), <p>OR</p> <ul style="list-style-type: none"> ▪ Growth on a plate containing 6 µg/ml of oxacillin in Mueller-Hinton agar supplemented with NaCl (4% w/v; 0.68 mol/L) <p>Note: 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. Methicillin is no longer commercially available in the United States. http://www.cdc.gov/mrsa/index.html</p>
<p><i>Staphylococcus aureus</i>, coagulase-positive, vancomycin resistant (VRSA)</p>	<p>See Vancomycin-resistant, coagulase-positive <i>Staphylococcus aureus</i> (VRSA)</p>	
<p><i>Staphylococcus aureus</i>, vancomycin intermediate (VISA)</p>	<p>See Vancomycin-intermediate, coagulase-positive <i>Staphylococcus aureus</i> (VISA)</p>	

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Streptococcal toxic-shock syndrome - (Outbreaks only) 11700	<p>Streptococcal toxic-shock syndrome (STSS) is a severe illness associated with invasive or noninvasive group A streptococcal (<i>Streptococcus pyogenes</i>) infection. STSS may occur with infection at any site but most often occurs in association with infection of a cutaneous lesion. Signs of toxicity and a rapidly progressive clinical course are characteristic, and the case fatality rate may exceed 50%.</p> <p>An illness with the following clinical manifestations:</p> <ol style="list-style-type: none"> 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, <p>AND</p> <ol style="list-style-type: none"> 2) Multi-organ involvement characterized by <u>two or more</u> of the following: <ul style="list-style-type: none"> ▪ <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 ▪ <i>Coagulopathy</i>: Platelets less than or equal to 100,000/mm³ (less than or equal to 100 x 10⁶/L) or disseminated intravascular coagulation, defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products ▪ <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 ▪ <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 ▪ A generalized erythematous macular rash that may desquamate ▪ Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene <p>Confirmed: A case that meets the clinical case definition and is laboratory confirmed</p> <p>Note: Enter all confirmed and probable STSS cases as confirmed group A <i>Streptococcus</i>, invasive disease, code 11710.</p> <p>See group A <i>Streptococcus</i>, invasive disease, code 11710.</p>	<ul style="list-style-type: none"> ▪ Isolation of group A <i>Streptococcus</i> (<i>S. pyogenes</i>) (GAS)

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p><i>Streptococcus</i>, invasive group A (GAS), (<i>Streptococcus pyogenes</i>) 11710</p>	<p>Invasive group A streptococcal infections may manifest as any of several clinical syndromes, including pneumonia, bacteremia in association with 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 non-focal bacteremia.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> ▪ Isolation of group A streptococci (<i>Streptococcus pyogenes</i>) by culture from a normally sterile site (e.g., blood, cerebrospinal fluid, or less commonly, pleural, or pericardial fluid) ▪ Isolation of group A streptococci (<i>Streptococcus pyogenes</i>) by culture from any site when Toxic Shock Syndrome or Necrotizing Fasciitis is present <p>See Normally Sterile Site and Streptococcus Classification</p>
<p><i>Streptococcus</i>, invasive group B (GBS), (<i>Streptococcus agalactiae</i>) 11715</p>	<p>Group B <i>Streptococcus</i> 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 <i>Streptococcus</i> is characterized by sepsis, respiratory distress, apnea, shock, pneumonia and meningitis. GBS is acquired in utero or during delivery and occurs more frequently in low birth weight infants.</p> <p>Group B <i>Streptococcus</i>, 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, group B <i>Streptococcus</i> can cause meningitis in adults.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> ▪ Isolation of group B streptococci (<i>Streptococcus agalactiae</i>) by culture from a normally sterile site (e.g., blood, cerebrospinal fluid, or less commonly, pleural or pericardial fluid) ▪ Isolation of group B streptococci (<i>Streptococcus agalactiae</i>) by culture from placenta or amniotic fluid <p>See Normally Sterile Site and Streptococcus Classification</p>
<p><i>Streptococcus pneumoniae</i>, invasive disease (IPD) 11723*</p> <p>*Note: Code 11717 was used prior to 2010 and for 2010 there are cases under both codes.</p>	<p><i>Streptococcus pneumoniae</i> causes many clinical syndromes, depending on the site of infection (e.g., pneumonia, bacteremia, or meningitis). Only invasive <i>Streptococcus pneumoniae</i> is reportable.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>S. pneumoniae</i> from a normally sterile site (e.g., blood, cerebrospinal fluid, or less commonly, pleural or pericardial fluid) <p>See Normally Sterile Site and Streptococcus Classification</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p><i>Taenia solium</i> and undifferentiated <i>Taenia</i> infection 80680</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 can 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> can cause fatal cysticercosis.</p> <p>Confirmed: Laboratory identification of the presence of <i>T. solium</i> proglottids, eggs, or antigens in a clinical specimen</p> <p>Probable: Laboratory identification of the presence of undifferentiated <i>Taenia</i> spp. tapeworm proglottids or eggs in a clinical specimen</p> <p>See Cysticercosis</p>	<ul style="list-style-type: none"> ▪ 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. <p>Note: 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>Tetanus 10210</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>Probable: A clinically compatible case, as reported by a health-care professional</p>	<p>Not applicable</p>
<p>Trichinellosis (Trichinosis) 10270</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>Confirmed: A clinically compatible case that is laboratory confirmed in the patient</p> <p>Probable: A clinically compatible illness in a person who shared an epidemiologically implicated meal or ate an epidemiologically implicated meat product; OR A clinically compatible illness in a person who consumed a meat product in which the parasite was demonstrated</p> <p>Suspect: Instances where there is no clinically compatible illness in a person who shared an implicated meal or ate an implicated meat product, has no known prior history of <i>Trichinella</i> infection, and has a positive serologic test for trichinellosis</p> <p>Note: Epidemiologically implicated meals or meat products are defined as a meal/meat product that was consumed by a person who subsequently developed a clinically compatible illness that was laboratory confirmed. Subsequent cases of trichinellosis experienced by one individual should only be counted if there is a clinically-compatible illness AND a compatible exposure.</p>	<ul style="list-style-type: none"> ▪ Demonstration of <i>Trichinella</i> larvae in tissue obtained by muscle biopsy, OR ▪ Positive serologic test for <i>Trichinella</i>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Tuberculosis 10220</p>	<p>A chronic bacterial infection caused by <i>Mycobacterium tuberculosis</i>, usually characterized pathologically by the formation of granulomas. The most common site of infection is the lung, but other organs can be involved.</p> <p>Clinical Case Criteria: A case that meets ALL of the following criteria:</p> <ul style="list-style-type: none"> ▪ A positive tuberculin skin test result or positive interferon gamma release assay for <i>M.tuberculosis</i>, AND ▪ Other signs and symptoms compatible with tuberculosis (TB) (e.g., abnormal chest radiograph, abnormal chest computerized tomography scan or other chest imaging study, or clinical evidence of current disease), AND ▪ Treatment with two or more anti-TB medications, AND ▪ A completed diagnostic evaluation <p>Provider Diagnosis Criteria: A case that belongs to a high population or medical risk group and meets at least one of the following criteria:</p> <ul style="list-style-type: none"> ▪ A negative tuberculin skin test result and considerable improvement on a abnormal chest radiograph after started on at least two anti-TB medications, OR ▪ Considerable clinical improvement based on symptoms from onset after started on at least two anti-TB medications, OR ▪ Child that has had recent contact to an active case, OR ▪ Active TB disease based on autopsy, OR ▪ Active TB disease based on consult with TB Expert <p>Confirmed: A case that meets the clinical case criteria, or is laboratory confirmed, or that meets the provider diagnosis criteria</p> <p>Multidrug-resistant TB (MDR): TB that is resistant to at least two of the best anti-TB drugs, isoniazid and rifampin. These drugs are considered first-line drugs and are used to treat all persons with TB disease.</p> <p>Extensively drug resistant TB (XDR): TB that is resistant to isoniazid and rifampin, plus resistant to any fluoroquinolone and at least one of three injectable second-line drugs (i.e., amikacin, kanamycin, or capreomycin).</p> <p>Note: For cases to be counted for annual incidence in Texas, they must be verified by an authorized TB surveillance designee as meeting both the confirmed case definition and Texas residence status.</p> <p>Although “Provider Diagnosis” is not a component of the TB case definition published by CDC for public health surveillance, CDC’s national morbidity reports include all TB cases that are considered “verified” without a requirement that cases solely meet the published case definition.</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>M. tuberculosis</i> complex from a clinical specimen,* OR ▪ Demonstration of <i>M. tuberculosis</i> complex from a clinical specimen by nucleic acid amplification test[†], OR ▪ Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained or is falsely negative or contaminated <p>* Use of rapid identification techniques for <i>M. tuberculosis</i> (e.g., DNA probes and mycolic acid high-pressure liquid chromatography performed on a culture from a clinical specimen) is acceptable under this criterion</p> <p>[†] Nucleic acid amplification (NAA) tests must be accompanied by culture for <i>Mycobacteria</i> species for clinical purposes. A culture isolate of <i>M. tuberculosis</i> complex is required for complete drug susceptibility testing and also genotyping. However, for surveillance purposes, CDC will accept results obtained from NAA tests approved by the Food and Drug Administration (FDA) and used according to the approved product labeling on the package insert, or a test produced and validated in accordance with applicable FDA and Clinical Laboratory Improvement Amendments (CLIA) regulations.</p> <p>Note: As required by TAC, all <i>Mycobacterium tuberculosis</i> isolates must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Tularemia 10230</p>	<p>The signs and symptoms of tularemia vary depending on how the bacteria enter the body. Illness ranges from mild to life-threatening. All forms are accompanied by fever, which can be as high as 104 °F. 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"> ▪ Ulceroglandular: cutaneous ulcer with regional lymphadenopathy ▪ Glandular: regional lymphadenopathy with no ulcer ▪ Oculoglandular: conjunctivitis with preauricular lymphadenopathy ▪ Oropharyngeal: stomatitis or pharyngitis or tonsillitis and cervical lymphadenopathy ▪ Intestinal: intestinal pain, vomiting, and diarrhea ▪ Pneumonic: primary pleuropulmonary disease ▪ Typhoidal: febrile illness without early localizing signs and symptoms <p>Confirmed: A clinically compatible case with confirmatory laboratory results</p> <p>Probable: A clinically compatible case with laboratory results indicative of presumptive infection:</p> <ul style="list-style-type: none"> ▪ 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 ▪ Detection of <i>F. tularensis</i> in a clinical specimen by fluorescent assay 	<ul style="list-style-type: none"> ▪ Isolation of <i>F. tularensis</i> in a clinical specimen, <p>OR</p> <ul style="list-style-type: none"> ▪ Fourfold or greater change in serum antibody titer to <i>F. tularensis</i> antigen <p>Note: As required by TAC, all <i>Francisella tularensis</i> isolates must be submitted to the DSHS laboratory.</p>
<p>Typhoid fever (caused by <i>Salmonella Typhi</i>) 10240</p>	<p>An illness caused by <i>Salmonella Typhi</i> 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> can be prolonged.</p> <p>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case in an outbreak</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>S. Typhi</i> from blood, stool, or other clinical specimen <p>See Salmonellosis for other <i>Salmonella</i> isolates</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Typhus fever (endemic fleaborne, Murine) 10260</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 5th or 6th 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>Confirmed: Clinically compatible case that is laboratory confirmed</p> <p>Probable: Clinically compatible case with supportive laboratory results:</p> <ul style="list-style-type: none"> ▪ IFA serologic titer of >1:64, OR ▪ A single CF of \geq16, OR ▪ Other supportive serology (single titer >1:64 by an LA, IHA, or MA test) <p>See Rickettsia Classification</p>	<ul style="list-style-type: none"> ▪ Fourfold or greater rise in antibody titer to <i>Rickettsia typhi</i> or <i>Rickettsia felis</i> 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 ▪ Positive PCR assay to <i>R. typhi</i> or <i>R. felis</i>, OR ▪ Demonstration of positive <i>R. typhi</i> or <i>R. felis</i> IF of skin lesion (biopsy) or organ tissue (autopsy), OR ▪ Isolation of <i>R. typhi</i> or <i>R. felis</i> from clinical specimen, OR ▪ In South Texas and Travis County where murine typhus is endemic, clinically compatible cases with single <i>R. typhi</i> or <i>R. felis</i> IgM or IgG titers of \geq 1:1024 are considered “confirmed” cases <p>Note: The IFA 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	Laboratory Confirmation Tests
<p>Typhus fever (epidemic louseborne, <i>R. prowazekii</i>) 10265</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 or 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. Toxemia is usually pronounced, and the disease terminates by rapid defervescence after about 2 weeks of fever.</p> <p>Confirmed: Clinically compatible case that is laboratory confirmed</p> <p>Probable: Clinically compatible case with supportive laboratory results:</p> <ul style="list-style-type: none"> ▪ IFA serologic titer of >1:64, OR ▪ A single CF of >16, OR ▪ Other supportive serology (single titer >1:64 by an LA, IHA, or MA test) <p>See Rickettsia Classification</p>	<ul style="list-style-type: none"> ▪ 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 ▪ Positive PCR assay to <i>R. prowazekii</i>, OR ▪ Demonstration of positive <i>R. prowazekii</i> IF of skin lesion (biopsy) or organ tissue (autopsy), OR ▪ Isolation of <i>R. prowazekii</i> from clinical specimen <p>Note: The IFA 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>Vancomycin-intermediate <i>Staphylococcus aureus</i> (VISA) 11663</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>Confirmed: A clinically compatible case of vancomycin-resistant <i>Staphylococcus aureus</i> that is laboratory-confirmed (MIC: 4-8 µg/ml)</p> <p>Note: The DSHS laboratory uses the ETest for confirmation of resistance. ETest generates MIC values from a continuous scale and can give results in-between conventional two-fold dilutions. According to manufacturer’s protocol, a value which falls between standard two-fold dilutions is rounded up to the next upper two-fold value before categorization so that a MIC of 3 µg/ml is reported as intermediate resistance.</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Staph aureus</i> from any body site, and ▪ Intermediate-level resistance (MIC: 4-8 µg/ml) of the <i>Staphylococcus aureus</i> isolate to vancomycin, detected and defined according to CLSI approved standards and recommendations <p>http://www.cdc.gov/ncidod/dhqp/ar_visavrsa_1abFAQ.html</p> <p>Note: As required by TAC, all <i>Staphylococcus aureus</i> isolates with a vancomycin MIC greater than 2 µg/mL must be submitted to the DSHS.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Vancomycin-resistant <i>Staphylococcus aureus</i>, coagulase-positive (VRSA) 11665</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>Confirmed: A clinically compatible case of vancomycin-resistant <i>Staphylococcus aureus</i> that is laboratory-confirmed (MIC: ≥ 16 $\mu\text{g/ml}$)</p> <p>Note: Texas has never identified a VRSA and as of January 2014, only 13 cases have been identified in the USA since 2002. Thus, identification of a VRSA is highly unusual and should be treated as a highly unusual event with immediate notification of public health, immediate submission of the isolate to the DSHS lab, and institution of appropriate control measures.</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Staphylococcus aureus</i> from any body site, AND ▪ High-level resistance of the <i>Staphylococcus aureus</i> isolate to vancomycin (MIC: ≥ 16 $\mu\text{g/ml}$), detected and defined according to CLSI approved standards and recommendations http://www.cdc.gov/HAI/settings/lab/visa_vrsa_lab_detection.html <p>Note: As required by TAC, all <i>Staphylococcus aureus</i> isolates with a vancomycin MIC greater than 2 $\mu\text{g/mL}$ must be submitted to the DSHS laboratory.</p>
<p>Varicella (chickenpox) 10030</p>	<p>An illness with acute onset of diffuse (generalized) maculopapulovesicular 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 can also be atypical in appearance (maculopapular with few or no vesicles).</p> <p>Confirmed: A case that meets the clinical case definition AND is either laboratory confirmed, OR epidemiologically linked to another probable or confirmed case</p> <p>Probable: A case that meets the clinical case definition without epidemiologic linkage or laboratory confirmation</p> <p>Note: Two or more patients that meet clinical case definition and are epidemiologically linked to one another meet the confirmed case definition.</p>	<ul style="list-style-type: none"> ▪ Isolation of varicella-zoster virus (VZV) from a clinical specimen, OR ▪ Varicella antigen detected by direct fluorescent antibody (DFA), OR ▪ Varicella-specific nucleic acid detected by polymerase chain reaction (PCR), OR ▪ Significant rise in serum varicella immunoglobulin G (IgG) antibody level by any standard serologic assay

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p><i>Vibrio parahaemolyticus</i> 11541</p>	<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>Confirmed: A case that meets the laboratory criteria for diagnosis</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Vibrio parahaemolyticus</i> from a clinical specimen <p>Note: As required by TAC all <i>Vibrio</i> species isolates must be submitted to the DSHS laboratory.</p>
<p><i>Vibrio vulnificus</i> 11542</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>Confirmed: A case that meets the laboratory criteria for diagnosis</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Vibrio vulnificus</i> from a clinical specimen <p>Note: As required by TAC all <i>Vibrio</i> species isolates must be submitted to the DSHS laboratory.</p>
<p>Vibriosis, other or unspecified 11540</p>	<p>An infection of variable severity characterized by diarrhea and vomiting, primary septicemia, or wound infections. Asymptomatic infections can occur, and the organism can cause extraintestinal infections</p> <p>Confirmed: A case that meets the laboratory criteria for diagnosis</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> ▪ Isolation of a species of the family <i>Vibrionaceae</i> (other than <i>Vibrio parahaemolyticus</i>, <i>Vibrio vulnificus</i>, and toxigenic <i>Vibrio cholerae</i>) from a clinical specimen. Genera in the family <i>Vibrionaceae</i> currently include <i>Aliivibrio</i>, <i>Allomonas</i>, <i>Catenococcus</i>, <i>Enterovibrio</i>, <i>Grimontia</i>, <i>Listonella</i>, <i>Photobacterium</i>, <i>Salinivibrio</i>, and <i>Vibrio</i>. <p>Note: As required by TAC all <i>Vibrio</i> species isolates must be submitted to the DSHS laboratory.</p>

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
Viral hemorrhagic fever (VHF) 11647	<p>An illness with acute onset of fever > 40° C (104°F), AND one or more of the following clinical findings: severe headache, muscle pain, erythematous maculopapular rash on the trunk with fine desquamation 3–4 days after rash onset, vomiting, diarrhea, abdominal pain, bleeding not related to injury, or thrombocytopenia, or for arenavirus, pharyngitis, retrosternal chest pain, or proteinuria</p> <p><i>Confirmed:</i> A clinically compatible illness that is laboratory confirmed</p> <p><i>Probable:</i> A clinically compatible illness epidemiologically-linked to a confirmed case</p> <p><i>Suspect:</i> A clinically compatible illness that meets one or more of the following exposures within 3 weeks before onset of symptoms:</p> <ul style="list-style-type: none"> ▪ Contact with blood or other body fluids of a patient with VHF, OR ▪ Residence in—or travel to—an VHF endemic area, OR ▪ Work in a laboratory that handles VHF specimens, OR ▪ Work in a laboratory that handles primates from endemic areas, OR ▪ Exposure to semen from a confirmed acute or convalescent case of VHF within the 10 weeks of onset of that person’s symptoms 	<ul style="list-style-type: none"> ▪ Detection of VHF* viral antigens in blood by enzyme-linked immunosorbent assay (ELISA) antigen detection, OR ▪ Isolation of VHF virus in cell culture for blood or tissues, OR ▪ Detection of VHF viral genes using reverse transcriptase with polymerase chain reaction amplification (RT-PCR) from blood or tissues, OR ▪ Detection of VHF viral antigens in tissues by IHC <p>*Viral hemorrhagic fever (VHF) agents include:</p> <ul style="list-style-type: none"> ▪ Ebola virus ▪ Marburg virus ▪ Crimean-Congo hemorrhagic fever viruses ▪ Lassa virus ▪ Lujo virus ▪ New world arenaviruses (Guanarito, Machupo, Junin, Sabia viruses)
West Nile neuroinvasive disease (WNND)	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis)	See Lab Confirmation Tests for Arbovirus, Neuroinvasive (Encephalitis/meningitis)
West Nile fever	See Case Definition/Case Classification for Arbovirus, Non-neuroinvasive	See Lab Confirmation Tests for Arbovirus, Non-neuroinvasive
Western equine encephalitis virus (WEE)	See Case Definition/Case Classification for Arbovirus, Neuroinvasive (Encephalitis/meningitis) and Non-neuroinvasive	See Lab Confirmation Tests for Arbovirus, Neuroinvasive and Non-neuroinvasive

Condition/Code	Case Definition/Case Classification	Laboratory Confirmation Tests
<p>Yellow fever 10660</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>Confirmed: A clinically compatible case that is laboratory confirmed</p> <p>Probable: A clinically compatible case with supportive serology:</p> <ul style="list-style-type: none"> ▪ Stable elevated antibody titer to yellow fever virus, e.g.: <ul style="list-style-type: none"> ▪ Greater than or equal to 32 by complement fixation, OR ▪ Greater than or equal to 256 by immunofluorescence assay, OR ▪ Greater than or equal to 320 by hemagglutination inhibition, OR ▪ Greater than or equal to 160 by neutralization, OR ▪ Positive serologic result by immunoglobulin M-capture enzyme immunoassay. <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"> ▪ Fourfold or greater rise in yellow fever antibody titer in a patient who has no history of recent yellow fever vaccination and cross-reactions to other flaviviruses have been excluded, OR ▪ Demonstration of yellow fever virus, antigen, or genome in tissue, blood, or other body fluid
<p>Yersiniosis 11565</p>	<p>An illness characterized by diarrhea (sometimes bloody), fever, and abdominal pain; an appendicitis-like syndrome and systemic infections can occur</p> <p>Confirmed: A case that meets the laboratory criteria for diagnosis</p> <p>Probable: A clinically compatible case that is epidemiologically linked to a confirmed case</p>	<ul style="list-style-type: none"> ▪ Isolation of <i>Yersinia</i> (except <i>Y. pestis</i>)* in a clinical specimen <p>As required by TAC all <i>Yersinia pestis</i> isolates must be submitted to the DSHS laboratory.</p> <p>For <i>Yersinia pestis</i> isolates, see Plague</p>
<p>Outbreaks, exotic diseases, and unusual expression of disease (Outbreak list)</p>	<p>In addition to specified reportable conditions, any outbreak, exotic disease, or unusual group expression of disease that may be of public health concern should be reported by the most expeditious means available.</p>	