TEXAS Health and Human Services | Texas Department of State Health Services

Epi Case Criteria Guide (ECCG) 2025

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2025 Epi Case Criteria Guide (ECCG)

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REVISIONS FROM THE 2024 EPI CASE CRITERIA GUIDE

Revisions of case criteria for Clinical Description and/or criteria (CD); Confirmed, Probable, Possible, or Suspect cases (CC, PC, PsC, SC); Laboratory Confirmation tests (LC); and Note(s) (N)

- Anaplasmosis (CD), (CC), (PC), (SC), (LC), (N)
  - Note: Changed from Anaplasmosis (*Anaplasma phagocytophilum* infection).
- Anthrax (CD), (SC)
- Ascariasis (LC), (N)
- Babesiosis (CD), (LC)
- Brucellosis (CD), (LC), (SC)
- Botulism, Wound (LC), (N)
- Chagas disease, acute (LC), (N)
- Chagas disease, chronic indeterminate (N)
- Chagas disease, chronic symptomatic (N)
- Candida auris (CD), (LC)
- CRE (CD), (LC)
- Cronobacter in infants (CD), (LC), (N)
- Dengue-like illness, Dengue, Severe Dengue (CD), (SC), (LC)
- Ebola (CD), (CC), (PC), (PsC), (SC)
- Ehrlichiosis (CD), (CC), (PC), (SC), (LC), (N)
  - Note: Ehrlichiosis (*Ehrlichia chaffeensis*) infection and Ehrlichiosis (*Ehrlichia ewingii* infection) merged.
- Hookworm (LC), (N)
- Influenza A, Novel/Variant (CD),(CC, PC, PsC, SC), (LC), (N)
- Monkeypox (Mpox) (CD), (CC), (PC), (PsC), (SC), (LC), (N)
- Multisystem Inflammatory Syndrome in Children (CD), (CC), (LC), (N)
- Mumps (CD), (CC), (LC)
- Non-Ebola Viral Hemorrhagic Fever (CD)
- Norovirus (CD), (PC), (LC)
- Coronavirus Disease 2019 (CD), (PC), (SC), (N)
- Prion diseases such as Creutzfeldt-Jakob disease (CJD) (N)
- Rabies, animal (LC)
- Rubella (CC, PC, SC, (LC)
- Shigellosis (LC), (N)
- Smallpox (CD), (CC), (PC), (PsC), (SC), (LC), (N)
- Trichuriasis (LC), (N)
- Tularemia (N)
- Vancomycin Intermediate *Staphylococcus aureus* (CD), (LC)
- Vancomycin Intermediate *Staphylococcus aureus* (CD), (LC)
- Vibriosis (non-cholera Vibrio species infections)
  - Note: Vibriosis (non-cholera Vibrio species infections) is a merge of V. parahaemolyticus, V. vulnificus, and V. other.
- Yellow fever
- Zika disease, non-congenital (LC)
- Zika disease, congenital (LC)

Added Conditions

- Oropouche

Removed Conditions

- Ehrlichiosis (*Ehrlichia ewingii* infection)
- Typhus fever (epidemic, louse-borne)
- Ehrlichiosis/anaplasmosis, undetermined
- Zika infection, congenital
- Zika infection, non-congenital

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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Term Definitions

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.

Culture-independent diagnostic testing: The detection of antigen or nucleic acid sequences of the pathogen

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
- These 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)

Placentas and amniotic fluid from an intact amnion are not sterile sites, but Group B streptococci or *Listeria* isolation from these sites may qualify as invasive disease. Consult the Sterile Site and Invasive Disease Determination flowchart in Appendix A of the EAIDB Investigation Guidelines: https://www.dshs.texas.gov/IDCU/investigation/Investigation-Guidance/

Normally sterile sites do not include:

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

Abbreviations

Laboratory Test Abbreviations

CF – Complement fixation
COVID-19-Coronavirus Disease 2019
CIDT – Culture-independent diagnostic testing
CLSI – Clinical and Laboratory Standards Institute
CSF – Cerebrospinal fluid
DFA – Direct fluorescent antibody
DNA – Deoxyribonucleic acid
EEG – Electroencephalogram
EIA – Enzyme immunoassay
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
RT-PCR – Reverse transcription polymerase chain reaction
RT-QuIC – Real-time quaking-induced conversion
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
HBeAb or anti-HBe – hepatitis B e antibody
HBeAg – hepatitis B e antigen
HBsAb or anti-HBs – hepatitis B surface antibody
HBsAg – hepatitis B surface antigen
HBV DNA – hepatitis B nucleic acid
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
EAIDU – Emerging and Acute Infectious Disease Unit
FDA – Food and Drug Administration
HAI- Healthcare Associated Infections
ILI – Influenza-Like Illness
NDM-1 – New Delhi Metallo-beta-lactamase-1
NPDPSC – The National Prion Disease Pathology Surveillance Center
TAC – Texas Administrative Code
VHF – Viral hemorrhagic fever

NOTES

Arbovirus Classification

Arboviruses (arthropod-borne viruses) are a diverse group of pathogens mostly transmitted by mosquitoes but also other arthropods including ticks. Within the ECCG, there are five separate case definitions for arboviral diseases: Arbovirus, neuroinvasive and non-neuroinvasive; Dengue (includes Dengue-like Illness, Dengue, and Severe Dengue); Yellow fever; Zika disease, congenital; and Zika disease, non-congenital. Though co-infections of multiple arboviruses are possible, diagnostics are often complicated by antibody cross-reactivity between genetically related viruses. Please consider all relevant case definitions, reported epidemiological information (including travel history) and relevant related viruses when interpreting diagnostics. If lab evidence, clinical manifestations, and exposure history cannot distinguish between two arboviruses (e.g. dengue and Zika), the case should be reported as "Other arboviral diseases" or "Flavivirus disease" if the viruses are all flaviviruses. Below are genera that are closely related and commonly reported examples in Texas.

- **Flaviviruses**: West Nile, St. Louis encephalitis, Dengue, Yellow fever, Japanese encephalitis, Zika
- **Orthobunyaviruses**: Cache Valley, California serogroup (includes La Crosse, Keystone, Jamestown Canyon, California Encephalitis, Snowshoe hare, Trivittatus), Oropouche
- **Alphaviruses**: Chikungunya, Eastern equine encephalitis, Western equine encephalitis

***Rickettsia* Classification**

Rickettsial diseases can be difficult to distinguish between because of overlapping symptomatology and cross-reactivity in serology, which comprises the majority of diagnostic testing for these diseases. The *Rickettsia* are divided into two antigenic groups for surveillance purposes: spotted fever group and typhus group. The condition spotted fever rickettsiosis is defined as infection with spotted fever group *Rickettsia* spread by tick vectors. Flea-borne (murine) typhus, caused primarily by *R. typhi* and spread by fleas, and epidemic typhus, caused by *R. prowazekii* and transmitted by lice, belong to the typhus group. 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 CDC's Traveler's Health Yellow Book at https://wwwnc.cdc.gov/travel/yellowbook/2020/travel-related-infectious-diseases/rickettsial-including-spotted-fever-and-typhus-fever-rickettsioses-scrub-typhus-anaplasmosis-and-ehr

***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 viridians streptococci are Lancefield group non-typeable.

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

Streptococcus pneumoniae (pneumococcus) - Most strains of S. pneumoniae are alpha-hemolytic but can cause ß-hemolysis during anaerobic incubation. They are non-typeable by Lancefield group.

Acute Flaccid Myelitis
11120

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness with onset of acute flaccid limb weakness (low muscle tone, limp, hanging loosely, not spastic or contracted) of one or more limbs. ***Confirmed:*** A case that meets the clinical symptoms AND confirmatory laboratory/imaging evidence in the absence of a clear alternative diagnosis attributable to a nationally notifiable condition. • MRI showing spinal cord lesion with predominant gray matter involvement* and spanning one or more vertebral segments, AND • Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities. ***Probable:*** A case that meets the clinical symptoms AND presumptive laboratory/imaging evidence in the absence of a clear alternative diagnosis attributable to a nationally notifiable condition. ***Presumptive laboratory/imaging evidence:*** • MRI showing spinal cord lesion where gray matter involvement is present, but predominance cannot be determined, AND • Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities.	• A magnetic resonance image (MRI) showing spinal cord lesion with predominant gray matter* involvement and spanning one or more vertebral segments, • Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities. * Terms in the spinal cord MRI report such as "affecting mostly gray matter," "affecting the anterior horn or anterior horn cells," "affecting the central cord," "anterior myelitis," or "poliomyelitis" would all be consistent with this terminology.

Acute Flaccid Myelitis
11120

Case Definition/Case Classification	Laboratory Confirmation Tests
Suspect: A case that meets the clinical symptoms with supportive laboratory/imaging evidence AND available information is insufficient to classify case as probable or confirmed. ***Supportive laboratory/imaging evidence:*** • MRI showing spinal cord lesion in at least some gray matter and spanning one or more vertebral segments, **AND** • Excluding persons with gray matter lesions in the spinal cord resulting from physician diagnosed malignancy, vascular disease, or anatomic abnormalities. ***Other classification criteria:*** Autopsy findings that include histopathologic evidence of inflammation largely involving the anterior horn of the spinal cord spanning one or more vertebral segments.	

Amebic meningitis/encephalitis, other
10096

Case Definition/Case Classification	Laboratory Confirmation Tests
An infection presenting as meningoencephalitis or encephalitis. Granulomatous amebic encephalitis (GAE) can include general symptoms and signs of encephalitis such as early personality and behavioral changes, depressed mental status, fever,	Detection of *Acanthamoeba*, *Balamuthia*, or another non-*Naegleria* free-living ameba from a clinical specimen or culture via: • Detection of nucleic acid (e.g., PCR),

Amebic meningitis/encephalitis, other **10096**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
photophobia, seizures, nonspecific cranial nerve dysfunction, and visual loss. GAE neurologic infections are generally fatal within weeks or months; however, a few patients have survived. ***Confirmed:*** A clinically compatible case that is laboratory confirmed **Note:** *Acanthamoeba* species and *Balamuthia mandrillaris* can also cause disseminated disease (affecting multiple organ systems) or cutaneous disease. For *B. mandrillaris* disease, painless skin lesions appearing as plaques a few millimeters thick and one to several centimeters wide have been observed in some patients, especially patients outside the U.S., preceding the onset of neurologic symptoms by 1 month to approximately 2 years. Skin lesions and sinus disease may be seen in *Acanthamoeba* disease. Disseminated disease and cutaneous disease caused by free-living amebae are only voluntarily reportable in Texas unless they progress to meningitis or encephalitis. See also Amebic meningoencephalitis, primary (PAM)	**OR** • Detection of antigen (e.g., immunohistochemistry) Contact the DSHS epidemiologist for meningitis (amebic) at 800-252-8239 if suspected. DSHS can 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 https://www.cdc.gov/balamuthia/about/ **Note:** *Acanthamoeba* spp. and *B. mandrillaris* can cause clinically similar illnesses and might be difficult to differentiate using commonly available laboratory procedures. Definitive diagnosis by a reference laboratory might be required. A negative test on CSF does not rule out *Acanthamoeba* or *Balamuthia* infection because these organisms are not commonly present in the CSF.

Amebic meningoencephalitis, primary (PAM)
80750

Case Definition/Case Classification	Laboratory Confirmation Tests

An infection presenting as meningoencephalitis or encephalitis. The clinical presentation of PAM is like that of acute meningitis caused by other pathogens and symptoms include headache, nausea, vomiting, anorexia, fever, lethargy, and stiff neck. Disorientation, mental status changes, seizure activity, loss of consciousness, and ataxia may occur within hours of initial presentation. After the onset of symptoms, the disease progresses rapidly and usually results in death within 3 to 7 days.
 	
Confirmed: A clinically compatible case that is laboratory confirmed
 	
Probable: A clinically compatible case that meets at least one of the supportive laboratory criteria (listed below) and does not meet confirmatory lab criteria
 	
• Supportive laboratory evidence:
  ○ Visualization of motile amebae in a wet mount of CSF
  ○ Isolation of *N. fowleri* in culture from a clinical specimen
 	
See also Amebic meningitis/encephalitis, other
	Detection of *Naegleria fowleri* from a clinical specimen via:
	
	• Detection of nucleic acid (e.g., PCR),
	
	OR
	
	• Detection of antigen (e.g., immunohistochemistry)
	
	Notes:
	
	• When available, molecular characterization [e.g., genotype] should be reported.
	
	• Contact the DSHS epidemiologist for amebic meningitis at 800-252-8239 if suspected. DSHS can assist in coordinating specimen and/or electronic images submission to the CDC for verification.
	
	• Collection & shipping procedures can be found at:
	
	https://www.cdc.gov/naegleria/hcp/diagnosis-testing/?CDC_AAref_Val=https://www.cdc.gov/parasites/naegleria/diagnosis-hcp.html
	
	Naegleria fowleri might cause clinically similar illness to bacterial meningitis, particularly in its early stages. Definitive diagnosis by a reference laboratory is required. Unlike *Balamuthia mandrillaris* and *Acanthamoeba* spp., *N. fowleri* is commonly found in the CSF of patients with PAM.

Anaplasmosis
11090

Case Definition/Case Classification	Laboratory Confirmation Tests
Anaplasmosis is a tick-borne illness caused by the bacterium *Anaplasma phagocytophilum*, which is transmitted primarily by blacklegged ticks (*Ixodes* spp.). Anaplasmosis typically presents 5 to 14 days after a tick bite with a combination of nonspecific clinical symptoms, such as fever, fatigue, and headache. Illness is often accompanied by laboratory abnormalities including leukopenia, thrombocytopenia, and mildly elevated liver enzymes. Anaplasmosis may result in severe illness or even death in older or immunocompromised individuals or if treatment is delayed. Serologic testing is commonly used to diagnose anaplasmosis, but as with other closely related species, antibodies to *Anaplasma* and *Ehrlichia* can cross-react. **Clinical Criteria** • Objective clinical evidence: fever as reported by patient or healthcare provider, anemia, leukopenia, thrombocytopenia, any hepatic transaminase elevation, or elevated C-reactive protein. • Subjective clinical evidence: chills/sweats, headache, myalgia, or fatigue/malaise ***Confirmed:*** Meets confirmatory laboratory evidence AND at least one of the objective or subjective clinical evidence criteria.	• Serological evidence of a four-fold change[1] in IgG-specific antibody titer to *A. phagocytophilum* antigen by indirect immunofluorescence assay (IFA) in paired serum samples (one taken in the first two weeks after illness onset and a second taken two to ten weeks after acute specimen collection)[2], **OR** • Detection of *A. phagocytophilum* DNA in a clinical specimen via amplification of a specific target by polymerase chain reaction (PCR) assay, nucleic acid amplification tests (NAAT), or other molecular testing, **OR** • Demonstration of anaplasmal antigen in a biopsy/autopsy sample by IHC, **OR** • Isolation of *A. phagocytophilum* from a clinical specimen in cell culture with molecular confirmation (e.g., PCR or sequencing) [1] A four-fold change in titer is equivalent to a change of two dilutions (e.g., 1:64 to 1:256).

Anaplasmosis **11090**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Probable: Meets presumptive laboratory evidence with fever as reported by patient or healthcare provider AND at least one other objective or subjective clinical evidence criterion (excluding chills/sweats) OR meets presumptive laboratory evidence without a reported fever but with chills/sweats AND at least one objective clinical evidence criterion, OR two other subjective clinical evidence criteria. ***Presumptive Laboratory evide*nce:** Serological evidence of IgG antibody reactive with *A. phagocytophilum* antigen by IFA at a titer ≥1:128 in a sample taken within 60 days of illness onset, OR microscopic identification of intracytoplasmic morulae in leukocytes in a sample taken within 60 days of illness onset. ***Suspect:*** Meets confirmatory or presumptive laboratory evidence with no or insufficient clinical information to classify as a confirmed or probable case (e.g., a laboratory report only). **Notes:** A person previously reported as a probable or confirmed case-patient may be counted as a new case-patient when there is an episode of new clinically compatible illness with confirmatory laboratory evidence. Patients should not be classified as cases for both anaplasmosis and ehrlichiosis based on serologic evidence alone.	[2] A four-fold rise in titer should not be excluded as confirmatory laboratory criteria if the acute and convalescent specimens are collected within two weeks of one another.

Anthrax
10350

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness or post-mortem examination characterized by several distinct clinical forms often related to the route of exposure, including: cutaneous, ingestion (gastrointestinal and oropharyngeal), inhalation, injection, and welder's anthrax. ***Clinical criteria:*** In the absence of another more likely etiology: • At least one of the following specific signs and symptoms: Evidence of pleural effusion; evidence of mediastinal widening or hemorrhagic mediastinal lymphadenopathy on imaging; blood in the CSF; painless or pruritic papular or vesicular lesion or eschar, may be surrounded by edema or erythema; AND/OR pneumonia, **OR** • At least two of the following non-specific signs and symptoms: abdominal pain; abdominal swelling; abnormal lung sounds; altered mental status; ascites; cervical lymphadenopathy/swelling of the neck; coagulopathy; cough; diarrhea; difficulty swallowing; dyspnea; edema; fever; headache; hemoptysis; hypotension; lymphadenopathy; meningeal signs; nausea/vomiting; sore throat; AND/OR tachycardia, **OR** • A death of unknown cause AND organ involvement consistent with anthrax. *Epidemiologic linkage* is defined as one or more of the following*:*	• Culture and identification of *Bacillus anthracis* or *Bacillus spp.* expressing anthrax toxins from clinical specimens by the Laboratory Response Network, **OR** • Evidence of a four-fold rise in antibodies to protective antigen between acute and convalescent sera collected two to four weeks apart using quantitative anti-PA IgG ELISA testing in an unvaccinated person **OR** • Detection of Lethal Factor (LF) in clinical serum specimens by LF mass spectrometry **OR** • Detection of *B. anthracis* or anthrax toxin genes by the LRN-validated PCR and/or sequencing in clinical specimens collected from a normally sterile site or lesion of other affected tissue **Note:** As required by *TAC*, all *B. anthracis* isolates must be submitted to the DSHS Laboratory. *Bacillus* species expressing anthrax toxin suspect isolates from patients with severe disease should be forwarded for confirmation.

Anthrax **10350**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
• Exposure to environment, food, animal, materials, or objects that is suspected or confirmed to be contaminated with *B. anthracis*, **OR** • Exposure to the same environment, food, animal, materials, or objects as another person who has lab-confirmed anthrax, **OR** • Consumption of the same food as another person who has laboratory-confirmed anthrax. ***Vital records criteria:*** A person whose death certificate lists anthrax as a cause of death or a significant condition contributing to death. ***Confirmed:*** A case that meets clinical criteria AND has confirmatory laboratory test results; OR a case that meets vital records criteria AND has confirmatory laboratory test results. ***Probable:*** A case that meets clinical criteria OR vital records criteria AND has one of the following presumptive laboratory results: • Demonstration of *B. anthracis* antigens in tissues by immunohistochemical staining; **OR** • Gram stain demonstrating Gram-positive rods, square-ended, in pairs or short chains; **OR** • Positive result on an anthrax test with established performance in a CLIA-accredited laboratory.	

Anthrax 10350	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
OR • meets clinical criteria AND meets epidemiologic linkage relating it to anthrax. ***Suspect:*** A case that meets vital records criteria only.	

Arbovirus, neuroinvasive and non-neuroinvasive		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
Neuroinvasive diseases: 10058 Cache Valley virus 10054 California serogroup virus 10053 Eastern equine encephalitis virus 10078 Jamestown Canyon virus 10059 Japanese encephalitis virus 10081 La Crosse virus 10057 Powassan virus 10051 St. Louis encephalitis virus	For the purposes of surveillance and reporting, arboviral disease cases are often categorized into two primary groups based on their clinical presentation: neuroinvasive disease and non-neuroinvasive disease. Many arboviruses cause neuroinvasive disease such as aseptic meningitis, encephalitis, or acute flaccid paralysis (AFP). These illnesses are usually characterized by the acute onset of fever with stiff neck, altered mental status, seizures, limb weakness, CSF pleocytosis, and/or abnormal neuroimaging. Less common neurological manifestations, such as cranial nerve	**Neuroinvasive:** • 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

Arbovirus, neuroinvasive and non-neuroinvasive		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
10055 Venezuelan equine encephalitis virus 10056 West Nile virus 10052 Western equine encephalitis virus **Non-neuroinvasive diseases:** 10066 Cache Valley virus 10061 California serogroup virus 10062 Eastern equine encephalitis virus 10079 Jamestown Canyon virus 10068 Japanese encephalitis virus 10082 La Crosse virus 10063 Powassan virus 10064 St. Louis encephalitis virus 10067 Venezuelan equineencephalitis virus 10049 West Nile virus 10065 Western equine encephalitis virus	palsies, also occur. AFP is characterized by rapid-onset extremity, facial, and/or respiratory weakness and flaccid muscle tone in the affected area; AFP may result from anterior myelitis, peripheral neuritis or post-infectious peripheral demyelinating neuropathy (Guillain-Barré Syndrome). Meningitis is infection or inflammation of the tissues surrounding the brain; symptoms can include fever, headache, photophobia, and nuchal rigidity. Encephalitis is infection or inflammation of the brain tissue itself and may present with fever, altered mental status, seizures, and focal neurologic deficits; meningitis may also be present simultaneously, known as meningoencephalitis. Most arboviruses are capable of causing an acute systemic febrile illness (e.g., West Nile fever) that may include headache, myalgias, arthralgias, rash, and/or gastrointestinal symptoms. Some viruses also can cause more characteristic clinical manifestations, such as severe polyarthralgia or arthritis due to chikungunya virus or other alphaviruses. **Clinical evidence of neuroinvasive disease:**	later specimen, and negative neutralizing antibody results for potentially cross-reactive* arboviruses endemic to the region where exposure occurred, **OR** • Virus-specific IgM antibodies in CSF and a negative result for other IgM antibodies in CSF for potentially cross-reactive* arboviruses endemic to the region where exposure occurred. **Non-neuroinvasive:** • 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 and negative

Arbovirus, neuroinvasive and non-neuroinvasive		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
Other disease categories: 11718 California encephalitis virus disease 10073 Chikungunya virus disease 10093 Colorado tick fever virus disease 50237 Flavivirus disease, not otherwise specified 11712 Keystone virus disease 10072 Other arboviral diseases, not otherwise specified. 11734 Snowshoe hare virus disease 10074 Tick-borne Encephalitis viruses 11724 Trivittatus virus disease	• 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 **Clinical evidence of non-neuroinvasive disease:** • 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 ***Neuroinvasive:*** ***Confirmed*:** A clinically compatible case (meets neuroinvasive clinical evidence criteria) with laboratory confirmation ***Probable:*** A clinically compatible case (meets neuroinvasive clinical evidence criteria) with virus-specific IgM antibodies in CSF or serum but no other testing OR	neutralizing antibody results for potentially cross-reactive* arboviruses endemic to the region where exposure occurred. *Refer to Arbovirus Classification note in Notes section for more details.

Arbovirus, neuroinvasive and non-neuroinvasive		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
	with lower levels of neutralizing antibodies for potentially cross-reactive* arboviruses endemic to the region where exposure occurred. ***Non-neuroinvasive:*** *Confirmed*: A clinically compatible case (meets non-neuroinvasive clinical evidence criteria) with laboratory confirmation ***Probable:*** A clinically compatible case (meets non-neuroinvasive clinical evidence criteria) with virus-specific IgM antibodies in serum but no other testing OR with lower levels of neutralizing antibodies for potentially cross-reactive* arboviruses endemic to the region where exposure occurred	

Ascariasis
80770

Case Definition/Case Classification	Laboratory Confirmation Tests
A parasitic infection caused by the soil-transmitted helminths *Ascaris lumbricoides* and *Ascaris suum*. Most infections with *Ascaris* spp. are asymptomatic. Live worms, passed in stool or occasionally from the mouth, anus, or nose, are often the first recognized sign of infection. Larval migration may result in pulmonary manifestations such as wheezing, cough, fever, eosinophilia, and pulmonary infiltration in some patients. Light infections may result in minor abdominal discomfort, dyspepsia, and loss of appetite. Heavy infections may result in severe abdominal pain, fatigue, vomiting, or weight loss. In children, these symptoms can result in nutrient deficiencies resulting in growth retardation and/or cognitive impairment. Serious complications are rare but can be fatal and include intestinal obstruction by a bolus of worms, or obstruction of the bile duct, pancreatic duct or appendix by one or more adult worms. ***Confirmed:*** A case that is laboratory confirmed ***Probable*:** A clinically compatible case with evidence of infection such as: • An ultrasound showing *Ascaris* spp. worms in the pancreas or liver, **OR** • CT scans or MRI showing *Ascaris* spp. worms present in the ducts of the liver or pancreas, **OR** • Detection of *Ascaris* spp. DNA using a diagnostic molecular test (e.g., PCR, NAAT, genomic sequencing).	• Microscopic identification of *Ascaris* spp. (*A.lumbricoides* or *A. suum*) eggs in stool specimens, **OR** • Microscopic identification of ascarid larvae in sputum or gastric washings, **OR** • Examination of adult worms identified as *A. lumbricoides* or *A. suum* passed from the anus, mouth, or nose **Note:** A laboratory confirmed case may involve the examination of adult worms or the microscopic identificaion of larvae or eggs.

Ascariasis
80770

Case Definition/Case Classification	Laboratory Confirmation Tests
Suspect: Detection of *Ascaris* spp. DNA using a diagnostic molecular test (e.g., PCR, NAAT, genomic sequencing) in an asymptomatic individual.	

Babesiosis
12010

Case Definition/Case Classification	Laboratory Confirmation Tests
Babesiosis is a parasitic disease caused by organisms in the *Babesia* 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. ***Clinical Criteria:*** Objective: fever as reported by patient or healthcare provider, anemia, or thrombocytopenia.	• Identification of intraerythrocytic *Babesia* organisms by light microscopy in a Giemsa, Wright, or Wright-Giemsa–stained blood smear, **OR** • Detection of *Babesia* spp. DNA in a whole blood specimen through nucleic acid testing such as PCR assay, nucleic acid amplification test (NAAT), or genomic sequencing that amplifies a specific target, in a sample taken within 60 days of illness onset, **OR** • Serologic evidence of a four-fold change[1] in IgG-specific antibody titer to *Babesia microti* antigen by IFA in paired serum samples (one taken within two weeks of illness onset and a second taken two to ten weeks after acute specimen collection)[2]

Babesiosis
12010

Case Definition/Case Classification	Laboratory Confirmation Tests
Subjective: chills, sweats, headache, myalgia, or arthralgia *Confirmed:* Meets confirmatory laboratory evidence criteria AND at least one of the objective or subjective clinical criteria. *Probable:* Meets presumptive laboratory evidence AND meets at least one of the objective clinical criteria. ***Presumptive Laboratory evidence:*** Serologic evidence of an elevated IgG or total antibody reactive to *B. microti* antigen by IFA at a titer ≥1:256 in a sample taken within 60 days of illness onset *Suspect:* Meets supportive laboratory evidence. ***Supportive Laboratory evidence:*** Serologic evidence of an elevated IgG or total antibody reactive to *B. divergens* antigen by IFA at a titer ≥1:256, OR Serologic evidence of an elevated IgG or total antibody reactive to *B. duncani* antigen by IFA at a titer ≥1:512 **Notes:** • A new case of babesiosis is one that has not been previously enumerated within the same calendar year. • The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.	*[1]A four-fold change in titer is equivalent to a change of two dilutions (e.g., 1:64 to 1:256).* *[2]A four-fold rise in titer should not be excluded as confirmatory laboratory criteria if the acute and convalescent specimens are collected within two weeks of one another.*

Babesiosis
12010

Case Definition/Case Classification	Laboratory Confirmation Tests
• Antibodies can be indicative of active or previously resolved infections, so it is recommended that laboratory results be evaluated in conjunction with information on symptoms and exposure whenever possible. If symptom information is available, specimens meeting supportive laboratory criteria should be collected within 60 days of illness onset. • While a single IgG serologic test is adequate for surveillance purposes, molecular testing or blood smear are recommended for clinical diagnosis, especially in cases where species other than *B. microti* are suspected.	

Botulism, foodborne
10530

Case Definition/Case Classification	Laboratory Confirmation Tests
Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms include diplopia, blurred vision, slurred speech, difficulty swallowing, and bulbar weakness. Symmetric descending paralysis can progress rapidly. ***Confirmed*:** 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 ***Probable*:** A clinically compatible case with a history of ingestion of a food item known to carry a risk for the botulism toxin	• Detection of botulinum toxin in serum, stool/enema, gastric aspirate/vomitus or patient's food, **OR** • Isolation of *Clostridium botulinum* from stool/enema or gastric aspirate/vomitus **Note:** As required by Texas Administrative Code all *Clostridium botulinum* isolates must be submitted to the DSHS Laboratory.

Botulism, infant 10540	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
An illness of infants, characterized by constipation, poor feeding, altered cry, and "failure to thrive" that can be followed by progressive weakness, impaired respiration, and death. ***Confirmed*:** A clinically compatible case that is laboratory confirmed, occurring in a child aged less than 1 year	• Detection of botulinum toxin in stool/enema or serum, **OR** • Isolation of *Clostridium botulinum* from stool/enema **Note:** As required by Texas Administrative Code all *Clostridium botulinum* isolates must be submitted to the DSHS Laboratory.

Botulism, other unspecified 10548	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms include diplopia, blurred vision, slurred speech, difficulty swallowing, and bulbar weakness. Symmetric descending paralysis can progress rapidly. ***Confirmed*:** 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	• Detection of botulinum toxin in clinical specimen, **OR** • Isolation of *Clostridium botulinum* from clinical specimen **Note:** As required by Texas Administrative Code all *Clostridium botulinum* isolates must be submitted to the DSHS Laboratory.

Botulism, Wound
10549

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness resulting from toxin produced by *Clostridium botulinum* that has infected a wound. Common symptoms include diplopia, blurred vision, slurred speech, difficulty swallowing, and bulbar weakness. Symmetric descending paralysis can progress rapidly. ***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 ***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	• Detection of botulinum toxin in serum or from wound **OR** • Isolation of *Clostridium botulinum* from wound or serum **Note:** As required by Texas Administrative Code all *Clostridium botulinum* isolates must be submitted to the DSHS Laboratory.

Brucellosis
10020

Case Definition/Case Classification	Laboratory Confirmation Tests
Brucellosis is a zoonotic disease caused by certain bacteria in the *Brucella* genus. Initial symptoms of brucellosis can include fever, night sweats, malaise, headache, anorexia, myalgia, and	• Identification of a *Brucella* isolate as a brucellosis-causing Brucella species (BBS) by methods specific for BBS (i.e., PCR assay with documented specificity for BBS and/or

Brucellosis 10020	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
arthralgias. Some symptoms may persist, including recurrent fevers, arthritis, spondylitis, orchitis/epididymitis, endocarditis, chronic fatigue, and hepatomegaly and/or splenomegaly. Severe complications occur in a small number of cases, including neurobrucellosis. ***Clinical criteria:*** An illness characterized by acute or insidious onset of fever, AND two or more of the following signs and symptoms: Night sweats; arthralgia; headache; fatigue; anorexia; myalgia; weight loss; arthritis; spondylitis; meningitis, encephalitis, or other neurologic abnormalities; discitis or osteomyelitis; abscesses; AND/OR focal organ involvement (including, but not limited to: endocarditis, orchitis/epididymitis, hepatomegaly, splenomegaly). ***Confirmed*:** A case with: • A culture identifying BBS, regardless of reported signs and symptoms, **OR** • A clinically compatible illness with evidence of a fourfold rise between acute and convalescent sera ***Probable:*** A clinically compatible case with at least one of the following: • Direct contact with body fluids or tissue from a confirmed human case of brucellosis, **OR**	biochemical tests and/or whole genome sequencing of *Brucella* isolate), OR • Evidence of fourfold or greater rise in *Brucella* antibody titer between acute and convalescent serum specimens obtained at least 2 weeks apart. **Note:** As required by Texas Administrative Code, all *Brucella* spp. isolates must be submitted to the DSHS Laboratory.

Brucellosis 10020	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
• Veterinary occupational exposure to *Brucella* vaccine (i.e., needle stick, mucous membrane exposure), **OR** • Laboratory exposure to Brucellosis-causing *Brucella* species (BBS), **OR** • Direct contact to an animal diagnosed with a *Brucella* infection (or their fluids), as determined by a state or federal animal health official, including potential aerosol exposure, **OR** • *Brucella* total antibody titer >1:160 by standard tube agglutination (SAT) or *Brucella* microagglutination test (BMAT) in one or more serum samples obtained after onset of symptoms. • Shared one of the following exposures with a confirmed human case of brucellosis: ○ Consumption of dairy products from a common source that were unpasteurized or of unknown pasteurization, particularly from countries lacking domestic animal health programs, **OR** ○ Consumption or handling of undercooked meat or carcass of an animal from a herd or of a species with a known or suspected history of *Brucella*, **OR**	

Brucellosis
10020

Case Definition/Case Classification	Laboratory Confirmation Tests
○ Slaughtering, dressing, butchering, or having other direct contact with animals or animal tissues possibly infected with Brucella. ***Suspect:*** • Meets confirmatory (non-culture) or presumptive serology laboratory evidence with no or unknown clinical criteria • Detection of *Brucella* IgG antibodies by ELISA in a sample collected at least 2 weeks after onset of symptoms. • Death certificate lists brucellosis as a cause of death or a significant condition contributing to death.	

Campylobacteriosis
11020

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea and sometimes vomiting. The organism may also rarely cause extra-intestinal infections such as bacteremia, meningitis, or other focal infections. ***Confirmed*:** A case that is laboratory confirmed ***Probable:***	Isolation (Culture) of *Campylobacter* spp. in a clinical specimen. **Note:** A positive culture result is considered a Confirmed case. A PCR, enteric panel, or other positive CIDT is considered a Probable case.

Campylobacteriosis
11020

Case Definition/Case Classification	Laboratory Confirmation Tests
• A case with *Campylobacter* spp. detected in a clinical specimen using a culture independent diagnostic test (CIDT) **OR** • A clinically compatible case that is epidemiologically linked to a case that meets the probable or confirmed laboratory criteria for diagnosis. **Notes:** A case should not be counted as a new case if laboratory results were reported within 30 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection, e.g., different species.	

Candida auris (C. auris)

50263 **C. auris, Clinical**
50264 **C. auris, Screening**

Case Definition/Case Classification	Laboratory Confirmation Tests
C. auris is an emerging multidrug-resistant yeast that can cause invasive infections and is associated with high mortality. Some *C. auris* strains are resistant to the three major classes of antifungals (azoles, polyenes, and echinocandins), severely limiting treatment options.	Confirmatory Laboratory Evidence: ***Candida auris*, clinical** • Detection of *C. auris* in a clinical specimen obtained during the normal course of care for diagnostic or treatment purposes using either culture or a validated culture-

Candida auris (C. auris)

50263 C. auris, Clinical
50264 C. auris, Screening

Case Definition/Case Classification	Laboratory Confirmation Tests
C. auris can colonize patients' skin and other body sites, perhaps indefinitely, and colonization poses a risk both for invasive infection and transmission. *C. auris* persists in the healthcare environment for weeks and can spread in healthcare settings and cause outbreaks. Certain disinfectants that are routinely used in healthcare settings are not effective against *C. auris*. ***Candida auris*, clinical** **Confirmed:** A case with a confirmatory laboratory test from a clinical specimen collected for the purpose of diagnosing or treating disease in the normal course of care. ***Candida auris*, screening** **Confirmed:** Person with confirmatory laboratory evidence from a swab collected for the purpose of screening for *C. auris* colonization regardless of site swabbed**. **Typical screening specimen sites are skin (e.g., axilla, groin), nares, rectum, or other external body sites. Swabs collected from a wound or ear drainage as part of clinical care are considered clinical specimens. Criteria to distinguish a new case from an existing case: A patient who is colonized or infected with *C. auris* is considered colonized indefinitely. • For screening cases, count patient as a screening case only once. • For clinical cases, count patient as a clinical case only once. A person with a clinical case should not be counted as a screening case thereafter.	independent test (e.g., nucleic acid amplification test [NAAT]). ***Candida auris*, screening** • Detection of *C. auris* in a specimen from a swab obtained for the purpose of colonization screening using either culture or validated culture-independent test (e.g., NAAT). **Note:** As required by TAC, all isolates identified as *C. auris* must be submitted to the DSHS Laboratory. However, isolates can be submitted to another public health laboratory as designated by DSHS. Please contact a DSHS Epidemiologist or the DSHS Laboratory for additional information on laboratory support.

Candida auris (C. auris)

50263 C. auris, Clinical
50264 C. auris, Screening

Case Definition/Case Classification	Laboratory Confirmation Tests
Note: Additional *C. auris* information is found at: https://www.cdc.gov/candida-auris/about/index.html	

Carbapenem-resistant Enterobacterales (CRE)
77924

Case Definition/Case Classification	Laboratory Confirmation Tests
Carbapenem-resistant Enterobacterales (previously Enterobacteriaceae) are gram-negative bacilli that are either: (1) resistant to at least one carbapenem antibiotic (ertapenem, meropenem, doripenem, imipenem); or (2) produce a carbapenemase (blaKPC, blaNDM, blaVIM, blaIMP, blaOXA-48, blaSIM, blaGIM, blaSPM, other blaOXA, etc.) CRE can colonize or infect any body site and may cause infections including pneumonia, bloodstream infections, urinary tract infections, wound infections, and meningitis. Common causes of CRE infections in healthcare settings include *Klebsiella* species, and *Escherichia coli*. *Klebsiella aerogenes*, previously known as *Enterobacter aerogenes*, meets the case definition of *Klebsiella* species. **Confirmed:** A case with a confirmatory laboratory test.	Detection of *Klebsiella* species or *E. coli* from any body site that is laboratory confirmed with: • Resistance to any carbapenem, including meropenem, imipenem, doripenem, or ertapenem. **OR** • Positive for known carbapenemase resistance gene (i.e., KPC, NDM, VIM, IMP, OXA-48); Xpert Carba-R positive for KPC, PCR or Xpert Carba-R Assay positive. **OR** • Positive on a phenotypic test for carbapenemase production by metallo-β-lactamase test, modified Hodge Test (MHT),

Carbapenem-resistant Enterobacterales (CRE)
77924

Case Definition/Case Classification	Laboratory Confirmation Tests
Note: Additional CRE information can be accessed here: https://www.cdc.gov/cre/about/	Carbapenem Inactivation Method (CIM) positive, or modified CIM (mCIM). **Note:** If a culture-independent diagnostic test (CIDT) report is received with multiple pathogens detected and a carbapenemase gene is detected, there is no way to know which organism the carbapenemase gene belongs to; in this situation, it is recommended to collect a culture from the same site. There is no requirement to submit isolates to the DSHS Laboratory. However, isolates can be voluntarily submitted to the DSHS Laboratory for additional carbapenemase and antibiotic susceptibility testing. Please contact a DSHS HAI/AR Epidemiologist or the DSHS Laboratory for additional information on available lab support. If the CRE isolate is sent to the DSHS Laboratory for additional testing, use the submitting laboratory's antibiotic susceptibility test results to meet the Epi Case Criteria.

Chagas disease, acute
12041

Case Definition/Case Classification	Laboratory Confirmation Tests
Chagas disease is a parasitic infection caused by *Trypanosoma cruzi*. 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: 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), acute myocarditis, and/or meningoencephalitis. ***Clinical Criteria:*** N/A ***Epidemiologic Linkage Criteria:*** • Suspected triatomine (kissing bug) exposure (e.g., bite, triatomine found in bed, etc.) within the 3 months prior to specimen collection, **OR** • Residence for at least 6 months in a Chagas endemic region* (if outside of Texas, residence concluded within the 3 months prior to specimen collection), **OR** • History of donor-derived infection in the recipient of organ or HCT/P^ transplant within the 3 months prior to the specimen collection, **OR**	• Visualization of *T. cruzi* by microscopy (e.g., wet mount-microscopic examination, thick and thin smears-Giemsa stain) performed on any tissue or body fluid **OR** • Detection of *T. cruzi* DNA by molecular testing (e.g., NAAT, metagenomic sequencing) performed on any tissue or body fluid

Chagas disease, acute
12041

Case Definition/Case Classification	Laboratory Confirmation Tests
• History of donor-derived infection in the recipient of a blood transfusion within the 3 months prior to the specimen collection **Chagas endemic countries include Argentina, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, French Guiana, Guatemala, Guyana, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Uruguay, and Venezuela. Most areas of Texas could be deemed "Chagas endemic" due to the widespread presence of infected triatomine bugs, Chagas-infected animals, and reported autochthonous human cases. See* Chagas Disease Data | Texas DSHS. *^Human cell, tissue, and cellular and tissue-based product* ***Confirmed*:** Meets acute disease confirmatory laboratory evidence AND acute Chagas disease epidemiologic linkage criteria. **Notes:** Individuals experiencing reactivation may test positive using molecular testing or microscopic observation. In the context of transplant recipients, case classification should be informed by whether the positive result may reflect an acute, donor-derived infection or chronic infection in a case experiencing reactivation. Please refer to the DSHS website for guidance on Chagas disease testing (Information for Healthcare Providers): Chagas Disease | Texas DSHS	

Chagas disease, chronic
12043

Case Definition/Case Classification	Laboratory Confirmation Tests
Following the acute phase, most infected people enter into a prolonged, asymptomatic form of disease 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 (chronic indeterminate). However, an estimated 20-30% of infected people will develop debilitating and sometimes life-threatening medical problems over the course of their lives (chronic symptomatic). 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. ***Clinical Criteria:*** N/A ***Epidemiologic Linkage Criteria:*** Case is a gestational parent that delivered a fetus or infant with confirmed congenital *T. cruzi* infection. ***Confirmed:*** Meets chronic Chagas disease confirmatory laboratory evidence. ***Probable:*** • Meets chronic Chagas disease presumptive laboratory evidence criteria, OR	Detection of antibody specific to *T. cruzi* by at least two diagnostic tests using two different antigen preparations [e.g., confirmed by two tests at CDC OR two different *T. cruzi* ELISA* test kits (e.g., Wiener and Hemagen)] **DSHS or commercial lab (T. cruzi IgG serology tests may be called "Trypanosoma cruzi Antibody, IgG," "Trypanosoma cruzi Antibody, Total," or Trypanosoma cruzi Total Antibody"). The DSHS lab utilizes the Wiener and Hemagen test kits, so "presumptive positive" results are confirmatory.*

Chagas disease, chronic
12043

Case Definition/Case Classification	Laboratory Confirmation Tests
• Meets one chronic Chagas presumptive laboratory evidence criterion AND chronic Chagas disease epidemiologic linkage criterion. ***Presumptive Laboratory evidence:*** • Detection of IgG antibodies specific to *T. cruzi* by a single diagnostic test, AND • Positive blood, organ, or HCT/P^ donor screen for *T. cruzi* ***Suspect:*** Meets supportive laboratory evidence criterion. ***Supportive Laboratory evidence:*** • Detection of IgG antibodies specific to *T. cruzi* by a single diagnostic test, OR • Positive blood, organ, or HCT/P^ donor screen for *T. cruzi* *^Human cell, tissue, and cellular and tissue-based product* **Notes:** • Includes chronic indeterminate and chronic symptomatic Chagas disease. • Patients with positive blood donor screening should have *T. cruzi* IgG testing at a commercial or public health lab. • Patients testing positive with commercial lab serology should have samples forwarded to DSHS. • Samples forwarded to CDC for confirmatory testing which test negative cannot be classified as cases.	

Chagas disease, chronic
12043

Case Definition/Case Classification	Laboratory Confirmation Tests
• Women with chronic indeterminate disease can transmit infection to their unborn babies. Infants <12 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 12 months of age and classify based on presence or absence of symptoms as chronic symptomatic or chronic indeterminate case definition. Please refer to the DSHS website for guidance on Chagas disease testing (Information for Healthcare Providers): Chagas Disease | Texas DSHS	

Chagas disease, congenital
12042

Case Definition/Case Classification	Laboratory Confirmation Tests
Transmission of Chagas disease may occur vertically from an infected gestational parent to their fetus. ***Clinical Criteria:*** N/A	• Visualization of *T. cruzi* by microscopy (e.g., wet mount-microscopic examination, thick and thin smears-Giemsa stain) performed on any tissue or body fluid collected from the fetus or infant within 3 months of delivery to gestational parent, **OR**

Chagas disease, congenital
12042

Case Definition/Case Classification	Laboratory Confirmation Tests
Confirmed: A fetus (≥20 weeks or ≥350g) or infant who meets congenital Chagas disease confirmatory laboratory evidence in the absence of other known routes of transmission. **Notes:** Individuals experiencing reactivation may test positive using molecular testing or microscopic observation. In the context of transplant recipients, case classification should be informed by whether the positive result may reflect an acute, donor-derived infection or chronic infection in a case experiencing reactivation.	• Detection of *T. cruzi* DNA by molecular testing (e.g., NAAT, metagenomic sequencing) performed on any tissue or body fluid collected from the fetus or infant within 3 months of delivery to gestational parent.

Chickenpox - (see Varicella)

Case Definition/Case Classification	Laboratory Confirmation Tests
See Varicella	

Cholera (toxigenic *Vibrio cholerae* O1 or O139)
10470

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness characterized by profuse watery diarrhea and/or vomiting; severity is variable. ***Confirmed:*** A clinically compatible illness that is laboratory **Confirmed Note:** Illnesses caused by strains of *V. cholerae* other than toxigenic *V. cholerae* O1 or O139 should not be reported as cases of cholera. (See Vibriosis, other or unspecified*)*	• Isolation of toxigenic (i.e., cholera toxin-producing) *Vibrio cholerae* O1 or O139 from stool or vomitus, **OR** • Serologic evidence of recent infection **Note:** As required by Texas Administrative Code all *Vibrio* species isolates must be submitted to the DSHS Laboratory.

COVID-19 (Coronavirus Disease 2019)
11065

Case Definition/Case Classification	Laboratory Confirmation Tests
Coronavirus disease 2019 (COVID-19) is caused by the virus severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a new virus in humans causing respiratory illness which can be spread from person-to-person. The first case of the disease that would later be named Novel Coronavirus Disease 2019 (Novel COVID-19) was identified in Wuhan, China in December 2019. Coronavirus Disease 2019 is a newly identified coronavirus that has not been previously identified in the human population and it is assumed there is no existing immunity to the virus. SARS-CoV-2 is a newly identified pathogen, and it is assumed there was no pre-existing human immunity to the virus in 2019 and early in 2020. The virus	*Laboratory evidence using a method approved or authorized by the FDA[1] or designated authority*: ***Confirmatory** laboratory evidence*:** • Detection of SARS-CoV-2 RNA in a clinical or post-mortem specimen using a diagnostic molecular amplification test performed by a CLIA-certified provider***, **OR** • Detection of SARS-CoV-2 in a clinical or post-mortem specimen by genomic sequencing****.

COVID-19 (Coronavirus Disease 2019)
11065

Case Definition/Case Classification	Laboratory Confirmation Tests
(SARS-CoV-2) causing coronavirus disease 2019 (COVID-19), first identified in Wuhan, China in 2019 is not the same as coronaviruses that commonly circulate among humans and cause mild illness, like the common cold. The virus is distinct from although closely related to both SARS-CoV and MERS-CoV. Epidemiologic findings indicate COVID-19 may be less severe than SARS or MERS, but evidence suggests that the virus is more contagious than its predecessors[†]. As of August 2021, COVID-19 is circulating widely in Texas and more than 2.8 million cases, and more than 55,000 fatalities have been reported since January of 2020. Reporting of individual SARS-CoV-2 infections to public health has become increasingly sporadic as testing patterns have changed (including widespread use of at-home testing) and as a higher proportion of infections with the now endemic virus result in asymptomatic infections and less severe illnesses not requiring medical care. The utility and representativeness of universal case-based surveillance data at the national level has diminished as some jurisdictions have removed SARS-CoV-2 infection from their lists of reportable conditions following the end of the federal Public Health Emergency in May 2023. SARS-CoV-2 infections remain reportable in many jurisdictions, though other surveillance systems have been leveraged or developed to achieve public health surveillance goals. Also, as of March 1, 2024, Coronavirus Disease 2019 (COVID-19) is no longer considered a novel coronavirus and is no longer a notifiable disease condition in Texas. The transmission of COVID-19 can take place among individuals infected with the virus, regardless of their vaccination status, and whether	***Presumptive** laboratory evidence:*** • Detection of SARS-CoV-2 specific antigen in a clinical or post-mortem specimen using a diagnostic test performed by a CLIA-certified provider. ***Supportive** laboratory evidence:*** • Detection of SARS-CoV-2 specific antigen by immunocytochemistry OR • Detection of SARS-CoV-2 RNA or specific antigen using a test performed without CLIA oversight. *1.* FDA Emergency Use Authorizations Emergency Use Authorization | FDA and Coronavirus Disease 2019 (COVID-19) | FDA **. On March 13, 2020, the President issued a Memorandum on Expanding State-Approved Diagnostic Tests: "Should additional States request flexibility to authorize laboratories within the State to develop and perform tests used to detect COVID-19, the Secretary shall take appropriate action, consistent with law, to facilitate the request."* ***. The terms confirmatory, presumptive, and supportive are categorical labels used here to standardize case classifications for public health surveillance. The terms should not be used to interpret the utility or validity of any laboratory test methodology.* **** Includes those tests performed under a CLIA certificate of waiver.*

COVID-19 (Coronavirus Disease 2019) 11065	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
they are asymptomatic, pre-symptomatic, or symptomatic. Peak transmissibility occurs from prior to symptom onset to a few days after, but most people can shed virus up to 10 days following infection. Asymptomatic and pre symptomatic individuals who are infected may transmit SARS-CoV-2. Symptoms of COVID-19 are non-specific, and the disease presentation can range from no symptoms (asymptomatic) to severe pneumonia and death. With pre-symptomatic and asymptomatic individuals SARS-CoV-2 infection may not elicit symptoms in some people (asymptomatic) and may elicit symptoms after a positive test (pre-symptomatic presentation). It is unclear what percentage of people who initially appear asymptomatic progress to clinical disease. People may have abnormalities in chest imaging consistent with COVID-19 before symptom onset or a positive COVID-19 test. COVID-19 is primarily transmitted from person-to-person by exposure to infectious respiratory fluids through three primary mechanisms: 1) inhalation of very fine respiratory droplets and aerosol particles, 2) deposition of respiratory droplets and particles on exposed mucous membranes such as in the mouth, nose, or eye by direct splashes and sprays, and 3) by touching mucous membranes with hands that have been soiled–either directly by virus containing respiratory fluids, or indirectly by touching surfaces with SARS-CoV-2 virus on them. Virus containing droplets and particles are released when someone with COVID-19 sneezes, coughs, or talks. Infectious droplets can land in the mouths or noses of people who are	**** *Some genomic sequencing tests that have been authorized for emergency use by the FDA do not require an initial PCR result to be generated. Genomic sequencing results may be all the public health agency receives.*

COVID-19 (Coronavirus Disease 2019) 11065	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
nearby or possibly be inhaled into the lungs. Respiratory droplets can land on hands, objects, or surfaces around the person when they cough or talk, and people can then become infected with COVID-19 from touching hands, objects or surfaces with droplets and then touching their eyes, nose, or mouth. COVID-19 clinical illness presentation is mild, moderate, severe, and critical. It must be noted that symptoms can be difficult to differentiate from, and can overlap with, other viral respiratory illnesses such as influenza (flu) and respiratory syncytial virus (RSV). COVID-19 can vary from mild asymptomatic infection to critical illness leading to death; symptoms and severity can change during the illness. COVID-19 is considered mild when there are clinical features suggestive of upper respiratory tract involvement without features of lung or other end organ involvement. Moderate COVID-19 is pulmonary involvement with no hypoxia. Most patients improve with supportive care at this stage, but patients with risk factors can progress to more severe or critical disease or death; such individuals may benefit from pharmacotherapies. Severe Illness: Individuals who have SpO2 <94% on room air at sea level or needing supplemental oxygen. Critical Illness: Individuals who have respiratory failure who are subcategorized as: Needing high-flow oxygen or non-invasive ventilation and needing mechanical ventilation and extracorporeal membrane oxygenation (ECMO). Because symptoms may progress quickly, close follow-up is needed, especially for individuals who have greater risk factors	

Case Definition/Case Classification	Laboratory Confirmation Tests
for COVID-19 severity of illness. Those at highest risk for severe disease and death include people aged over 60 years (especially those 85 years and older), individuals lacking COVID-19 vaccinations, and those with underlying conditions, including but not limited to obesity, hypertension, diabetes, cardiovascular disease, chronic respiratory or kidney disease, immunosuppression from solid organ transplant, and sickle cell disease. A complete list can be found at: CDC | COVID-19 Risk Factors. Disease in children mostly appears to be relatively mild, and there is evidence that a significant proportion of infections across all age groups are asymptomatic, or pre symptomatic at the time of testing. People with COVID-19 generally develop signs and symptoms, including mild respiratory symptoms and fever 3-5 days after infection (mean incubation period 3-5 days, range 1- more than 14 days). Texas DSHS manages special populations such as MIS-C cases, Variants, Reinfections, Vaccine breakthroughs, and Outbreaks. **MIS-C:** Multisystem Inflammatory Syndrome in Children (MIS-C) is "Multisystem inflammatory syndrome in children" is an unusual expression of COVID-19 of public health concern and should be reported to Texas Department of State Health Services. MIS-C is a condition where different body parts can become inflamed. See the DSHS MIS-C webpage for more information: News Update: Multisystem	

COVID-19 (Coronavirus Disease 2019) 11065	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Inflammatory Syndrome in Children (MIS-C) | Texas DSHS and CDC webpage at https://www.cdc.gov/mis/about/index.html. **SARS-CoV-2 Variants:** Viruses like SARS-CoV-2 continuously evolve as changes in the genetic code (genetic mutations) occur during replication of the genome. **Reinfection:** COVID reinfections should be enumerated as a new case for surveillance purposes. Guidance is evolving rapidly, for more information or the most up to date guidance about reporting COVID-19 reinfection cases, and the case definition please see the DSHS Coronavirus Disease 2019 (COVID-19) Reinfection Guidance available on the DSHS website at DSHS COVID-19 Reinfection Guidance (texas.gov). **Vaccine Breakthrough Cases:** Because updates to vaccination guidance is rapidly evolving, please see the Vaccine Breakthrough Guidance available on the DSHS website at DSHS Coronavirus Disease 2019 (COVID-19) Vaccine Breakthrough Case Guidance (texas.gov). **Clusters of Patients with Severe Acute Respiratory Illness/Outbreaks of COVID-19:** If an outbreak is suspected or there is a cluster of COVID-19 in a jurisdiction, local area or facility, notify EAIDU by submitting	

COVID-19 (Coronavirus Disease 2019) 11065	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
a Respiratory Disease Outbreak Summary Form to eaidu-coronavirus@dshs.texas.gov or by fax to (512) 776-7676 The local/regional health department should: • Investigate common exposures among the cases and work with any identified facilities or entities. • Recommend appropriate control measures for the specific entity or setting. • Monitor individuals exposed to confirmed/probable cases. • Collect specimens from individuals exposed to confirmed or probable cases, if requested. • Encourage persons with compatible symptoms to be evaluated by a healthcare provider. If appropriate, alert healthcare providers in the area to be cognizant of possible cases and encourage immediate reporting of suspected cases. DSHS is updating the COVID-19 reporting and case classification criteria to better meet long-term surveillance goals for tracking this disease. Because of the continual advancement in the science of COVID-19 disease and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection and changes to surveillance approaches during the pandemic, there has been an update to reporting and case classification criteria to better meet long-term surveillance goals for tracking this disease. Therefore, case definitions for novel coronaviruses evolve as clinical and epidemiologic information on these viruses is updated. Please refer to the COVID-19 information on DSHS's website for the most recent definitions. The DSHS COVID-19 case definitions	

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Case Definition/Case Classification	**Laboratory Confirmation Tests**
may be found here: COVID-19 (Coronavirus Disease 2019) | Texas DSHS. At this time, universal case investigation and contact tracing is no longer an effective intervention for containing spread. Further, surveillance for probable cases based on clinical criteria and epidemiologic linkage to known cases is no longer necessary. COVID-19 case ascertainment based on positive serologic test results is also no longer relevant due to high community seroprevalence. For these reasons, surveillance should focus on incident cases only and positive PCR and AG tests. In accordance with the Council of State and Territorial Epidemiologists (CSTE) update to the standardized surveillance case definition and national notification for 2019 novel coronavirus disease (COVID-19) Interim-22-ID-01, DSHS has adopted the following case classification strategy effective January 1, 2023; *† The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) in China]. Zhonghua Liu Xing Bing Xue Za Zhi. 2020;41(2):145–151. DOI:10.3760/cma.j.issn.0254-6450.2020.02.003.* **Case Classification** **Confirmed:** A case that meets confirmatory laboratory evidence* **Probable:** A case that meets presumptive laboratory evidence* **Suspect:** A case that:	

COVID-19 (Coronavirus Disease 2019)
11065

Case Definition/Case Classification	Laboratory Confirmation Tests
• Meets supportive laboratory evidence, * † **OR** • Meets vital records criteria with no confirmatory or presumptive laboratory evidence for SARS-CoV-2. **Vital Records Criteria for Reporting** A person whose death certificate lists COVID-19 disease or SARS-CoV-2 or an equivalent term as an underlying cause of death or a significant condition contributing to death. **Clinical Criteria for Reporting** N/A **Epidemiologic Linkage Criteria for Reporting** N/A **Other Criteria for Reporting** N/A **Laboratory Evidence** *Includes those tests performed under a CLIA certificate of waiver. † *For suspect cases, jurisdictions may opt to place them in a registry for other epidemiological analyses or investigate to determine probable or confirmed status. Suspect cases should not be included in case counts.* **NOTE:** Testing performed by individuals at home using over-the-counter test kits is considered supportive laboratory	

COVID-19 (Coronavirus Disease 2019) 11065	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
evidence and should not be included in case counts due to lack of CLIA oversight. **Criteria to distinguish a new case of this disease or condition from reports or notifications which should not be enumerated as a new case for surveillance:** The following should be enumerated as a new case: • Person was most recently enumerated as a confirmed or probable case with onset date (if available) or first positive specimen collection date for that classification >90 days prior‡, **OR** • SARS-CoV-2 sequencing results from the new positive specimen and a positive specimen from the most recent previous case demonstrate a different lineage, **OR** • Person was previously reported but not enumerated as a confirmed or probable case (i.e., suspect) ‡‡, but now meets the criteria for a confirmed or probable case. *‡Some individuals, e.g., severely immunocompromised persons, can shed SARS-CoV-2 detected by molecular amplification tests >90 days after infection. For severely immunocompromised individuals, clinical judgment should be used to determine if a repeat positive test is likely to result from long term shedding and therefore not be enumerated as a new case. CDC defines severe immunocompromise as certain*	

COVID-19 (Coronavirus Disease 2019) 11065	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
conditions, such as being on chemotherapy for cancer, untreated HIV infection with CD4 T lymphocyte count < 200, combined primary immunodeficiency disorder, receipt of prednisone > 20mg/day for more than 14 days. *‡‡Repeat suspect cases should not be enumerated.* **Regarding COVID-19 Case Investigations:** Local and regional health departments should investigate laboratory, clinical reports and self-reports of SARS-CoV-2 based on the prioritization of case investigations outlined in Coronavirus Disease 2019 (COVID-19) 2023 Case Definition | CDC at https://ndc.services.cdc.gov/case-definitions/coronavirus-disease-2019-2023. The current investigation form for 2019 Novel Coronavirus available at www.dshs.texas.gov/sites/default/files/coronavirus/docs/DSHS-COVID19CaseReportForm.pdf. Completion of a more detailed investigation form may be required for probable or confirmed cases or in the event of an outbreak or other special situation. This more detailed investigation form will be provided by DSHS or may be available at www.dshs.texas.gov/covid-19-coronavirus-disease-2019/information-public-health if needed. • Any reported novel coronavirus case should be investigated within 7 days of notifications to the health department if possible. Otherwise, case investigations should be prioritized based on the order outlined in Coronavirus Disease 2019 (COVID-19) 2023 Case Definition | CDC at https://ndc.services.cdc.gov/case-definitions/coronavirus-disease-2019-2023.	

COVID-19 (Coronavirus Disease 2019)
11065

Case Definition/Case Classification	Laboratory Confirmation Tests
• Ensure that appropriate control measures have been implemented (see Prevention and Control Measures, below). • Determine whether the patient meets the case definition. • If needed obtain medical records, interview the suspected case-patient or surrogate and interview the patient's healthcare provider. • Notify DSHS within 7 days of cases of novel coronavirus. • For any patient who meets case criteria as a probable or confirmed COVID-19 case, complete a case investigation in NBS. Please refer to the *Data Entry Guidelines (DEG)* for specific data entry requirements.	

Contaminated sharps injury

Case Definition/Case Classification	Laboratory Confirmation Tests
A contaminated sharps injury that occurs in a heath care setting that is contaminated with human blood or body fluids should be reported per the below guidelines. Contaminated sharps injuries in private facilities must be documented per OSHA guidelines. http://www.osha.gov/SLTC/etools/hospital/hazards/sharps/sharps.html	Both source person and injured employee should be tested for HIV, HBV, and HCV due to the exposure and not as a laboratory confirmation. See referenced U.S. Public Health Service Guidelines for recommended follow-up testing.

Contaminated sharps injury

Case Definition/Case Classification	Laboratory Confirmation Tests
Contaminated sharps injuries in Texas public facilities (government entities) are reported to DSHS Emerging and Acute Infectious Disease Branch. *The facility where the injury occurred should complete the reporting form and submit it to the local health authority where the facility is located. If no local health authority is appointed for this jurisdiction, submit to the regional director of the Texas Department of State Health Services (TDSHS) regional office in which the facility is located. Address information for regional directors can be obtained at* http://www.dshs.state.tx.us/regions/default.shtm. *The local health authority, acting as an agent for the TDSHS will receive and review the report for completeness, and submit the report to:* Texas Department of State Health Services Emerging and Acute Infectious Disease Branch PO Box 149347 (Mail Code 1960), Austin, Texas 78714-9347 Fax number: 512-776-7616 The reporting forms can be found at http://www.dshs.state.tx.us/idcu/health/infection_control/bloodborne_pathogens/reporting/ For health care worker HIV risk assessment and follow-up refer to the Updated U.S. Public Health Service guidelines for the management of occupational exposures to HIV and recommendations for post-exposure prophylaxis 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	

Contaminated sharps injury

Case Definition/Case Classification	Laboratory Confirmation Tests
HBV, HCV, and HIV and Recommendations for Post-exposure Prophylaxis (updated 2001).	

Cronobacter in infants

Case Definition/Case Classification	Laboratory Confirmation Tests
In the absence of a more likely alternative diagnosis, it is an acute illness in an infant characterized by an invasive infection, including but not limited to meningitis, cerebral abscess, sepsis, necrotizing enterocolitis, or urinary tract infection. It is required that infections with Cronobacter from infants (<12 months of age) are reported to the public health authorities. ***Confirmed:*** Meets clinical criteria AND confirmatory laboratory evidence ***Probable:*** Meets clinical criteria AND epidemiological linkage criteria AND supportive laboratory evidence ***Suspect:*** • Meets clinical criteria AND supportive laboratory evidence, **OR** • Meets clinical criteria AND epidemiological linkage criteria	***Confirmatory Laboratory Evidence:*** • Isolation by culture of *Cronobacter* spp. in a clinical specimen from a normally sterile site (e.g., blood or cerebrospinal fluid) ***Supportive Laboratory Evidence:*** • Isolation of *Cronobacter* spp. in a clinical specimen from a non-sterile site (e.g., stool or rectum, urine, skin, respiratory secretions, or broncho-alveolar lavage, etc.) ***Epidemiologic Linkage Criteria:*** Epidemiologic risk factors within 7 days prior to illness onset in an infant: • Consumption of powdered infant formula (PIF) implicated as the source of infection, **OR** • Exposure to a non-PIF product, such as breast milk, implicated as the source of infection, **OR**

Cronobacter in infants

Case Definition/Case Classification	Laboratory Confirmation Tests
	• Residing in a congregate setting (e.g., a neonatal intensive care unit [NICU]) with an active *Cronobacter* spp. outbreak.

Cryptosporidiosis
11580

Case Definition/Case Classification	Laboratory Confirmation Tests
A gastrointestinal illness characterized by diarrhea and one or more of the following: diarrhea duration of 72 hours or more, abdominal cramping, vomiting, or anorexia. ***Confirmed*:** A case that is laboratory confirmed **Probable:** • A case with *Cryptosporidium* 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: ○ 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	**Confirmed:** Detection of *Cryptosporidium* 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): • Direct fluorescent antibody (DFA) test, **OR** • Polymerase chain reaction (PCR), **OR** • Enzyme immunoassay (EIA), **OR** • Light microscopy of stained specimen (O&P). **Probable:** • Immunochromatographic card/rapid card test **OR** • Unknown lab test type.

Cryptosporidiosis
11580

Case Definition/Case Classification	Laboratory Confirmation Tests
Note: A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection	

Cyclosporiasis
11575

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness of variable severity caused by the protozoan parasite *Cyclospora cayetanensis*. The most common symptom is watery diarrhea. Other symptoms include loss of appetite, weight loss, abdominal cramps/bloating, nausea, body aches, and fatigue. Vomiting and low-grade fever also may occur. **Confirmed:** A laboratory-confirmed case with clinical symptoms **Probable:** A clinically compatible case that is epidemiologically linked to a confirmed case **Note:** A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection	**Confirmed:** • Detection of *Cyclospora* organisms by microscopic examination in stool, intestinal fluid/aspirate, or intestinal biopsy specimens, **OR** • Detection of *Cyclospora* DNA (by PCR) in stool, intestinal fluid/aspirate, or intestinal biopsy specimens **Probable:** • A probable case must have an epi-linkage

Cysticercosis
12031

Case Definition/Case Classification	Laboratory Confirmation Tests
Cysticercosis is a tissue infection caused by the larval form of the pork tapeworm, *Taenia solium*. Infection occurs when the tapeworm eggs are ingested, hatch into larvae, and migrate to tissues where they form cysticerci (cysts). The signs and symptoms of cysticercosis reflect the development of cysticerci in various sites. Subcutaneous cysticerci may be visible or palpable. 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 signs and symptoms. Asymptomatic subcutaneous nodules and calcified intramuscular nodules can be encountered. **Confirmed:** Laboratory confirmation of the presence of cysticercus in tissue **Notes:** • Documentation of biopsy or imaging results is required. • Demonstration of *T. solium* eggs and proglottids in the feces are diagnostic of taeniasis (see *Taenia solium* and undifferentiated Taeniasis), not cysticercosis. Persons who are found to have eggs or proglottids in their feces should be evaluated serologically since autoinfection, resulting in cysticercosis, can occur. • Blood tests are available to help diagnose an infection but are not always accurate. While suggestive, it does not necessarily prove that cysticercosis is present.	• 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). • Radiographs can identify calcified cysticerci in tissues other than the brain.

Dengue–like Illness **11704** **Dengue** **10680** **Dengue, severe** **11705**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Dengue is a potentially fatal febrile illness caused by infection with any of the four dengue viruses (DENV-1, -2, -3 and -4). Dengue is transmitted primarily through the bite of *Aedes aegypti* and *Ae. albopictus* mosquitoes. For the purposes of surveillance and reporting, based on their clinical presentation, dengue cases can be categorized into three primary groups: dengue-like illness, dengue, and severe dengue. *Indicates clinical evidence that must be documented in medical records Clinical evidence of dengue-like illness: • Fever as reported by the patient or healthcare provider. Clinical evidence of dengue: • Fever as reported by the patient or healthcare provider and the presence of one or more of the following signs and symptoms: ○ nausea/vomiting ○ rash ○ aches and pains (i.e., headache, retro-orbital pain, arthralgia, myalgia) ○ tourniquet test positive ○ *Leukopenia (a total white blood cell count of <5,000/mm³)	• Detection of DENV nucleic acid in serum, plasma, CSF, other body fluid or tissue by validated RT-PCR, **OR** • Detection of DENV antigen in tissue, by IHC, **OR** • Detection in serum or plasma of DENV NS1 antigen by a validated immunoassay, **OR** • Cell culture isolation of DENV from serum, plasma, or CSF specimen, **OR** • Detection of IgM anti-DENV in serum or CSF in a traveler returning from a dengue endemic area without ongoing transmission of another flavivirus, clinical evidence of co-infection with a flavivirus or recent vaccination against a flavivirus**, **OR** • Detection of IgM anti-DENV in serum or CSF in a person living in a dengue endemic or non-endemic area of the US without evidence of other flavivirus transmission**, **OR** • IgM anti-DENV seroconversion (negative to positive, or

Dengue–like Illness
11704
Dengue
10680
Dengue, severe
11705

Case Definition/Case Classification	Laboratory Confirmation Tests
○ abdominal pain or tenderness ○ persistent vomiting ○ extravascular fluid accumulation ○ mucosal bleeding ○ *Liver enlargement >2 centimeters ○ *Increasing hematocrit concurrent with rapid decrease in platelet count, demonstrated in consecutive blood specimens (thrombocytopenia alone is not sufficient) **Clinical evidence of severe dengue:** • Dengue with any one or more of the following scenarios: *Severe plasma leakage evidenced by hypovolemic shock and/or extravascular fluid accumulation with respiratory distress *Severe bleeding from the gastrointestinal tract or vagina as defined by requirement for medical intervention including intravenous fluid resuscitation or blood transfusion (not just platelets) *Severe organ involvement, including any of the following: • elevated liver transaminases: aspartate aminotransferase (AST) or alanine aminotransferase (ALT) ≥1,000 units per liter (U/L) • impaired level of consciousness and/or diagnosis of encephalitis, encephalopathy, or meningitis • heart or other organ involvement including myocarditis, cholecystitis, and pancreatitis. ***Confirmed:*** A clinically compatible case of dengue-like illness,	equivocal to positive) by validated immunoassay in acute (i.e., collected <5 days of illness onset) and convalescent (i.e., collected >5 days after illness onset) serum specimens, **OR** • IgG anti-DENV seroconversion or ≥4-fold rise in titer in serum specimens collected >2 weeks apart, and confirmed by a neutralization test (e.g., plaque reduction neutralization test) with a >4-fold higher end point titer as compared to other flaviviruses tested** **Refer to Arbovirus Classification note in notes section for more details.

Dengue–like Illness **11704** **Dengue** **10680** **Dengue, severe** **11705**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
dengue, or severe dengue with confirmatory laboratory results ***Probable*:** A clinically compatible case of dengue-like illness, dengue, or severe dengue AND one of the following: • Positive (not equivocal) IgM anti-DENV by validated immunoassay in serum or CSF in a person living in a dengue endemic or non-endemic area of the US with evidence of other flavivirus transmission or recent vaccination against a flavivirus** • Positive (not equivocal) IgM anti-DENV by validated immunoassay in serum or CSF in a traveler returning from a dengue endemic area with ongoing transmission of another flavivirus, clinical evidence of co-infection with one of these flaviviruses, or recent vaccination against a flavivirus** ***Suspect:*** A clinically compatible case of dengue-like illness, dengue, or severe dengue with negative or equivocal dengue IgM results and no PCR or NS1 testing in an acute specimen (collected <5 days after onset) and an epidemiologic linkage, defined as: • Travel to a dengue endemic country or presence at a location with an ongoing outbreak within two weeks prior to onset of an acute febrile illness or dengue, **OR** • Association in time and place with a confirmed or probable dengue case	

Diphtheria
10040

Case Definition/Case Classification	Laboratory Confirmation Tests
An upper respiratory tract illness with an adherent membrane of the nose, pharynx, tonsils, or larynx OR an infection of a non-respiratory anatomical site (e.g., skin, wound, conjunctiva, ear, genital mucosa) ***Confirmed:*** A clinically compatible case that is either laboratory confirmed, OR epidemiologically linked to a laboratory-confirmed case **OR** An infection at a non-respiratory anatomical site (e.g., skin, wound, conjunctiva, ear, genital mucosa) with: • Isolation of toxin-producing Corynebacterium diphtheriae from that site **Notes:** • PCR and MALDI-TOF (matrix assisted laser desorption/ionization-time of flight mass spectrometry) diagnosis for *C. diphtheria*, when used alone, do not confirm toxin production. These tests, when used, should always be combined with a test that confirms toxin production, such as the Elek test. • Individuals without evidence of clinical criteria as described by the diphtheria surveillance case definition but for whom toxin-producing *C. diphtheria* is confirmed via laboratory testing (isolation and toxigenicity testing by modified Elek test or other validated test capable of confirming toxin-production) should not be classified as cases. These individuals are considered carriers of the bacteria and are not reportable.	• Isolation of *Corynebacterium diphtheriae* from a clinical specimen, **AND** • Confirmation of toxin-production by Elek test or by another validated test capable of confirming toxin-production

Ebola (HF)
11630

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness with an incubation period of 2-21 days with an average of 8-10 days. The course of the disease often progresses from "dry" symptoms such as fever, severe headache, and myalgia (muscle pain), to "wet" symptoms such as maculopapular rash that can desquamate, vomiting, diarrhea, abdominal pain, bleeding not related to injury, or low platelet count (thrombocytopenia). Other symptoms and clinical findings may include chills, malaise, fatigue, weakness, nausea, decreased appetite, arthralgia, conjunctival injection (red eyes), sore throat, hiccups, chest pain, shortness of breath, confusion, seizures, cerebral edema, spontaneous miscarriage, symptoms of impaired kidney and liver function, elevated liver enzymes, or leukopenia frequently with lymphopenia followed later by elevated neutrophils and a left shift. ***Confirmed*:** A person that meets laboratory criteria ***Suspect*:** A person that meets the clinical criteria AND meets epidemiologic linkage evidence OR meets vital records evidence **Clinical Criteria:** • Acute onset of one or more of the following clinical findings: fever (≥38ºC/100.4ºF), headache, muscle and/or joint pain, weakness and fatigue, cough or difficulty breathing, pharyngitis, loss of appetite, chest pain skin rash, red eyes, abdominal pain, vomiting, diarrhea, intractable hiccups, encephalitis or other neurological manifestations, or unexplained bleeding or bruising not related to injury or menstruation, or other clinically compatible symptoms **Epidemiologic Linkage Criteria:** Within the 21 days prior to symptom onset:	• Detection of *orthoebolavirus*-specific nucleic acid in blood or other body fluids, blood products, or tissues using a diagnostic molecular test (e.g., NAAT, genome sequencing), **OR** • Detection of *orthoebolavirus*-specific IgM by ELISA, **OR** • Detection of a four-fold rise in *orthoebolavirus*-specific IgG titer from an acute sample to a convalescent sample, **OR** • Viral isolation of *orthoebolavirus* in cell culture for blood, blood products (e.g., serum), or tissues

Ebola (HF) **11630**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**

• Contact with a person who had known or suspected Ebola or any object contaminated by their body fluids without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, OR,
• Handles specimens that contain or might contain replication competent *orthoebolavirus* without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, OR,
• Handles bats, rodents, or primates that are or may be infected with an *orthoebolavirus* without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, OR,
• Exposure to body fluids (i.e., urine, saliva, sweat, vomit, breast milk, amniotic fluid, semen, aqueous humor, or cerebral spinal fluid) from a person who clinically recovered from Ebola Hemorrhagic Fever without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, OR,
• Residence in or travel to an Ebola-endemic area or an area with active transmission AND an experience with any of the following scenarios for potentially unrecognized Ebola exposures:
  ○ Contact with someone who was sick or died
  ○ Visiting or work in a healthcare facility
  ○ Breach in PPE and/or IPC precautions
  ○ Visiting a traditional healer
  ○ Attending or participating in funerals or burials
  ○ Contact with animals
  ○ Consumption of or handling raw meat
  ○ Spending time in a mine or cave
  ○ Any other scenario for previously unrecognized	

Ebola (HF)
11630

Case Definition/Case Classification	Laboratory Confirmation Tests
orthoebolavirus exposure as determined in consultation with DSHS and the CDC **Vital Records Evidence:** • A person whose death certificate lists Ebola Hemorrhagic Fever or infection with an *orthoebolavirus* as an underlying cause of death or a significant condition contributing to death.	

Echinococcosis
80670

Case Definition/Case Classification	Laboratory Confirmation Tests
Echinococcosis is an infection caused by the larval stage of tapeworms in the genus *Echinococcus*, including *E. granulosus* and *E. multilocularis*. Transmission occurs through the ingestion of tapeworm eggs in contaminated food, water, soil, dog feces, or on the contaminated coats of dogs and cats. Infection may also occur through the ingestion of cysts in the undercooked internal organs of infected intermediate hosts, such as sheep, goats and swine. Many infections are asymptomatic for years before the growing cysts cause clinical signs and symptoms associated with the affected organs. Liver involvement is associated with abdominal pain, hepatic masses, and biliary	• Detection of cysts or organ lesions using imaging techniques, including CT, MRI, and ultrasonography AND detection of Echinococcus-specific antibodies, **OR** • Detection of Echinococcus spp. DNA by PCR in a clinical specimen, **OR**

Echinococcosis
80670

Case Definition/Case Classification	Laboratory Confirmation Tests
duct obstruction. Pulmonary involvement can produce chest pain, cough, and hemoptysis. Other organs, including the brain, bone, and heart, may also be involved with resulting clinical signs and symptoms. Ruptured cysts may cause fever, urticaria (hives), eosinophilia and anaphylactic shock. **Confirmed:** An asymptomatic or symptomatic case that meets one or more confirmatory laboratory criteria. **Probable:** An asymptomatic or symptomatic case with *Echinococcus*-specific antibodies identified by TWO different types of serological assays. **Note:** Documentation of imaging and/or histopathology results is required.	Histopathology or parasitology results compatible with Echinococcus spp. (i.e., direct visualization of the protoscolex in cyst fluid)

Ehrlichiosis
11088

Case Definition/Case Classification	Laboratory Confirmation Tests
Ehrlichiosis is the general name given to the diseases caused by obligate intracellular bacteria in the genus *Ehrlichia*. *Ehrlichia* spp. are tickborne pathogens and are the most commonly reported species transmitted by *Amblyomma americanum,* the lone star tick. The majority of reported human infections are caused by either *Ehrlichia chaffeensis* or *Ehrlichia ewingii*. Most	• Serological evidence of a fourfold change[1] in immunoglobulin G (IgG)-specific antibody titer to *Ehrlichia* antigen by indirect immunofluorescence assay (IFA) in paired serum samples (one taken in first two weeks after illness onset and a second taken two to ten weeks after acute specimen collection)[2],

Ehrlichiosis
11088

Case Definition/Case Classification	Laboratory Confirmation Tests
cases of ehrlichiosis occur across the south-central, southeastern, and mid-Atlantic states, although *Ehrlichia muris eauclairensis,* which is transmitted by *Ixodes scapularis*, the blacklegged tick, has been reported from travelers to, or residents of, Minnesota and Wisconsin. Ehrlichiosis typically presents 5 to 14 days after a tick bite with a combination of nonspecific clinical symptoms, such as fever, fatigue, and headache. Illness is often accompanied by laboratory abnormalities including leukopenia, thrombocytopenia, and mildly elevated liver enzymes. *Ehrlichia chaffeensis* disease may result in severe illness or even death in older or immunocompromised individuals or if treatment is delayed. Serologic testing is commonly used to diagnosis ehrlichiosis, but antibodies to *Anaplasma* and *Ehrlichia* can cross-react. **Clinical Criteria** • Objective clinical evidence: fever as reported by patient or healthcare provider, anemia, leukopenia, thrombocytopenia, or any hepatic transaminase elevation. • Subjective clinical evidence: chills/sweats, headache, myalgia, nausea/vomiting, or fatigue/malaise. **Confirmed:** Meets confirmatory laboratory evidence AND at least one of the objective or subjective clinical evidence criteria. **Probable:** Meets presumptive laboratory evidence with fever as reported by patient or healthcare provider AND at least one other objective or subjective clinical evidence criterion (excluding chills/sweats) OR meets presumptive laboratory evidence without reported fever but with chills/sweats AND at least one objective clinical evidence criterion, OR two other subjective clinical evidence criteria.	**OR** • Detection of *E. chaffeensis, E. ewingii, E. muris eauclairensis,* unspeciated *Ehrlichia* spp., or other *Ehrlichia* spp. DNA in a clinical specimen via amplification of a specific target by polymerase chain reaction (PCR) assay, nucleic acid amplification tests (NAAT), or other molecular method, **OR** • Demonstration of ehrlichial antigen in a biopsy or autopsy sample by IHC, **OR** • Isolation of of *E. chaffeensis, E. ewingii, E. muris eauclairensis*, unspeciated *Ehrlichia* spp., or other *Ehrlichia spp.* from a clinical specimen in cell culture with molecular confirmation (e.g., PCR or sequence).

Ehrlichiosis
11088

Case Definition/Case Classification	Laboratory Confirmation Tests
Presumptive Laboratory Evidence: Serological evidence of elevated IgG antibody reactive with *Ehrlichia* spp. antigen by IFA at a titer ≥1:128 in a sample taken within 60 days of illness onset, OR microscopic identification of intracytoplasmic morulae in leukocytes in a sample taken within 60 days of illness onset. **Suspect:** Meets confirmatory or presumptive laboratory evidence with no or insufficient clinical information to classify as a confirmed or probable case (e.g., a laboratory report only). **Notes:** • A person previously reported as a probable or confirmed case-patient may be counted as a new case-patient when there is an episode of new clinically compatible illness with confirmatory laboratory evidence. • Patients should not be classified as cases for both anaplasmosis and ehrlichiosis based on serologic evidence alone.	

Escherichia coli, Shiga toxin-producing (STEC)
11563

Case Definition/Case Classification	Laboratory Confirmation Tests
See Shiga toxin-producing Escherichia coli (STEC)	

Fascioliasis
80663

Case Definition/Case Classification	Laboratory Confirmation Tests
Fasciola hepatica and *Fasciola gigantica* (liver flukes) are transmitted by ingesting raw aquatic plants or water contaminated with immature larvae, usually in locations around domestic and wild ruminants (commonly sheep, cattle and goats). Infection may or may not be sympyomatic. In early infection (acute phase), the immature larval flukes migrate through the intestinal wall, the abdominal cavity, and the liver tissue, into the bile ducts, where they develop into mature adult flukes. Symptoms may include fever; gastrointestinal problems such as nausea, vomiting and diarrhea; a swollen liver (hepatomegaly); liver function abnormalities, skin rashes; shortness of breath; and abdominal pain or tenderness. The chronic phase (after the parasite settles in the bile ducts), is marked by inflammation and hyperplasia and thickening of the bile ducts and gall bladder, leading to biliary lithiasis or obstruction. Symptoms of this phase may include: biliary colic, nausea, intolerance to fatty food, right upper quadrant pain, epigastric pain, obstructive jaundice, and pruritus, are the result of a blockade in the biliary tract and inflammation in the gall bladder. Inflammation of the liver, gallbladder, and pancreas can also occur. **Confirmed:** A case that is laboratory confirmed **Probable:** A clinically compatible case with • Detection of *Fasciola* antibodies, OR • History of ingestion of watercress or freshwater plants and eosinophilia	• Microscopic identification of *Fasciola* eggs in feces, duodenal contents, or bile, **OR** • Microscopic identification of a *Fasciola* adult fluke extracted from a clinical specimen (e.g. bile ducts), **OR** • Detection of *Fasciola* coproantigens (antigens found in feces) by ELISA

Granulomatous amebic encephalitis (GAE)

Case Definition/Case Classification	Laboratory Confirmation Tests
See Amebic meningitis/encephalitis, other	

Haemophilus influenzae, invasive disease
10590

Case Definition/Case Classification	Laboratory Confirmation Tests
Invasive *Haemophilus influenzae* may manifest as pneumonia, bacteremia, meningitis, epiglottitis, septic arthritis, cellulitis, or purulent pericarditis; less common infections include endocarditis and osteomyelitis **Confirmed:** A case that is laboratory confirmed **Probable:** Meningitis with detection of *H. influenzae* type b antigen in cerebrospinal fluid (CSF). (Antigen test results in urine or serum are unreliable for diagnosis of *H. influenzae* disease.)	• Detection of *Haemophilus influenzae*-specific nucleic acid in a specimen obtained from a normally sterile body site (e.g., blood or CSF), using a validated polymerase chain reaction (PCR) assay; **OR** • Isolation of Haemophilus influenzae from a normally sterile body site (e.g., cerebrospinal fluid [CSF], blood, joint fluid, pleural fluid, pericardial fluid) **OR** • Detection of *Haemophilus influenzae* type b antigen in cerebrospinal fluid [CSF] (probable cases only) See Normally Sterile Site **Note:** Serotyping of isolates can be performed at the DSHS laboratory. Serotyping is recommended for all *H. influenzae* cases and required by Texas Administrative Code on isolates from children under 5 years old.

Haemophilus influenzae, invasive disease
10590

Case Definition/Case Classification	Laboratory Confirmation Tests

Hantavirus infection, non-HPS
11610

Hantavirus pulmonary syndrome
11590

Case Definition/Case Classification	Laboratory Confirmation Tests
Hantaviruses are rodent-borne viruses that can be transmitted to humans. Patients with hantavirus infection typically present with nonspecific signs and symptoms including fever, myalgia, headache, and chills. After the prodromal phase, symptoms of hantavirus pulmonary syndrome (HPS) may develop. Non-HPS hantavirus infection is a febrile illness with non-specific signs and symptoms including fever, chills, myalgia, headache, and gastrointestinal symptoms, but no cardio-pulmonary symptoms. Clinical laboratory findings may include hemoconcentration, left shift in white blood cell count, neutrophilic leukocytosis, thrombocytopenia, and circulating immunoblasts. HPS is an acute febrile illness characterized by non-specific viral symptoms including fever, chills, myalgia, headache, and gastrointestinal symptoms, and one or more of the following clinical features:	• Detection of hantavirus-specific IgM* or rising titers of hantavirus-specific IgG, **OR** • Detection of hantavirus-specific ribonucleic acid sequence in clinical specimens, **OR** • Detection of hantavirus antigen by IHC in lung biopsy or autopsy tissues *Due to the high rate of false positives at commercial labs, a sample should be forwarded to DSHS for confirmatory testing

Hantavirus infection, non-HPS **11610** **Hantavirus pulmonary syndrome** **11590**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
• 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, and includes autopsy examination demonstrating noncardiogenic pulmonary edema without an identifiable cause, **OR** • Healthcare record with a diagnosis of HPS, **OR** • Death certificate that lists HPS as a cause of death or a significant condition contributing to death **Confirmed:** A clinically compatible case of HPS or non-HPS hantavirus infection with confirmatory laboratory results.	

Hemolytic uremic syndrome, post-diarrheal (HUS)
11550

Case Definition/Case Classification	Laboratory Confirmation Tests
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). **Confirmed:** An acute illness diagnosed as HUS or TTP that both meets the laboratory criteria and began within 3 weeks after onset of an episode of acute or bloody diarrhea **Probable:** • An acute illness diagnosed as HUS or TTP that meets the laboratory criteria in a patient who does not have a clear history of acute or bloody diarrhea in preceding 3 weeks, OR • An acute illness diagnosed as HUS or TTP, that 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. Note: See Shiga toxin-producing *Escherichia coli* (STEC) as cases that meet the HUS case criteria should also be reported as a "Suspect" STEC case unless other criteria is met for another case definition.	The following are both present at some time during the illness: • Anemia (acute onset) with microangiopathic changes (i.e., schistocytes, burr cells, or helmet cells) on peripheral blood smear, **AND** • Renal injury (acute onset) evidenced by either hematuria, proteinuria, or elevated creatinine level (i.e., greater than or equal to 1.0 mg/dL in a child aged less than 13 years or greater than or equal to 1.5 mg/dL in a person aged greater than or equal to 13 years, or greater than or equal to 50% increase over baseline) **Note:** A low platelet count can usually, but not always, be detected early in the illness, but it 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.

Hepatitis A, acute
10110

Case Definition/Case Classification	Laboratory Confirmation Tests
An acute illness with a discrete onset of any sign or symptom consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, abdominal pain, or dark urine), AND a) either jaundice or elevated total bilirubin levels ≥ 3.0 mg/dL, OR elevated serum alanine aminotransferase (ALT) levels >200 IU/L, AND b) the absence of a more likely diagnosis. **Confirmed:** • A case that meets the clinical case criteria and is IgM anti-HAV positive, **OR** • A case that has hepatitis A virus RNA detected by NAAT (such as PCR or genotyping), **OR** • A case that meets the clinical criteria and occurs in a person who has an epidemiological link with a person who had contact (e.g., household or sexual) with a laboratory-confirmed hepatitis A case 15-50 days prior to the onset of symptoms. **AND** • A case that is not otherwise ruled out by IgM anti-HAV or NAAT for hepatitis A virus testing performed in a public health laboratory. **Note:** Hepatitis A is usually self-limiting and does not result in chronic infection. However, up to 10% of persons with hepatitis A may experience a relapse during the 6 months after acute illness. Cases of relapsing hepatitis A should not be enumerated as new cases. In addition, a case should not be counted as a hepatitis A case if there is an alternate, more likely diagnosis.	• Immunoglobulin M antibody to hepatitis A virus (anti-HAV IgM) positive, **OR** • Nucleic acid amplification test (NAAT, such as Polymerase Chain Reaction [PCR] or genotyping) for hepatitis A virus RNA positive

Hepatitis B, acute **10100**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
An acute illness with a discrete onset of any sign or symptom* consistent with acute viral hepatitis (e.g., fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, and abdominal pain), AND either b) jaundice, or c) elevated serum alanine aminotransferase levels (ALT) >100 IU/L. **Confirmed:** A case that meets the clinical case definition, is laboratory confirmed, and is not known to have chronic hepatitis B** *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. **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.	• Hepatitis B surface antigen (HBsAg) positive, **AND** • IgM antibody to hepatitis B core antigen (anti-HBc IgM) positive (if done)

Hepatitis B virus infection, perinatal
10104

Case Definition/Case Classification	Laboratory Confirmation Tests
Perinatal hepatitis B (HBV) in the newborn can range from asymptomatic to fulminant hepatitis. **Confirmed:** Child born in the US to a HBV-infected mother and positive for HBsAg at ≥ 1 month of age and ≤ 24 months of age OR positive for HBeAg or HBV DNA ≥9 months of age and ≤ 24 months of age. **Probable:** Child born in the US and positive for HBsAg at ≥ 1 month of age and ≤ 24 months of age OR positive for HBeAg or HBV DNA ≥9 months of age and ≤ 24 months of age, but whose mother's hepatitis B status is unknown (i.e., epidemiologic linkage not present). **Notes:** • If the mother is known to be NOT infected with HBV, refer to the case definition for acute Hepatitis B. These definitions are used for surveillance purposes only, not for perinatal hepatitis B prevention case management purposes.	• Hepatitis B surface antigen (HBsAg) positive, hepatitis B e antigen (HBeAg) positive, or detectable Hepatitis B virus DNA (HBV DNA) **Note:** HBsAg must be tested more than 4 weeks after last dose of hepatitis B vaccine to be considered confirmatory.

Hepatitis C, acute
10101

Case Definition/Case Classification	Laboratory Confirmation Tests
All hepatitis C virus cases in each classification category should be > 36 months of age, unless known to have been exposed non-perinatally. **Clinical Criteria:**	Hepatitis C virus detection test: • Nucleic acid test (NAT) or PCR test for HCV RNA positive (including qualitative, quantitative or genotype testing) OR

Hepatitis C, acute
10101

Case Definition/Case Classification	Laboratory Confirmation Tests
• Jaundice, **OR** • Peak total bilirubin levels >= 3.0 mg/DL, **OR** • Elevated serum alanine aminotransferase (ALT) level >200 IU/L, **AND** • The absence of a more likely diagnosis (which may include evidence of acute liver disease due to other causes or advanced liver disease due to pre-existing chronic Hepatitis C virus (HCV) infection or other causes, such as alcohol exposure, other viral hepatitis, hemochromatosis, etc.) **Confirmed:** • A case that meets the clinical criteria and is laboratory confirmed, **OR** • A documented negative HCV antibody followed within 12 months by a positive HCV antibody test (anti-HCV test conversion) in the absence of a more likely diagnosis, **OR** • A documented negative HCV antibody OR negative hepatitis C virus detection test (in someone without a prior diagnosis of HCV infection) followed within 12 months by a positive hepatitis C virus detection test (HCV RNA test conversion) in the absence of a more likely diagnosis. **Probable:** • A case that meets clinical criteria and has presumptive laboratory evidence (a positive anti-HCV antibody test), **AND** • Does not have a hepatitis C virus test reported,	• A positive test indicating presence of hepatitis C viral antigen (HCV antigen) * *When and if a test for HCV antigen(s) is approved by FDA and available

Hepatitis C, acute
10101

Case Definition/Case Classification	Laboratory Confirmation Tests
AND • Has no documentation of anti-HCV or HCV RNA test conversion within 12 months	

Hepatitis E, acute
10103

Case Definition/Case Classification	Laboratory Confirmation Tests
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 viral excretion in stools has been demonstrated for 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-aged 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. **Confirmed:**	• IgM anti-HEV from CDC laboratory or PCR positive from reference laboratory **Note:** No FDA approved tests to diagnose HEV infection are available in the United States.

Hepatitis E, acute
10103

Case Definition/Case Classification	Laboratory Confirmation Tests
• A case that meets the clinical case description and is laboratory confirmed. **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	

Hookworm
80760

Case Definition/Case Classification	Laboratory Confirmation Tests
A parasitic infection caused by the soil-transmitted helminths *Necator americanus* and *Ancylostoma duodenale* (rarely by other *Ancylostoma* species, e.g. *A. ceylanicum*). Itching and localized rash are often the first signs of infection. Other symptoms may include cough, abdominal discomfort, diarrhea, blood in the stool, loss of appetite, nausea, fatigue, or pale skin. Light hookworm infections generally produce few or no clinical effects. In heavy infections, symptoms may include abdominal pain, nausea and anorexia. Chronic blood loss at the site of the intestinal attachment of adult worms can lead to anemia. Children with heavy long-term infections may have impaired growth and delayed mental development.	• Microscopic identification of *Ancylostoma* or *Necator* (Hookworm) eggs in feces, **OR** • Microscopic identification of *Ancylostoma* or *Necator* species larvae cultured from feces, **OR** • Examination of adult worms identified as *Ancylostoma* or *Necator* species expelled after treatment or removed during endoscopy **Note:** A laboratory confirmed case may involve the examination of adult worms or the microscopic identificaion of larvae or eggs.

Hookworm
80760

Case Definition/Case Classification	Laboratory Confirmation Tests
Confirmed: A case that is laboratory confirmed **Probable:** A clinically compatible case AND Detection of *Necator* spp. Or *Ancylostoma* spp. DNA using a diagnostic molecular test (e.g., PCR, NAAT, genomic sequencing). **Suspect:** Detection of *Necator* spp. or *Ancylostoma* spp. DNA using a diagnostic molecular test (e.g., PCR, NAAT, genomic sequencing) in an asymptomatic individual.	

Influenza, human isolates - [outbreaks only]
11060

Case Definition/Case Classification	Laboratory Confirmation Tests
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 may 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. **Confirmed:** Case that is clinically compatible and laboratory confirmed	• 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,

Influenza, human isolates - [outbreaks only]
11060

Case Definition/Case Classification	Laboratory Confirmation Tests
Outbreak: See the Texas Influenza Surveillance Handbook for more information on influenza (flu)-associated outbreaks including operational influenza-like illness (ILI) and flu-associated outbreak definitions. **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.	**OR** • Four-fold rise in influenza hemagglutination inhibition (HI) antibody titer in paired acute and convalescent sera

Influenza A, novel/variant
11062

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness compatible with influenza virus infection. Cough, sore throat, fever (measured or subjective), etc. **Confirmed:** • A case meeting clinical criteria and confirmatory laboratory test results **OR** • A positive isolation from a clinical specimen of a novel influenza virus **OR**	Confirmation of an influenza A virus subtype or strain that is different from currently circulating human influenza H1 and H3 influenza 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-authorized tests for specific strains. • 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.

Influenza A, novel/variant
11062

Case Definition/Case Classification	Laboratory Confirmation Tests
• A significant rise in IgG antibody rise to novel influenza (at least a 4-foold rise in titer or seroconversion) in paired acute and convalescent serum IgG in the absence of another explanation (such as vaccination). **Probable:** A case in which only confirmatory testing has been identified • OR clinical criteria is met AND presumptive positive novel influenza tests specifically designed to detect novel influenza, such as H5 or H7 • OR clinical criteria is met AND is epidemiologically linked AND there are viral testing results indicative of variant influenza, such as H1v or H3v, as determined in consultation with subject matter experts at CDC. **Criteria for epidemiologic linkage:** a) close contact with a confirmed human case of novel influenza a virus infection, OR b) shared a common exposure (such as an agricultural fair or live animal market) with a confirmed novel influenza A case, OR c) Direct or indirect contact (such as touching an animal, their environment, or their raw or unprocessed animal product) with animals with confirmed influenza A, OR d) Inadequate use or breach of PPE and exposed to novel influenza A virus in a laboratory. **Suspect:** A case meeting the clinical criteria AND epidemiologic linkage criteria AND laboratory testing results are positive for	• 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.

Influenza A, novel/variant
11062

Case Definition/Case Classification	Laboratory Confirmation Tests
influenza A, but no laboratory evidence is available that would rule out novel influenza A. **Note:** 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.	

Influenza-associated pediatric mortality
11061

Case Definition/Case Classification	Laboratory Confirmation Tests
An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. There should be no period of complete recovery between the illness and death. Influenza-associated deaths in all persons aged <18 years should be reported. A death should not be reported if there is no laboratory confirmation of influenza virus infection, the influenza illness is followed by full recovery to baseline health status prior to death, the death occurs in a person 18 years 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,	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: • 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,

Influenza-associated pediatric mortality
11061

Case Definition/Case Classification	Laboratory Confirmation Tests
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 tests whose death is attributed to another infectious cause such as staphylococcal pneumonia would still qualify as a case.). **Confirmed:** A death meeting the clinical case definition that is laboratory confirmed	**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

Legionellosis
10490

Case Definition/Case Classification	Laboratory Confirmation Tests
Legionellosis is associated with three clinically and epidemiologically distinct illnesses: Legionnaires' disease, which is characterized by fever, myalgia, cough, and clinical or radiological pneumonia; Pontiac fever, a milder illness without pneumonia; and extrapulmonary legionellosis, a rare manifestation in which *Legionella* can cause disease at sites outside the lungs (e.g., endocarditis, wound infection, joint infection, graft infection). **Confirmed:** A clinically compatible case that meets at least one of the confirmatory laboratory criteria **Probable:** A clinically compatible case with an epidemiologic linkage* during the incubation period ***Epidemiologic linkage criteria:**	• Isolation (culture) of any *Legionella* organism from respiratory secretions, lung tissue, pleural fluid, or other normally sterile fluid, **OR** • Detection of any *Legionella* species from lower respiratory secretions, lung tissue, or pleural fluid by a validated nucleic acid amplification test (e.g. PCR), **OR** • Detection of *Legionella pneumophila* 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

Legionellosis
10490

Case Definition/Case Classification	Laboratory Confirmation Tests
1) Linkage to a setting with a confirmed source of *Legionella* **OR** 2) Linkage to a setting with a suspected source of *Legionella* that is associated with at least one confirmed case	convalescent phase serum specimens to *Legionella pneumophila* serogroup 1 using validated reagents

Leishmaniasis
80550

Case Definition/Case Classification	Laboratory Confirmation Tests
Leishmaniasis is a parasitic disease that is present primarily in South and Central America, Africa, Asia, and southern Europe. The *Leishmania* parasite is transmitted via the bite of phlebotomine sand flies. There are several forms of the disease in humans: cutaneous, the most common, which causes skin lesions; visceral, which may affect multiple internal organs, including the liver, spleen, and bone marrow; and mucosal, a less common form that affects mucous membranes of the nose, mouth, or throat. Most leishmaniasis cases reported in Texas are the cutaneous form and are travel-associated, albeit autochthonous cases occur occasionally. Cutaneous leishmaniasis infection can present as one or more skin sores weeks or months after a sand fly bite. Over time, the sores may change in size and appearance—they may start out as papules or nodules and may end up as ulcers which might scab over. Lesions can heal spontaneously within weeks to months, or last for a year or more. Some *Leishmania* strains can	• 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** • Positive *Leishmania* Real-Time PCR or *Leishmania* PCR and DNA sequencing at CDC

Leishmaniasis
80550

Case Definition/Case Classification	Laboratory Confirmation Tests
disseminate to cause mucosal lesions (espundia) years after the primary cutaneous lesion has healed. Without treatment, this sequela can progress and lead to destruction of the naso-oropharyngeal mucosa, which can be severely disfiguring. Visceral leishmaniasis infection can be asymptomatic or result in manifestations such as fever, weight loss, hepatosplenomegaly, and pancytopenia. Severe cases of visceral leishmaniasis are often fatal without treatment. **Confirmed:** A clinically compatible case that is laboratory confirmed	

Listeriosis
10640

Case Definition/Case Classification	Laboratory Confirmation Tests
In adults, invasive disease caused by *Listeria monocytogenes* 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. **Confirmed:** A clinically compatible case that is laboratory confirmed **Probable:** The mother of a neonate with confirmed or probable listeriosis, even if the laboratory criteria are not met for the mother; a neonate born to a mother with confirmed or probable	• Isolation of *L. monocytogenes* from a normally sterile site, e.g., blood, cerebrospinal fluid (CSF), or less commonly, joint, pleural, or pericardial fluid, **OR** • Isolation of *L. monocytogenes* from products of conception at time of delivery and non-sterile sites of neonates obtained within 48 hours of delivery, **OR** • In the setting of miscarriage or stillbirth, isolation of *L. monocytogenes* from placental or fetal tissue, **OR**

Listeriosis
10640

Case Definition/Case Classification	Laboratory Confirmation Tests
listeriosis, even if laboratory criteria are not met for the neonate; or a clinically compatible case detected through use of a culture independent laboratory testing method. **Suspect:** Isolation of *L. monocytogenes* from a non-invasive, non-sterile clinical specimen, e.g., stool, urine, wound. **Notes:** • Pregnancy loss and intrauterine fetal demise are considered maternal outcomes and would be counted as a single case in the mother. • Cases in neonates and mothers should be reported separately when each meets the case definition. A case in a neonate is counted if live born. A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual unless additional information is available indicating a separate infection.	• In the setting of pregnancy or live birth, isolation of *L. monocytogenes* from mother's or neonate's blood or other sterile site, or from placental or amniotic fluid See Normally Sterile Site **Note:** As required by Texas Administrative Code all *Listeria monocytogenes* isolates must be submitted to the DSHS Laboratory.

Lyme disease
11080

Case Definition/Case Classification	Laboratory Confirmation Tests
A systemic, tickborne disease with protean manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The most common clinical marker for the disease is erythema migrans (EM), the initial skin lesion that occurs in 60-80% of patients. For purposes of surveillance, EM is defined	• Isolation of *B. burgdorferi* sensu stricto or *B. mayonii* in culture, **OR** • Detection of *B. burgdorferi* sensu stricto *or B. mayonii* in a clinical specimen by a *B. burgdorferi* group specific NAAT

Lyme disease
11080

Case Definition/Case Classification	Laboratory Confirmation Tests
as a skin lesion that typically begins as a red macule or papule and expands over a period of days to weeks to form a large round lesion, often with partial central clearing. Secondary lesions also may occur. Annular erythematous lesions occurring within several hours of a tick bite represent hypersensitivity reactions and do not qualify as EM. For most patients, the expanding EM lesion is accompanied by other acute symptoms, particularly fatigue, fever, headache, mildly stiff neck, arthralgia, or myalgia. These symptoms are typically intermittent. Texas is a low-incidence jurisdiction for Lyme disease (has had <10 confirmed cases/100,000 population for a period of three consecutive years) and thus follows the recommended reporting criteria for low-incidence jurisdictions. **Clinical criteria:** An illness characterized by one of the following early or late-stage manifestations, as reported by a healthcare provider, and in the absence of another known etiology: • Erythema migrans (EM) rash ≥5 cm in diameter • Recurrent, brief attacks (weeks or months) of objective joint swelling in one or a few joints • Any of the following signs that cannot be explained by any other etiology, alone or in combination: lymphocytic meningitis; cranial neuritis, particularly facial palsy (unilateral or bilateral); radiculoneuropathy; or, rarely, encephalomyelitis. • Acute onset of high-grade (2nd-degree or 3rd-degree) atrioventricular conduction defects that resolve in days to weeks. **Confirmed:** A clinically compatible case that has confirmatory laboratory evidence.	assay, **OR** • Detection of *B. burgdorferi* group-specific antigens by immunohistochemical assay (IHC) on biopsy or autopsy tissues, **OR** • Standard two-tier test (STTT): positive or equivocal EIA or IFA test, followed by a positive IgM[1] or IgG[2] immunoblot. **OR** • Modified two-tier test (MTTT): positive or equivocal EIA or IFA test, followed by a different, sequential positive or equivocal EIA. [1]IgM WB is considered positive when at least two of the following three bands are present: 24 kilodalton (kDa) outer surface protein C (OspC)*, 39 kDa basic membrane protein A (BmpA), and 41 kDa (Fla). Disregard IgM results for specimens collected >30 days after symptom onset. [2]IgG WB is considered positive when at least five of the following 10 bands are present: 18 kDa, 24 kDa (OspC)*, 28 kDa, 30 kDa, 39 kDa (BmpA), 41 kDa flagellin (Fla), 45 kDa, 58 kDa (not GroEL), 66 kDa, and 93 kDa. *Depending upon the assay, OspC could be indicated by a band of 21, 22, 23, 24 or 25 kDA.

Lyme disease
11080

Case Definition/Case Classification	Laboratory Confirmation Tests
Probable: A clinically compatible case that has presumptive laboratory evidence: • Positive IgG[2] immunoblot without positive or equivocal first-tier screening assay. **Suspect:** A case of EM rash with no laboratory evidence of infection OR a case that meets confirmatory or presumptive laboratory criteria, but no clinical information is available **Notes:** • A new case is one that has not been reported within the same calendar year. • While a single IgG immunoblot is adequate for surveillance purposes, a two-tier test is still recommended for patient diagnosis; a positive IgG immunoblot preceded by a negative screen is considered a false positive. • There is no validated Lyme disease test for CSF; positive tests on CSF are not confirmatory	

Malaria
10130

Case Definition/Case Classification	Laboratory Confirmation Tests
Initial symptoms of malaria are non-specific and include fever, chills, sweats, headaches, muscle pains, nausea and vomiting. In severe cases of malaria (usually caused by Plasmodium falciparum), clinical findings can also include confusion, coma, neurologic focal signs, severe anemia, and respiratory difficulties.	• Detection and specific identification of malaria parasite species by microscopy on blood films in a laboratory with appropriate expertise **OR** • Detection of *Plasmodium* species by nucleic acid test*

Malaria
10130

Case Definition/Case Classification	Laboratory Confirmation Tests
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 **Suspect:** Detection of *Plasmodium* species by rapid diagnostic antigen testing (RDT) without confirmation by microscopy or nucleic acid testing in any person (symptomatic or asymptomatic) *diagnosed in the United States*, regardless of whether the person experienced previous episodes of malaria while outside the country **Note:** A subsequent episode of malaria is counted as an additional case, regardless of the detected Plasmodium species, unless the case is indicated as a treatment failure within 4 weeks of initial presentation.	**OR** • Detection of unspeciated malaria parasite by microscopy on blood films in a laboratory with appropriate expertise *Laboratory-developed malaria PCR tests must fulfill CLIA requirements, including validation studies.

Measles (Rubeola)
10140

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness characterized by all of the following: a generalized maculopapular rash lasting at least 3 days; a temperature ≥ 101.0° F (>38.3 ° C); and cough, coryza, or conjunctivitis. **Confirmed:**	• 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**

Measles (Rubeola)
10140

Case Definition/Case Classification	Laboratory Confirmation Tests
An acute, febrile rash illness (temperature can be lower than 101°F and rash < 3 days) that is: • Laboratory confirmed **OR** • Epidemiologically linked to a laboratory confirmed measles case	• 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. *Not explained by MMR vaccination during the previous 6-45 days

Melioidosis
11585

Case Definition/Case Classification	Laboratory Confirmation Tests
Melioidosis is caused by the environmental bacterium *Burkholderia pseudomallei*. Infection typically occurs through direct contact with contaminated soil or water via subcutaneous inoculation, ingestion, or inhalation. The median incubation period is 9 days but ranges from a few hours to decades after exposure. ***Clinical Criteria:*** In the absence of a more likely diagnosis, at least one of the following signs or symptoms: Fever, muscle aches, ulcer, nodule, skin abscess, pneumonia, headache, chest pain, anorexia, respiratory distress, abdominal discomfort, joint pain, disorientation, weight loss, seizure, organ abscess (liver, lung, spleen, prostate, or brain), AND/OR encephalomyelitis/meningitis/extra-meningeal disease	• Isolation of *B. pseudomallei* from a clinical specimen **Note:** The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.

Melioidosis **11585**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Epidemiologic linkage is defined as a person with at least one of the following findings: • History of travel to or residence in a region endemic for melioidosis, **OR** • Known exposure to *B. pseudomallei* as a result of intentional release or known product/source exposure (outside of laboratory), **OR** • Known exposure to *B. pseudomallei* as a result of an occupational risk (i.e., laboratory exposure) *Vital records criteria* is defined as a person whose death certificate lists melioidosis as a cause of death or a significant condition contributing to death. *Other criteria* include a person whose healthcare record contains a recent diagnosis of melioidosis. **Confirmed:** A case that is lab confirmed Probable: A case that meets presumptive laboratory criteria AND one of the following: clinical criteria and epidemiologic linkage; OR vital records criteria and epidemiologic linkage; OR other criteria and epidemiologic linkage. • Evidence of a fourfold or greater rise in *B. pseudomallei* antibody titer by IHA between acute- and convalescent-phase serum specimens obtained at least two weeks apart, **OR**	

Melioidosis **11585**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
• Evidence of *B. pseudomallei* DNA (for example, by LRN-validated nucleic acid amplification test) in a clinical specimen ***Suspect:*** A case that meets supportive laboratory evidence AND one of the following: clinical criteria and epidemiologic linkage; OR vital records criteria and epidemiologic linkage; **OR** other criteria and epidemiologic linkage. • Single *B. pseudomallei* total antibody titer of greater than or equal to 1:40 by serology in one or more serum specimens.	

Meningococcal infection, invasive (Neisseria meningitidis)
10150

Case Definition/Case Classification	Laboratory Confirmation Tests
Invasive meningococcal disease manifests most commonly as meningitis and/or meningococcemia that can progress rapidly to purpura fulminans, shock, and death. However, other manifestations (e.g., pneumonia, myocarditis, endocarditis or pericarditis, arthritis, cervicitis) might be observed. **Confirmed:** A case that is laboratory confirmed **Probable:** A case that has one of the following: • *N. meningitidis* antigen detection by immunohistochemistry (IHC) on formalin-fixed tissue • *N. meningitidis* antigen detection by latex agglutination of CSF **Suspect:** A case that has one of the following: • Clinical purpura fulminans in the absence of a positive blood culture • Gram-negative diplococci, not yet identified, isolated from a normally sterile site (e.g., blood or CSF)	• Isolation of *Neisseria meningitidis* from a normally sterile site, **OR** • Isolation of *N. meningitidis* from purpuric lesions, **OR** • Detection of *N. meningitidis*-specific nucleic acid in a specimen obtained from a normally sterile site, using a validated polymerase chain reason (PCR) assay See Normally Sterile Site Note: As required by Texas Administrative Code all *Neisseria meningitidis* isolates from normally sterile sites and/or purpuric lesions must be submitted to the DSHS Laboratory for typing and molecular analysis.

Mpox
11801

Case Definition/Case Classification	Laboratory Confirmation Tests
Mpox is an illness typically characterized by a rash that may be located on the genitals, anus, hands, feet, chest, face, or mouth. The characteristic rash associated with mpox lesions involves the following: deep-seated and well-circumscribed lesions, often with central umbilication; and lesion progression	***Confirmatory laboratory evidence:*** • Detection of MPXV nucleic acid by molecular testing in a clinical specimen; **OR**

Mpox **11801**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
through specific sequential stages—macules, papules, vesicles, pustules, and scabs.; this can sometimes be confused with other diseases that are more commonly encountered in clinical practice (e.g., secondary syphilis, herpes, and varicella zoster). Historically, sporadic accounts of patients co-infected with the mpox virus and other infectious agents (e.g., varicella zoster, syphilis) have been reported, so patients with a characteristic rash should be considered for testing, even if other tests are positive. The average incubation period for symptom onset is 7–14 days with a range of 5-21 days. The causative agent is the monkeypox virus which belongs to the Orthopoxvirus genus in the family Poxviridae. The Orthopoxvirus genus also includes variola virus (which causes smallpox), vaccinia virus (used in the smallpox vaccine), and cowpox Virus. **Confirmed**: Meets confirmatory laboratory criteria **Probable**: No suspicion of other recent Orthopoxvirus exposure AND meets presumptive laboratory criteria **Suspect**: New characteristic rash OR meets one of the epidemiologic criteria and has a high clinical suspicion† for mpox **Epidemiologic Criteria** Within 21 days of illness onset: • Reports having contact with a person or people with a similar appearing rash or who received a diagnosis of confirmed or probable mpox **OR** • Had close or intimate in-person contact with individuals in a	• Detection of MPXV by genomic sequencing in a clinical specimen. • Isolation of Mpox virus in culture from a clinical specimen ***Presumptive laboratory evidence:*** • Orthopoxvirus DNA by polymerase chain reaction of a clinical specimen **OR** • Orthopoxvirus using immunohistochemical or electron microscopy testing methods **OR** • Demonstration of detectable levels of anti-orthopoxvirus IgM antibody during the period of 4 to 56 days after rash onset.

Mpox
11801

Case Definition/Case Classification	Laboratory Confirmation Tests
social network experiencing mpox activity, this includes men who have sex with men (MSM) who meet partners through an online website, digital application ("app"), or social event (e.g., a bar or party) **OR** • Traveled outside the US to a country with confirmed cases of mpox or where mpox virus is endemic **OR** • Had contact with a dead or live wild animal or exotic pet that is an African endemic species or used a product derived from such animals (e.g., game meat, creams, lotions, powders, etc).	

Multisystem Inflammatory Syndrome in Children (MIS-C) associated with SARS-CoV-2 Infection
11066

Case Definition/Case Classification	Laboratory Confirmation Tests
MIS-C associated with SARS-CoV-2 infection is a severe delayed hyperinflammatory condition in children and adolescents occurring 2–6 weeks after antecedent SARS-CoV-2 infection. MIS-C is characterized by fever, elevated laboratory markers of systemic inflammation, and multiple organ system dysfunction including cardiovascular, mucocutaneous, gastrointestinal, hematologic, neurologic, and renal involvement. Some patients may also present with respiratory failure or radiographic pulmonary abnormalities, which may reflect associated	**Confirmatory laboratory evidence:** • Detection of SARS-CoV-2 RNA in a clinical specimen*** up to 60 days prior to or during hospitalization, or in a post-mortem specimen using a diagnostic molecular amplification test (e.g., polymerase chain reaction [PCR]), **OR** • Detection of SARS-CoV-2 specific antigen in a clinical specimen*** up to 60 days prior to or during hospitalization,

Multisystem Inflammatory Syndrome in Children (MIS-C) associated with SARS-CoV-2 Infection 11066	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
pulmonary hyperinflammation, a phenotypic overlap with COVID-19 viral pneumonia, or cardiogenic pulmonary edema. Patients with MIS-C are often critically ill, with the majority requiring admission to an intensive care unit (ICU) and 1–3% requiring extracorporeal membrane oxygenation (ECMO). Mortality among MIS-C patients has been estimated to be 1–2%. In accordance with the Council of State and Territorial Epidemiologists (CSTE) update to the Standardized Case Definition for Surveillance of Multisystem Inflammatory Syndrome in Children Associated with SARS-CoV-2 Infection 22-ID-02, DSHS has adopted the following case classification strategy effective January 1, 2023; **Confirmed:** • Meets the clinical criteria AND the confirmatory laboratory evidence. **Probable:** • Meets the clinical criteria AND the epidemiologic linkage criteria. **Suspect:** • Meets the vital records criteria. **Note:** *For cases initially identified as suspect, jurisdictions may conduct investigation of clinical and laboratory records to determine if confirmed or probable case criteria are met.* **Comment:** *To provide consistency in case classification, review of case information and assignment of final case classification*	or in a post-mortem specimen, **OR** • Detection of SARS-CoV-2 specific antibodies^ in serum, plasma, or whole blood associated with current illness resulting in or during hospitalization *Presumptive laboratory evidence:* N/A *Supportive laboratory evidence:* N/A ****Positive molecular or antigen results from self-administered testing using over-the-counter test kits meet laboratory criteria.* *^Includes a positive serology test regardless of COVID-19 vaccination status. Detection of antinucleocapsid antibody is indicative of SARS-CoV-2 infection, while anti-spike protein antibody may be induced either by COVID-19 vaccination or by SARS-CoV-2 infection.* **Note:** *The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. The categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.*

Multisystem Inflammatory Syndrome in Children (MIS-C) associated with SARS-CoV-2 Infection 11066	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
for all suspected MIS-C cases will be done by experts in national MIS-C surveillance at Texas DSHS Central Office and staff at CDC. **Clinical Criteria** An illness in a person aged <21 years characterized by all of the following, in the absence of a more likely alternative diagnosis*: • Subjective or documented fever (temperature ≥38.0º C) **AND** • Clinical severity requiring hospitalization or resulting in death **AND** • Evidence of systemic inflammation indicated by C-reactive protein ≥3.0 mg/dL (30 mg/L) **AND** • New onset manifestations in at least two of the following categories: 1. Cardiac involvement indicated by: • Left ventricular ejection fraction <55%, **OR** • Coronary artery dilatation, aneurysm, or ectasia, **OR** • Troponin elevated above laboratory normal range, or indicated as elevated in a clinical note. 2. Mucocutaneous involvement indicated by: • Rash, **OR** • Inflammation of the oral mucosa (e.g., mucosal erythema or swelling, drying or fissuring of the lips, strawberry tongue),	

Multisystem Inflammatory Syndrome in Children (MIS-C) associated with SARS-CoV-2 Infection 11066	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
OR • Conjunctivitis or conjunctival injection (redness of the eyes), **OR** • Extremity findings (e.g., erythema [redness] or edema [swelling] of the hands or feet) 3. Shock** 4. Gastrointestinal involvement indicated by: • Abdominal pain, **OR** • Vomiting, **OR** • Diarrhea 5. Hematologic involvement indicated by: • Platelet count <150,000 cells/μL, **OR** • Absolute lymphocyte count (ALC) <1,000 cells/μL **If documented by the clinical treatment team, a final diagnosis of Kawasaki Disease should be considered an alternative diagnosis. These cases should not be reported to state MIS-C surveillance.* *** Clinician documentation of shock meets this criterion.* *Epidemiologic Linkage Criteria* Close contact‡ with a confirmed or probable case of COVID-19 disease in the 60 days prior to hospitalization. *‡Close contact is generally defined as being within 6 feet for at*	

Multisystem Inflammatory Syndrome in Children (MIS-C) associated with SARS-CoV-2 Infection
11066

Case Definition/Case Classification	Laboratory Confirmation Tests
least 15 minutes (cumulative over a 24-hour period). However, it depends on the exposure level and setting; for example, in the setting of an aerosol-generating procedure in healthcare settings without proper personal protective equipment (PPE), this may be defined as any duration. ***Vital Records Criteria*** A person aged <21 years whose death certificate lists MIS-C or multisystem inflammatory syndrome as an underlying cause of death or a significant condition contributing to death. *Criteria to distinguish a new case of this disease or condition from reports or notifications which should not be enumerated as a new case for surveillance:* A case should be enumerated as a new case if the person had never previously been enumerated as a case OR if the person was most recently enumerated as a case with illness onset date (if available) or hospital admission date >90 days prior.	

Mumps
10180

Case Definition/Case Classification	Laboratory Confirmation Tests
Acute parotitis or other (non-parotid) salivary gland(s) swelling lasting at least 2 days, OR a mumps-associated complication, including orchitis, ophoritis, aseptic meningitis, encephalitis,	• Isolation of mumps virus from a clinical specimen, **OR** • Detection of mumps-virus-specific nucleic acid by PCR

Mumps **10180**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
hearing loss, mastitis, or pancreatitis, unexplained by another more likely diagnosis **Confirmed:** A case that meets confirmatory laboratory evidence **Probable:** A case that meets the clinical criteria, **AND** • Has a positive test for serum anti-mumps immunoglobulin M (IgM) antibody AND does not meet epidemiologic linkage criteria, **OR** • Has exposure to or contact with a confirmed mumps case or is a member of a group or population identified by public health authorities as being at increased risk for acquiring mumps because of an outbreak **Suspect:** A case that has parotitis, acute salivary gland swelling, orchitis, or oophoritis unexplained by another more likely diagnosis, OR a has a positive lab result with no mumps clinical symptoms (with or without an epidemiologic link to a confirmed or probable case) AND documentation that mumps was suspected.	**Note:** An elevated serum amylase is not confirmatory for mumps.

Norovirus
10996

Case Definition/Case Classification	Laboratory Confirmation Tests
Acute onset vomiting with watery, non-bloody diarrhea, abdominal cramps, and nausea. Low-grade fever may also occasionally occur, and vomiting is more common in children. **Confirmed:** A clinically compatible case that is laboratory confirmed **Probable:** A clinically compatible case that is epidemiologically linked to a confirmed case	• Detection of norovirus DNA (PCR) in stool or vomitus. 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. **OR** • Detection of norovirus antigen in stool. **Note:** The etiology of gastrointestinal outbreaks should be confirmed by submitting specimens to the DSHS Laboratory. Sequencing for norovirus strains is available.

Oropouche virus diseases

Oropouche virus diseases, non-congenital
50290
Oropouche virus diseases, congenital
50291

Case Definition/Case Classification	Laboratory Confirmation Tests
Oropouche virus, a member of the *Orthobunyavirus* genus, causes a spectrum of disease including febrile illness, hemorrhagic manifestations, neurologic disease, and congenital malformations. Oropouche is transmitted through the bite of an infected *Culicoides* species midge and possibly also *Culex quinquefasciatus* mosquitoes. Previously endemic to the Amazon basin region, this virus spread in 2024 to more areas of the	• Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid • Four-fold or greater change in virus-specific quantitative antibody titers in paired sera • Virus-specific IgM antibodies in CSF or serum with confirmatory virus-specific neutralizing antibodies in the

Oropouche virus diseases

Oropouche virus diseases, non-congenital
50290
Oropouche virus diseases, congenital
50291

Case Definition/Case Classification	Laboratory Confirmation Tests
Americas. **Clinical criteria:** Absence of a more likely clinical explanation for an abrupt onset of reported fever, headache, and one or more of the following: myalgia, arthralgia, photophobia, retroorbital/eye pain, or signs and symptoms of neuroinvasive disease (e.g., stiff neck, altered mental status, seizures, limb weakness, or cerebrospinal fluid pleocytosis). Symptoms may reoccur. Epidemiologic linkage criteria: Travel within two weeks of initial symptom onset to an area with documented or suspected Oropouche transmission. **Confirmed**: A case that meets clinical criteria, epi link criteria, and confirmatory lab evidence (to right). **Probable**: A case that meets clinical criteria, epi link criteria, and: • Virus-specific IgM antibodies in CSF or serum • Virus-specific neutralizing antibodies in a single CSF or serum specimen	same or a later specimen

Outbreaks, exotic diseases, and unusual expression of disease		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
Outbreaks, exotic diseases, and unusual expression of disease Amebiasis Cronobacter Giardia 11570 Influenza, human isolates 11060 Norovirus 10996 Streptococcal toxic- shock syndrome 11700	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.	

Paragonimiasis
80664

Case Definition/Case Classification	Laboratory Confirmation Tests
Paragonimiasis (lung fluke trematode) is transmitted by eating inadequately cooked crustaceans (primarily crayfish in the US) that are infected with the parasite. Disease most frequently involves the lungs. Initial signs and symptoms may be diarrhea and abdominal pain followed several days later by fever, chest pain, and fatigue. The symptoms may also include a dry cough, which later becomes productive with rusty-colored or blood-tinged sputum on exertion, and pleuritic chest pain. X-ray findings may include diffuse and/or segmental infiltrates, nodules, cavities, ring cysts and/or pleural effusions. Extrapulmonary disease is not uncommon, with flukes found in such sites as the CNS, subcutaneous tissues, intestinal wall, peritoneal cavity, liver, lymph nodes and genitourinary tract. Infection usually lasts for years, and the infected person may be asymptomatic. Paragonimiasis may be mistaken for tuberculosis, clinically and on chest X-rays. **Confirmed:** A case that is laboratory confirmed **Probable**: A clinically compatible case with • Detection of *Paragonimus* antibodies by CF, EIA, or immunoblot, **OR** • Positive skin test for *Paragonimus,* **OR** History of ingestion of inadequately cooked crustaceans and marked eosinophilia with total WBC count in the normal range or supportive x-ray findings	• Microscopic identification of *Paragonimus* eggs in feces, sputum, pleural fluid, CSF, or pus, **OR** • Identification of worms or eggs in biopsies of pulmonary, cerebral, subcutaneous, or intra-abdominal nodules or cystic lesions

Pertussis
10190

Case Definition/Case Classification	Laboratory Confirmation Tests

A cough illness lasting at least 14 days AND at least one of the following additional symptoms in the absence of a more likely diagnosis:
• Paroxysmal coughing, **OR**
• Inspiratory "whoop," **OR**
• Post-tussive vomiting, **OR**
• Apnea (with or without cyanosis)
 	
Confirmed: A person with an acute cough illness of any duration who is laboratory confirmed
 	
Probable: In the absence of a more likely diagnosis, a person who is not laboratory confirmed (not tested, tests are negative, or tested by serology or DFA), and is either:
• A person with an acute cough illness of any duration, with
  • At least one of the following signs or symptoms:
  ○ Paroxysms of coughing, OR
  ○ Inspiratory whoop, OR
  ○ Post-tussive vomiting, OR
  ○ Apnea (with or without cyanosis)
  AND epidemiological linkage to a laboratory confirmed case
OR
• A person who meets the clinical case definition.
	• Isolation (culture) of *Bordetella pertussis* from a clinical specimen,
	OR
	• Positive polymerase chain reaction (PCR) assay for *Bordetella pertussis*
	
	Note: Because *B. pertussis* can be difficult to culture, a negative culture result does not rule out pertussis. 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.

Plague
10440

Case Definition/Case Classification	Laboratory Confirmation Tests
Plague, a bacterial infection caused by *Yersinia pestis*, is transmitted to humans via flea bites or by direct exposure to infected tissues or respiratory droplets. The disease is characterized by fever, chills, headache, malaise, prostration, and leukocytosis and can manifest in one or more specific clinical presentations which typically reflect the route of exposure to the pathogen. *Clinical evidence:* Acute onset of fever as reported by the patient or healthcare provider with or without one or more of the following: regional lymphadenitis, septicemia, pneumonia, or pharyngitis with cervical lymphadenitis. **Confirmed:** A clinically compatible case with confirmatory laboratory evidence, **OR** a clinically compatible case with presumptive laboratory evidence **AND** epidemiologic linkage (see below) **Probable:** A clinically compatible case with a presumptive laboratory evidence* as listed below that lacks an alternative diagnosis and epidemiologic linkage (see below) • Elevated serum antibody titer(s) to *Y. pestis* fraction 1 (F1) antigen (without documented four-fold or greater change) in a patient with no history of plague vaccination, **OR** • Detection of *Y. pestis* specific DNA or antigens, including F1 antigen, in a clinical specimen by DFA, IHC, or PCR **Suspect:** A clinically compatible case without laboratory evidence that has an epidemiologic linkage **OR** an individual with confirmed or presumptive laboratory evidence without any associated clinical information	• Isolation of *Y. pestis* from a clinical specimen with culture identification validated by a secondary assay (e.g. bacteriophage lysis assay, DFA assay) as performed by a CDC or LRN laboratory, **OR** • Four-fold or greater change in paired serum antibody titer to *Y. pestis* F1 antigen For isolates of other species of *Yersinia*, see Yersiniosis Note: As required by Texas Administrative Code, all *Y. pestis* isolates must be submitted to an LRN laboratory.

Plague **10440**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Epidemiologic linkage is defined as one or more of the following*:* • Person that is epidemiologically linked to a person or animals with confirmatory laboratory evidence within the prior two weeks. **OR** • Close contact with a confirmed pneumonic plague case, including but not limited to presence within two meters of a person with active cough due to pneumonic plague. **OR** • A person that lives in or has traveled within two weeks of illness onset to a geographically localized area with confirmed plague epizootic activity in fleas or animals as determined by the relevant local authorities. **Other laboratory tests, including rapid bedside tests, are in use in some low resourced international settings but are not recommended as laboratory evidence of plague infection in the United States.*	

Poliomyelitis, paralytic
10410

Case Definition/Case Classification	Laboratory Confirmation Tests
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 **Confirmed*:** A case that meets the clinical case definition **AND** confirmatory laboratory evidence. *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.	• Poliovirus detected by sequencing of the capsid region of the genome by the CDC Poliovirus Laboratory • Poliovirus detected in an appropriate clinical specimen (e.g., stool [preferred], cerebrospinal fluid, oropharyngeal secretions) using a properly validated assay^, **AND** specimen is not available for, sequencing by the CDC Poliovirus Laboratory

Poliovirus infection, nonparalytic
10405

Case Definition/Case Classification	Laboratory Confirmation Tests
Most poliovirus infections are asymptomatic or cause mild febrile disease. **Confirmed:** Laboratory confirmed poliovirus infection in a person without symptoms of paralytic poliomyelitis	• Poliovirus detected by sequencing of the capsid region of the genome by the CDC Poliovirus Laboratory Poliovirus detected in an appropriate clinical specimen (e.g., stool [preferred], cerebrospinal fluid, oropharyngeal secretions) using a properly validated assay^, **AND** specimen is not available for, sequencing by the CDC Poliovirus Laboratory

Primary amebic meningoencephalitis (PAM)	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
See Amebic meningoencephalitis (PAM)	

Prion diseases, such as Creutzfeldt-Jakob disease (CJD) **80060**	
Case Definition/Case Classification	**Laboratory Tests**
Creutzfeldt-Jakob disease (CJD) is a human prion disease described as rapidly progressive, neurodegenerative, and invariably fatal. Human prion diseases include sporadic forms of disease (sporadic CJD (sCJD), sporadic fatal insomnia (sFI), and variably protease-sensitive prionopathy (VPSPr)), genetic/familial forms of disease (genetic or familial CJD (gCJD or fCJD), fatal familial insomnia (FFI), and Gerstmann-Sträussler-Scheinker syndrome (GSS)), and acquired forms of disease (iatrogenic CJD (iCJD), Kuru (described only in the Fore population of Papua New Guinea), and variant CJD (vCJD)). Classical sporadic CJD presentation consists of rapidly progressive dementia, visual abnormalities, myoclonus, or cerebellar dysfunction (where both balance abnormalities and muscle incoordination can be seen). 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 4-5 months; the duration of illness is usually less than 12 months.	**Confirmatory Laboratory Criteria (brain tissue) - sporadic, genetic/familial & iatrogenic CJD** • Diagnosis by standard neuropathological techniques **AND/OR** • Immunohistochemistry **AND/OR** • Western blot confirmed protease-resistant PrP **AND/OR** • Presence of scrapie-associated fibrils **Supportive Laboratory Criteria - sporadic, genetic/familial & iatrogenic CJD**

Prion diseases, such as Creutzfeldt-Jakob disease (CJD)
80060

Case Definition/Case Classification	Laboratory Tests
For purposes of surveillance and notification: prion diseases such as Creutzfeldt-Jakob disease (CJD) includes sCJD, and also includes SFI, VPSPr, any gCJD or fCJD, FFI, GSS syndrome, iCJD, Kuru, vCJD, and any novel prion disease affecting humans. **Sporadic CJD (sCJD)*** *Confirmed:* Satisfactory confirmatory test findings on autopsy or biopsy of brain tissue **Probable:** • Neuropsychiatric disorder AND positive RT-QuIC in CSF or other tissues **OR** • Rapidly progressive dementia AND at least two of the following four clinical features: **a)** Myoclonus **b)** Visual or cerebellar signs **c)** Pyramidal/extrapyramidal signs **d)** Akinetic mutism AND satisfying at least one of the supportive laboratory criteria, AND absence of routine investigations indicating an alternative diagnosis **Possible (Suspect):** Progressive dementia AND at least two of the following four clinical features: **a)** Myoclonus **b)** Visual or cerebellar signs **c)** Pyramidal/extrapyramidal signs	• CSF 14-3-3 protein: Reported as elevated, above normal limits, or positive. If 14-3-3 protein is the only supportive test used in determining classification, then duration of illness must be < 2 years. • CSF RT-QuIC: 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 limitation on duration of illness. • Brain MRI: High signal abnormalities in the caudate nucleus and/or putamen OR in at least two cortical regions (temporal, parietal, occipital) on diffusion-weighted imaging (DWI) or fluid attenuated inversion recovery (FLAIR). No limitation on duration of illness. **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". **Note:** 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

Prion diseases, such as Creutzfeldt-Jakob disease (CJD) 80060	
Case Definition/Case Classification	**Laboratory Tests**
d) Akinetic mutism AND absence of any supportive laboratory criteria, AND duration of illness < 2 years, AND absence of routine investigations indicating an alternative diagnosis *sCJD includes sporadic fatal insomnia (sFI) and variably protease-sensitive prionopathy (VPSPr) which are typically neuropathologic diagnoses. **Genetic/Familial CJD (gCJD or fCJD) **** A classification of *Confirmed* or *Probable* requires: • Confirmed or probable CJD AND confirmed or probable CJD classification in a first degree relative **AND/OR** • Neuropsychiatric disorder AND disease specific PRNP gene mutation **Fatal familial insomnia (FFI) and Gerstmann-Sträussler-Scheinker syndrome (GSS) are specific genetic/familial CJD diseases, and classification will be based on neuropathology results and/or a specific PRNP gene mutation for the disease and family history. **Acquired CJD***** Iatrogenic CJD (iCJD): • Progressive cerebellar syndrome in a recipient of human cadaveric-derived pituitary hormone **OR**	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 and arranging autopsy with the NPDPSC and family members. Autopsy is "highly suggested" for all cases with onset age less than 55 years or physician diagnosed CJD that does not meet the epidemiologic case criteria.

Prion diseases, such as Creutzfeldt-Jakob disease (CJD)
80060

Case Definition/Case Classification	Laboratory Tests
• Meets sCJD criteria AND a recognized exposure risk (e.g., antecedent neurosurgery with dura mater graft) ***Acquired CJD also includes vCJD. See specific vCJD case definition below.	
Variant CJD (vCJD) was first described in 1996 in the United Kingdom, and there is strong evidence it is the same agent that was responsible for the bovine spongiform encephalopathy (BSE) outbreak in cattle. Variant CJD is characterized by presumed exposure to BSE most commonly through consumption of contaminated meat, a prolonged incubation period of many years or decades, and presence of a neuropsychiatric disease that is progressive and invariably fatal. Median age at death in the United Kingdom is 28 years old. Clinical presentation includes early psychiatric symptoms (anxiety/depression/withdrawal) or sensory symptoms, and delayed development of neurologic signs (≥ 4 months), and duration of illness lasting over 6 months with a median duration of illness of 13-14 months. **Confirmed:** Confirmatory laboratory criteria are met **Suspect****:** The following criteria are met: • Current age or age at death <55 years old (a brain autopsy is recommended, however, for all physician diagnosed CJD cases) • Psychiatric symptoms at illness onset AND/OR persistent painful sensory symptoms (frank pain and/or dysesthesia)	**Confirmatory Laboratory Criteria (brain tissue) – variant CJD** • 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. **Supportive Laboratory Criteria – variant CJD** • 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 brain MRI (relative to other deep gray-matter nuclei)

Prion diseases, such as Creutzfeldt-Jakob disease (CJD)
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Case Definition/Case Classification	Laboratory Tests
• 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.) • A normal or an abnormal EEG, BUT NOT the diagnostic EEG changes often seen in classic CJD. • Duration of illness of over 6 months • Routine investigations of the patient do not suggest an alternative, non-CJD diagnosis. • No history of receipt of cadaveric human pituitary growth hormone or a dura mater graft • No history of CJD in a first degree relative or PRNP gene mutation in the patient • Presence of "bilateral pulvinar high signal" or "pulvinar sign" or "symmetrical, bilateral high signal in the posterior thalamic nuclei" on brain MRI, **AND** • Presence of all of the following: a progressive neuropsychiatric disorder, a normal or an abnormal EEG, BUT NOT the diagnostic EEG changes often seen in classic CJD, duration of illness of over 6 months, routine investigations of the patient do not suggest an alternative, non-CJD diagnosis, & no history of receipt of cadaveric human pituitary growth hormone or a dura mater graft	**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". **Note:** 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 and arranging autopsy with the NPDPSC and family members. Autopsy is "highly suggested" for all cases with onset age less than 55 years or physician diagnosed CJD that does not meet the epidemiologic case criteria.

Prion diseases, such as Creutzfeldt-Jakob disease (CJD)
80060

Case Definition/Case Classification	Laboratory Tests

AND
• Four of the following five criteria:
  ○ Early psychiatric symptoms (anxiety, apathy, delusions, depression, withdrawal)
  ○ Persistent painful sensory symptoms (frank pain and/or dysesthesia)
  ○ Ataxia
  ○ Myoclonus or chorea or dystonia
  ○ Dementia
****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.	

Q Fever, acute
10257

Case Definition/Case Classification	Laboratory Confirmation Tests
Q fever is a zoonotic disease caused by *Coxiella burnetii*. Asymptomatic infection occurs in approximately half of those infected. Exposure to *C. burnetii* 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	• Serological evidence of a four-fold change in IgG-specific antibody titer to *C. burnetii* Phase II antigen by IFA between paired serum samples (preferably one taken during the first week of illness and a second 3-6 weeks later; phase I titer may be elevated as well), **OR** • Detection of *C. burnetii* DNA in a clinical specimen by PCR, **OR**

Q Fever, acute
10257

Case Definition/Case Classification	Laboratory Confirmation Tests
infection, if symptomatic, is characterized by acute onset of fever accompanied by rigors, myalgia, malaise, and severe retrobulbar headache, and can include fatigue, night sweats, dyspnea, confusion, nausea, diarrhea, abdominal pain, vomiting, non-productive cough, or chest pain. Acute hepatitis, atypical pneumonia, and meningoencephalitis may be present with severe disease. Pregnant women are at risk for fetal death and abortion. Clinical laboratory findings can include elevated liver enzyme levels, leukocytosis, and thrombocytopenia. **Clinical evidence:** Acute fever and one or more of the following: rigors, severe retrobulbar headache, acute hepatitis, pneumonia, or elevated liver enzyme levels. **Confirmed:** A clinically compatible case that is laboratory confirmed **Probable:** A clinically compatible case with a single supportive IgG-specific antibody titer to *C. burnetii* Phase II antigen of ≥1:128 by IFA, and the absence of a more likely clinical explanation	• Demonstration of *C. burnetii* antigen in a clinical specimen by IHC, **OR** • Isolation of *C. burnetii* from a clinical specimen in cell culture

Q Fever, chronic
10258

Case Definition/Case Classification	Laboratory Confirmation Tests
Chronic Q fever is characterized by a *Coxiella burnetii* infection that persists for more than 6 months. Potentially fatal endocarditis	• Serological evidence of IgG antibody to *C. burnetii* Phase I antigen of ≥1:800 by IFA (phase II will likely be elevated as

Q Fever, chronic
10258

Case Definition/Case Classification	Laboratory Confirmation Tests
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. **Clinical evidence:** 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 a compromised immune system). **Confirmed:** A clinically compatible (meets clinical evidence criteria) case of chronic illness that is laboratory confirmed **Probable:** A clinically compatible case of chronic illness with an antibody titer to *C. burnetii* Phase I IgG antigen that is ≥1:128 and <1:800 by IFA	well but will generally be lower than phase I) **OR** • Detection of *C. burnetii* DNA in a clinical specimen by PCR, **OR** • Demonstration of *C. burnetii* antigen in a clinical specimen by IHC, **OR** • Isolation of *C. burnetii* from a clinical specimen in cell culture

Rabies, animal
10340

Case Definition/Case Classification	Laboratory Confirmation Tests
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	• A positive DFA test (preferably performed on central nervous system tissue), **OR**

Rabies, animal
10340

Case Definition/Case Classification	Laboratory Confirmation Tests
usually acquire rabies infections from wild animals. Medical authorities distinguish between "furious" and "dumb" rabies on the basis of clinical signs. 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. **Confirmed:** A case that is laboratory confirmed	• Isolation of rabies virus (in cell culture or in a laboratory animal) **OR** • A positive rabies virus direct rapid immunohistochemical test (dRIT) **OR** • A positive rabies virus test by immunohistochemistry (IHC) on formalin-fixed tissue **OR** • A positive pan-lyssavirus probe-based real time reverse transcription-polymerase chain reaction (RT-PCR test) **OR** • Detection of lyssavirus nucleic acid by genomic sequencing

Rabies, human
10460

Case Definition/Case Classification	Laboratory Confirmation Tests
Rabies is an acute encephalomyelitis that almost always progresses to coma or death within 10 days after the first symptom.	• Detection of Lyssavirus antigens in a clinical specimen (preferably the brain or the nerves surrounding hair follicles in the nape of the neck) by DFA,

Rabies, human
10460

Case Definition/Case Classification	Laboratory Confirmation Tests
Confirmed: A clinically compatible case that is laboratory confirmed by testing at a state or federal public health laboratory **Note:** Laboratory confirmation by all of the methods listed under "Lab Confirmation Tests" is strongly recommended.	**OR** • Isolation (in cell culture or in a laboratory animal) of Lyssavirus from saliva, 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 RT-PCR in saliva, CSF, or tissue

Relapsing fever, tick-borne (TBRF)
10845

Case Definition/Case Classification	Laboratory Confirmation Tests
Tick-borne Relapsing Fever (TBRF) is an illness caused by infection with some members of the genus *Borrelia,* including *B. hermsii, B. parkeri,* and *B. turicatae. Borrelia* spirochetes that cause TBRF are transmitted to humans through the bite of infected "soft ticks" of the genus *Ornithodoros*. Each relapsing fever group *Borrelia* species is usually associated with a specific tick species: *B. hermsii* is transmitted by *O. hermsi*, *B. parkeri* by *O. parkeri*, and *B. turicatae* by *O. turicata* ticks. Disease	• Isolation of *Borrelia hermsii, B. parkeri*, or *B. turicatae* from blood using a *Borrelia*-specific medium such as Barbour-Stoenner-Kelly (BSK) broth medium **OR** • *Borrelia hermsii, B. parkeri,* or *B. turicatae* detection through nucleic acid testing, such as PCR, which differentiates soft-tick relapsing fever *Borrelia* spp. from other relapsing fever *Borrelia* spp.

Relapsing fever, tick-borne (TBRF)
10845

Case Definition/Case Classification	Laboratory Confirmation Tests
incubation averages one week following a tick bite. Illness is characterized by periods of fever, often exceeding 103°F, lasting 2-7 days, alternating with afebrile periods of 4-14 days. Febrile periods are often accompanied by shaking chills, sweats, headache, muscle and joint pain, and nausea/vomiting. TBRF may be fatal in 5-10% of untreated cases. TBRF contracted during pregnancy can cause spontaneous abortion, premature birth, and neonatal death. **Clinical evidence:** Measured fever ≥38.8°C (102°F) alone **OR** one or more episodes of subjective or measured fever <101°F **AND** two or more of the following: headache, myalgia, nausea/vomiting, or arthralgia. **Epidemiologic linkage criteria:** Onset of clinically compatible illness 2-18 days after sharing the same exposure site and time as a confirmed case. **Exposure criteria***:* Exposure is defined as time spent in a county in which *Ornithodoros* soft ticks are present or where a confirmed autochthonous case of TBRF has been previously reported. Time spent in cabins, caves, around firewood, or other possible soft tick habitat within 2-18 days of symptom onset is considered highest risk. **Confirmed:** A clinically compatible illness that is laboratory confirmed, **OR** a clinically compatible illness with presumptive laboratory evidence* that meets the exposure and/or epidemiologic linkage criteria. **Probable:** A clinically compatible illness with presumptive laboratory evidence*, defined as: • Identification of *Borrelia* spirochetes in peripheral blood, bone marrow, or cerebral spinal fluid (CSF),	

Relapsing fever, tick-borne (TBRF)
10845

Case Definition/Case Classification	Laboratory Confirmation Tests
OR • Serologic evidence of *Borrelia hermsii*, *B. parkeri*, or *B. turicatae* infection by equivocal or positive EIA and positive Western blot, **OR** • Relapsing fever *Borrelia* detection through nucleic acid testing, such as PCR, which does not differentiate soft-tick relapsing fever *Borrelia* spp. from other relapsing fever *Borrelia* spp. **Note:** Antibodies stimulated by other spirochetal infections (e.g., Lyme disease and syphilis) may cross react on TBRF serologic assays. Epidemiological information including exposure history is crucial to differentiate positive serology results.	

Rickettsiosis, unspecified
65466

Case Definition/Case Classification	Laboratory Confirmation Tests
Flea-borne typhus and spotted fever rickettsioses (SFR) are vector-borne infections caused by some members of the genus *Rickettsia*. These infections can be difficult to differentiate clinically and serologically due to antibody cross-reactivity. **Clinical evidence:** Acute illness lasting less than 30 days with fever and two or more of the following: rash, headache, nausea/vomiting, myalgia, anemia, thrombocytopenia, or elevated liver enzymes.	• Not applicable – see note

Rickettsiosis, unspecified
65466

Case Definition/Case Classification	Laboratory Confirmation Tests
Probable: A case that meets clinical criteria with similar elevations* in IgG serologic titers (≥1:128 to spotted fever and/or typhus group antigens) in a sample taken within 60 days of illness onset that cannot be definitively classified as spotted fever rickettsiosis or flea-borne typhus and does not have a more likely clinical explanation. **Serologic IgG titers that are equal or within one dilution of each other* **Note:** For "Rickettsiosis, unspecified," an undetermined case can only be classified as probable. See *Rickettsia* Classification	

Rubella
10200

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness that has all the following characteristics: Acute onset of generalized maculopapular rash **AND** fever or temperature >99°F (37.2°C), if measured; **AND** arthralgia/arthritis, lymphadenopathy, or conjunctivitis. **Confirmed:** • Meets confirmatory laboratory evidence, **OR** • Meets presumptive laboratory evidence **AND** epidemiologic linkage criterion of "contact with a laboratory-confirmed	**Confirmatory Lab Evidence** • Detection of rubella virus (e.g., RT-PCR, culture, next generation sequencing [NGS]) • Significant rise (at least four-fold) between acute- and convalescent-phase titers in serum rubella immunoglobulin G (IgG) antibody level* • Positive serum rubella immunoglobulin M (IgM) antibody**, *** **AND** low IgG avidity**

Rubella **10200**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
rubella or congenital rubella case during the case's likely infectious period", **OR** • Meets clinical criteria, **AND** meets epidemiologic linkage criterion of "close contact (e.g., household contact) with a laboratory-confirmed rubella or congenital rubella case during the case's likely infectious period", **OR** • Meets presumptive laboratory evidence **AND** meets epidemiologic linkage criterion of "international travel in the 23 days prior to rash onset" **AND** lacks presumptive evidence of rubella immunity prior to infection, **OR** • Meets epidemiologic linkage criterion of "gave birth to an infant with confirmed congenital rubella." **Probable:** • Meets clinical criteria **AND** meets presumptive laboratory evidence **AND** lacks presumptive evidence of rubella immunity prior to infection. ***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.*	**Presumptive Laboratory Evidence†:** • Positive serum rubella immunoglobulin M (IgM) antibody**, ***† * ***Note:*** *The categorical labels used here to stratify laboratory evidence are intended to support the standardization of case classifications for public health surveillance. These categorical labels should not be used to interpret the utility or validity of any laboratory test methodology.* ** *In the absence of rubella vaccination during the previous 6-45 days.* *** *Acquired rubella was suspected, testing not conducted as part of routine immunity screening (e.g., titers for employment documentation).* † *When not superseded by more specific testing in a public health laboratory.*

Rubella, congenital syndrome

10370

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness of newborns resulting from rubella infection in utero and characterized by signs or symptoms from the following categories: **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, meningoencephalitis, or radiolucent bone disease **Confirmed:** A clinically consistent case that is laboratory confirmed **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	• 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

Salmonella Paratyphi

50266

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness caused by *Salmonella* Paratyphi serotypes A, B (tartrate negative), and C that is often characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea, and non-productive cough. However, mild and atypical infections may occur. Carriage of *S*.	**Confirmed:** • Isolation of *S.* Paratyphi A, B (tartrate negative), or C from a clinical specimen **Probable:** • Detection of S. Paratyphi A, B (tartrate negative), or C in a

Salmonella Paratyphi

50266

Case Definition/Case Classification	Laboratory Confirmation Tests
Paratyphi A, B (tartrate negative), and C may be prolonged. **Confirmed:** A case that is laboratory confirmed **Probable:** • A clinically compatible case with *S.* Paratyphi A, B (tartrate negative), or C detected by use of culture independent laboratory methods (non-culture based), **OR** • A clinically compatible case that is epidemiologically linked to a case that meets the probable or confirmed laboratory criteria for diagnosis. **Notes:** • Both asymptomatic infections and infections at sites other than the gastrointestinal tract, if laboratory confirmed, are considered confirmed cases that should be reported. • S.Paratyphi B (tartrate positive) was previously known as S.Java and should be reported under the "Salmonellosis, non-paratyphi/non-typhi" condition • Carriage of *S.* Paratyphi A, B (tartrate negative), and C can be prolonged. A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection, e.g., different serotype.	clinical speciment using a CIDT **Note:** As required by Texas Administrative Code all *Salmonella* spp. isolates must be submitted to the DSHS Laboratory.

Salmonella Typhi
50267

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness caused by *Salmonella* Typhi that is often characterized by insidious onset of sustained fever, headache, malaise, anorexia, relative bradycardia, constipation or diarrhea, and non-productive cough. However, mild and atypical infections may occur. Carriage of *S*. Typhi may be prolonged. **Confirmed:** A case that is laboratory confirmed **Probable:** • A clinically compatible case with *S.* Typhi detected by use of culture independent laboratory methods (non-culture based), **OR** • A clinically compatible case that is epidemiologically linked to a case that meets the probable or confirmed laboratory criteria for diagnosis. **Notes:** • Both asymptomatic infections and infections at sites other than the gastrointestinal tract, if laboratory confirmed, are considered confirmed cases that should be reported. • Carriage of *S*. Typhi can be prolonged. A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection, e.g., different serotype.	**Confirmed:** • Isolation of *S.* Typhi from blood, stool, or other clinical specimen **Probable:** • Detection of S.Typhi in a clinical specimen using a CIDT Note: As required by Texas Administrative Code all *Salmonella* spp. isolates must be submitted to the DSHS Laboratory.

Salmonellosis, non-Paratyphi/non-Typhi **50265**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
An illness of variable severity commonly manifested by diarrhea, fever, abdominal pain, nausea, and sometimes vomiting. Asymptomatic infections can occur, and the organism can cause extraintestinal infections. **Confirmed:** A case that is laboratory confirmed. When available, *Salmonella* serotype characterization should be reported. **Probable:** • A case with *Salmonella sp*. (excluding *S.* Typhi and *S.* Paratyphi [A, B (tartrate negative), and C]) detected by use of culture independent laboratory methods (non-culture based), **OR** • A clinically compatible case that is epidemiologically linked to a case that meets the probable or confirmed laboratory criteria for diagnosis. **Notes:** • A case with isolation of *S.* Paratyphi B (tartrate positive) from a clinical specimen should be reported as a "Salmonellosis, non-Paratyphi/non-Typhi" case. • Both asymptomatic infections and infections at sites other than the gastrointestinal tract, if laboratory confirmed, are considered confirmed cases that should be reported. • A case should not be counted as a new case if laboratory results were reported within 365 days of a previously	**Confirmed:** Isolation of *Salmonella* (excluding *S.* Typhi and *S*. Paratyphi [A, B (tartrate negative), and C]) * from a clinical specimen **OR** A whole genome sequencing result from DSHS **Probable:** Detection of Salmonella spp. in a clinical specimen using a CIDT. Notes**:** **S.* Typhi is reportable as *Salmonella* Typhi. **S.* Paratyphi is reportable as *Salmonella* Paratyphi. Note: As required by Texas Administrative Code all *Salmonella* spp. isolates must be submitted to the DSHS Laboratory.

Salmonellosis, non-Paratyphi/non-Typhi 50265	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
reported infection in the same individual, unless additional information is available indicating a separate infection, e.g., different serotype.	

Shiga toxin-producing *Escherichia coli* (STEC) 11563	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
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. **Confirmed:** A case that meets the laboratory criteria for diagnosis; when available, O and H antigen serotype characterization should be reported **Probable:** • A case with isolation of *E. coli* O157 from a clinical specimen, without confirmation of H antigen, with detection of Shiga toxin or detection of Shiga toxin genes, **OR**	**Confirmed:** • Isolation of *Escherichia coli* from a clinical specimen with detection of Shiga toxin or Shiga toxin genes, **OR** • Isolation of *Escherichia coli* O157:H7 from a clinical specimen, **OR** • A whole genome sequinning result from DSHS **Probable:** • Detection of Shiga toxin or Shiga toxin gene in a clinical specimen using a CIDT **OR**

Shiga toxin-producing *Escherichia coli* (STEC)
11563

Case Definition/Case Classification	Laboratory Confirmation Tests
• A clinically compatible case that is epidemiologically linked to a confirmed or probable case with laboratory evidence, **OR** • A clinically compatible illness in a person with identification of an elevated antibody titer to a known Shiga toxin-producing *E. coli* serotype, **OR** • A clinically compatible illness in a person with detection of Shiga toxin or Shiga toxin genes in a clinical specimen using a CIDT and no known isolation of *Shigella* from a clinical specimen, **OR** • A clinically compatible illness in a person with detection of *E. coli* O157 or Shiga toxin-producing *E. coli* in a clinical specimen using a CIDT, **OR** • A clinically compatible illness in a person that is a member of a risk group as defined by public health authorities during an outbreak. **Suspect:** • Identification of an elevated antibody titer against a known Shiga toxin-producing serogroup of *E. coli* in a person with no known clinical compatibility,	• Detection of E. coli 0157 or STEC/EHEC in a clinical specimen using a CIDT **Notes:** • *Escherichia coli* non-O157:H7 isolates must also have Shiga toxin-production verified to qualify for the "confirmed" case status. Shiga toxin can be demonstrated by EIA or PCR testing. • As required by Texas Administrative Code, for all cases of Shiga toxin-producing *E.coli* infections, including *E.coli* 0157:H7 and cases where Shiga-toxin activity is demonstrated, available isolates or specimens must be submitted to the DSHS Laboratory.

Shiga toxin-producing *Escherichia coli* (STEC)
11563

Case Definition/Case Classification	Laboratory Confirmation Tests
OR • Detection of Shiga toxin or Shiga toxin genes in a clinical specimen using a CIDT and no known isolation of *Shigella* from a clinical specimen in a person with no known clinical compatibility, **OR** • Detection of *E. coli* O157 or Shiga toxin-producing *E. coli* in a clinical specimen using a CIDT with no known clinical compatibility, **OR** • A person with a diagnosis of post-diarrheal HUS/TTP **Notes:** • EIA and/or PCR positive results for Shiga toxin-production, in the absence of isolation of *E.coli*, can only qualify a case as "probable." • Cases meeting confirmed or probable criteria for both STEC and HUS should be reported separately under each condition. • A case should not be counted as a new case if a positive laboratory result is reported within 180 days of a previously reported positive laboratory result in the same individual, OR • When two or more different serogroups are identified in one or more specimens from the same individual, each serogroup/serotype should be reported as a separate case.	

Shiga toxin-producing *Escherichia coli* (STEC)
11563

Case Definition/Case Classification	Laboratory Confirmation Tests
• Persons with (1) detection of Shiga toxin or Shiga toxin genes using a CIDT and (2) isolation of *Shigella* spp. from a clinical specimen should not be reported as an STEC case.	

Shigellosis
11010

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections can occur. **Confirmed:** A case that is laboratory confirmed. When available, *Shigella* serogroup or species and serotype characterization should be reported. **Probable:** • A case with *Shigella* spp. or *Shigella*/EIEC detected, in a clinical specimen, by use of culture independent laboratory methods (non-culture based, CIDT), **OR** • A clinically compatible case that is epidemiologically linked to a case that meets the probable or confirmed laboratory criteria for diagnosis. **Notes:** • Both asymptomatic infections and infections at sites other than the gastrointestinal tract, if laboratory confirmed, are considered confirmed cases that should be reported. • A case should not be counted as a new case if laboratory results were reported within 90 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection, e.g., different serotype.	**Confirmed:** • Isolation of Shigella from a clinical specimen. **OR** • A whole genome sequencing result from DSHS. **Probable:** Detection of Shigella spp. or Shigella/EIEC in a clinical specimen using a CIDT

Smallpox
11800

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness with acute onset of fever ≥101ºF (≥38.3ºC) followed by a rash characterized by firm, deep-seated vesicles or pustules in the same stage of development without other apparent cause. **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. **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. (Detailed clinical description is available on the CDC web site, see https://www.cdc.gov/smallpox/clinicians/clinical-disease.html.) ***Suspect:*** A case with a generalized, acute vesicular or pustular rash illness with fever preceding development of rash by 1-4 days **Exclusion Criteria*:*** A case 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. **Note:** • The smallpox case definition above is to be used only during post-event surveillance. • Pre-event surveillance relies on a highly specific clinical case definition focused on identifying a classic case (ordinary	• Polymerase chain reaction (PCR) identification of variola DNA in a clinical specimen, **OR** • Isolation of smallpox (variola) virus from a clinical specimen (National LRN laboratory only; confirmed by variola PCR) **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. • Generic orthopox PCR and negative stain electron microscopy (EM) identification of a pox virus in a clinical specimen are suggestive of an orthopox virus infection but not diagnostic for smallpox.

Smallpox
11800

Case Definition/Case Classification	Laboratory Confirmation Tests
type) of smallpox. In the absence of known smallpox disease, the predictive value of a positive smallpox diagnostic test is extremely low, 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. • For post-event enhanced surveillance and case reporting guidance see https://www.cdc.gov/smallpox/bioterrorism-response-planning/public-health/enhanced-surveillance-case-reporting.html.	

Spotted fever rickettsiosis
10250

Case Definition/Case Classification	Laboratory Confirmation Tests
Spotted fever rickettsioses (SFR) are tick-borne infections caused by some members of the genus *Rickettsia*. The most well-known SFR is Rocky Mountain spotted fever (RMSF), an illness caused by *Rickettsia rickettsii*. Disease onset for RMSF averages one week following a tick bite. 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 may appear 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,	• Serological evidence of a four-fold increase in IgG-specific antibody titer reactive with SFGR** antigen by IFA betwee paired acute (taken in the first two weeks after illness onset) and convalescent (taken two to ten weeks after acu specimen collection) serum specimens, **OR** • Detection of SFGR** nucleic acid in a clinical specimen via amplification of a species-specific target by PCR assay,

Spotted fever rickettsiosis
10250

Case Definition/Case Classification	Laboratory Confirmation Tests
human illness associated with other spotted fever group *Rickettsia* (SFGR) species, including infection with *R. parkeri*, 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 SFR. ***Clinical evidence:*** Acute illness lasting less than 30 days with fever and one or more of the following: rash, eschar, headache, myalgia, anemia, thrombocytopenia, or any hepatic transaminase elevation. ***Confirmed:*** Clinically compatible case (meets clinical evidence criteria) that is laboratory confirmed ***Probable:*** Clinically compatible case with serological evidence of elevated IgG antibody reactive with SFGR antigen* by IFA (serologic titer of ≥1:128; specimen collected within 60 days of onset) and the absence of a more likely clinical explanation **Notes:** • Because antibodies for rickettsial diseases can be cross-reacti specimens should be tested against a panel* of *Rickettsia* antigens, including, at a minimum, *R. rickettsii* and *R. typhi*, t differentiate between SFGR and non-SFGR species. • A case should not be counted as new if the case has ever previously been reported for the same condition. ** Specimens can be forwarded to the DSHS Serology lab for rickettsial panel testing.* See Rickettsia Classification	**OR** • Demonstration of SFGR** antigen in a biopsy or autopsy specimen by IHC, **OR** • Isolation of SFGR** from a clinical specimen in cell culture ar molecular confirmation (e.g., PCR). **The spotted fever group *Rickettsia* (SFGR) are *R. aeschlimannii, R. africae, R. australis, R. conorii, R. heilongjiangensis, R. helvetica, R. honei, R. japonica, R. marmionii, R. massiliae, R. parkeri, R. rickettsii, R. sibirica, R. sibirica mongolotimonae,* and *R. slovaca*. *Rickettsia* spp. excluded from this group are *R. felis* and *R. akari*. **Note:** Samples can be forwarded for additonal testing at the DSHS lab or CDC.

Streptococcal toxic shock syndrome - [outbreaks only]
11700

Case Definition/Case Classification	Laboratory Confirmation Tests
Streptococcal toxic-shock syndrome (STSS) is a severe illness associated with invasive or noninvasive group A streptococcal (*Streptococcus pyogenes*) infection. STSS may occur with infection at any site but most often occurs in association with infection of a cutaneous lesion. Signs of toxicity and a rapidly progressive clinical course are characteristic, and the case fatality rate may exceed 50%. An illness with the following clinical manifestations: 1) Hypotension defined by a systolic blood pressure less than or equal to 90 mm Hg for adults or less than the fifth percentile by age for children aged less than 16 years, **AND** 2) Multi-organ involvement characterized by two or more of the following: *Renal Impairment*: Creatinine greater than or equal to 2 mg/dL (greater than or equal to 177 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. *Coagulopathy*: Platelets less than or equal to 100,000/mm^3 (less than or equal to 100 x 10^6/L) or disseminated intravascular coagulation, defined by prolonged clotting times, low fibrinogen level, and the presence of fibrin degradation products	Isolation of group A Streptococcus (S. pyogenes) (GAS)

Streptococcal toxic shock syndrome - [outbreaks only]
11700

Case Definition/Case Classification	Laboratory Confirmation Tests
Liver Involvement: Alanine aminotransferase, aspartate aminotransferase, or total bilirubin levels greater than or equal to twice the upper limit of normal for the patient's age. In patients with preexisting liver disease, a greater than twofold increase over the baseline level. *Acute Respiratory Distress Syndrome*: Defined by acute onset of diffuse pulmonary infiltrates and hypoxemia in the absence of cardiac failure or by evidence of diffuse capillary leak manifested by acute onset of generalized edema, or pleural or peritoneal effusions with hypoalbuminemia. A generalized erythematous macular rash that may desquamate Soft-tissue necrosis, including necrotizing fasciitis or myositis, or gangrene **Confirmed:** A case that meets the clinical case definition and is laboratory confirmed with isolation of group A *Streptococcus* from a normally sterile site (e.g., blood or cerebrospinal fluid or, less commonly, joint, pleural, or pericardial fluid) **Probable:** A case that meets the clinical case definition in the absence of another identified etiology for the illness and with isolation of group A *Streptococcus* from a non-sterile site **Note:** Enter all confirmed and probable STSS cases as confirmed group A *Streptococcus*, invasive disease, code 11710.	

11723*

*Note: Code 11717 was used prior to 2010 and for 2010 there are cases under both codes.

Case Definition/Case Classification	Laboratory Confirmation Tests
Streptococcus pneumoniae bacteria cause many clinical syndromes, depending on the site of infection (e.g., acute otitis media, pneumonia, bacteremia, or meningitis). Only invasive *Streptococcus pneumoniae* is reportable. ***Confirmed:*** A case that is laboratory confirmed ***Probable:*** A case with detection of *S. pneumoniae* from a normally sterile site using a culture independent diagnostic test (CIDT) (e.g., PCR, antigen-based tests) without isolation of the bacteria **Note:** Positive lab results from a specimen collected more than 30 days after the collection date of a prior case should be counted as a new case. If specimen collection occurred within 30 days of the collection date of a prior case, it should not be counted as a new case.	Isolation of *S. pneumoniae* from a normally sterile site (e.g., blood or cerebrospinal fluid, or, less commonly, joint, pleural, or pericardial fluid) See Normally Sterile Site and *Streptococcus* Classification **Note:** Serotyping of isolates can be performed at the DSHS laboratory. Serotyping is required by Texas Administrative Code for invasive *Streptococcus pneumoniae* cases on all isolates from children under 5 years old.

Taenia solium and undifferentiated Taenia infection
80680

Case Definition/Case Classification	Laboratory Confirmation Tests
Taeniasis is an intestinal infection with the adult stage of the pork (*T. solium*) or beef (*T. saginata*) tapeworm. Clinical manifestations of infection with the 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 *T. solium* can cause fatal cysticercosis. *Confirmed:* Laboratory identification of the presence of *T. solium* proglottids, eggs, or antigens in a clinical specimen *Probable:* Laboratory identification of the presence of undifferentiated *Taenia* spp. tapeworm proglottids or eggs in a clinical specimen See Cysticercosis	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. **Note:** Eggs of T. solium and T. saginata cannot be differentiated morphologically. Specific diagnosis is based on the morphology of the scolex (head) and/or gravid proglottids.

Tetanus
10210

Case Definition/Case Classification	Laboratory Confirmation Tests
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. **Probable:** A clinically compatible case, as reported by a health-care professional	Not applicable

Trichinellosis (Trichinosis)
10270

Case Definition/Case Classification	Laboratory Confirmation Tests
A disease caused by ingestion of *Trichinella* larvae. The disease has variable clinical manifestations. Common signs and symptoms include eosinophilia, fever, myalgia, and periorbital edema. **Confirmed:** A clinically compatible case that is laboratory confirmed in the patient **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. **Suspect:** A person without clinically compatible illness who shared an implicated meal or ate an implicated meat product, has no known prior history of *Trichinella* infection, and has a positive serologic test for trichinellosis. **Notes:** • 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.	• Demonstration of *Trichinella* spp. larvae in tissue obtained by muscle biopsy, **OR** • Positive serologic test for *Trichinella* spp.

Trichuriasis

80790

Case Definition/Case Classification	Laboratory Confirmation Tests
A parasitic infection caused by the soil-transmitted helminth *Trichuris trichiura* (whipworm). People with light infections are usually asymptomatic. Cases with heavy infections may experience frequent, painful passage of stool that contains a mixture of mucus, water, and blood. Rectal prolapse can also occur. Heavy infections in children can lead to severe anemia, delayed physical growth and impaired cognitive development. **Confirmed:** A case that is laboratory confirmed **Probable:** A clinically compatible case AND Detection of *Trichuriais trichuria* DNA using a diagnostic molecular test (e.g., PCR, NAAT, genomic sequencing). **Suspect:** Detection of *Trichuriais trichuria* DNA using a diagnostic molecular test (e.g., PCR, NAAT, genomic sequencing) in an asymptomatic individual	• Microscopic identification of *Trichuris* eggs or adult worms in feces, **OR** • Observation during endoscopy of *Trichuris* adult worms characterized by a threadlike form with an attenuated, whip-like end, **OR** • Examination of adult *Trichuris* worms on prolapsed rectal mucosa **Note:** A laboratory confirmed case may involve the examination of adult worms or the microscopic identificaion of adult worms or eggs

Tularemia

10230

Case Definition/Case Classification	Laboratory Confirmation Tests
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	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

Tularemia **10230**	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
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 *Francisella tularensis*, or exposure to potentially contaminated water. Illness is characterized by several distinct forms, including the following: 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 Pneumonic: primary pleuropulmonary disease Typhoidal: febrile illness without early localizing signs and symptoms **Confirmed:** A clinically compatible case with confirmatory laboratory results **Probable:** A clinically compatible case with laboratory results indicative of presumptive infection and the absence of a more likely clinical explanation: • Elevated serum antibody titer(s)* *to F. tularensis* antigen (without documented fourfold or greater change) in a patient with no history of tularemia vaccination, **OR**	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 *Francisella tularensis*, or exposure to potentially contaminated water. Illness is characterized by several distinct forms, including the following: 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 Pneumonic: primary pleuropulmonary disease Typhoidal: febrile illness without early localizing signs and symptoms **Confirmed:** A clinically compatible case with confirmatory laboratory results **Probable:** A clinically compatible case with laboratory results indicative of presumptive infection and the absence of a more likely clinical explanation: • Elevated serum antibody titer(s)* *to F. tularensis* antigen (without documented fourfold or greater change) in a patient with no history of tularemia vaccination, **OR**

Tularemia
10230

Case Definition/Case Classification	Laboratory Confirmation Tests
• Detection of *F. tularensis* in a clinical or autopsy specimen by fluorescent assay **OR** • Detection of *F. tularensis* in a clinical or autopsy specimen by PCR **Notes*:** • Most ELISAs are qualitative tests and do not provide a titer. Some commercial labs perform reflex titer testing for ELISA-positive specimens; contact the commercial lab for these results. Enter titer results into NEDSS as a lab report or a comment in the ELISA ELR. • Samples that are ELISA-positive with no reflex testing should be forwarded to DSHS for *Francisella tularensis* serology at CDC. • IFA testing at commercial labs can be unreliable and results should be interpreted with caution if samples cannot be forwarded for validation.	• Detection of *F. tularensis* in a clinical or autopsy specimen by fluorescent assay **OR** • Detection of *F. tularensis* in a clinical or autopsy specimen by PCR **Notes*:** • Most ELISAs are qualitative tests and do not provide a titer. Some commercial labs perform reflex titer testing for ELISA-positive specimens; contact the commercial lab for these results. Enter titer results into NEDSS as a lab report or a comment in the ELISA ELR. • Samples that are ELISA-positive with no reflex testing should be forwarded to DSHS for *Francisella tularensis* serology at CDC. • IFA testing at commercial labs can be unreliable and results should be interpreted with caution if samples cannot be forwarded for validation.

Typhus, flea-borne (endemic, murine)
10260

Case Definition/Case Classification	Laboratory Confirmation Tests
Flea-borne typhus is a rickettsial disease whose course resembles that of louse-borne typhus but is generally milder. The onset is variable, often sudden and marked by headache, chills, fatigue, fever, and general body aches. A macular rash may appear 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. Absence of louse infestation, geographic and seasonal distribution, and sporadic occurrence of the disease help to differentiate it from louse-borne typhus. ***Clinical evidence*:** Acute illness lasting less than 30 days with fever and two or more of the following: headache, myalgia, rash, nausea/vomiting, thrombocytopenia, or any elevated liver enzyme. ***Confirmed:*** Clinically compatible case that is laboratory confirmed ***Probable*:** Clinically compatible case with evidence of epidemiologic linkage*, the absence of a more likely clinical explanation, and supportive lab evidence: • Serologic evidence of elevated IgG at a titer of ≥1:128 reactive with R. typhi antigen by IFA in a sample taken within 60 days of illness onset, **OR** • Serologic evidence of elevated IgM at a titer of ≥1:256 reactive with R. typhi antigen by IFA in a sample taken within 60 days of illness onset.	• Serological evidence of a four-fold increase in IgG-specific antibody titer reactive with *R. typhi* by IFA test between paired serum specimens (preferably one taken in the first two weeks of illness and a second up to ten weeks later), **OR** • Detection of *R. typhi* by molecular testing (e.g., NAAT, metagenomic sequencing), **OR** • Demonstration of typhus fever group antigen in a biopsy or autopsy specimen by IHC, **OR** • Isolation of *R. typhi* from a clinical specimen in cell culture and molecular confirmation (e.g., PCR or sequence) **Note:** Samples can be forwarded for additional testing at the DSHS lab or CDC.

Typhus, flea-borne (endemic, murine)
10260

Case Definition/Case Classification	Laboratory Confirmation Tests
***Epidemiologic linkage criteria:** Was in same household or had same defined exposure as a confirmed case within the past 14 days before onset of symptoms, OR likely vector exposure in an area with suitable seasonal and ecological conditions for potential local vector-borne transmission **Notes:** • Because antibodies for rickettsial diseases can be cross-reactive, specimens should be tested against a panel** of *Rickettsia* antigens, including, at a minimum, *R. rickettsii* and *R. typhi,* to differentiate between SFG and non-SFG *Rickettsia* spp. • According to CDC, rickettsial IgM tests lack specificity (resulting in false positives); thus, IgG titers are much more reliable. • A case should not be counted as new if the case has ever previously been reported for the same condition. • ***Specimens can be forwarded to the DSHS Serology Laboratory for rickettsial panel testing.* See Rickettsia Classification	

Vancomycin-intermediate Staphylococcus aureus (VISA)
11663

Case Definition/Case Classification	Laboratory Confirmation Tests
Staphylococcus aureus 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. **Confirmed:** VISA from any body site that is laboratory confirmed (minimum inhibitory concentration [MIC]: 4-8 µg/ml). **Note:** The DSHS Laboratory uses the E-test for confirmation of resistance. The E-test generates MIC values from a continuous scale and can give results 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 3µg/ml is reported as intermediate resistance (e.g., 3 is between 2 and 4, so it is rounded to 4). Additional VISA information is here: https://www.cdc.gov/staphylococcus-aureus/php/laboratories/	• Isolation of *Staphylococcus aureus* from any body site; **AND** • Intermediate-level resistance (MIC: 4-8 µg/ml) of the Staphylococcus aureus isolate to vancomycin, detected and defined according to Clinical and Laboratory Standards Institute (CLSI) approved standards and recommendations; **AND** • Confirmed by the DSHS Laboratory. **Note:** As required by the TAC, all *Staphylococcus aureus* isolates with a vancomycin MIC greater than 2 µg/mL must be submitted to the DSHS Laboratory. Please contact a DSHS HAI/AR Epidemiologist or the DSHS Laboratory for additional information on available laboratory support. CDC Reference:https://www.cdc.gov/staphylococcus-aureus/php/laboratories/

Vancomycin-resistant *Staphylococcus aureus* (VRSA)
11665

Case Definition/Case Classification	Laboratory Confirmation Tests
Staphylococcus aureus produces 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. **Confirmed:** A VRSA from any body site that is laboratory confirmed (MIC: ≥ 16 µg/ml). Additional VRSA information is found here: https://www.cdc.gov/staphylococcus-aureus/about/vancomycin-resistant-staph.html	• Isolation of *Staphylococcus aureus* from any body site; **AND** • High-level resistance of the *Staphylococcus aureus* isolate to vancomycin (MIC: ≥16 µg/ml), detected and defined according to CLSI approved standards and recommendations; **AND** • Confirmed by the DSHS Laboratory. **Note:** As required by the TAC, all *Staphylococcus aureus* isolates with a vancomycin MIC greater than 2 µg/mL must be submitted to the DSHS Laboratory. Please contact a DSHS HAI Epidemiologist or the DSHS Laboratory for additional information on available laboratory support. CDC Reference: https://www.cdc.gov/staphylococcus-aureus/php/laboratories/

Varicella (chickenpox)
10030

Case Definition/Case Classification	Laboratory Confirmation Tests
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). **Confirmed:** A case that meets the clinical case definition AND is either laboratory confirmed, OR epidemiologically linked to another probable or confirmed case **Probable:** A case that meets the clinical case definition without epidemiologic linkage or laboratory confirmation **Note:** Two or more patients that meet clinical case definition and are epidemiologically linked to one another meet the probable case definition.	• 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

Vibriosis (non-cholera Vibrio species infections)
11541

Case Definition/Case Classification	Laboratory Confirmation Tests
Vibriosis is caused by infection with pathogenic species of the family *Vibrionaceae* (species other than toxigenic *Vibrio cholerae* O1 and O139, which cause cholera). These pathogens typically cause gastrointestinal illness with watery diarrhea and vomiting, primary septicemia, or wound infections. Asymptomatic infections can occur, and the organism can cause extraintestinal infections. **Confirmed:** A case that is laboratory confirmed **Probable:** • A case with a species of the family *Vibrionaceae* (other than toxigenic *Vibrio cholerae* O1 or O139) detected, in a clinical specimen, by use of culture independent laboratory methods (non-culture based, CIDT), OR • A clinically compatible case that is epidemiologically linked to a case that meets the probable or confirmed laboratory criteria for diagnosis. **Note:** • The CDC has merged Vibrio parahaemolyticus, Vibrio vulnificus, and Vibriosis, other or unspecified into a single reportable disease, rather than splitting them into 3 distinct categories. • A case should not be counted as a new case if laboratory results were reported within 30 days of a previously reported infection in the same individual, unless additional information is available indicating a separate infection, e.g., different species.	**Confirmed:** • Isolation of *Vibrio spp (except* toxigenic *Vibrio cholerae* O1 or O139) from a clinical specimen **Probable:** • Detection of vibrio spp.in a clinical specimen using a CIDT **Note:** As required by Texas Administrative Code all *Vibrio* species isolates must be submitted to the DSHS Laboratory.

Viral Hemorrhagic Fever (VHF) non-Ebola		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
Viral Hemorrhagic Fever (VHF) non-Ebola* **11640 Crimean-Congo HF** **11648 Guanarito HF** **11638 Junin (Argentine) HF** **11632 Lassa fever** **11644 Lujo HF** **11637 Machupo (Bolivian) HF** **11631 Marburg fever** **11639 Sabia (Brazilian) HF** **#### Rift Valley Fever** *Viral Hemorrhagic Fevers include Ebola - please see Ebola case definition for Ebola specific information	An illness typically with acute onset of fever ≥38°C/100.4°F and one or more of the following clinical findings: severe headache, muscle pain, erythematous maculopapular rash on the trunk with flaking or shedding (fine desquamation) of the skin 3–4 days after rash onset, vomiting, diarrhea, abdominal pain, bleeding or bruising not related to injury, or thrombocytopenia. For arenaviruses (Chapare, Guanarito, Junin, Lassa, Lujo, Machupo, Sabia) pharyngitis, retrosternal chest pain, or proteinuria may also occur. **Confirmed:** A person that meets laboratory criteria **Suspect:** A person that meets the clinical criteria AND meets epidemiologic linkage evidence OR meets vital records evidence **Clinical Criteria:** Acute onset of one or more of the following clinical findings: fever (≥38ºC/100.4ºF), headache, muscle and/or joint pain, weakness and fatigue, cough or difficulty breathing, pharyngitis, loss of appetite,	• Detection of VHF-specific nucleic acid in blood or other body fluids, blood products, or tissues using a diagnostic molecular test (e.g., NAAT, genome sequencing), **OR** • Detection of VHF-specific IgM by ELISA, **OR** • Detection of a four-fold rise in VHF-specific IgG titer from an acute sample to a convalescent sample, **OR** • Viral isolation of VHF in cell culture for blood, blood products (e.g., serum), or tissues

Viral Hemorrhagic Fever (VHF) non-Ebola		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
	chest pain skin rash, red eyes, abdominal pain, vomiting, diarrhea, intractable hiccups, encephalitis or other neurological manifestations, or unexplained bleeding or bruising not related to injury or menstruation, acute hearing loss (relevant for Lassa fever), or other clinically compatible symptoms **Epidemiologic Linkage Criteria:** Within the 21 days prior to symptom onset: • Contact with a person who had known or suspected VHF or any object contaminated by their body fluids without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, **OR** • Handles specimens that contain or might contain replication competent VHF without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, **OR** • Handles bats, rodents, or primates that are or may be infected with an VHF without use of or confidence in proper	

Viral Hemorrhagic Fever (VHF) non-Ebola		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
	adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, **OR** • Exposure to body fluids (i.e., urine, saliva, sweat, vomit, breast milk, amniotic fluid, semen, aqueous humor, or cerebral spinal fluid) from a person who clinically recovered from a VHF without use of or confidence in proper adherence to, or experiences a breach in, recommended IPC precautions, including PPE use, **OR** • Residence in or travel to a VHF-endemic area or an area with active transmission AND an experience with any of the following scenarios for potentially unrecognized VHF exposures: ○ Contact with someone who was sick or died ○ Visiting or work in a healthcare facility ○ Breach in PPE and/or IPC precautions ○ Visiting a traditional healer ○ Attending or participating in funerals or burials	

Viral Hemorrhagic Fever (VHF) non-Ebola		
Condition/Code	**Case Definition/Case Classification**	**Laboratory Confirmation Tests**
	○ Contact with animals ○ Consumption of or handling raw meat ○ Spending time in a mine or cave ○ Any other scenario for previously unrecognized VHF exposure as determined in consultation with DSHS and the CDC. **Vital Records Evidence:** • A person whose death certificate lists VHF or infection with an VHF as an underlying cause of death or a significant condition contributing to death.	

Yellow fever 10660	
Case Definition/Case Classification	**Laboratory Confirmation Tests**
Yellow fever virus is a mosquito-borne flavivirus that is closely related to dengue, Japanese encephalitis, West Nile, and Zika viruses. Yellow fever is preventable by a safe and effective vaccine. Most yellow fever virus infections are asymptomatic. Following an incubation period of 3–9 days, approximately one-third of	• Isolation of yellow fever virus from, or demonstration of yellow fever viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, **AND** no history of yellow fever vaccination within 30 days before onset of illness unless there is molecular evidence of infection with wild-type yellow fever virus, **OR**

Yellow fever
10660

Case Definition/Case Classification	Laboratory Confirmation Tests
infected people develop symptomatic illness characterized by fever and headache. Other clinical findings include chills, vomiting, myalgia, lumbosacral pain, and bradycardia relative to elevated body temperature. An estimated 5%–25% of patients progress to more severe disease, including jaundice, renal insufficiency, cardiovascular instability, or hemorrhage (e.g., epistaxis, hematemesis, melena, hematuria, petechiae, or ecchymoses). The case-fatality rate for severe yellow fever is 30%–60%. **Clinical criteria**: An acute illness with at least one of the following: fever, jaundice, or elevated total bilirubin ≥3 mg/dl, and the absence of a more likely clinical explanation. **Confirmed**: A clinically compatible case that is laboratory confirmed **Probable:** A clinically compatible case with supportive serology: • Yellow fever virus-specific IgM antibodies in CSF or serum, **AND** negative IgM results for other cross-reactive arboviruses endemic to the region where exposure occurred*, **AND** no history of yellow fever vaccination, **AND** • Epidemiologic linkage to a confirmed yellow fever case or having visited or resided in an area with a risk of yellow fever in the 2 weeks before onset of illness.	• Four-fold or greater rise or fall in yellow fever virus-specific neutralizing antibody titers in paired sera, **AND** no history of yellow fever vaccination within 30 days before onset of illness, **OR** • Yellow fever virus-specific IgM antibodies in CSF or serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **AND** no history of yellow fever vaccination. *Refer to Arbovirus Classification note in Notes section for more details.

Yersiniosis
11565

Case Definition/Case Classification	Laboratory Confirmation Tests
An illness characterized by acute diarrhea (may be bloody) with abdominal pain. Other symptoms include acute mesenteric lymphadenitis mimicking appendicitis, exudative pharyngitis, and systemic infection. **Note:** Extra-intestinal manifestations may also be present, such as abscess, which could be a source for testing, and reactive arthritis and erythema nodosum, which are often immunologic phenomena not directly caused by the infection. These manifestations are not required as part of the clinical criteria. **Confirmed:** A case that is laboratory confirmed **Probable:** A clinically compatible case that is epidemiologically linked to a confirmed case, or a case identified through use of NAAT or other molecular testing methods (ex. PCR). **Note:** A case should not be counted as a new case if laboratory results were reported within 365 days of a previously reported infection in the same individual.	**Confirmed:** • Isolation* of any non-*pestis*** *Yersinia* spp. by culture in a clinical specimen **Probable:** • Detection of non-*pestis Yersinia* spp, in a clinical specimen using NAAT or other molecular testing method, such as PCR • A clinically compatible case that is epidemiologically linked to a laboratory confirmed case *As required by Texas Administrative Code all *Yersinia pestis* isolates must be submitted to the DSHS Laboratory. **For *Yersinia pestis* isolates, see Plague

Zika disease, congenital
50224

Case Definition/Case Classification	Laboratory Confirmation Tests
Clinical evidence: A liveborn infant with one or more of the following not explained by another genetic, infectious, or other	• Detection of ZIKV, viral antigen or viral RNA in infant CSF, blood, urine, or postmortem tissue (collected within 4 weeks of birth) with a validated diagnostic test.

Zika disease, congenital
50224

Case Definition/Case Classification	Laboratory Confirmation Tests
etiology (including a positive test for another likely etiology, including but not limited to cytomegalovirus): • microcephaly (occipital frontal circumference >2 standard deviations below the mean for age and sex) at birth or postnatal onset, • cortical hypoplasia or abnormal gyral patterns (polymicrogyria, lissencephaly, heterotopia), • increased volume of cerebrospinal fluid (CSF) (hydrocephalus ex vacuo, unspecified hydrocephalus, ventriculomegaly) due to loss of brain parenchyma, • intracranial calcifications (most commonly between the cortex and subcortex), • congenital contractures of major joints (arthrogryposis) associated with structural brain anomalies, • congenital paralysis of the diaphragm associated with structural brain anomalies, • corpus callosum agenesis/hypoplasia, • cerebellar hypoplasia, • scarring of the macula with coarse deposits of pigment in the retina (focal retinal pigmentary mottling), • other structural eye anomalies (microphthalmia, cataracts, chorioretinal atrophy, optic nerve hypoplasia) **Confirmed:** A liveborn infant who meets clinical and confirmatory laboratory criteria and whose gestational parent	**OR** • Positive ZIKV IgM antibody test in infant blood or CSF with positive ZIKV neutralizing antibody titers (collected within 4 weeks of birth)

Zika disease, congenital
50224

Case Definition/Case Classification	Laboratory Confirmation Tests

meets either epidemiologic linkage criteria or confirmatory laboratory criteria for *non-congenital Zika virus disease* (see next page) during this pregnancy
 	
Probable: A liveborn infant who meets clinical criteria and presumptive laboratory evidence (below), whose gestational parent meets either epidemiologic linkage criteria or confirmatory laboratory criteria for *non-congenital Zika virus disease* (see next page) during this pregnancy.
 	
• Presumptive laboratory evidence of infection as follows (specimens collected within 4 weeks of birth):
  ○ Positive ZIKV IgM antibody test of infant serum or CSF with no neutralizing antibody testing performed, OR
  ○ Detection of ZIKV, viral antigen, or viral RNA in amniotic fluid, placenta, umbilical cord, or cord blood	

Zika disease, non-congenital
50223

Case Definition/Case Classification	Laboratory Confirmation Tests
A mosquito-borne viral illness transmitted by *Aedes* mosquitoes, including *Ae. aegypti* and *Ae. albopictus*. Infection is asymptomatic in up to 80% of cases and clinical illness, when it occurs, is typically mild and lasts for several days to a week. Transmission of Zika virus (ZIKV) *in utero* has been associated	• Detection of ZIKV, viral antigen or viral RNA in body fluid or tissue with a validated diagnostic test **OR** • Positive ZIKV IgM antibody test in blood or CSF with positive ZIKV neutralizing antibody titers and negative neutralizing

Zika disease, non-congenital
50223

Case Definition/Case Classification	Laboratory Confirmation Tests

with severe birth outcomes, including microcephaly and fetal loss.
 	
Clinical evidence: An individual with one or more of the following not explained by another etiology:
 	
• Clinically compatible illness that includes:
  ○ acute onset of fever (measured or reported), or
  ○ generalized rash, or
  ○ arthralgia, or
  ○ non-purulent conjunctivitis
  ○ loss of a fetus at greater or equal to 20 weeks gestation
  ○ Guillain-Barré syndrome
 	
Epidemiologic linkage criteria:
 	
• Resided in or traveled to an area with risk of ZIKV transmission (within 14 days before onset of febrile symptoms, 28 days before Guillain-Barré syndrome onset, or during pregnancy)
 	
OR
 	
• Sexual contact, within 14 days of symptom onset or during pregnancy, with a person who in the last 90 days has either been diagnosed with Zika virus infection or has returned from traveling to an area with a risk of Zika virus transmission
 	
OR
	antibody titers against dengue or other flaviviruses endemic to the region where exposure occurred*
	
	*Refer to Arbovirus Classification note in Notes section for more details.

Zika disease, non-congenital
50223

Case Definition/Case Classification	Laboratory Confirmation Tests
• Laboratory exposure to Zika virus before onset of symptoms or during pregnancy; **OR** • Receipt of blood, blood products, organ transplant, or tissue transplant (within 30 days of symptom onset or during pregnancy if the person was diagnosed with Zika infection or was exposed to a risk area) **Confirmed**: An individual who meets the clinical, epidemiologic linkage, and confirmatory laboratory criteria. **Probable:** An individual who meets the clinical, epidemiologic linkage, and following presumptive laboratory criteria: • Positive ZIKV IgM antibody test of blood or CSF with negative dengue virus IgM antibody test and no neutralizing antibody test performed*, **OR** • Four-fold or greater rise in ZIKV-specific neutralizing antibody titers in paired blood specimens; **OR** • Positive ZIKV IgM antibody test in blood or CSF after exposure to an active Zika virus outbreak (as determined by DSHS and CDC)	