Armed Forces Reportable Medical Events

Guidelines and Case Definitions

Functional Proponent:

Armed Forces Health Surveillance Branch

Defense Health Agency

January 2020

Prepared in collaboration with: U.S. Air Force School of Aerospace Medicine
Army Public Health Center
Navy and Marine Corps Public Health Center

Armed Forces Reportable Medical Events

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3. Arboviral diseases
4. Botulism
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Overview

A reportable medical event may represent an inherent, significant threat to public health and military operations. These events have the potential to affect large numbers of people, to be widely transmitted within a population, to have severe/life threatening clinical manifestations, and to disrupt military training and deployment. Timely, accurate reporting of probable, suspected or confirmed cases ensures proper identification, treatment, control, and follow-up of cases.

Reportable medical events were chosen by consensus and recommendations from each of the Services about notifiable diseases from the Centers for Disease Control and Prevention (CDC), the Council of State and Territorial Epidemiologists (CSTE), and events that military public health experts have identified as representing significant military threats that deserve additional emphasis for surveillance. The principal goals of this document are to achieve data consistency and standardization of reportable events tracking across each Service, and to aid local-level reporting by providing programmatic guidance.

As part of the ongoing effort to consolidate Department of Defense (DoD) medical surveillance data, the following sections are included in this *Armed Forces Reportable Medical Events Guidelines and Case Definitions* document:

- Requirement to Report
- Selection Criteria for Reportable Medical Events
- Common Delineations for Reportable Medical Events
- What Not to Report
- Service Points of Contact
- Reportable Medical Event Case Definitions
- Reportable Disease ICD-10 Codes & Synonyms
- References

Summary of Change

This document represents a revision from the July 2017 version and should be read in its entirety. The following is a summary of the significant changes:

- The following conditions have been updated: Anthrax (updates to clinical forms and new criteria added), Arboviral Diseases (edits to the inclusion and exclusion criteria), E. coli, Shiga Toxin Producing (confirmed case definition updated), Hepatitis A (case definition rewrite), Hepatitis C (clarification of laboratory requirements), Lyme Disease (edits to clinical criteria), Norovirus (probable case definition added), Post-Exposure Prophylaxis against Rabies (edits to comments section), Q Fever (edits to epidemiological link), Salmonellosis (edits to the inclusion and exclusion criteria), Spotted Fever Rickettsiosis (clinical criteria updated and suspect case definition removed), Trypanosomiasis (updates to the clinical descriptions and case classification criteria), Tuberculosis (includes non-pulmonary), Typhus fever (edits to the clinical descriptions and case classification criteria), Varicella (edits to the exclusion criteria), Required Data Elements (rewritten for clarity), References (new references added).

Requirement to Report

The reporting of important preventable medical events has long been a cornerstone of public health surveillance rooted in international and national regulations to prevent the introduction, transmission, and spread of communicable diseases. As such, DODD 6490.02E requires the reporting of medical events within the DoD as defined in this Guide. Specific Service and COCOM guidance specify the process by which these requirements are implemented within each Component. Reference documents include:

- DODD 6490.02E "Comprehensive Health Surveillance"
- DODI 6490.03 “Deployment Health”
- Joint Publication 4-02 "Doctrine for Health Service Support for Joint Operations"
- CJCS Memorandum MCM 0028-07 "Procedures for Deployment Health Surveillance"
- Navy Manual of the Medical Department p-117 articles 2-17 and 2-19
- BUMED INST 6220.12 series “Medical Surveillance and Medical Event Reporting”
- Army Regulations 40-5 “Medical Services Preventive Medicine”
- Department of the Army Pamphlet 40-11 “Medical Services Preventive Medicine”
- AFI 48-105 “Surveillance, Prevention, and Control of Diseases and Conditions of Public Health or Military Significance”
- Coast Guard Medical Manual COMDTINST M6000.1F “Chapter 7, Preventive Medicine”

This Guide represents a DoD list of reportable events of interest. Individual Services may require reporting of additional diseases and conditions. Please refer to above Service specific instructions for details. Furthermore, military medical departments may be required to report additional diseases and events to their respective country, state and/or local health departments. Refer to country Status of Forces Agreements, the directives listed above and respective state health department regulations for details.

Selection Criteria for Reportable Medical Events

The below criteria are used collectively to decide whether a medical diagnosis or condition should be reportable or not. Not all events can be reportable as it takes a considerable amount of time and resources. All events are set against the below standards to ensure the data collected are useful within the DoD for Force Health Protection.

1. Is there a clear case definition?
2. Are there control and/or prevention measures that can be put into place or need to be tracked within the DoD?
3. Is reporting of the event the only sufficient, timely source of the necessary information?
4. Does it represent an inherent, significant threat to military public health?
5. Does it represent a significant military operational threat?
6. Does it have the potential to inform military program guidance or policy?
7. Is the tactical burden of reporting worth the time and effort?
8. Is the event commonly reportable by state or federal laws, regulations, or guidelines?

Common Terminology for Reportable Medical Events

Case Definition. In this Guide, a case definition represents the specific clinical, laboratory, and other criteria that must be met for a disease or condition to be reportable.

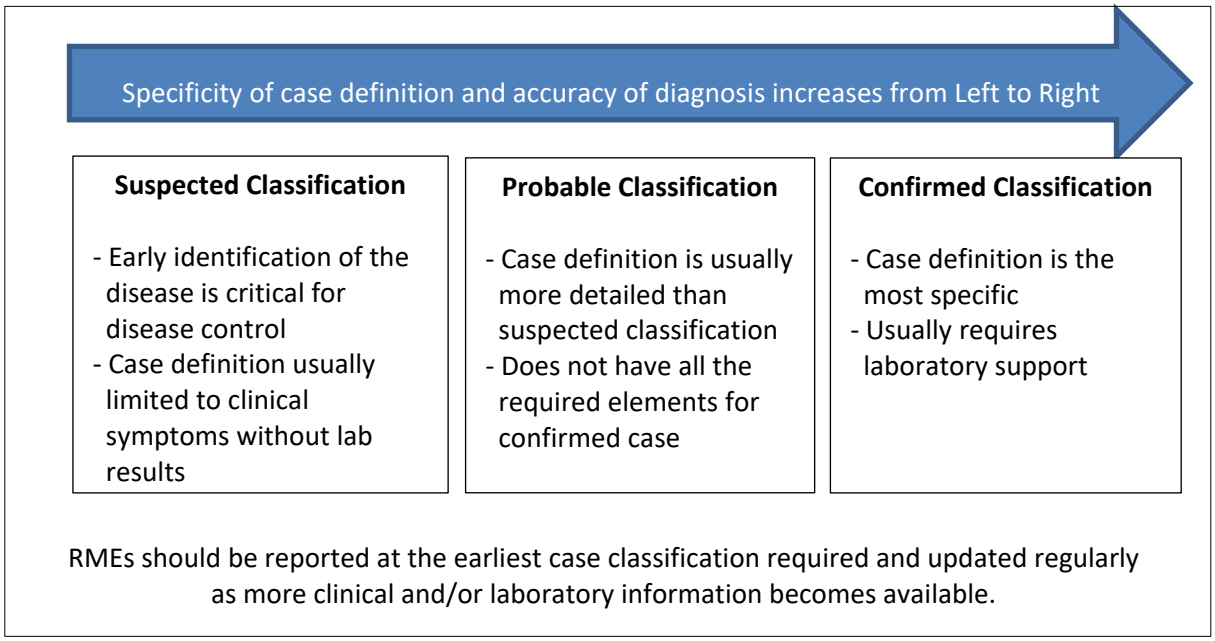
Reportable Medical Event (RME). A medical event or condition mandatory for reporting.

Medical Event Report (MER). The actual report containing information from the RME that is physically entered into the Disease Reporting System internet (DRSi).

Background. This section of the case definition provides descriptive information about the RME. The background includes information about the causative agent, travel risks, and clinical description.

Case Classification. A case classification specifies what is needed to meet the case definition of a reportable event. A case definition can be grouped into three classification categories: suspected, probable, or confirmed (Figure 1). Each case classification has it's own specific set of clinical and/or laboratory criteria. Not all RMEs have all three case classifications.

Figure 1: Depiction of Case Classification



Clinical Description. A brief description of clinical signs and symptoms. Unless the clinical description is explicitly referenced in the Case Classification section of the case definition, it is included only as background information.

Epidemiologically Linked (Epi-link). A case in which the patient: (a) had contact with a confirmed or probable case, as defined by the case definition or (b) was exposed to the same source of infection as a probable or confirmed case or (c) is a member of a risk group as defined by Public Health during an outbreak.

Critical Reporting Elements. Additional information is sometimes required for specific MERs. Ensure the information listed in the Required Comments section of the case definition is recorded in the MER. If the information is unavailable, indicate so.

Incident Rule. Only incident cases are reportable. Incident cases are newly diagnosed cases in a person, regardless of how long the person has been sick.

What Not to Report

- HIV is not reportable through DRSi.
- Healthcare-associated Infections. Report healthcare associated infections to your Infection Control Practitioner (ICP).
- Prevalent cases. DRSi is a reporting tool for incident cases only.

Common Laboratory Acronyms

CIA	Chemiluminescence Immunoassay
CF	Complement Fixation
CSF	Cerebrospinal Fluid
DA	Direct Agglutination
DFA	Direct Immunofluorescent Antibody
DNA	Deoxyribonucleic Acid
ELISA	Enzyme Linked Immunosorbent Assay
EIA	Enzyme Immunoassay
FTA-ABS	Fluorescent Treponemal Antibody Absorption
HI	Hemagglutination Inhibition
IFA	Indirect Immunofluorescent Antibody
IgG	Immunoglobulin antibody class G
IgM	Immunoglobulin antibody class M
IHA	Indirect Hemagglutination
IHC	Immunohistochemistry
IU/L	International Units per Liter
LA	Latex Agglutination
LRN	Laboratory Response Network
MAT	Microagglutination Test
NAAT	Nucleic Acid Amplification Test
NAT	Nucleic Acid Test
PCR	Polymerase Chain Reaction

PRNT	Plaque Reduction Neutralization Test
RNA	Ribonucleic Acid
RPR	Rapid Plasma Reagin
SAT	Slide Agglutination Test
TP-PA	Treponema Pallidum Particle Agglutination
WBC	White Blood Cell
VDRL	Venereal Disease Research Laboratory

Service Points of Contact

Consult the following individual Service points of contact with suggested changes to this Armed Forces Reportable Medical Events Guidelines and Case Definitions document and/or questions about reporting:

Air Force:	Reportable Medical Events/DRSi POC USAF School of Aerospace Medicine DSN 798-3207 (COM 937-938-3207) afdrsi@us.af.mil
Army:	Reportable Medical Events/DRSi POC Army Institute of Public Health DSN 584-7605 (COM 410-436-7605)
Navy/MC:	Reportable Medical Events/DRSi POC Navy Marine Corps Public Health Center DSN 377-0700 (COM 757-953-0700)
Coast Guard:	Reportable Medical Events/DRSi POC HQ USCG, COMDT (CG-1121) DSN: NA (COM 202-475-5256)

This Guide is available electronically at the Armed Forces Health Surveillance Branch (AFHSB) website (URL: http://www.health.mil/afhsb). Personnel with recommendations to change, add, or delete from the list can contact their respective Service Reportable Medical Events/DRSi POC.

Amebiasis (*Entamoeba histolytica*)

Background

Causative Agent	*Entamoeba histolytica*
Travel Risks	Present worldwide; particularly in parts of Africa, Asia, and Central and South America
Clinical Description	An illness caused by infection of the large intestine that is characterized by symptoms ranging from mild, chronic diarrhea to severe and sudden onset diarrhea containing mucus, blood, or both. Extraintestinal or invasive infections can also occur and may present as an acute abscess in the liver, lung, brain or other organs. A granulomatous lesion in the intestine may be discovered on rare occasion.

Case Classification

Probable:

A case that meets the clinical description as described above with any of the following:

- Microscopic identification of *E. histolytica* trophozoites with ingested red blood cells from stool or
- *E. histolytica* positive antibody without clinical evidence of extraintestinal or invasive amebiasis

Confirmed:

An asymptomatic case with **ALL** of the following:

- *E. histolytica* nucleic acid (DNA) detected (example: PCR, sequencing) and
- Epidemiologically linked to a confirmed case

OR

A case that meets the clinical description as described above with any of the following:

- *E. histolytica* nucleic acid (DNA) detected (example: PCR, sequencing) from any clinical specimen or
- *E. histolytica* positive antigen (example: EIA) from stool or
- *E. histolytica* positive antibody with clinical evidence of extraintestinal or invasive amebiasis (example: EIA, IHA) or
- Microscopic identification of *E. histolytica* trophozoites from intestinal tissue biopsies, ulcer scrapings, or extra-intestinal tissues

Critical Reporting Elements

Document the anatomical site of infection.

Document relevant travel and deployment history occurring within the incubation period.

Comments

Microscopic test from stool reported as positive for *E. histolytica* and *E. dispar* should only be reported as probable if trophozoites with ingested red blood cells are seen.

Anthrax (*Bacillus anthracis*)

Background

Causative Agent	*Bacillus anthracis*
Travel Risks	Most common in Central and South America, sub-Saharan Africa, Central and Southwestern Asia, and Southern and Eastern Europe

Clinical Description	An acute onset illness with at least one of the following:
	• An illness with at least one specific OR two non-specific symptoms and signs that are compatible with cutaneous, ingestion, inhalation, or injection anthrax; systemic involvement; or anthrax meningitis or
	• A death of unknown cause AND organ involvement consistent with anthrax
	
	There are several distinct clinical forms including:
	• Cutaneous: A painless skin lesion evolving during a period of 2-6 days from a papule, through a vesicular stage, to a depressed black eschar surrounded by edema. Fever, malaise, and lymphadenopathy may also be present.
	• Inhalation: Symptoms resembling a viral respiratory illness, followed by hypoxia, dyspnea, or acute respiratory distress with resulting cyanosis and shock. Radiographic evidence of mediastinal widening or pleural effusion is common in later stages of illness.
	• Injection: Severe soft tissue infection that appears like a significant edema or bruising after an injection. No eschar or pain is associated. Symptoms may also include fever, shortness of breath, or nausea.
	• Ingestion: Presents as two subtypes
	  ○ Gastrointestinal: Severe abdominal pain and tenderness, nausea, vomiting or vomiting of blood, bloody diarrhea, fever, abdominal swelling, loss of appetite, and possibly septicemia.
	  ○ Oropharyngeal: A painless mucosal lesion in the oral cavity or oropharynx with pharyngitis, swollen lymph nodes in the neck, edema, fever, and possibly septicemia.
	• Meningeal: May complicate any form of anthrax or may be a primary manifestation. Symptoms include fever, headache (often severe), nausea, vomiting, fatigue, meningeal signs, altered mental status, and other neurological signs such as seizures or focal signs are usually present. Most patients with anthrax meningitis have cerebral spinal fluid abnormalities consistent with bacterial meningitis.

Case Classification

Suspected:
A case that meets the clinical description as described above, where a test has been ordered but results are not available yet, and there is no epidemiologic evidence* of anthrax

Probable:
A case that meets the clinical description as described above with any of the following:

- Epidemiologically linked to a documented anthrax environmental exposure or
- Gram stain demonstrating Gram-positive rods, square-ended, in pairs or short chains or
- Positive result on a test with established performance in a CLIA-accredited laboratory

Confirmed:
A case that meets the clinical description as described above with any of the following:

- *B. anthracis* identified by culture by an LRN reference laboratory from any clinical specimen or
- Histopathologic identification of *B. anthracis* antigens from tissue samples by IHC using both *B. anthracis* cell wall and capsule monoclonal antibodies or
- At least a four-fold increase of *B. anthracis* IgG antibodies against protective antigen between acute and convalescent sera using CDC's quantitative anti-PA IgG ELISA test or
- At least a four-fold change of *B. anthracis* IgG antibodies against protective antigen in paired convalescent sera using CDC's quantitative anti-PA IgG ELISA test or
- Detection of lethal factor (LF) in clinical serum specimens by LF mass spectrometry or
- B. anthracis nucleic acid (DNA) detected by LRN-validated PCR, BioFire's JBAIDS Anthrax Detection Kit for PX01 and PX02, or other DoD approved test from a normally sterile site (example: blood or CSF or, less commonly, joint, pleural, or pericardial fluid) or a lesion of affected tissue

Critical Reporting Elements

Specify the clinical form(s) of the disease.
Document the anatomical site of infection.
Document the source of infection if known.
Note the patient's anthrax immunization history.

Comments

*Epidemiologic linkage includes:

- Exposure to environment, food, animal, materials, or objects that is suspect or confirmed to be contaminated with *B. anthracis*;
- Exposure to the same environment, food, animal, materials, or objects as another person who has laboratory-confirmed anthrax;
- Consumption of the same food as another person who has laboratory-confirmed anthrax.

Arboviral diseases, neuroinvasive and non-neuroinvasive

INCLUDES: West Nile fever, West Nile encephalitis, Japanese encephalitis, and other mosquito-borne viruses (Western equine encephalitis, Eastern equine encephalitis, St. Louis encephalitis, California virus encephalitis), tick-borne viruses (Powassan virus, tick-born encephalitis), and others.

EXCLUDES: chikungunya virus disease, dengue virus infections, Lyme disease, relapsing fever, Rift Valley Fever, Spotted Fever Rickettsioses, yellow fever virus, and Zika virus. See respective case definitions.

Background

Causative Agent	Various Arboviruses
Travel Risks	Present worldwide
Clinical Description	An illness that ranges from mild febrile illness to severe encephalitis categorized into two clinical presentations:

Non-neuroinvasive disease:

- Fever (chills) as reported by the patient or a health-care provider **AND**
- Absence of neuroinvasive disease **AND**
- Absence of a more likely clinical explanation. Other clinically compatible symptoms of arbovirus disease include: headache, myalgia, rash, arthralgia, vertigo, vomiting, paresis and/or nuchal rigidity.

Neuroinvasive 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. Other clinically compatible symptoms of arbovirus disease include: headache, myalgia, rash, arthralgia, vertigo, vomiting, paresis and/ or nuchal rigidity.

Case Classification

Non-neuroinvasive disease:

Probable:

A case that meets the clinical description of non-neuroinvasive disease as described above with virus-specific positive IgM antibody from serum and no other laboratory test performed

Confirmed:

A case that meets the clinical description of non-neuroinvasive disease as described above with any of the following:

- Virus identified by culture from any clinical specimen except CSF or
- Virus-specific positive antigen from any clinical specimen except CSF or
- Virus-specific nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen except CSF or
- At least a four-fold change of virus-specific antibody titers between acute and convalescent sera or

- Virus-specific positive IgM antibody from serum followed by confirmatory virus-specific positive neutralizing antibody (example: PRNT) in the same or a later serum specimen

Neuroinvasive disease:
Probable:
A case that meets the clinical description of neuroinvasive disease as described above with virus-specific positive IgM antibody from CSF or serum and no other laboratory test performed

Confirmed:
A case that meets the clinical description as described above with any of the following:

- Virus identified by culture from any clinical specimen or
- Virus-specific positive antigen from any clinical specimen or
- Virus-specific nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen or
- At least a four-fold change of virus-specific antibody titers between acute and convalescent sera or
- Virus-specific positive IgM antibody followed by confirmatory virus-specific positive neutralizing antibody (example: PRNT) from serum in the same or a later specimen or
- Virus-specific positive IgM antibody from CSF and a negative IgM antibody in CSF for other arboviruses endemic to the region where exposure occurred

Critical Reporting Elements

Specify the etiologic/causative agent.
Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Note the patient's disease specific immunization history.

Comments

None.

Botulism (*Clostridium botulinum* toxin)

Background

Causative Agent	*Clostridium botulinum* toxin
Travel Risks	N/A
Clinical Description	Botulism is categorized into four clinical manifestations: Foodborne: An illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly. Infant: An illness of infants aged less than 1 year, characterized by constipation, poor feeding, and "failure to thrive" that may be followed by progressive weakness, impaired respiration, and death. Wound: An illness resulting from toxin produced by *Clostridium botulinum* that has infected a wound. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly. Other: An illness of variable severity that occurs among persons greater than 1 year of age. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Case Classification

Foodborne:

Probable:

A case that meets the clinical description of foodborne botulism as described above that is epidemiologically linked to a food source (example: ingestion of a home-canned food within the previous 48 hours)

Confirmed:

A case that meets the clinical description of foodborne botulism as described above with any of the following:

- A history of eating the same food as a laboratory confirmed case or
- *C. botulinum* toxin detected in serum, stool, or patient's food or
- Toxin producing *C. botulinum* identified by culture from stool

Infant:

Confirmed:

A case that meets the clinical description of infant botulism as described above with any of the following:

- *C. botulinum* toxin detected in serum or stool or
- Toxin producing *C. botulinum* identified by culture from stool

Wound:

Probable:

A case that meets clinical description of wound botulism as described above in a patient who has no suspected exposure to contaminated food and who has any of the following:

- 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

Confirmed:
A case that meets **ALL** of the following:

- Meets the clinical description of wound botulism as described above in a patient who has no suspected exposure to contaminated food and who has any of the following exposures:
  - 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 and
- Any of the following:
  - *C. botulinum* toxin detected in serum or
  - Toxin producing *C. botulinum* identified by culture from a wound

Other:
Confirmed:
A case that meets the clinical description of other botulism as described above without a history of ingestion of suspect food and has no wounds, and who has any of the following:

- *C. botulinum* toxin detected in any clinical specimen or
- Toxin producing *C. botulinum* identified by culture from any clinical specimen

Critical Reporting Elements

Specify the clinical form of the disease.
Document the source of infection if known.

Comments

None.

Brucellosis (*Brucella* species)

Background

Causative Agent	*Brucella* species
Travel Risks	Present worldwide
Clinical Description	An acute systemic disease characterized by fever plus any of the following: night sweats, arthralgia, headache, fatigue, anorexia, myalgia, weight loss, arthritis, spondylitis, meningitis, or focal organ involvement (endocarditis, orchitis, epididymitis, hepatomegaly, splenomegaly).

Case Classification

Probable:

A case that meets the clinical description as described above with any of the following:

- Epidemiologically linked to a confirmed human or animal case or
- *Brucella* total antibody titer ≥ 1:160 by SAT or MAT from serum or
- *Brucella* nucleic acid (DNA) detected by PCR from any clinical specimen

Confirmed:

A case that meets the clinical description as described above with any of the following:

- *Brucella* identified by culture from any clinical specimen or
- At least a four-fold increase of *Brucella* antibody titer between acute and convalescent sera separated by at least 2 weeks

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the source of infection if known.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

A positive *Brucella* slide agglutination test is the same thing as MAT; it therefore meets the probable case definition and should be reported.

Campylobacteriosis (*Campylobacter* species)

Background

Causative Agent	*Campylobacter* species
Travel Risks	Present worldwide
Clinical Description	An acute enteric disease characterized by diarrhea, abdominal pain, nausea, and sometimes vomiting. Severe symptoms and invasive infections occur rarely causing bacteremia, meningitis or other focal infections.

Case Classification

Probable:
Any of the following:

- *Campylobacter* positive laboratory test by a method other than culture (example: EIA, PCR) or
- A case that meets the clinical description as described above that is epidemiologically linked to a probable or a confirmed case

Confirmed:
Campylobacter identified by culture from any clinical specimen

Critical Reporting Elements

Document the species if known.
Document the source of infection if known.
Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Chikungunya Virus Disease (chikungunya virus)

Background

Causative Agent	Chikungunya virus
Travel Risks	Most common in Africa, Asia, parts of Central and South America, islands in the Indian Ocean, Western and South Pacific, and Caribbean
Clinical Description	Chikungunya typically causes non-neuroinvasive symptoms causing high fever (typically > 102°F [> 39°C]), severe arthralgia, arthritis, rash, headache, conjunctivitis, nausea, vomiting, and lymphopenia. Joint symptoms are usually bilateral and symmetric, and can be severe and debilitating. Acute symptoms typically resolve within 7 to 10 days.

Case Classification

Probable:

A case that meets the clinical description as described above with **ALL** of the following:

- Chikungunya positive IgM antibody from CSF or serum and
- No other laboratory test performed

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Chikungunya identified by culture from tissue, blood, CSF, or other body fluid or
- Chikungunya positive antigen from tissue, blood, CSF, or other body fluid or
- Chikungunya nucleic acid (RNA) detected by PCR from tissue, blood, CSF, or other body fluid or
- At least a four-fold increase of antibody titer between acute and convalescent sera or
- Chikungunya positive IgM antibodies from serum followed by confirmatory virus-specific neutralizing antibodies (example: PRNT) in the same or a later specimen

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Chlamydia trachomatis infection (*Chlamydia trachomatis*)

Background

Causative Agent	*Chlamydia trachomatis*
Travel Risks	N/A
Clinical Description	An infection characterized by urethritis, epididymitis, cervicitis, acute salpingitis, or other syndromes when sexually transmitted. Infections are often asymptomatic in women. Perinatal infections may result in inclusion conjunctivitis and pneumonia in newborns. Other syndromes caused by *C. trachomatis* include lymphogranuloma venereum and trachoma.

Case Classification

Confirmed:

A case with any of the following:

- *C. trachomatis* identified by culture from any clinical specimen or
- *C. trachomatis* positive antigen from any clinical specimen or
- *C. trachomatis* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT, probe) from any clinical specimen

Critical Reporting Elements

None.

Comments

Report co-infections with other organisms, like gonorrhea, separately as individual RMEs.

Cholera (*Vibrio cholerae* O1 or 0139)

Background

Causative Agent	*Vibrio cholerae*, serogroup O1 or O139
Travel Risks	Present worldwide; particularly in sub-Saharan Africa, the Indian Subcontinent, and Southeast Asia
Clinical Description	An acute illness characterized by profuse watery diarrhea and vomiting. Severity is variable; however, severe cases can result in rapid dehydration, electrolyte disturbances, and death.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Toxin producing *V. cholerae* O1 or O139 identified by culture from stool or
- *V. cholerae* O1 or O139 positive antibody from serum or
- *V. cholerae* O1 or O139 nucleic acid (DNA) detected (example: PCR, sequencing, NAAT, probe) from stool or vomitus

Critical Reporting Elements

Specify the serogroup (*V. cholerae* O1 or *V. cholerae* O139) if known.

Document relevant travel and deployment history occurring within the incubation period.

Comments

None.

Coccidioidomycosis (*Coccidioides* species)

COMMON NAME: Valley Fever

EXCLUDES: Rift Valley Fever. See Rift Valley Fever case definition.

Background

Causative Agent	*Coccidioides* species
Travel Risks	Most common in Southwest United States, Mexico, Central and South America
Clinical Description	An illness characterized with at least one of the following: Influenza-like symptoms (example: fever, chest pain, cough, myalgia, arthralgia, and headache), pneumonia or pulmonary lesion, erythema nodosum or multiforme rash, involvement of bones, joints, or skin by dissemination, meningitis or involvement of the viscera and lymph nodes. Infection may disseminate to multiple organ systems.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Coccidioidal positive IgM antibody by immunodiffusion, EIA, latex agglutination, or tube precipitin from any bodily fluid or
- Coccidioidal positive IgG antibody by EIA or complement fixation from any bodily fluid or
- *Coccidioides* identified by culture from any clinical specimen or
- Histopathologic identification of *Coccidioides* from tissue samples or
- Coccidioidal skin-test conversion from negative to positive after onset of clinical signs and symptoms

Critical Reporting Elements

Document the source of infection if known.

Document any relevant travel and deployment history within the incubation period.

Comments

None.

Cold Weather Injuries

INCLUDES: Service Member cases only

Background

Causative Agent	N/A
Travel Risks	N/A
Clinical Description	Hypothermia: Reduction of body temperature to ≤ 95°F. It can result from either dry-land whole body exposure to cold temperatures or immersion in cold water. Freezing temperatures are not required to produce hypothermia. Freezing Peripheral Injuries: Freezing injuries (example: frostbite) occur only when exposed to temperatures below freezing. They result from the freezing of tissue fluids in the skin and/or subcutaneous tissues. Although it has often been classified as 1st to 4th degree levels of injury severity, final classification often takes weeks and is not helpful for immediate treatment. A more recent classification system uses two levels: superficial or deep injuries. Do not delay reporting to determine classification. Non-Freezing Peripheral Injuries: A spectrum of localized non-freezing injuries, usually of extremities (example: trench foot, immersion foot, chilblains), that occur due to prolonged vasoconstriction in response to cold that leads to tissue injury and destruction. These injuries develop over a period of hours to days. They may occur at temperatures below or above freezing and can occur at temperatures as high as 60°F with prolonged exposure. Injury is accelerated by exposure to damp conditions. (Note: The term "trench foot" is also sometimes used to describe a tropical foot injury or "jungle rot.")

Case Classification

Hypothermia:

Probable:

A case of provider-diagnosed hypothermia

Confirmed:

A case that meets the clinical description of hypothermia as described above with a core body temperature ≤ 95°F or ≤ 35°C as measured by rectal, esophageal, or other central method

Freezing Peripheral Injuries:

Confirmed:

A case that meets the clinical description of freezing peripheral injuries as described above occurring from exposure to temperatures below freezing where the extent of the freezing injury can be classified as:

- Superficial: Partial or full thickness freezing of the epidermis without involvement of the underlying tissue. Mobility is unaffected, and blistering may occur or
- Deep: Full thickness freezing of the epidermis accompanied by freezing of subcutaneous tissue and which may involve muscles, tendons, and bones as severity increases or
- Unknown: As yet unclassified

Non-Freezing Peripheral Injuries:

Confirmed:

A case that meets the clinical description of non-freezing peripheral injuries as described above occurring from exposure to a cold and wet or damp environment.

Critical Reporting Elements

Specify the type of injury.

Document the anatomical site of injury.

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

Please specify ambient temperature if known in degrees Fahrenheit (estimate if unknown).

Cryptosporidiosis (*Cryptosporidium* species)

Background

Causative Agent	*Cryptosporidium* species
Travel Risks	N/A
Clinical Description	An illness characterized by diarrhea and any of the following: duration of diarrhea of 72 hours or more, abdominal cramping, vomiting, or anorexia.

Case Classification

Probable:

A case with any of the following:

- *Cryptosporidium* positive antigen by a screening test (example: immunochromatographic lateral flow test, rapid card test) or
- *Cryptosporidium* positive laboratory test of unknown method or
- A case that meets the clinical description as described above that is epidemiologically linked to a confirmed case

Confirmed:

A case with any of the following:

- *Cryptosporidium* positive antigen from any clinical specimen or
- *Cryptosporidium* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Microscopic identification of *Cryptosporidium* from any clinical specimen

Critical Reporting Elements

Document the source of infection if known.

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Cyclosporiasis (*Cyclospora cayetanensis*)

Background

Causative Agent	*Cyclospora cayetanensis*
Travel Risks	Most common in tropical or subtropical regions
Clinical Description	The most common symptom is watery diarrhea with frequent bowel movements. Other common symptoms include loss of appetite, weight loss, abdominal cramps/bloating, nausea, body aches, and fatigue. Vomiting and low grade fever also may be noted.

Case Classification

Probable:
A case that meets the clinical description as described above that is epidemiologically linked to a confirmed case

Confirmed:
A case that meets the clinical description as described above with any of the following:

- *C. cayetanensis* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT) from stool, intestinal fluid/aspirate or intestinal biopsy specimens or
- Microscopic identification of *C. cayetanensis* from stool, intestinal fluid/aspirate or intestinal biopsy specimens

Critical Reporting Elements

Document the source of the infection if known.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Dengue Virus Infection (dengue virus -1, -2, -3, and -4)

Background

Causative Agent	Dengue virus (DENV-1, -2, -3, and -4)
Travel Risks	Most common in tropical and subtropical areas of South America, Africa and Asia, Mexico, and Oceana to include the Pacific and the Caribbean
Clinical Description	An acute febrile illness typically presenting with at least one of the following: nausea, vomiting, rash, aches and pains, tourniquet test positive or leukopenia. Severe manifestations (severe plasma leakage, severe bleeding from the gastrointestinal tract or vagina, or severe organ involvement) are rare, but may be fatal.

Case Classification

Probable:

A case that meets the clinical description as described above with:

- Dengue positive IgM antibody from serum or CSF in a person who has:
  - Documented or unknown exposure to other flaviviruses (example: Yellow Fever virus, Japanese encephalitis virus, West Nile virus) or
  - Recent receipt of a flavivirus vaccine

Confirmed:

A case that meets any of the clinical case definitions as described above with any of the following:

- Dengue nucleic acid (RNA) detected by PCR from any clinical specimen or
- Dengue positive antigen by DFA, IFA, or IHC from tissue or
- Dengue NS1 positive antigen from serum or plasma or
- Dengue identified by culture from a serum, plasma, or CSF or
- Dengue positive IgM antibody from serum or CSF in a person who has had no documented exposure to other flaviviruses (example: Yellow Fever virus, Japanese encephalitis virus, West Nile virus) or recent receipt of a flavivirus vaccine or
- Seroconversion from a negative IgM in an acute sera collected < 5 days after illness onset followed by a positive IgM in convalescent sera collected > 5 days after illness onset or
- Seroconversion from a negative IgG followed by a positive IgG or
- At least a four-fold increase of antibody titer between acute and convalescent sera separated by at least 2 weeks followed by a confirmatory neutralization test (example: PRNT) that has a greater than four-fold higher end point titer as compared to the other flaviviruses tested with it

Critical Reporting Elements

Specify serotype if known.

Document relevant travel and deployment history occurring within the incubation period.

Comments

None.

Diphtheria (*Corynebacterium diphtheriae*)

Background

Causative Agent	*Corynebacterium diphtheriae*
Travel Risks	Present worldwide; particularly tropical areas
Clinical Description	An upper respiratory tract illness characterized by weakness, sore throat, fever, adenitis in the neck, and adherent membrane lesions in the nose, pharynx, larynx, or on the tonsils.

Case Classification

Probable:

In the absence of a more likely diagnosis, a case that meets the clinical description as described above with **ALL** of the following:

- No laboratory confirmation and
- Not epidemiologically linked to a confirmed case

Confirmed:

A case that meets the clinical description as described above with any of the following:

- *C. diphtheriae* identified by culture from the nose or throat or
- Histopathologic identification of *C. diphtheriae* from tissue samples of the nose or throat or
- Epidemiologically linked to a confirmed case

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Note the patient's diphtheria immunization history.
Document if the case patient works in, lives in, or attends a high transmission setting like food handling, day care, school, group living, or healthcare.

Comments

None.

Escherichia coli, Shiga toxin producing (STEC) infection

COMMON NAME: Enterohemorrhagic *E. coli (EHEC)*, Verotoxin *E. coli* (VTEC)

INCLUDES: *E. coli* O157:H7, *E. coli* O113, *E. coli* O118, *E. coli* O111, *E. coli* O26

EXCLUDES: Enterotoxigenic *E. coli* (ETEC), Enteropathogenic *E. coli* (EPEC), Enteroinvasive *E. coli* (EIEC), Enteroaggregative *E. coli* (EAEC)

Background

Causative Agent	*Escherichia coli*, Shiga toxin producing
Travel Risks	Most common in North America, Europe, Japan, the southern cone of South America, and Southern Africa
Clinical Description	An infection of variable severity characterized by diarrhea (often bloody) and abdominal cramps. The illness may be complicated by hemolytic uremic syndrome (HUS) or thrombotic thrombocytopenic purpura (TTP). HUS is characterized by the acute onset of microangiopathic hemolytic anemia, renal injury, and low platelet count. TTP also is characterized by these features but can include central nervous system (CNS) involvement and fever and may have a more gradual onset. Most cases of HUS (but few cases of TTP) occur after an acute gastrointestinal illness (usually diarrheal). The organism rarely causes extraintestinal infections.

Case Classification

Suspected:

A case with any of the following:

- A diagnosis of post-diarrheal HUS/TTP or
- A case with no known clinical information available and any of the following:
  - An elevated antibody titer against a known STEC serotype from serum or
  - Shiga toxin or Shiga toxin genes detected by a method other than culture (example: PCR, EIA) from any clinical specimen and no known *Shigella* culture or
  - *E. coli* 0157 or other STEC identified by a method other than culture (example: PCR, EIA) from any clinical specimen

Probable:

A case with any of the following:

- *E. coli* O157 identified by culture from any clinical specimen without confirmation of H antigen, or without detection of Shiga toxin, or Shiga toxin genes or
- A case that meets the clinical description as described above and any of the following:
  - An elevated antibody titer against a known STEC serotype from serum or
  - Shiga toxin or Shiga toxin genes detected by a method other than culture (example: PCR, EIA) from any clinical specimen and no known *Shigella* culture or
  - *E. coli* 0157 or other STEC identified by a method other than culture (example: PCR, EIA) or
  - Epidemiologically linked to a confirmed or probable case with laboratory evidence

Confirmed:
A case with any of the following:

- *E. coli* O157 identified by culture from any clinical specimen or
- *E. coli* identified by culture with detection of Shiga toxin or Shiga toxin genes

Critical Reporting Elements

Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.
Document the source of infection if known.
Document relevant travel and deployment history occurring within the incubation period.

Comments

Shigella also produces Shiga toxin. Persons with (1) detection of Shiga toxin or Shiga toxin genes using a test other than culture and (2) a positive culture of *Shigella* from any clinical specimen should not be reported as an STEC case, but should be reported as *Shigella*.

Ehrlichiosis and Anaplasmosis *(Anaplasma phagocytophilum, Ehrlichia chaffeensis, Ehrlichia ewingii)*

Background

Causative Agent	*Anaplasma phagocytophilum*, *Ehrlichia chaffeensis*, *Ehrlichia ewingii*
Travel Risks	Southeastern and south-central United States, Europe, Asia
Clinical Description	A tick borne illnesses characterized by fever plus one or more of the following: headache, myalgia, malaise, anemia, leukopenia, thrombocytopenia, or elevated hepatic transaminases.

Case Classification

A. phagocytophilum* or *E. chaffeensis:

Suspected:

A case with any of the following:

- *A. phagocytophilum* or *E. chaffeensis* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Histopathologic identification of anaplasmal or ehrlichial antigen (example: IHC) from a biopsy or autopsy tissue sample or
- *A. phagocytophilum* or *E. chaffeensis* identified by culture from any clinical specimen or
- *A. phagocytophilum or E. chaffeensis* positive IgG or IgM antibody (example: IFA or ELISA) from serum

Probable:

A case that meets the clinical description as described above with any of the following:

- *A. phagocytophilum* or *E. chaffeensis* positive IgG or IgM antibody (example: IFA or ELISA) from serum or
- Microscopic identification of morulae in the cytoplasm of neutrophils or eosinophils

Confirmed:

A case that meets the clinical description as described above with any of the following:

- At least a four-fold increase of IgG antibody titer against *A. phagocytophilum* or *E. chaffeensis* antigen by IFA between acute and convalescent sera separated by 2 – 4 weeks or
- *A. phagocytophilum* or *E. chaffeensis* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Histopathologic identification of anaplasmal or ehrlichial antigen (example: IHC) from a biopsy or autopsy tissue sample or
- *A. phagocytophilum* or *E. chaffeensis* identified by culture from any clinical specimen

E. ewingii:

Suspected:

A case with *E. ewingii* nucleic acid (DNA) detected by PCR from any clinical specimen

Confirmed:

A case that meets the clinical description as described above with *E. ewingii* nucleic acid (DNA) detected by PCR from any clinical specimen

Undetermined ehrlichiosis or anaplasmosis*:*

Probable:

A case that meets the clinical description as described above with identification of morulae in the cytoplasm of monocytes, macrophages, neutrophils, or eosinophils by microscopic examination

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed to ticks including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Specify the etiologic agent.

Comments

For acute and convalescent testing, the first serum should be taken in the first week of illness.

Filariasis (*Wuchereria bancrofti, Brugia malayi, Brugia timori*), Loiasis (*Loa loa*), and Onchocerciasis (*Onchocerca volvulus*)

Background

Causative Agent	Filariasis (*Wuchereria bancrofti, Brugia malayi, Brugia timori*), Onchocerciasis (*Onchocerca volvulus*), Loiais (*Loa loa*), and others
Travel Risks	Most common in tropical and subtropical areas of Asia, Africa, the Western Pacific, and parts of South America and the Caribbean
Clinical Description	Filariasis: An acute illness that may be characterized by recurrent fevers, lymphadenitis, retrograde lymphangitis (i.e. inflammation of lymph vessels), "elephantiasis", or tropical pulmonary eosinophilia syndrome that is characterized by cough, shortness of breath, wheezing, and eosinophilia. Onchocerciasis: An illness characterized by small solid nodules beneath the skin that can be felt by touch, severe pruritus, pigmentation changes, and corneal opacities potentially leading to blindness in severe infections. Loiasis: An illness characterized by transient swelling and generalized pruritus, often with eosinophilia. Loiasis may also result in eye worm causing eye congestion, itching, pain, and light sensitivity.

Case Classification

Probable:
A case that meets the clinical description as described above with antifilarial positive IgG4 antibody from blood

Confirmed:
A case that meets the clinical description as described above with any of the following:

- Microscopic identification of microfilariae from blood, urine, or skin or
- Identification of the adult worm by a microbiologist or pathologist following removal from skin or eye

Critical Reporting Elements

Specify the etiologic/causative agent.
Document relevant travel and deployment history occurring within the incubation period.

Comments

None.

Giardiasis (*Giardia lamblia*)

Background

Causative Agent	*Giardia lamblia*
Travel Risks	Present worldwide
Clinical Description	An illness characterized by gastrointestinal symptoms such as diarrhea, abdominal cramps, bloating, weight loss, or malabsorption.

Case Classification

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

Confirmed:
A case that meets the clinical description as described above with any of the following:

- Microscopic identification of *Giardia* cysts or trophozoites from any clinical specimen or
- *Giardia* positive antigen (example: EIA, DFA) from any clinical specimen or
- *Giardia* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen

Critical Reporting Elements

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Gonorrhea (*Neisseria gonorrhoeae*)

Background

Causative Agent	*Neisseria gonorrhoeae*
Travel Risks	N/A
Clinical Description	A sexually transmitted infection commonly manifested by urethritis, cervicitis, salpingitis, or pharyngitis.

Case Classification

Probable:

A case with any of the following:

- Microscopic identification of gram negative intracellular diplococci in a urethral smear obtained from a male or
- Microscopic identification of gram negative intracellular diplococci in an endocervical smear obtained from a female

Confirmed:

A case with any of the following:

- *N. gonorrhoeae* identified by culture from any clinical specimen or
- *N. gonorrhoeae* positive antigen from any clinical specimen or
- *N. gonorrhoeae* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT, probe) from any clinical specimen

Critical Reporting Elements

None.

Comments

Report co-infections with other organisms, like chlamydia, separately as individual RMEs.

Haemophilus influenzae, Invasive

EXCLUDES: Conjunctivitis

Background

Causative Agent	*Haemophilus influenzae*
Travel Risks	Present worldwide
Clinical Description	An invasive disease that may manifest as pneumonia, bacteremia, meningitis, epiglottitis, septic arthritis, cellulitis, or purulent pericarditis. Less common infections manifestations include endocarditis and osteomyelitis.

Case Classification

Probable:
A case of meningitis with *H. influenzae* type b positive antigen from CSF

Confirmed:
A case with any of the following:

- *H. influenzae* identified by culture from a normally sterile body site (example: CSF, blood, joint fluid, pleural fluid, pericardial fluid) or
- *H. influenzae* nucleic acid (DNA) detected by PCR from a specimen obtained from a normally sterile body site (example: CSF, blood, joint fluid, pleural fluid, pericardial fluid)

Critical Reporting Elements

Note the patient's *H. influenzae* immunization history.

Comments

None.

Hantavirus Disease (*Bunyaviridae* viruses)

COMMON NAME: Korean hemorrhagic fever, Hemorrhagic fever with renal syndrome (HFRS)

Background

Causative Agent	Region-specific hantaviruses (*Bunyaviridae*)
Travel Risks	Most common in Western United States, Canada, South America, Central America, China, Russia, and Korea
Clinical Description	Hantavirus infection, non-pulmonary syndrome: A febrile illness with non-specific viral symptoms including fever (temperature greater than 101.0°F or 38.3°C), chills, myalgia, headache, and gastrointestinal symptoms, without cardiopulmonary symptoms. Hantavirus pulmonary syndrome (HPS): A febrile illness (temperature greater than 101.0°F or 38.3°C) with chills, myalgia, and gastrointestinal symptoms and at least one of the following: bilateral diffuse interstitial edema, acute respiratory distress syndrome, noncardiogenic pulmonary edema, or physician-diagnosed HPS. Hantavirus hemorrhagic fever with renal syndrome (HFRS), including Korean Hemorrhagic Fever: An illness characterized by acute onset of fever, lower back pain, hemorrhagic manifestations and renal involvement.

Case Classification

Confirmed:

A case that meets any of the clinical descriptions as described above with any of the following:

- Hantavirus positive IgM antibody from serum or
- Hantavirus rising IgG antibody titers between acute and convalescent sera or
- Hantavirus nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen or
- Histopathologic identification of hantavirus antigen by IHC from a lung biopsy or autopsy tissues

Critical Reporting Elements

Specify the clinical form of the disease.
Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Heat Illness

INCLUDES: Service Member cases only

EXCLUDES: Cases of simple parade syncope (heat syncope), heat edema, heat cramps, miliaria rubra, sunburn, transient heat fatigue and isolated rhabdomyolysis (i.e., without evidence for or diagnosis of a reportable heat illness). Cases of heat illness in the absence of medical intervention or change in duty status are also excluded.

Background

Causative Agent	N/A
Travel Risks	N/A
Clinical Description	Heat Illness encompasses a spectrum of acute conditions associated with exertion or heat exposure. Heat Exhaustion: Heat exhaustion (HE) is defined as the inability to continue physical activity due to competing demand for cardiac output between thermoregulation and metabolic requirements. Clinically, HE may present as weakness, fatigue, ataxia, dizziness, headache, nausea, vomiting, and malaise in individuals with a core body temperature less than 104°F or 40°C. HE may be accompanied by evidence of end organ damage (Hypo/hyperkalemia, Elevated AST or ALT, Elevated CK, Rhabdomyolysis/myoglobinuria). HE resolves rapidly with minimal cooling intervention. Heat Stroke: Heat stroke (HS) is defined as an elevated core body temperature associated with central nervous system (CNS) dysfunction. Clinically, HS presents as hyperthermia, physical collapse or debilitation, and encephalopathy as evidenced by a change in mental status, delirium, stupor, or coma, occurring during or immediately following exertion or significant heat exposure. HS may be complicated by organ and/or tissue damage, systemic inflammatory activation, and disseminated intravascular coagulation. Heat stroke will likely be the working diagnosis for any service member with altered mental status and exposure history consistent with heat illness.

Case Classification

Heat Exhaustion (HE):

Confirmed:

A case that meets the clinical description of HE as described above occurring during/immediately after exertion or heat exposure with **ALL** of the following:

- Core body temperature > 100.5°F or 38°C and < 104°F or 40°C (or evidence of elevated core body temperature if cooling was initiated in the field) and
- Short-term physical collapse or debilitation occurring during or shortly after physical exertion that rapidly resolves with minimal cooling intervention and
- No evidence of CNS dysfunction or only minor CNS symptoms (e.g. headache, dizziness) that rapidly resolves with minimal cooling intervention.

Heat Stroke (HS):

Probable:

A case that meets the clinical description of HS as described above occurring during/immediately after exertion or heat exposure with **ALL** of the following:

- Evidence of elevated core body temperature (even if cooling was initiated in the field) and
- CNS dysfunction (change in mental status, delirium, stupor, loss of consciousness or coma)

Confirmed:

A case that meets the clinical description as described above occurring during/immediately after exertion or heat exposure with **ALL** of the following:

- Core body temperature ≥ 104°F or 40°C and
- CNS dysfunction (change in mental status, delirium, stupor, loss of consciousness or coma)

Critical Reporting Elements

Specify the type of illness.

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

Please specify Wet Bulb Globe Temperature (WBGT) if known in degrees Fahrenheit.

Hemorrhagic Fever, Viral (VHF)

EXCLUDES: Dengue hemorrhagic fever, Hantavirus hemorrhagic fever, Korean hemorrhagic fever, chikungunya, yellow fever. See each respective case definition.

Background

Causative Agents	Varies. Includes but is not limited to: Junin virus, Machupo virus, Guanarito virus, Sabia virus, Lassa virus, Lujo virus, Crimean-Congo hemorrhagic fever virus, Omsk hemorrhagic fever virus, Kyasanur Forest Disease virus, Ebola virus and Marburg virus.
Travel Risks	Varies depending on the causative agent. Risk areas include Africa, Eastern Europe, Central Asia, the Middle East, and South America.
Clinical Description	An acute onset illness with a fever > 104°F or > 40 °C and any of the following: severe headache, muscle pain, erythemous maculopapular rash on the trunk with fine desquamation 3 to 4 days after rash onset, vomiting, diarrhea, pharyngitis (arenavirus only), abdominal pain, bleeding not related to injury, retrosternal chest pain (arenavirus only), proteinuria (arenavirus only), thrombocytopenia

Case Classification

Suspected:
A case that meets the clinical description as described above with any of the following within the 3 weeks before onset of symptoms:

- Contact with blood or other body fluids of a confirmed case or
- Residence in or travel to a VHF endemic area or
- Work in a laboratory that handles VHF specimens or
- Work in a laboratory that handles bats, rodents, or primates from endemic areas or
- Exposure to semen from a confirmed case of VHF within the 10 weeks of that person's onset of symptoms

Confirmed:
A case that meets the clinical description as described above with any of the following:

- VHF positive antigen by ELISA from blood or
- VHF identified by culture from blood or tissues or
- VHF nucleic acid (RNA) detected by PCR from blood or tissue or
- Histopathologic identification of VHF viral antigens from tissues

Critical Reporting Elements

Specify the etiologic/causative agent.
Document relevant travel and deployment history occurring within the incubation period.

Comments

None.

Hepatitis A (Hepatitis A virus)

Background

Causative Agent	Hepatitis A virus
Travel Risks	Present worldwide
Clinical Description	An acute illness with a discrete onset of any of the following: fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, or abdominal pain, and either of the following: • Jaundice or elevated total bilirubin levels ≥ 3.0 mg/dl or • Elevated serum alanine aminotransferase (ALT) liver test levels > 200 IU/L

Case Classification

Confirmed:

In the absence of a more likely diagnosis, a case that meets the clinical description as described above with any of the following:

- Epidemiologically linked to a laboratory-confirmed case 15 to 50 days before the onset of symptoms or
- Hepatitis A positive IgM antibody from serum* or
- Hepatitis A virus nucleic acid (RNA) detected by PCR from any clinical specimen

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.
Note the patient's hepatitis A immunization history.

Comments

*Not otherwise ruled out by PCR/NAAT testing
Positive hepatitis A IgM results without symptoms DO NOT meet this case definition and, therefore, ARE NOT reportable.
Positive hepatitis A total antibody tests are commonly found in CHCS and DO NOT meet this case definition and, therefore, ARE NOT reportable.

Hepatitis B, acute & chronic (Hepatitis B virus)

Background

Causative Agent	Hepatitis B virus
Travel Risks	N/A
Clinical Description	Acute hepatitis B: An acute illness with a discrete onset of any of the following: fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, or abdominal pain, and either of the following: • Jaundice or • Elevated serum alanine aminotransferase (ALT) levels > 100 IU/L Chronic hepatitis B: Ranges from asymptomatic to evidence of liver disease such as cirrhosis or liver cancer.

Case Classification

Acute:
Confirmed:
A case that meets the clinical description of acute hepatitis B as described above with **ALL** of the following:

- Is not known to have chronic hepatitis B and
- Positive hepatitis B surface antigen (HBsAg) from serum and
- Positive IgM antibody to hepatitis B core antigen (HBc-IgM)

Chronic*:
Confirmed:
A case with **ALL** of the following:

- Negative IgM antibody to hepatitis B core antigen (HBc-IgM) and
- Hepatitis B positive result in any of the following tests:
  - Positive hepatitis B surface antigen (HBsAg) from serum or
  - Positive hepatitis B e antigen (HBeAg) from serum or
  - Hepatitis B nucleic acid (DNA) detected (example: PCR, sequencing, NAAT)

OR

A case with any of the following combinations of tests performed twice separated by at least 6 months*:

- Positive hepatitis B surface antigen (HBsAg) or
- Positive hepatitis B e antigen (HBeAg) or
- Hepatitis B nucleic acid (DNA) detected (example: PCR, sequencing, NAAT)

Critical Reporting Elements

Specify the clinical form of the disease.
Note the patient's Hepatitis B immunization history.

Comments

*For the purposes of this case definition, any positive result among the three laboratory tests mentioned above is acceptable, regardless of other conflicting testing results.
A hepatitis B core antibody test is a total antibody test that includes IgM and IgG unless otherwise specified. Anti-HBc-total DOES NOT meet this case definition and, therefore, IS NOT reportable.

Last update: July 2017

Hepatitis C, acute & chronic (Hepatitis C virus)

Background

Causative Agent	Hepatitis C virus
Travel Risks	N/A
Clinical Description	Acute: An acute illness with a discrete onset of any of the following: fever, headache, malaise, anorexia, nausea, vomiting, diarrhea, or abdominal pain, and either of the following: • Jaundice or • Elevated serum alanine aminotransferase (ALT) levels > 100 IU/L Chronic: Most chronic hepatitis C infections are asymptomatic; however, many result in chronic liver disease which can range from mild to severe.

Case Classification

Acute:

Probable:

A case that meets the clinical description as described above with **ALL** of the following:

- Hepatitis C positive antibody (anti-HCV) from serum and
- No record of a test conversion* within the past 12 months

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Hepatitis C nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen or
- HCV positive antigen from any clinical specimen or
- Test conversion* from a negative HCV antibody, HCV antigen, or HCV NAAT test followed by a positive result of any of these tests within 12 months

Chronic:

Probable:

A case with **ALL** of the following:

- No clinical signs and symptoms of acute hepatitis C infection and
- Hepatitis C positive antibody (anti-HCV) from serum and
- No record of a test conversion* within the past 12 months

Confirmed:

A case with **ALL** of the following:

- No clinical signs and symptoms of acute hepatitis C infection and
- No record of a test conversion* within the past 12 months and
- Hepatitis C nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen or
- Hepatitis C positive antigen from serum

Critical Reporting Elements

Specify the clinical form of the disease if known.

Comments

*Test conversion refers to a documented lab result of hepatitis C negative antibody, hepatitis C negative antigen, or hepatitis C nucleic acid not detected followed within 12 months by a positive result of any of these tests.

An acute case of hepatitis C should be reported as a chronic case of hepatitis C if a positive NAT for HCV RNA or a positive HCV antigen is reported one year or longer after acute case onset.

A confirmed acute case may not be reported as a probable chronic case (i.e., HCV antibody positive, but with an unknown HCV RNA NAT or antigen status).

A chronic hepatitis C case that has already been reported in the past should not be reported again.

Influenza-Associated Hospitalization

COMMON NAME: Seasonal flu

INCLUDES: People younger than 65 years of age who are admitted to the hospital because of influenza

EXCLUDES: Non-hospitalized influenza cases

Background

Causative Agent	Influenza virus
Travel Risks	Present worldwide
Clinical Description	An acute viral disease of the respiratory tract characterized by fever, chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headache, and fatigue.

Case Classification

Confirmed:

A case that meets the clinical description as described above with **ALL** of the following:

- Younger than 65 years of age and
- Any positive influenza laboratory test (example: culture, DFA, IFA, rapid, PCR)

AND

- Hospital admission date was ≤ 14 days *after* a positive influenza test or
- Hospital admission date was ≤ 3 days *before* a positive influenza test

Critical Reporting Elements

Specify the virus type (A or B) and subtype (example: H3N2, H1N1) if available.
Note the patient's influenza immunization history.

Comments

Hospitalization is defined as an admission to an inpatient ward of a hospital, or a medical transfer or evacuation to a facility with a higher level of care. Patients admitted for observation and discharged the same day are considered hospitalized for this case definition. An overnight stay is not required. Emergency room or outpatient clinic visits that do not result in hospital admission are not considered hospitalizations.

Last update: July 2017

Legionellosis (*Legionella* species)

COMMON NAME: Legionnaire's Disease, Pontiac Fever

Background

Causative Agent	*Legionella* species
Travel Risks	N/A
Clinical Description	Legionellosis is associated with two clinically and epidemiologically distinct illnesses: Legionnaires' disease: Characterized by fever, myalgia, cough, and clinical or radiographic pneumonia. Pontiac fever: A milder illness without pneumonia characterized by dry cough or sore throat, fever, chills, fatigue, headache, myalgia.

Case Classification

Suspected:
A case that meets any of the clinical descriptions as described above with any of the following:

- Seroconversion from a negative antibody titer followed by a positive antibody titer that is at least four-fold higher than the first titer and is against specific species or serogroups of *Legionella* other than *L. pneumophila* serogroup 1 (example: *L. micdadei*, *L. pneumophila* serogroup 6) or
- Seroconversion from a negative antibody titer followed by a positive antibody titer that is at least four-fold higher than the first titer and is against multiple species of pooled *Legionella* antigens or
- *Legionella* positive antigen by DFA or other similar method from respiratory secretions, lung tissue, or pleural fluid or
- Histopathologic identification of specific *Legionella* antigen by IHC or other similar method from respiratory secretions, lung tissue, or pleural fluid or
- *Legionella* species nucleic acid (DNA) detected from any clinical specimen.

Confirmed:
A case that meets any of the clinical descriptions as described above with any of the following:

- *Legionella* identified by culture from a respiratory specimen, lung tissue, or other normally sterile fluid (example: blood or CSF or, less commonly, joint, pleural, or pericardial fluid) or
- *L. pneumophila* serogroup 1 positive antigen from urine or
- Seroconversion from a negative antibody titer followed by a positive antibody titer that is at least a four-fold higher than the first titer and is against *L. pneumophila* serogroup 1

Critical Reporting Elements

Specify the clinical form of the disease.
Document relevant travel and deployment history occurring within the incubation period.

Comments

None.

Leishmaniasis (*Leishmania* species)

Background

Causative Agent	*Leishmania* species
Travel Risks	Most common in areas from Northern Argentina to Southern Texas, Southern Europe, Asia, the Middle East, and Africa
Clinical Description	Organisms of the genus *Leishmania* cause two major forms of disease: Cutaneous, Mucosal, and Mucocutaneous: An illness characterized by one or more lesions on uncovered parts of the body. The face, neck, arms, and legs are most common. A nodule appears at site of inoculation, becomes an indolent ulcer, and eventually heals leaving a depressed scar. Certain strains can disseminate and cause disfiguring mucosal lesions (mucosal/mucocutaneous leishmaniasis). Visceral: A chronic systemic illness with persistent irregular fever, hepatosplenomegaly, lymphadenopathy, pancytopenia, and weight loss.

Case Classification

Cutaneous, Mucosal, and Mucocutaneous:

Confirmed:

A case that meets any of the clinical descriptions as described above with any of the following:

- Microscopic identification of *Leishmania* from a lesion or
- *Leishmania* identified by culture from a lesion or
- *Leishmania* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT) from a lesion biopsy specimen or lesion aspirate

Visceral:

Confirmed:

A case that meets any of the clinical descriptions as described above with any of the following:

- Microscopic identification of *Leishmania* from bone marrow, spleen, liver, lymph node, or blood or
- *Leishmania* identified by culture from bone marrow, spleen, liver, lymph node, or blood, or
- *Leishmania* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT) from bone marrow, spleen, liver, lymph node, or blood or
- *Leishmania* positive antibody (example: direct agglutination, rK39 assay) from serum

Critical Reporting Elements

Specify the clinical form of the disease.

Document relevant travel and deployment history occurring within the incubation period.

Comments

None.

Leprosy (*Mycobacterium leprae*)

COMMON NAME: Hansen's disease

Background

Causative Agent	*Mycobacterium leprae*
Travel Risks	N/A
Clinical Description	A chronic bacterial disease characterized by the involvement primarily of skin as well as peripheral nerves and the mucosa of the upper airway. The following characteristics are typical of the major forms of the disease, though these classifications are assigned after a case has been laboratory confirmed. Tuberculoid: An illness characterized by one or few well-demaracated, hypopigmented, and hypoesthetic or anesthetic skin lesions, frequently with active, spreading edges and a clearing center; peripheral nerve swelling or thickening also may occur. Lepromatous: An illness characterized by a number of erythematous papules and nodules or an infiltration of the face, hands, and feet with lesions in a bilateral and symmetrical distribution that progress to thickening of the skin, possibly with reduced sensation. Borderline (dimorphous): An illness characterized by skin lesions characteristic of both the tuberculoid and lepromatous forms. Indeterminate: An illness characterized by early lesions, usually hypopigmented macules, without developed tuberculoid or lepromatous features but with definite identification of acid-fast bacilli in Fite stained sections.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Microscopic identification of acid fast bacilli in skin or dermal nerve from a biopsy of a skin lesion using Fite stain, without growth of mycobacteria on conventional media (if performed) or
- Microscopic identification of noncaseating granulomas with peripheral nerve involvement, without growth of mycobacteria on conventional media (if performed)

Critical Reporting Elements

Document clinical form of the disease.
Document the source of infection if known.

Comments

None.

Last update: July 2017

Leptospirosis (*Leptospira interrogans*)

COMMON NAME: Weil disease

Background

Causative Agent	*Leptospira interrogans*
Travel Risks	Present worldwide; particularly tropical areas
Clinical Description	An illness characterized by history of fever within the past two weeks and: • At least two of the following: Myalgia, headache, jaundice, conjunctival suffusion without purulent discharge, or rash or • At least one of the following: aseptic meningitis, GI symptoms, pulmonary complications, cardiac arrhythmias, ECG abnormalities, renal insufficiency, hemorrhage, or jaundice with acute renal failure.

Case Classification

Probable:

A case that meets the clinical description as described above with any of the following:

- Epidemiologically linked to an exposure event (example: adventure race, triathlon, flooding) with associated confirmed cases or
- *Leptospira* agglutination titer of ≥ 200 but < 800 by MAT in one or more serum specimens or
- *Leptospira* positive antibody by IFA from any clinical specimen or
- Darkfield microscopic identification of *Leptospira* from any clinical specimen or
- *Leptospira* positive IgM antibody from an acute phase serum specimen

Confirmed:

A case with any of the following:

- *Leptospira* identified by culture from any clinical specimen or
- At least a four-fold increase in *Leptospira* antibody titer between acute and convalescent serum or
- *Leptospira* positive antigen by DFA from tissue or
- *Leptospira* agglutination titer of ≥ 800 by MAT from serum or
- *Leptospira* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT) from any clinical specimen

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Last update: July 2017

Listeriosis (*Listeria monocytogenes*)

Background

Causative Agent	*Listeria monocytogenes*
Travel Risks	N/A
Clinical Description	An invasive disease that manifests most commonly as meningitis or bacteremia in adults. Infection during pregnancy may result in fetal loss through miscarriage or stillbirth, or neonatal meningitis or bacteremia. Other manifestations can also be observed.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- *L. monocytogenes* identified by culture from specimens obtained from a normally sterile site (example: blood, CSF or, less commonly, joint, pleural, or pericardial fluid) or
- *L. monocytogenes* identified by culture from placental or fetal tissue

Critical Reporting Elements

Document source of infection if known.

Comments

Listeria antibody or PCR which is commonly found in CHCS, DOES NOT meet this case definition, and therefore IS NOT reportable.

Lyme disease (*Borrelia burgdorferi*)

Background

Causative Agent	*Borrelia burgdorferi sensu lato*
Travel Risks	Most common in North America, Europe, and Northern Asia
Clinical Description	A systemic, tick-borne disease with protean manifestations, including dermatologic, rheumatologic, neurologic, and cardiac abnormalities. The most common clinical marker for the disease is *erythema migrans* (EM) or "bulls-eye rash", the initial skin lesion that occurs in 60%-80% of patients. EM typically begins as a red macule or papule and expands over a period of days to weeks to form a large round lesion, often with partial central clearing. A single primary lesion must reach greater than or equal to 5 cm in size across its largest diameter. Secondary lesions also may occur. Annular erythematous lesions occurring within several hours of a tick bite represent hypersensitivity reactions and do not qualify as EM. For most patients, the expanding EM lesion is accompanied by other acute symptoms, particularly fatigue, fever, headache, mildly stiff neck, arthralgia, or myalgia. These symptoms are typically intermittent. Late clinical manifestations of the disease include: severe headaches and neck stiffness, additional EM Rashes to the body, arthritis with severe joint pain and swelling (particularly to the knees and other large joints), facial palsy (loss of muscle tone or droop on one or both sides of the face), intermittent pain in tendons, muscles, joints, and bones, heart palpitations or an irregular heartbeat, episodes of dizziness or short breath, inflammation of the brain and spinal cord, nerve pain, shooting paints, numbness, or tingling in the hands or feet, and problems with short term memory.

Case Classification

Suspected:

A case with any of the following:

- EM without a known exposure* and no laboratory information available or
- A case with no clinical information available and any of the following:
  - *B. burgdorferi* identified by culture from any clinical specimen or
  - *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgM Western Blot[Ω] only when ≤ 30 days of symptom onset or
  - *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgG Western Blot[¥] at any point during illness or
  - *B. burgdorferi* positive IgG antibody by Western Blot[¥]

Probable:

A case of provider-diagnosed Lyme disease and any of the following:

- *B. burgdorferi* identified by culture from any clinical specimen or
- *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgM Western Blot [Ω] only when ≤ 30 days of symptom onset or
- *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgG Western Blot[¥] at any point during illness or
- *B. burgdorferi* positive IgG antibody by Western Blot[¥]

Confirmed:
A case with any of the following:

- EM and a known exposure* in a high endemic area
- EM with a known exposure*in a non-endemic area, and any of the following:
  - *B. burgdorferi* identified by culture from any clinical specimen or
  - *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgM Western Blot [Ω] only when ≤ 30 days of symptom onset or
  - *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgG Western Blot[¥] at any point during illness or
  - *B. burgdorferi* positive IgG antibody by Western Blot[¥]

OR

- A case with at least one late manifestation (as described above) and any of the following:
  - *B. burgdorferi* identified by culture from any clinical specimen or
  - *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgM Western Blot [Ω] only when ≤ 30 days of symptom onset or
  - *B. burgdorferi* positive IgM/IgG antibody by EIA or IFA followed by *B. burgdorferi* positive IgG Western Blot[¥] at any point during illness or
  - *B. burgdorferi* positive IgG antibody by Western Blot[¥]

Critical Reporting Elements

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

[Ω] An IgM immunoblot is considered positive if two of the following three bands are present: 24 kDa (OspC), 39kDa (BmpA), and 41 kDa (Fla).

[¥] An IgG immunoblot is considered positive if five of the following ten bands are present: 18 kDa, 21 kDa (OspC), 28 kDa, 30 kDa,39 kDa (BmpA), 41 kDa (Fla), 45 kDa, 58 kDa (not GroEL), 66 kDa, and 93 kDa.

Depending upon the assay, OspC could be indicated by a band of 21, 22, 23, 24 or 25 kDA

*Exposure is defined as having been (less than or equal to 30 days before onset of EM) in wooded, brushy, or grassy areas (i.e., potential tick habitats) in a county in which Lyme disease is endemic. A history of tick bite is not required.

Endemicity is defined as a county in which at least two confirmed cases have been acquired or in which established populations of a known tick vector are infected with *B. burgdorferi*.

Malaria (*Plasmodium* species)

Background

Causative Agent	*Plasmodium* species
Travel Risks	Most common in tropical and subtropical areas of South America, Africa, and Southeastern Asia.
Clinical Description	Malaria is characterized most often by fever, chills, sweats, headaches, muscle pains, nausea, vomiting and fatigue. Persons with severe malaria may experience confusion, coma, neurologic focal signs, severe anemia, and respiratory difficulties.

Case Classification

Suspected:
Plasmodium positive antigen by rapid diagnostic test (RDT)

Confirmed:
A case with any of the following:

- Microscopic identification of the specific *Plasmodium* species from blood or
- Microscopic identification of *Plasmodium* from blood, but not able to determine the specific species of malaria or
- *Plasmodium* nucleic acid (DNA) detected (example: PCR, sequencing, NAAT) from blood

Critical Reporting Elements

Specify the species if known.
Document relevant travel and deployment history occurring within the incubation period.
Document chemoprophylaxis regimen.

Comments

Report dual infections of different *Plasmodium* species separately.

Measles (Measles virus)

COMMON NAME: Rubeola

Background

Causative Agent	Paramyxovirus
Travel Risks	Present worldwide
Clinical Description	An acute illness characterized by **ALL** of the following: • Generalized, maculopapular rash lasting ≥ 3 days and • Temperature ≥ 101°F or 38.3°C and • Cough or coryza (inflammation of nasal mucous membranes) or conjunctivitis (inflammation of the eye)

Case Classification

Probable:
In the absence of a more likely diagnosis, a case that meets the clinical description as described above where lab results are not available and there is no epidemiologic link to a laboratory-confirmed case

Confirmed:
Any acute febrile rash illness with any of the following:

- Measles virus identified by culture[‡] from any clinical specimen or
- Measles virus nucleic acid[‡] (RNA) detected by PCR from any clinical specimen or
- Seroconversion from a negative measles IgG followed by a positive measles IgG in a convalescent sera or
- Significant rise of measles IgG titer between 2 serum samples[‡] or
- Measles positive IgM antibody[‡§] from serum or
- Epidemiologically linked to a laboratory-confirmed case

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Note the patient's measles immunization history.

Comments

[‡] Not explained by MMR vaccination during the previous 6-45 days.
[§] Not otherwise ruled out by other confirmatory testing or more specific measles testing in a public health laboratory.

Meningococcal Disease (*Neisseria meningitidis*)

EXCLUDES: viral/aseptic meningitis

Background

Causative Agent	*Neisseria meningitidis*
Travel Risks	Present worldwide
Clinical Description	Meningococcal disease typically presents in one of two forms: meningitis or septicemia. However, other manifestations might be observed. Meningococcal disease manifests most commonly as meningitis and/or meningococcemia that may progress rapidly to purpura fulminans (a hemorrhagic condition and clotting disorder which manifests as blood spots, bruising and discoloration of the skin), shock, and death.

Case Classification

Suspected:
A case with any the following:

- Clinical purpura fulminans in the absence of a positive blood culture or
- Microscopic identification of gram-negative diplococci from a normally sterile body site (example: blood or CSF or, less commonly, joint, pleural, or pericardial fluid)

Probable:
A case with the following:

- Histopathologic identification of *N. meningitidis* antigen by IHC from formalin-fixed tissue or
- *N. meningitidis* positive antigen by latex agglutination from CSF

Confirmed:
A case with any of the following:

- *N. meningitidis* nucleic acid (DNA) detected by PCR from a specimen obtained from a normally sterile body site (example: blood or CSF or, less commonly, joint, pleural, or pericardial fluid) or
- *N. meningitidis* identified by culture from a normally sterile body site (example: blood, CSF, or less commonly, synovial, pleural, or pericardial fluid) or from purpuric lesions

Critical Reporting Elements

Specify the serogroup (A, B, C, Y, Z, W135) if known.
Note the patient's meningococcal immunization history.

Comments

None.

Mumps (Mumps virus)

Background

Causative Agent	Mumps virus
Travel Risks	Present worldwide
Clinical Description	Acute swelling of the parotid or other salivary gland(s) lasting at least 2 days. It can present as orchitis, oophortitis, aseptic meningitis, encephalitis (rarely), mastitis, pancreatitis (usually mild), hearing loss, and in rare instances can lead to permanent nerve deafness.

Case Classification

Suspected:
A case with any of the following:

- In the absence of a more likely diagnosis, a case that meets the clinical description as described above or
- Any positive mumps laboratory result without clinical symptoms

Probable:
In the absence of a more likely diagnosis, a case that meets the clinical description as described above with any of the following:

- Mumps positive IgM antibody from serum or
- Epidemiologically linked to a probable or confirmed case or
- Epidemiologically linked to a group/community defined by public health during an outbreak of mumps

Confirmed:
A case the meets the clinical description as described above with any of the following:

- Mumps nucleic acid (RNA) detected by PCR from any clinical specimen or
- Mumps identified by culture from any clinical specimen

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Note the patient's mumps immunization history.

Comments

None.

Last update: July 2017

Norovirus Infection (*Norovirus*)

Background

Causative Agent	Norovirus (*Norovirus*)
Travel Risks	N/A
Clinical Description	An acute, highly contagious viral gastroenteritis characterized by vomiting, watery non-bloody diarrhea with abdominal cramps, and nausea. Vomiting is the most commonly reported symptom and occurs in more than 50% of cases. Low-grade fever also occasionally occurs. Symptoms usually last 24 to 60 hours.

Case Classification

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

Confirmed:
A case with any of the following:

- Norovirus nucleic acid (RNA) detected by PCR from stool or vomitus or
- Microscopic identification of norovirus (by electron microscopy) from stool or vomitus or
- At least a four-fold increase of norovirus antibody titer between acute and convalescent sera

Critical Reporting Elements

Document the source of infection if known.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Novel and Variant Influenza (Influenza A virus)

INCLUDES: Hospitalized and non-hospitalized cases.

EXCLUDES: Seasonal influenza or influenza caused by current circulating influenza H1 and H3 viruses. Note that influenza A (H1N1) pdm09 is no longer reportable as novel influenza.

Background

Causative Agent	Novel and variant subtypes of influenza A virus
Travel Risks	Most common among poultry in Bangladesh, China, Egypt, India, Indonesia, and Vietnam.
Clinical Description	An acute respiratory illness with fever often indistinguishable from seasonal influenza.

Case Classification

Probable:
A case that meets the clinical description as described above with no or inconclusive laboratory testing for novel or variant influenza A virus and that meets any of the following:

- Contact with a confirmed case of novel or variant influenza

OR

- Travel to an area with known cases of novel or variant influenza and
- Exposure to animals known to transmit novel or variant influenza (e.g. birds or pigs)

Confirmed:
A case with any of the following:

- Novel or variant influenza A virus identified by culture or
- Novel or variant influenza A virus nucleic acid (RNA) detected by PCR or gene sequencing or
- At least a four-fold increase of novel or variant influenza A virus antibody titer between acute and convalescent serum or
- Novel or variant influenza A virus identified by another testing method as determined by DoD

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Outbreak or Disease Cluster

Background

Causative Agent	Various
Travel Risks	Present worldwide
Clinical Description	An outbreak is defined as the occurrence of a medical condition that exceeds the baseline or expected rate within a specific place or group of people over a given period of time. Outbreaks can be caused by a variety of etiologic agents, transmitted person-to-person or via a common source, resulting in mild or serious illness. There is not a minimum number of cases that constitutes an outbreak. In some instances a single case can constitute an outbreak depending on the organism (example: smallpox). The rate increase that should trigger reporting will vary according to the circumstances surrounding the event and requires exercise of professional judgment.

Case Classification

While the decision to report an outbreak requires professional judgment, outbreaks should be reported when an increase in illness leads local public health personnel to: (a) identify cases, (b) seek causes, or (c) institute control measures. When in doubt, report, but know that Service public health authorities are most interested in the following:

- Illnesses causing a rapid rise in numbers of affected persons
- Severe illnesses such as hospitalized cases
- Illnesses which appear to be limited to a specific group (demographic, occupational, etc.)
- Illnesses indicative of highly infectious or virulent organisms requiring rapid implementation of control measures
- Illnesses which affect or have the potential to affect mission readiness
- Illnesses leading to control measure recommendations which are invasive, involve mass prophylaxis, or are potentially resource intensive
- Illnesses with the potential to attract media attention or generate public concern
- Illnesses which may prompt an installation commander to exercise public health emergency powers (i.e. illnesses indicative of a public health emergency or act of bioterrorism)
- Vaccine-preventable illnesses occurring in a highly vaccinated population

Critical Reporting Elements

Document location, source of outbreak if known or suspected, case symptoms and likely etiological agent if known, number affected, group affiliation (example: military unit, boy scouts), beginning and end dates, and actions taken to mitigate outbreak.

Comments

Outbreaks are reportable regardless of whether the etiologic agent itself is known or on the reportable disease list. If the etiological agent is on the reportable disease list, then also report each case individually in addition to reporting the outbreak, unless otherwise directed by your service point of contact (pg10).

Pertussis (*Bordetella pertussis*)

COMMON NAME: Whooping Cough

Background

Causative Agent	*Bordetella pertussis*
Travel Risks	N/A
Clinical Description	In the absence of a more likely diagnosis, a cough lasting at least 2 weeks with any of the following symptoms: • Paroxysms of coughing or inspiratory "whoop" or • Post-tussive vomiting or • Apnea, with or without cyanosis (applies only to infants age less than 1 year)

Case Classification

Probable (infants less than 1 year of age):
A case with an acute cough illness of any duration with at least one of the symptoms listed in the clinical description as described above and with any of the following:

- *B. pertussis* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Epidemiologically linked to a laboratory confirmed case

Probable (over 1 year of age):
In the absence of a more likely diagnosis, a case that meets the clinical description as described above where lab results are not available and there is no epidemiologic link to a laboratory confirmed case

Confirmed:
A case that meets any of the following:

- An acute cough illness of any duration with *B. pertussis* identified by culture from any clinical specimen or
- Meets the clinical description as described above with *B. pertussis* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Meets the clinical description as described above and is epidemiologically linked to a laboratory-confirmed case

Critical Reporting Elements

Note the patient's pertussis immunization history.

Comments

None.

Last update: July 2017

Plague (*Yersinia pestis*)

Background

Causative Agent	*Yersinia pestis*
Travel Risks	Most common in rural areas of Central and Southern Africa, Central Asia and the Indian subcontinent, the Northeastern South America, and parts of the Southwestern United States
Clinical Description	An illness characterized by fever, chills, headache, malaise, prostration, and leukocytosis (high white blood cell count) that manifests as one of the four major clinical forms: Bubonic: Regional lymphadenitis (bubo) in the area of the infected flea bite. Most often (> 90%) inguinal; alternatively cervical or axillary. Septicemic: Without an evident bubo. May be a complication of any of the other forms of plague, or may be the presenting syndrome. Pneumonic: Plague pneumonia, resulting from hematogenous spread in bubonic or septicemic cases (secondary pneumonic plague) or inhalation of infectious droplets (primary pneumonic plague). Pharyngeal: Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues.

Case Classification

Suspected:
A case that meets the clinical description as described above with no laboratory information available

Probable:
A case that meets the clinical description as described above with any of the following:

- Elevated antibody titer against *Y. pestis* fraction 1 (F1) antigen (without documented fourfold or greater change) from serum in a patient with no history of plague vaccination or
- *Y. pestis* positive F1 antigen by IFA or DFA from any clinical specimen

Confirmed:
A case that meets the clinical description as described above with any of the following:

- *Y. pestis* identified by culture from any clinical specimen or
- At least a fourfold increase of antibody titer against *Y. pestis* F1 antigen between acute and convalescent sera

Critical Reporting Elements

Document the clinical form of the infection.
Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Last update: July 2017

Poliomyelitis (Poliovirus)

Background

Causative Agent	Poliovirus
Travel Risks	Most common in Afghanistan and Pakistan
Clinical Description	An illness characterized by an acute onset of a flaccid paralysis of one or more limbs with decreased or absent tendon reflexes in the affected limbs, without other apparent cause, and without sensory or cognitive loss.

Case Classification

Paralytic:

Probable:

A case that meets the clinical description as described above.

Confirmed:

A case that meets the clinical description as described above with any of the following:

- A neurologic deficit 60 days after onset of initial symptoms or
- Death or
- Unknown follow-up status

Non-paralytic:

Confirmed:

A case without symptoms of paralytic poliomyelitis with **ALL** of the following

- Poliovirus identified by culture from any clinical specimen and
- Confirmatory typing and sequencing by a CDC Poliovirus Laboratory, as needed

Critical Reporting Elements

Specify the clinical form of the disease.

Document relevant travel and deployment history occurring within the incubation period.

Note the patient's poliomyelitis immunization history.

Comments

None.

Post-Exposure Prophylaxis (PEP) against Rabies

Background

Causative Agent	N/A
Travel Risks	N/A
Clinical Description	Rabies is a zoonotic disease caused by RNA viruses in the family *Rhabdoviridae*, genus *Lyssavirus*. Rabies virus is present in the saliva and central nervous system (CNS) tissue of rabid mammals. If a person has been exposed (or reasonably presumed to have been exposed) to a rabid (or potentially rabid) animal, then rabies post-exposure prophylaxis (PEP) is warranted for the prevention of human rabies. PEP can be in the form of anti-rabies vaccine, human rabies immunoglobulin (HRIG) or both depending on the circumstances.

Case Classification

Confirmed:
A case that meets the exposure criteria* as defined below in which rabies PEP is initiated and a full rabies exposure risk assessment is completed

Critical Reporting Elements

Specify the implicated animal species if known.
Anatomical site of exposure.
Document the circumstances under which the case patient was potentially exposed including deployment and duty exposure, occupational activities, environmental exposures, or other high risk activities.
Note the patient's rabies immunization history.
Specify reason(s) for discontinuation if PEP was discontinued.

Comments

Report all cases receiving PEP that met the exposure criteria even if PEP is subsequently terminated due to the animal being deemed rabies free.

*Exposure is defined as one or more of the following:

- Any bite, scratch or other situation in which saliva or CNS tissue of a rabid or potentially rabid animal could have entered an open or fresh wound or come in contact with a mucous membrane by entering the eye, mouth or nose or
- Inadvertent contact with a bat's saliva or CNS tissue or circumstance in which bat exposure cannot be ruled out (ex: finding a bat in a room with an unattended child, a mentally impaired person, or a sleeping person) or
- Recipient of organ donations from suspected or known human cases of rabies

Q fever (*Coxiella burnetii*)

Background

Causative Agent	*Coxiella burnetii*
Travel Risks	Present worldwide; particularly in Africa and the Middle East
Clinical Description	Acute: An illness characterized by an acute fever and any of the following: rigors, severe retrobulbar headache, acute hepatitis, pneumonia, or elevated liver enzyme levels. Chronic: An infection that persists for more than 6 months. Newly recognized, culture-negative endocarditis, particularly in a patient with previous valvulopathy or compromised immune system, suspected infection of a vascular aneurysm or vascular prosthesis, or chronic hepatitis, osteomyelitis, osteoarthritis, or pneumonitis in the absence of other known etiology.

Case Classification

Acute:

Probable:

A case that meets the clinical description of acute Q fever as described above with any of the following:

- *C. burnetii* positive IgG titer of ≥ 1:128 against phase II antigen by IFA
- *C. burnetii* positive IgM or IgG antibody against phase II antigen by ELISA or latex agglutination

Confirmed:

A case that meets any of the following:

- Epidemiologically linked to a confirmed case or
- A case that meets the clinical description of acute Q fever as described above with any of the following:
    - At least a four-fold increase of IgG antibody titer against phase II antigen by IFA between acute and convalescent sera separated by 3-6 weeks or
    - *C. burnetii* nucleic acid (DNA) detected by PCR from any clinical specimen or
    - Histopathologic identification of *C. burnetii* antigen by IHC from any clinical specimen or
    - *C. burnetii* identified by culture from any clinical specimen

Chronic:

Probable:

A case that meets the clinical description of chronic Q fever as described above with *C. burnetii* positive IgG titer of ≥ 1:128 but < 1:800 to phase I antigen by IFA

Confirmed:

A case that meets the clinical description of chronic Q fever as described above with any of the following:

- *C. burnetii* positive IgG titer of ≥ 1:800 to phase I antigen by IFA or
- *C. burnetii* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Histopathologic identification of *C. burnetii* antigen by IHC from a clinical specimen or
- *C. burnetii* identified by culture from any clinical specimen

Critical Reporting Elements

Specify the clinical form of the disease.
Document the source of infection if known.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Document any relevant travel and deployment history within the incubation period.

Comments

None.

Rabies, Human (Lyssavirus)

Background

Causative Agent	Lyssaviruses
Travel Risks	Present worldwide
Clinical Description	An acute encephalomyelitis that almost always progresses to coma or death within 10 days after the first symptom.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Lyssavirus positive antigen by DFA from any clinical specimen (preferably the brain or nerves surrounding hair follicles in the nape of the neck) or
- Lyssavirus identified by culture from saliva or central nervous system tissue or
- Lyssavirus positive antibody by IFA or complete rabies virus neutralization at 1:5 dilution from CSF or
- Lyssavirus positive antibody by neutralization at 1:5 dilution from CSF of a vaccinated person or serum of an unvaccinated person or
- Lyssavirus nucleic acid (RNA) detected by PCR in saliva, CSF, or tissue

Critical Reporting Elements

Specify the implicated animal species if known.

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Note the patient's rabies immunization history.

Comments

None.

Last update: July 2017

Relapsing Fever (*Borrelia* species)

COMMON NAME: Tick-borne Relapsing Fever (TBRF), Louse-borne Relapsing Fever (LBRF)

Background

Causative Agent	*Borrelia* species (other than the Lyme disease agents)
Travel Risks	TBRF: Most common in Western United States, Western Europe, Middle East, Africa, and Central Asia LBRF: Most common in sub-Saharan Africa and Andes region
Clinical Description	An illness characterized by high fever, headache, muscle and joint aches, or nausea. Fever typically lasts 2 to 9 days and alternates with afebrile periods of 2 to 4 days. The total number of relapses varies from a single incident to over ten.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- Microscopic identification of *Borrelia* from blood or
- *Borrelia* identified by intraperitoneal inoculation of laboratory rats or mice with blood or
- *Borrelia* identified by culture from blood

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Rift Valley Fever (RVF)

Background

Causative Agent	Rift Valley Fever Virus
Travel Risks	Most common in Africa and Saudi Arabia
Clinical Description	An illness characterized by fever (may be biphasic), chills, headache, myalgia, or arthralgia. May include retinitis, encephalitis, and hemorrhage.

Case Classification

Confirmed:

A case that meets the clinical description as described above with any of the following:

- RVF identified by culture from any clinical specimen or
- RVF positive antibody by PRNT from any clinical specimen or
- RVF positive antigen (example: EIA, ELISA) from any clinical specimen or
- RVF nucleic acid (RNA) detected by PCR from any clinical specimen or
- RVF positive IgM antibody from any clinical specimen or
- At least a four-fold increase of RVF IgG antibody titer between acute and convalescent sera

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Rubella (Rubella virus)

COMMON NAME: German measles

Background

Causative Agent	Rubella virus
Travel Risks	Present worldwide
Clinical Description	An illness characterized by **ALL** of the following: • Acute onset of generalized maculopapular rash and • Temperature greater than 99.0°F or 37.2°C if measured and • Any of the following: arthralgia, arthritis, lymphadenopathy, or conjunctivitis

Case Classification

Suspected:
A case with any generalized rash illness of acute onset that does not meet the criteria for probable or confirmed rubella or any other illness

Probable:
In the absence of a more likely diagnosis, a case that meets the clinical description as described above with **ALL** of the following:

- Lack of epidemiologic linkage to a laboratory-confirmed case of rubella and
- Noncontributory or no serologic or virologic test performed

Confirmed:
A case that meets any of the following:

- Rubella identified by culture from any clinical specimen or
- Rubella nucleic acid (RNA) detected by PCR from any clinical specimen or
- Seroconversion† from a negative IgG followed by a positive IgG or
- Significant rise of an IgG antibody titer between acute and convalescent sera or
- Rubella positive IgM antibody†* from serum or
- A case meeting the clinical description as described above that is epidemiologically linked to a confirmed case

Critical Reporting Elements

Specify whether the patient presented with congenital rubella syndrome or whether the patient is pregnant.
Document relevant travel and deployment history occurring within the incubation period.
Note the patient's rubella immunization history.

Comments

Patients who have laboratory evidence of recent measles infection are excluded.
† Not explained by MMR vaccination during the previous 6-45 days.
*Not otherwise ruled out by more specific testing in a public health laboratory.

Last update: July 2017

Salmonellosis (*Salmonella* species)

INCLUDES: *Salmonella* species, including *Salmonella* Paratyphi

EXCLUDES: *Salmonella* Typhi. See Typhoid Fever case definition.

Background

Causative Agent	*Salmonella* species
Travel Risks	N/A
Clinical Description	An illness of variable severity commonly manifested by diarrhea, abdominal pain, nausea, and sometimes vomiting.

Case Classification

Suspected:
Salmonella positive laboratory test by a method other than culture (example: EIA, PCR) from any clinical specimen

Probable:
A case that meets the clinical description as described above that is epidemiologically linked to a confirmed case

Confirmed:
Salmonella identified from culture from any clinical specimen

Critical Reporting Elements

Specify the serotype characterization (O and H antigen) if known.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

None.

Schistosomiasis (*Schistosoma* species)

Background

Causative Agent	*Schistosoma* species. Most human infections are caused by *Schistosoma mansoni, Schistosoma haematobium,* or *Schistosoma japonicum*
Travel Risks	Most common in Africa, the Middle East, South America, Indonesia, some parts of China, and Southeast Asia
Clinical Description	Urinary schistosomiasis: gives rise to dysuria, frequency, and hematuria at the end of urination, and is usually caused by *Schistosoma haematobium*. Intestinal schistosomiasis: is normally accompanied by diarrhea, abdominal pain, and hepatosplenomegaly, and is caused by *Schistosoma mansoni* and *Schistosoma japonicum*.

Case Classification

Confirmed:
A case that meets the clinical description as described above with microscopic identification of eggs from stool, urine or biopsy specimens

Critical Reporting Elements

Specify the clinical form of the disease.
Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Severe Acute Respiratory Syndrome (Coronavirus)

COMMON NAME: SARS-CoV

Background

Causative Agent	Coronavirus
Travel Risks	Present worldwide
Clinical Description	SARS is characterized by severity of illness as follows: Early illness: Two or more of the following: Fever (might be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, or rhinorrhea. Mild-to-moderate respiratory illness: Temperature of > 100.4°F (> 38°C) and one or more clinical findings of lower respiratory illness (example: cough, shortness of breath, or difficulty breathing). Severe respiratory illness: Meets clinical description for mild-to-moderate respiratory illness with any of the following: • Radiographic evidence of pneumonia or • Acute respiratory distress syndrome

Case Classification

Suspected:
A case that meets the clinical case description for mild-to-moderate respiratory illness as described above and exposure criteria* is met as described below

Probable:
A case that meets the clinical description for severe respiratory illness as described above and exposure criteria* is met as described below.

Confirmed:
A case that meets any of the clinical case descriptions as described above with any of the following:

- SARS-CoV positive antibody (example: EIA) from serum or
- SARS-CoV identified by culture from any clinical specimen or
- SARS-CoV nucleic acid (RNA) detected by PCR from any clinical specimen and with subsequent confirmation in a reference laboratory (example: DoD or CDC)

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.

Comments

*Exposure is defined as one or more of the following in the 10 days before onset of symptoms:

- Close contact as defined in the definition page with a person with confirmed SARS-CoV disease or

- Close contact as defined in the definition page with a person with mild-to-moderate or severe respiratory illness for whom a chain of transmission can be linked to a confirmed case of SARS-CoV disease

A person can be excluded as a reportable case of SARS if any of the following apply:

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

Shigellosis (*Shigella* species)

Background

Causative Agent	*Shigella* species
Travel Risks	N/A
Clinical Description	An illness of variable severity characterized by diarrhea, fever, nausea, cramps, and tenesmus. Asymptomatic infections may occur.

Case Classification

Suspected:
A case with an undifferentiated *Shigella*/enteroinvasive *E. coli* (EIEC) positive laboratory test by a method other than culture (example: EIA, PCR) from any clinical specimen

Probable:
A case that meets any of the following:

- *Shigella* positive laboratory test by a method other than culture (example: EIA, PCR) from any clinical specimen or
- A case that meets the clinical description as described above that is epidemiologically linked to a probable or confirmed case

Confirmed:
Shigella identified by culture from any clinical specimen

Critical Reporting Elements

Specify the serotype characterization (O antigen) if known.
Document the source of infection if known.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.

Comments

Identification of Shiga toxin is presumptive for Shiga toxin-producing *E. coli* (STEC) and should not be reported as Shigellosis.

Smallpox (Variola virus)

EXCLUDES: Vaccinations and vaccine adverse events

Background

Causative Agent	*Variola* virus
Travel Risks	N/A
Clinical Description	An illness with acute onset of fever ≥ 101°F (≥ 38.3°C) followed by a rash characterized by firm, deep seated vesicles or pustules in the same stage of development without other apparent cause.
Clinically Consistent	Clinically consistent cases are those presentations of smallpox that do not meet the classical clinical description and include: a) hemorrhagic type, b) flat type, and c) *variola sine eruptione*.

Case Classification

Suspected:
A case with a generalized acute vesicular or pustular rash illness with a fever that precedes the rash by 1-4 days

Probable:
A case with any of the following:

- A case that meets the clinical description as described above or
- A clinically consistent case as described above that is epidemiologically linked to a confirmed case

Confirmed:
A case with any of the following:

- Smallpox nucleic acid (DNA) detected by PCR that was performed from culture from any clinical specimen or
- Smallpox identified by culture from any clinical specimen tested only in a Level D laboratory or
- A case that meets the clinical case description as described above that is epidemiologically linked to a confirmed case

Critical Reporting Elements

Document the source of infection if known.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Spotted Fever Rickettsiosis (*Rickettsia* species)

INCLUDES: Rocky Mountain spotted fever, Pacific Coast tick fever, African tick-bite fever, and others

EXCLUDES: *Rickettsia prowazekii* and *Rickettsia typhi*. See Typhus Fever case definition.

Background

Causative Agent	Rickettsia species
Travel Risks	Present worldwide
Clinical Description	Illness characterized by any reported fever and one or more of the following: rash, eschar, headache, myalgia, anemia, thrombocytopenia, or any hepatic transaminase elevation (AST or ALT). The macular or maculopapular rash appears on the fourth to seventh days following fever onset in most patients, often present on the palms and soles. Most often tick-borne, but some Rickettsia species can be transmitted by mites and fleas.

Case Classification

Probable:
A case that meets the clinical description as described above with the following:

- *R. rickettsii* or other spotted fever group *Rickettsia* positive IgM or IgG antibody titer by IFA, ELISA, or latex agglutination from serum

Confirmed:
A case that meets the clinical description as described above with any of the following:

- At least a four-fold change in IgG antibody titer by IFA between paired sera (one taken in the first week of illness and a second 2-4 weeks later) or
- *R. rickettsii* or other spotted fever group *Rickettsia* nucleic acid (DNA) detected by PCR via amplification of a specific target from any clinical specimen or
- Histopathologic identification of *R. rickettsii* or other spotted fever group *Rickettsia* by IHC from a biopsy or autopsy specimen or
- *R. rickettsii* or other spotted fever group *Rickettsia* identified by culture from any clinical specimen

Critical Reporting Elements

Document relevant travel and deployment history occurring within the 14 days prior to symptom onset. Document potential occupational/high risk exposure (outdoor activity, camping, hunting, field exercise, mission/duty related, etc.) to known arthropods.

Comments

There can be antibody cross-reactivity between spotted fever and typhus group antigens. In cases where IgM or IgG titers are positive for both diseases, report the case under the disease most consistent with the case's clinical presentation, exposure history, and travel history.

Last update: January 2020

Syphilis (*Treponema pallidum*)

Background

Causative Agent	*Treponema pallidum*
Travel Risks	N/A
Clinical Description	Disease course is complex and characterized in stages for surveillance purposes according to 1) clinical signs and 2) time since infection. Early latent: An asymptomatic period of less than 12 months since initial infection. Late latent: An asymptomatic period of greater than 12 months since initial infection. Late: Inflammatory lesions of the cardiovascular system, skin, bone, brain, or other tissue, or more rarely other structures (example: respiratory tract, mouth, eye, abdominal organs, lymph nodes, skeletal muscles) may be involved. Primary: One or more painless ulcerative lesions (chancres). Secondary: Localized or widespread lesions of the skin or mucous membranes (example: a rash that is non-pruritic macular, maculopapular, papular, or has pustular lesions), often with general swollen lymph nodes. Other symptoms can include mucous patches, wart like genital lesions, and hair loss. The primary ulcerative lesion may still be present. Neurosyphilis: Infection of the central nervous system as evidenced by syphilitic meningitis, meningovascular syphilis, optical involvement including interstitial keratitis and uveitis, general paresis, including dementia, and tabes dorsalis. Congenital: Fetal infection with *T. pallidum* in utero can result in a broad range of severity in infants, from inapparent infection to severe cases that are clinically apparent at birth. In those less than 2 years of age, hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice, pseudoparalysis, anemia, or edema (nephrotic syndrome or malnutrition) may occur. An older child may have stigmata (example: interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints).

Case Classification

Early Latent:

Probable:

An asymptomatic case with **ALL** of the following:

- No past diagnosis of syphilis and
- A reactive nontreponemal test by VDRL, RPR, or equivalent serologic methods and
- A reactive treponemal test by FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods

OR

An asymptomatic case with **ALL** of the following:

- A current nontreponemal titer by VDRL, RPR, or equivalent serologic methods demonstrating at least a four-fold increase from the last nontreponemal test titer and
- Evidence of having acquired the infection within the previous 12 months based on any of the following:
    - Seroconversion by a nontreponemal test during the previous 12 months or
    - At least a four-fold increase of antibody titer by a nontreponemal test during the previous 12 months or
    - Seroconversion of a treponemal test during the previous 12 months or
    - A history of symptoms consistent with the clinical description of primary or secondary syphilis during the previous 12 months or
    - A history of sexual exposure to a partner within the previous 12 months who had primary, secondary, or early latent syphilis with a duration < 12 months or
    - Only sexual contact was within the last 12 months (sexual debut)

Late Latent:

Probable:

An asymptomatic case with **ALL** of the following:

- No past diagnosis of syphilis and
- A reactive nontreponemal test by VDRL, RPR, or equivalent serologic methods and
- A reactive treponemal test by FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods

OR

An asymptomatic case with **ALL** of the following:

- A past history of syphilis treatment and
- A current nontreponemal test titer by VDRL, RPR, or equivalent serologic methods demonstrating at least a four-fold increase from the last nontreponemal test titer and
- There is no evidence of having acquired the disease within the preceding 12 months

Late:

Probable:

In the absence of other known causes of neurosyphilis symptoms, a case that meets the clinical description of late syphilis as described above with:

- A reactive treponemal test by FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods

Confirmed:

A case that meets the clinical description of late syphilis as described above with any of the following:

- Microscopic identification of *T. pallidum* by special stains or equivalent methods from late lesions or
- *T. pallidum* nucleic acid (DNA) detected by PCR or sequencing from any clinical specimen

Primary syphilis:

Probable:

A case that meets the clinical description of primary syphilis as described above with any of the following:

- Reactive nontreponemal testes by VDRL, RPR or
- Reactive treponemal specific tests by FTA-ABS, TP-PA, EIA, CIA or
- Equivalent serological methods

Confirmed:
A case that meets the clinical description of primary syphilis as described above with any of the following:

- Microscopic identification of *T. pallidum* by dark field microscopy from any clinical specimen or
- *T. pallidum* nucleic acid (DNA) detected by PCR or sequencing from any clinical specimen

Secondary syphilis:
Probable:
A case that meets the clinical description of secondary syphilis as described above with **ALL** of the following:

- Elevated nontreponemal titer ≥4 by VDRL, RPR, or equivalent serologic methods titer and
- A reactive treponemal test by FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods

Confirmed:
A case that meets the clinical description of secondary syphilis as described above with any of the following:

- Microscopic identification of *T. pallidum* by dark field microscopy from any clinical specimen or
- *T. pallidum* nucleic acid (DNA) detected by PCR or sequencing from any clinical specimen

Neurosyphilis:
Probable:
Syphilis of any stage with a negative VDRL test in CSF and any of the following:

- A reactive treponemal serologic test for syphilis by FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods or
- In the absence of other known causes of neurosyphilis symptoms, a reactive non-treponemal serologic test for syphilis by VDRL, RPR, or equivalent serologic method with **ALL** of the following:
    - Elevated CSF protein (>50 mg/dL) or CSF leukocyte count (>5 WBCs/mm^3) (in HIV-positive individuals, these parameters are less specific) and
    - Clinical symptoms or signs consistent with neurosyphilis

Confirmed:
Syphilis of any stage with a reactive VDRL in CSF with any of the following:

- A reactive treponemal serologic test for syphilis by FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods or
- A reactive nontreponemal serologic test for syphilis by VDRL, RPR, or equivalent serologic method

Congenital syphilis:
Probable:
An infant or child with any of the following

- An infant, regardless of symptoms, whose mother had untreated or inadequately treated syphilis at delivery, or
- An infant or child with a positive nontreponemal test and any of the following:
    - Clinically compatible with congenital syphilis
    - Any evidence of congenital syphilis on radiographs of long bones
    - Positive VDRL test from CSF
    - Elevated CSF leukocyte count or protein

Confirmed:
An infant or child with any of the following:

- Microscopic identification of *T. pallidum* by dark field microscopy from lesions, body fluids, or neonatal nasal discharge or
- Microscopic identification of *T. pallidum* by IHC or special stains from lesions, placenta, umbilical cord, or autopsy material or
- Detection of *T. pallidum* nucleic acid (example: PCR) from lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material

Critical Reporting Elements

Specify the stage of the disease.
Specify whether the patient presented with neurosyphilis (evidence of central nervous system infection).

Comments

Neurosyphilis can occur during any stage of syphilis. If no other stage is appropriate, report neurosyphilis case as Late Syphilis.

If only neurologic manifestations of syphilis (example: tabes dorsalis, dementia) are present and infection occurred more than 12 months ago, the case should be reported as "late syphilis".
There is no confirmed case classification for early latent syphilis.

Tetanus (*Clostridium tetani*)

COMMON NAME: Lockjaw

Background

Causative Agent	*Clostridium tetani*
Travel Risks	Present worldwide
Clinical Description	An illness characterized by acute onset of hypertonia or painful muscular contractions (usually the jaw and neck) and generalized muscle spasms without other apparent medical cause.

Case Classification

Probable:
In the absence of a more likely diagnosis, a case that meets the clinical description as described above with a diagnosis of tetanus by a health care provider

Critical Reporting Elements

Note the patient's tetanus immunization history.

Comments

There is no confirmed case classification for tetanus.

Toxic Shock Syndrome (TSS)

INCLUDES: Streptococcal TSS and non-streptococcal TSS

Background

Causative Agent	Streptococcal TSS: *Streptococcus pyogenes* (Group A Strep) Non-streptococcal: Often caused by *Staphylococcus aureus*
Travel Risks	N/A
Clinical Description	<u>Streptococcal TSS:</u>

- Hypotension defined by a systolic blood pressure less than or equal to 90 mm Hg for adults or less than the fifth percentile by age for children aged less than 16 years
- Multi-organ involvement characterized by two or more of the following:
  - Renal impairment: Creatinine greater than or equal to 2 mg/dL (greater than or equal to 177 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
  - 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

<u>Non-streptococcal TSS:</u>

- Fever: temperature greater than or equal to 102.0°F (greater than or equal to 38.9°C)
- Rash: diffuse macular erythroderma
- Desquamation: 1-2 weeks after onset of rash
- Hypotension: systolic blood pressure less than or equal to 90 mm Hg for adults or less than fifth percentile by age for children aged less than 16 years
- Multisystem involvement (three or more of the following organ systems):
  - Gastrointestinal: vomiting or diarrhea at onset of illness
  - Muscular: severe myalgia or creatine phosphokinase level at least twice the upper limit of normal

- Mucous membrane: vaginal, oropharyngeal, or conjunctival hyperemia
- Renal: blood urea nitrogen or creatinine at least twice the upper limit of normal for laboratory or urinary sediment with pyuria (greater than or equal to 5 leukocytes per high-power field) in the absence of urinary tract infection
- Hepatic: total bilirubin, alanine aminotransferase enzyme, or aspartate aminotransferase enzyme levels at least twice the upper limit of normal for laboratory
- Hematologic: platelets less than 100,000/mm^3
- Central nervous system: disorientation or alterations in consciousness without focal neurologic signs when fever and hypotension are absent

Case Classification

Streptococcal TSS:

Probable:

A case that meets the clinical description of Streptococcal TSS as described above with **ALL** of the following:

- Group A *Streptococcus* (*S. pyogenes*) identified by culture from a non-sterile site and
- There is no other identified cause for the illness

Confirmed:

A case that meets the clinical description of Streptococcal TSS as described above with the following:

- Group A *Streptococcus* (*S. pyogenes*) identified by culture from a normally sterile site (example: blood or CSF or, less commonly, joint, pleural, or pericardial fluid)

Non-streptococcal TSS:

Probable:

A case that has four of the five criteria listed in the clinical description of non-streptococcal TSS as described above with **ALL** of the following:

- Negative culture, if obtained, from blood or CSF (blood culture may be positive for *Staphylococcus aureus*) and
- Negative serologies, if obtained, for Rocky Mountain spotted fever, leptospirosis, or measles

Confirmed:

A case that meets the all five criteria of the clinical description of non-streptococcal TSS as described above with **ALL** of the following:

- Negative culture, if obtained, from blood or CSF (blood culture may be positive for *Staphylococcus aureus*) and
- Negative serologies, if obtained, for Rocky Mountain spotted fever, leptospirosis, or measles and
- Desquamation must be present unless the patient dies before desquamation occurs

Critical Reporting Elements

Specify the clinical form of the disease.

Comments

None.

Last update: July 2017

Trichinellosis (*Trichinella* species)

COMMON NAME: Trichinosis

Background

Causative Agent	*Trichinella* species
Travel Risks	Present worldwide
Clinical Description	The disease has variable clinical manifestations. Common signs and symptoms among symptomatic persons include eosinophilia, fever, myalgia, and periorbital edema.

Case Classification

Suspected:
A case that meets **ALL** of the following:

- A person who ate epidemiologically implicated food and
- *Trichinella* positive serologic test and
- Has no known prior history of *Trichinella* infection

Probable:
A case that meets the clinical description as described above with any of the following:

- A person who ate epidemiologically implicated food or
- A person who consumed a meat product in which *Trichinella* was demonstrated

Confirmed:
A case that meets the clinical description as described above with any of the following:

- *Trichinella* larvae identified from tissue biopsy or
- *Trichinella* positive serologic test

Critical Reporting Elements

Document the source of infection if known.

Comments

Trichomonas and trichomoniasis are STDs and are not the same thing as Trichinellosis. *Trichomonas* and trichomoniasis are not reportable and should not be reported as Trichinellosis.
Epidemiologically implicated food is defined as food that was consumed by a person who subsequently became a confirmed case.

Trypanosomiasis (*Trypanosoma* species)

COMMON NAME: African trypanosomiasis: Sleeping sickness
American trypanosomiasis: Chagas disease

Background

Causative Agent: African trypanosomiasis: *Trypanosoma brucei* (*T.b. rhodesiense* and *T. b. gambiense*)
American trypanosomiasis: *Trypanosoma cruzi*

Travel Risks: African trypanosomiasis: Most common in rural sub-Saharan Africa
American trypanosomiasis: Most common in Mexico, Central America, and South America

Clinical Description: African Trypanosomiasis: In the early stages of infection, there may be a painful chancre, which originates as a papule and evolves into a nodule at the site of the tsetse fly bite. There may be fever, intense headache, insomnia, painless swollen lymph nodes, anemia, local edema and rash. In the later stages, there may be cachexia, central nervous system dysfunction, and somnolence (hence the name "sleeping sickness"). The disease may run a protracted course of several years in the case of *T. b. gambiense*. In cases of *T. b. rhodesiense*, the disease has a rapid and acute evolution. Disease caused by either species is always fatal without treatment.

Acute American Trypanosomiasis: Acute disease occurs immediately after infection and may last up to a few weeks or months. Infections may be mild or asymptomatic. If symptoms do develop, they are typically mild or nonspecific, and include fever, malaise, and hepatosplenomegaly. An inflammatory response at the infection site (chagoma) may last several weeks.

Chronic American Trypanosomiasis: Most infected people enter into a prolonged asymptomatic form of disease ("chronic indeterminate") following the acute phase. Many remain asymptomatic for life. Approximately 20-30% of chronic American trypanosomiasis cases develop severe symptoms including cardiovascular complications (heart rhythm abnormalities, dilated heart) or gastrointestinal complications (dilated esophagus or colon, leading to difficulties eating or passing stool).

Case Classification

African Trypanosomiasis:

Suspected:

A case that meets the clinical description of African Trypanosomiasis as described above with travel to an endemic area

Probable:

A provider diagnosed case with any of the following:

- *T. b. gambiense* positive by CATT or
- *T. b. rhodesiense* or *T. b. gambiense* positive by IFA

Confirmed:
A case with microscopic identification of trypanosomes from blood, lymph node aspirates, or CSF

American Trypanosomiasis:
Probable:
A case with any of the following:

- *T. cruzi* positive blood screening test and a positive supplemental test (example: EIA, IFA, TESA, RIPA) from serum or
- Provider diagnosis of Chagas disease and *T. cruzi* positive antibody on at least one diagnostic assay

Confirmed:
A case with any of the following:

- Microscopic identification of *T. cruzi* (microscopic examination, wet mount, thick & thin smears - Giemsa stain) or
- *T. cruzi* identified by culture or
- *T. cruzi* nucleic acid (DNA) detected by PCR or
- *T. cruzi* positive antibody by two distinct diagnostic assays performed at CDC

Critical Reporting Elements

Specify the form of disease.
Document relevant travel and deployment history occurring within the incubation period.
Specify whether the patient presented with congenital disease.

Comments

None.

Tuberculosis (*Mycobacterium tuberculosis*)

COMMON NAME: TB

INCLUDES: Pulmonary and non-pulmonary Tuberculosis

EXCLUDES: Latent tuberculosis infection (LTBI) when a person tests positive via Mantoux tuberculin skin test (TST) or via FDA approved interferon-gamma release assay (IGRA) but is without evidence of active disease (negative chest x-ray for presence of TB disease and asymptomatic).

Background

Causative Agent	*Mycobacterium tuberculosis*
Travel Risks	Present worldwide
Clinical Description	An illness characterized by acute history of persistent cough, pain or tightness in the chest, bloody sputum, weakness or fatigue, weight loss, loss of appetite, chills, fever, or night sweats. The most common site of infection is the lung though other organs can be involved.

Case Classification

Suspected:
A case that meets the clinical description as described above with imaging studies compatible with tuberculosis

Confirmed:
A case with any of the following:

- *M. tuberculosis* identified by culture from any clinical specimen* or
- *M. tuberculosis* nucleic acid (DNA) detected by PCR from any clinical specimen or
- Microscopic identification of acid-fast bacilli from any clinical specimen when a culture has not been or cannot be obtained or
- A provider-diagnosed case with **ALL** of the following:
    - A positive TST or positive IGRA for *M. tuberculosis* and
    - Other signs and symptoms compatible with tuberculosis (example: abnormal chest radiograph, abnormal chest computerized tomography scan or other chest imaging study, or clinical evidence of current disease) and
    - Treatment with two or more anti-TB medications and
    - A completed diagnostic evaluation

Critical Reporting Elements

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.
Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.
Note the patient's BCG (tuberculosis vaccine) immunization history.
Document evidence of drug resistance.

Comments

*Use of a rapid test (example: DNA probe, liquid chromatography) performed from the culture is acceptable for this criteria.

Tularemia (*Francisella tularensis*)

Background

Causative Agent	*Francisella tularensis*
Travel Risks	Most common in North America and in parts of Europe, Russia, China, and Japan
Clinical Description	An illness characterized by several distinct forms, including the following: Ulceroglandular: cutaneous ulcer with regional swollen lymph nodes Glandular: regional swollen lymph nodes with no ulcer Oculoglandular: conjunctivitis with preauricular swollen lymph nodes Oropharyngeal: stomatitis or pharyngitis or tonsillitis and cervical swollen lymph nodes Intestinal: intestinal pain, vomiting, and diarrhea Pneumonic: primary pleuropulmonary disease Typhoidal: febrile illness without early localizing signs and symptoms

Case Classification

Probable:

A case that meets any of the clinical descriptions as described above with any of the following:

- *F. tularensis* positive antibody titer in a patient without a history of tularemia vaccination from any clinical specimen or
- *F. tularensis* positive fluorescent assay from any clinical specimen or
- *F. tularensis* nucleic acid (RNA) detected by PCR from any clinical specimen

Confirmed:

A case that meets any of the clinical descriptions as described above with any of the following:

- *F. tularensis* identified by culture from any clinical specimen or
- At least a four-fold increase of antibody titer between acute and convalescent sera

Critical Reporting Elements

Specify the clinical form of the disease.

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

None.

Typhoid Fever (*Salmonella enterica* serovar Typhi)

COMMON NAME: *Salmonella* Typhi, Enteric Fever

EXCLUDES: All other *Salmonellas* including Salmonella typhimurium. See *Salmonella* case definition.

Background

Causative Agent	*Salmonella enterica* serotype Typhi (*S*. Typhi)
Travel Risks	Most common in Southern Asia, East and Southeast Asia, Africa, the Caribbean, and Central and South America
Clinical Description	An illness often characterized by insidious onset of sustained fever, headache, malaise, anorexia, slow heart rate, constipation or diarrhea, and nonproductive cough. However, many mild and atypical infections occur. Carriage of *S.* Typhi may be prolonged.

Case Classification

Probable:
A case that meets the clinical description as described above that is epidemiologically linked to a confirmed case in an outbreak

Confirmed:
A case that meets the clinical description as described above with *S.* Typhi identified by culture from any clinical specimen

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Note the patient's typhoid immunization history.

Comments

Salmonella Typhi and *Salmonella typhimurium* are not the same organisms. *Salmonella typhimurium* is reportable under *Salmonella*.
The only time a case should be reported as probable is during an outbreak.

Typhus Fever (*Rickettsia prowazekii, Rickettsia typhi, or Orientia tsutsugamushi)*

EXCLUDES: All other *Rickettsia* species. See Spotted Fever Rickettsiosis case definition.

Background

Causative Agent	*Rickettsia prowazekii*, *Rickettsia typhi*, or *Orientia tsutsugamushi*
Travel Risks	Specific to each presentation. See the clinical description for distributions.
Clinical Description	A group of arthropod-borne diseases with three clinically distinct presentations, each with its own specific infectious agent and vector: Epidemic (Louse-borne) Typhus: (*Rickettsia prowazekii*) An illness characterized by any reported fever and one or more of the following: rash, headache, chills, prostration, and general pain. The macular or maculopapular rash appears on the fifth to sixth day, initially on the upper trunk followed by spread to the entire body, but usually sparing the face, palm, and soles. The infectious agent is transmitted by body lice. Most commonly found in the colder (i.e. mountainous) regions of central and eastern Africa, Central and South America, and Asia. In the United States, rare cases of epidemic typhus, called sylvatic typhus, can occur after exposure to flying squirrels and their nests. Murine (Endemic) Typhus: (*Rickettsia typhi*) Similar to louse-borne typhus, but often milder. The infectious agent is transmitted by fleas. Endemic in Mediterranean countries, some African, Central American, and South American countries, some coastal states in the USA, and Southeast Asia. Scrub Typhus: (*Orientia tsutsugamushi*) Often produces a primary "punched out" skin eschar corresponding to the primary attachment of an infected mite. Acute onset of symptoms follows within several days, characterized by fever, headache, profuse sweating, conjunctival injection and lymphadenopathy. A dull red maculopapular eruption appears on the trunk late in the first week, gradually extending to the extremities. Endemic to Southeast Asia, Indonesia, China, Japan, India, and northern Australia.

Case Classification

R. prowazekii or R. typhi

Probable:

A case that meets the clinical description as described above with the following:

- *R. prowazekii* or *R. typhi* (typhus fever group) positive IgM or IgG antibody titer by IFA, ELISA, or latex agglutination from serum

Confirmed:

A case that meets the clinical description as described above with any of the following:

- At least a four-fold change in antibody titer by IFA, CF, LA, MAT, or IHA between serum samples collected at least 3 weeks apart or
- *R. prowazekii* or *R. typhi* nucleic acid (DNA) detected by PCR from any clinical specimen or

- Histopathologic identification of *R. prowazekii* or *R. typhi* by IFA or DFA from skin lesion (biopsy) or organ tissue (autopsy) or
- *R. prowazekii* or *R. typhi* identified by culture from any clinical specimen

O. tsutsugamushi

Confirmed:

A case that meets the clinical description as described above with any of the following:

- *O. tsutsugamushi* identified from culture by inoculation of patient blood in white mice (preferably treated with cyclophosphamide at 0.2mg/g intraperitoneally or intramuscularly on days 1, 2 and 4 after inoculation) or
- *O. tsutsugamushi* positive IgM antibody by IFA, Weil-Felix agglutination from serum

Critical Reporting Elements

Specify the clinical form of the disease.

Document relevant travel and deployment history occurring within the 14 days prior to symptom onset.

Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

There can be antibody cross-reactivity between spotted fever and typhus group antigens. In cases where IgM or IgG titers are positive for both diseases, report the case under the disease most consistent with the case's clinical presentation, exposure history, and travel history.

Varicella (Varicella-zoster virus)

COMMON NAME: Chickenpox

EXCLUDES: Shingles

Background

Causative Agent	Varicella-zoster virus
Travel Risks	N/A
Clinical Description	Acute onset of diffuse (generalized) maculo-papulovesicular rash without other apparent cause.

Case Classification

Probable:
A case that meets the clinical description as described above where lab results are not available and there is no epidemiologic link to a probable or confirmed case

Confirmed:
A case that meets the clinical description as described above with any of the following:

- Epidemiologically linked to a probable or confirmed case or
- Varicella identified by culture from any clinical specimen or
- Varicella positive antigen by DFA from any clinical specimen or
- Varicella nucleic acid (DNA) detected by PCR from any clinical specimen or
- At least a one-fold increase of IgG antibody titer between acute and convalescent sera

OR

Two probable cases that are epidemiologically linked

Critical Reporting Elements

Document if the case patient works in, lives in, or attends a high transmission setting such as food handling, day care, school, group living, healthcare, training center, or ship.
Note the patient's varicella immunization history.

Comments

NOTE: This case definition includes all beneficiaries and is no longer limited to only Active Duty service members.

Yellow Fever (Yellow fever virus)

Background

Causative Agent	Yellow fever virus
Travel Risks	Most common in subtropical areas of South America and Africa
Clinical Description	An illness characterized by an acute onset of symptoms that affect many different body systems followed by a brief remission and a recurrence of fever, hepatitis, protein in the urine, and in some instances, renal failure, shock, and generalized hemorrhages.

Case Classification

Probable:

A case that meets the clinical description as described above with **ALL** of the following:

- Cross-reactive serologic reactions to other flaviviruses have been excluded and
- There is no history of yellow fever vaccination and
- There is a stable elevated antibody titer by any of the following:
  - Antibody titer ≥ 32 by CF or
  - Antibody titer ≥ 256 by IFA or
  - Antibody titer ≥ 320 by HI or
  - Antibody titer ≥ 160 by neutralization or
  - Positive IgM antibody by EIA

Confirmed:

A case that meets the clinical description as described above with any of the following:

- At least a four-fold increase of antibody titer between acute and convalescent sera in a patient who has no history of recent yellow fever vaccination and cross-reactions to other flaviviruses have been excluded or
- Yellow fever identified by culture from tissue or body fluid or
- Yellow fever positive antigen from tissue or body fluid or
- Yellow fever nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from tissue or body fluid

Critical Reporting Elements

Document relevant travel and deployment history occurring within the incubation period.
Note the patient's yellow fever immunization history.

Comments

None.

Zika Virus

Background

Causative Agent	Zika Virus
Travel Risks	Most common in Cape Verde, Mexico, the Caribbean, South and Central America, and parts of the Pacific Islands; possibly endemic in Africa, and Asia

Clinical Description	An emerging infection classified as two clinical types:
	
	Zika Virus Infection, Non-congenital: Symptoms may include any of the following:
	• Acute onset of fever, maculopapular rash, arthralgia, or conjunctivitis or
	• Complication of pregnancy:
	  ○ fetal loss in a mother who meets the clinical description of Zika virus or possess epidemiologic risk factors or
	  ○ in utero findings of microcephaly or
	• Guillain-Barre syndrome of unknown etiology
	
	Zika Virus Infection, Congenital: An infant with microcephaly, intracranial calcifications, or central nervous system abnormalities.

Case Classification

Zika Virus Infection, Non-congenital

Probable:

A case with **ALL** of the following:

- Meets the exposure criteria* as described below and
- Zika virus positive IgM antibody from serum or CSF with any of the following:
  - Dengue virus negative IgM antibody and no Zika virus PRNT test performed or
  - Positive PRNT titer against Zika and Dengue (or other flavivirus endemic to the region where exposure occurred)

Confirmed:

A case with any of the following:

- Zika virus identified by culture from any acceptable clinical specimen or
- Zika virus positive antigen from any acceptable clinical specimen or
- Zika virus nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any acceptable clinical specimen or
- Zika virus positive IgM antibody from serum or CSF with a positive PRNT titer against Zika **AND** a negative PRNT titer against Dengue (or other flavivirus endemic to the region where exposure occurred).

Zika Virus Infection, Congenital

Probable:

A case with **ALL** of the following:

- Mother meets the exposure criteria* described below or the laboratory criteria described above for Zika Virus Infection, Non-congenital and

- Zika virus positive IgM antibody from neonatal serum or neonatal CSF collected within 2 days of birth with any of the following:
    - Dengue virus negative IgM antibody and no Zika virus PRNT test performed or
    - Positive PRNT titer against Zika and Dengue (or other flavivirus endemic to the region where exposure occurred)

Confirmed:
A case with any of the following:

- Zika virus identified by culture from any acceptable neonatal clinical specimen collected within 2 days of birth or
- Zika virus positive antigen from any acceptable neonatal clinical specimen collected within 2 days of birth or
- Zika virus nucleic acid (RNA) detected (example: PCR, sequencing, NAAT) from any acceptable neonatal clinical specimen collected within 2 days of birth or
- Zika virus positive IgM antibody from umbilical cord blood, neonatal serum, or neonatal CSF collected within 2 days of birth with a positive PRNT titer against Zika and a negative PRNT titer against Dengue (or other flavivirus endemic to the region where exposure occurred)

Critical Reporting Elements

Specify the type of disease.
Document relevant travel and deployment history occurring within the incubation period.
Document the circumstances under which the case patient was exposed including duty exposure, occupational activities, environmental exposures, or other high risk activities.

Comments

*Exposure is defined as one or more of the following:

- Resides in or recent travel to an area with known Zika virus transmission or
- Sexual contact with a confirmed or probable case within the infection transmission risk window of Zika infection or
- Sexual contact with a person with recent travel to an area with known Zika virus transmission or
- Receipt of blood or blood products within 30 days of symptom onset or
- Organ or tissue transplant recipient within 30 days of symptom onset or
- Association in time and place with a confirmed or probable case or
- Likely vector exposure in an area with suitable seasonal and ecological conditions for potential local vector borne transmission.

Last update: July 2017

Required Data Elements

To assure consistency of the Armed Forces data, this section lists the minimum required data elements for each report, along with recommended reporting guidelines for each element. Each Service may add its own additional data fields for internal analysis without compromising eventual data integration. These fields are all required in the Disease Reporting System internet (DRSi) for a medical event report to be submitted into the system.

DEMOGRAPHIC DATA

1. **Case Number**
   Unique case identifier, automatically assigned by DRSi.
2. **Patient's First and Last Name**
3. **FMP and Patient Identification Number (SSN and/or DoD ID)**
   Family member prefix code and SSN and/or DODID. Sponsors and dependents are linked in the DRSi system by SSN.
4. **Race/Ethnicity**
   White, black, Hispanic, Asian, American Indian, other.
5. **Patient's Sex**
6. **Rank**
   E.g., E1, O1, CIV.
7. **Date of Birth**
   Two-digit month, two-digit day, four-digit year.
8. **Sponsor Service Branch**

MEDICAL DATA

1. **Reportable Medical Event**
2. **Date of Onset**
   If unsure of date of onset, date of presentation is an adequate substitute.
3. **Case Classification Status**
   Confirmed, probable, or suspect. A description of each classification is provided within each RME case definition. Please note, not all RMEs have case definitions for each status – refer to the RME case definition when assigning the classification.

ADDITIONAL INFORMATION RECOMMENDED FOR REPORTING

TRAVEL HISTORY

Specify any recent travel the case may have had, when applicable. See individual case definitions to determine the time period for which reporting of travel destinations is required (generally between 1 – 2 incubation periods).

COMMENTS

Content will vary by condition; see case definitions for minimum suggested content. Comments are important for data interpretation and should be provided whenever possible.

ICD-10 Codes & Synonyms

Condition	Synonyms	ICD-10 Codes
Amebiasis		A06.0, A06.1, A06.2, A06.3, A06.4, A06.5, A06.6, A06.7, A06.81, A06.82, A06.89, A06.9
Anthrax		A22.0, A22.1, A22.2, A22.7, A22.8, A22.9
Arboviral Diseases	Japanese encephalitis; Tick-borne encephalitis (TBE); West Nile encephalitis/infection, Western equine encephalitis, Eastern equine encephalitis, St. Louis encephalitis, Australian encephalitis, California encephalitis, Rocio virus, Far Eastern tick-borne encephalitis, Central European tick-borne encephalitis, O'nyong-nyong fever, Venezuelan equine fever, Oropouche virus disease, Sandfly fever, Colorado tick fever	A83.0, A83.1, A83.2, A83.3, A83.4, A83.5, A83.6, A83.8, A83.9, A84.0, A84.1, A84.8, A84.9, A85.2, A92.1, A92.2, A92.30, A92.31, A92.32, A92.39, A92.8, A92.9, A93.0, A93.1, A93.2, A93.8, A94
Botulism Toxin	Infant Botulism	A05.1, A48.51, A48.52
Brucellosis	Malta Fever; Mediterranean fever; Undulant fever	A23.0, A23.1, A23.2, A23.3, A23.8, A23.9
Campylobacteriosis	Vibrionic enteritis	A04.5
Chikungunya Virus Disease		A92.0
Chlamydia trachomatis		A56.00, A56.01, A56.02, A56.09, A56.11, A56.19, A56.2, A56.3, A56.4, A56.8
Cholera O1 or O139		A00.0, A00.1, A00.9
Coccidioidomycosis	Desert fever/rheumatism; San Joaquin valley fever; Valley fever	B38.0, B38.1, B38.2, B38.3, B38.4, B38.7, B38.81, B38.89, B38.9
Cold weather injuries	Frostbite; Immersion foot; Trench foot; Hypothermia	T33.011A, T33.011D, T33.011S, T33.012A, T33.012D, T33.012S, T33.019A, T33.019D, T33.019S, T33.02XA, T33.02XD, T33.02XS, T33.09XA, T33.09XD, T33.09XS, T33.1XXA, T33.1XXD, T33.1XXS, T33.2XXA, T33.2XXD, T33.2XXS, T33.3XXA, T33.3XXD, T33.3XXS, T33.40XA, T33.40XD, T33.40XS, T33.41XA, T33.41XD, T33.41XS, T33.42XA, T33.42XD, T33.42XS, T33.511A, T33.511D, T33.511S, T33.512A, T33.512D, T33.512S,

		T33.519A, T33.519D, T33.519S, T33.521A, T33.521D, T33.521S, T33.522A, T33.522D, T33.522S, T33.529A, T33.529D, T33.529S, T33.531A, T33.531D, T33.531S, T33.532A, T33.532D, T33.532S, T33.539A, T33.539D, T33.539S, T33.60XA, T33.60XD, T33.60XS, T33.61XA, T33.61XD, T33.61XS, T33.62XA, T33.62XD, T33.62XS, T33.70XA, T33.70XD, T33.70XS, T33.71XA, T33.71XD, T33.71XS, T33.72XA, T33.72XD, T33.72XS, T33.811A, T33.811D, T33.811S, T33.812A, T33.812D, T33.812S, T33.819A, T33.819D, T33.819S, T33.821A, T33.821D, T33.821S, T33.822A, T33.822D, T33.822S, T33.829A, T33.829D, T33.829S, T33.831A, T33.831D, T33.831S, T33.832A, T33.832D, T33.832S, T33.839A, T33.839D, T33.839S, T33.90XA, T33.90XD, T33.90XS, T33.99XA, T33.99XD, T33.99XS, T34.011A, T34.011D, T34.011S, T34.012A, T34.012D, T34.012S, T34.019A, T34.019D, T34.019S, T34.02XA, T34.02XD, T34.02XS, T34.09XA, T34.09XD, T34.09XS, T34.1XXA, T34.1XXD, T34.1XXS, T34.2XXA, T34.2XXD, T34.2XXS, T34.3XXA, T34.3XXD, T34.3XXS, T34.40XA, T34.40XD, T34.40XS, T34.41XA, T34.41XD, T34.41XS, T34.42XA, T34.42XD, T34.42XS, T34.511A, T34.511D, T34.511S, T34.512A, T34.512D, T34.512S, T34.519A, T34.519D, T34.519S, T34.521A, T34.521D, T34.521S, T34.522A, T34.522D, T34.522S, T34.529A, T34.529D, T34.529S, T34.531A, T34.531D, T34.531S, T34.532A, T34.532D, T34.532S, T34.539A, T34.539D, T34.539S, T34.60XA, T34.60XD, T34.60XS, T34.61XA, T34.61XD, T34.61XS, T34.62XA, T34.62XD, T34.62XS, T34.70XA, T34.70XD, T34.70XS,

		T34.71XA, T34.71XD, T34.71XS, T34.72XA, T34.72XD, T34.72XS, T34.811A, T34.811D, T34.811S, T34.812A, T34.812D, T34.812S, T34.819A, T34.819D, T34.819S, T34.821A, T34.821D, T34.821S, T34.822A, T34.822D, T34.822S, T34.829A, T34.829D, T34.829S, T34.831A, T34.831D, T34.831S, T34.832A, T34.832D, T34.832S, T34.839A, T34.839D, T34.839S, T34.90XA, T34.90XD, T34.90XS, T34.99XA, T34.99XD, T34.99XS, T68.XXXA, T68.XXXD, T68.XXXS, T69.021A, T69.021D, T69.021S, T69.022A, T69.022D, T69.022S, T69.029A, T69.029D, T69.029S
Cryptosporidiosis		A07.2
Cyclosporiasis		A07.4
Dengue Virus Infections	Breakbone fever; Dengue hemorrhagic fever	A90, A91
Diphtheria		A36.0, A36.1, A36.2, A36.3, A36.81, A36.82, A36.83, A36.84, A36.85, A36.86, A36.89, A36.9
Escherichia coli, Shiga toxin-producing		A04.3, B96.20, B96.21, B96.22, B96.23, B96.29
Ehrlichiosis and Anaplasmosis	Senetsu fever	A77.40, A77.41, A77.49
Filarial Infections	Loa loa; Onchocerciasis; Loiasis	B73.00, B73.01, B73.02, B73.09, B73.1, B74.0, B74.1, B74.2, B74.3, B74.8, B74.9
Giardiasis		A07.1
Gonorrhea		A54.00, A54.01, A54.02, A54.03, A54.09, A54.1, A54.21, A54.22, A54.23, A54.24, A54.29, A54.30, A54.31, A54.32, A54.33, A54.39, A54.40, A54.41, A54.42, A54.43, A54.49, A54.5, A54.6, A54.81, A54.82, A54.83, A54.84, A54.85, A54.86, A54.89, A54.9
Haemophilus influenza, Invasive	Haemophilus meningitis	A41.3, A49.2, B96.3, G00.0, J14, J20.1
Hantavirus disease	Hemorrhagic fever with renal syndrome; Korean hemorrhagic fever	B33.4

Heat injuries	Heat exhaustion; Heat stroke	T67.0XXA, T67.0XXD, T67.0XXS, T67.3XXA, T67.3XXD, T67.3XXS, T67.4XXA, T67.4XXD, T67.4XXS, T67.5XXA, T67.5XXD, T67.5XXS
Hemorrhagic Fever, Viral	Crimean Congo fever; Ebola-Marburg disease; Guanarito virus; Junin virus; Kyasanur forest disease; Lassa fever; Machupo virus; Omsk hemorrhagic fever; Sabia virus	A98.0, A98.1, A98.2, A98.3, A98.4, A98.5, A98.8
Hepatitis A	Catarrhal jaundice; Epidemic hepatitis/jaundice; Infectious hepatitis	B15.0, B15.9
Hepatitis B, acute & chronic	Serum hepatitis	B16.0, B16.1, B16.2, B16.9, B17.0, B18.0
Hepatitis C, acute & chronic	Parenterally transmitted non-A non-B hepatitis; Post transfusion non-A non-B hepatitis	B17.10, B17.11, B18.2, B19.20, B19.21
Influenza		J10.00, J10.01, J10.08, J10.1, J10.2, J10.81, J10.82, J10.83, J10.89, J11.00, J11.08, J11.1, J11.2, J11.81, J11.82, J11.83, J11.89
Legionellosis	Legionnaires disease; Pontiac fever	A48.1, A48.2
Leishmaniasis	Kala-azar	B55.0, B55.1, B55.2, B55.9
Leprosy	Hansen disease	A30.0, A30.1, A30.2, A30.3, A30.4, A30.5, A30.8, A30.9
Leptospirosis	Hemorrhagic jaundice; Mud fever; Weil disease	A27.0, A27.81, A27.89, A27.9
Listeriosis		A32.0, A32.11, A32.12, A32.7, A32.81, A32.82, A32.89, A32.9, P37.2
Lyme Disease	Tick-borne meningopolyneuritis	A69.20, A69.21, A69.22, A69.23, A69.29
Malaria		B50.0, B50.8, B50.9, B51.0, B51.8, B51.9, B52.0, B52.8, B52.9, B53.0, B53.8, B54
Measles	Hard measles; Morbilla; Red measles; Rubeola	B05.0, B05.1, B05.2, B05.3, B05.4, B05.81, B05.89, B05.9
Meningococcal disease	Cerebrospinal fever; Meningococcal meningitis	A39.0, A39.1, A39.2, A39.3, A39.4, A39.50, A39.51, A39.52, A39.53, A39.81, A39.82, A39.83, A39.84, A39.89, A39.9
Mumps	Infectious parotitis	B26.0, B26.1, B26.2, B26.3, B26.81, B26.82, B26.83, B26.84, B26.85, B26.89, B26.9

Norovirus	Norwalk-like virus; Norwalk-like agent	A08.11
Novel and Variant Influenza		J09.X1, J09.X2, J09.X3, J09.X9,
Pertussis	Whooping cough	A37.00, A37.01, A37.80, A37.81, A37.90, A37.91
Plague	Pestis	A20.0, A20.1, A20.2, A20.3, A20.7, A20.8, A20.9
Poliomyelitis	Infant paralysis	A80.0, A80.1, A80.2, A80.30, A80.39, A80.4, A80.9
Post-Exposure Prophylaxis (PEP) against Rabies		Z20.3, Z23.0, Z29.14
Q fever	Query fever	A78
Rabies, Human	Hydrophobia; Lyssa	A82.0, A82.1, A82.9
Relapsing Fever		A68.0, A68.1, A68.9
Rift valley fever		A92.4, A92.8, A92.9
Rubella	Congenital rubella syndrome; German measles	B06.00, B06.01, B06.02, B06.09, B06.81, B06.82, B06.89, B06.9, P35.0
Salmonellosis		A02, A02.0, A02.1, A02.2, A02.20, A02.21, A02.22, A02.23, A02.24, A02.25, A02.29, A02.8, A02.9
Schistosomiasis	Bilharziasis	B65.0, B65.1, B65.2, B65.3, B65.8, B65.9
Severe Acute Respiratory Syndrome	SARS; SARS-CoV	B97.21, J12.81
Shigellosis	Bacillary dysentery	A03.0, A03.1, A03.2, A03.3, A03.8, A03.9
Smallpox		B03
Spotted Fever Rickettsia	Sao Paolo fever; Rickettsia rickettsia	A77.0
Syphilis	Lues	A50.01, A50.02, A50.03, A50.04, A50.05, A50.06, A50.07, A50.08, A50.09, A50.1, A50.2, A50.30, A50.31, A50.32, A50.39, A50.40, A50.41, A50.42, A50.43, A50.44, A50.45, A50.49, A50.51, A50.52, A50.53, A50.54, A50.55, A50.56, A50.57, A50.59, A50.6, A50.7, A50.9, A51.0, A51.1, A51.2, A51.32, A51.39, A51.41, A51.42, A51.43, A51.44, A51.45, A51.46, A51.49, A51.5, A51.9, A52.00, A52.01, A52.02, A52.03, A52.04, A52.05,

		A52.06, A52.09, A52.10, A52.11, A52.12, A52.13, A52.14, A52.15, A52.16, A52.19, A52.2, A52.3, A52.71, A52.72, A52.73, A52.74, A52.75, A52.76, A52.77, A52.78, A52.79, A52.8, A52.9, A53.0, A53.9
Tetanus	Lockjaw	A33, A34, A35
Toxic shock syndrome	Streptococcal toxic shock syndrome	A48.3
Trichinosis	Trichinellosis; Trichiniasis	B75
Trypanosomiasis	Chagas' disease; Sleeping sickness	B56.0, B56.1, B56.9, B57.0, B57.1, B57.2, B57.30, B57.31, B57.32, B57.39, B57.40, B57.41, B57.42, B57.49, B57.5
Tuberculosis		A15.0, A15.5
Tularemia	Deer fly fever; Rabbit fever	A21.0, A21.1, A21.2, A21.3, A21.7, A21.8, A21.9
Typhoid fever	Enteric fever; Typhus abdominalis	A01.00, A01.01, A01.02, A01.03, A01.04, A01.05, A01.09, A01.1, A01.2, A01.3, A01.4
Typhus fever	Boutonneuse fever; South African tick typhus; Tsutsugamushi; Typhus exanthermaticus	A75.0, A75.1, A75.2, A75.3, A75.9
Varicella	Chickenpox	B01.0, B01.11, B01.12, B01.2, B01.81, B01.89, B01.9
Yellow fever		A95.0, A95.1, A95.9
Zika Virus		A92.8

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