# 2014 Changes to the National Notifiable Disease Surveillance System (NNDSS)

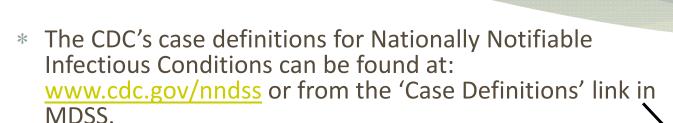
## Background

- \* The list of nationally notifiable infectious diseases is revised periodically.
  - \* Diseases may be added as a new pathogen emerges or deleted as incidence declines.
- \* The Council of State and Territorial Epidemiologists (CSTE), with input from CDC, makes recommendations annually for additions and deletions to the list of nationally notifiable diseases.
- \* Reporting of diseases is mandated at the state level and lists vary slightly by state.
  - \* CDC has some case definitions available to non-nationally notifiable diseases. For other diseases there is not a national case definition.

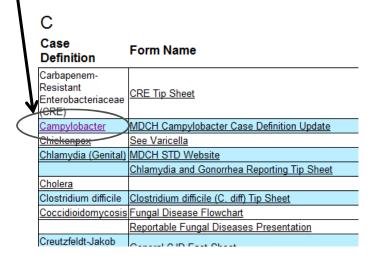
## 2014 NNDSS Changes

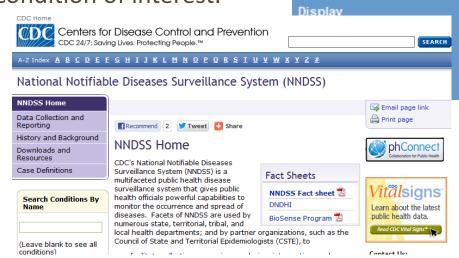
- \* Various revisions to case definitions and laboratory criteria for selected national surveillance case definitions.
- \* New National reportable condition, Leptospirosis.
- \* New definitions should be used for reporting new 2014 cases beginning in January 2014.

## Where can these revisions be found?



A link to the case definition for each condition is available on the CDInfo website (<a href="www.michigan.gov/cdinfo">www.michigan.gov/cdinfo</a>), just click on 'Communicable Diseases (A-Z)' then navigate to the condition of interest.





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**New Case** 

New Aggregate

## Gonorrhea

- \* 2014 Changes: modifications to the probable case definition to remove the criterion of a written morbidity report of gonorrhea reported by a physician.
  - Makes definition consistent with Chlamydia infection definition which does not allow for provider reporting in the absence of lab confirmation.

NOTE: Local health departments should continue to close out Gonorrhea cases as 'Confirmed' only. Please do NOT complete cases as 'Probable'.

## Syphilis

### \* **2014 Changes**:

- \* updated laboratory criteria to reflect the addition of new diagnostic tests and the removal of tests not used.
- \* Surveillance case definitions for different stages of syphilis have been modified (lab criteria for some, clinical description for all)
- \* Syphilis, latent; neurosyphilis; and syphilis, latent, unknown duration as separate categories were eliminated for the case classification.

## Syphilis, Early Latent

**Clinical Description**: a subcategory of latent syphilis (a stage of infection caused by *T. pallidum* in which organisms persist in the body of the infected person without causing symptoms or signs) when initial infection has occurred within the previous 12 months.

**Probable**: a person with no clinical signs or symptoms of syphilis who has one of the following:

\* No past diagnosis of syphilis, AND a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), AND a reactive treponemal test (e.g., FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods),

### OR

\* A current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer.

#### AND...

## Syphilis, Early Latent

...AND evidence of having acquired the infection within the previous 12 months based on one or more of the following criteria:

- Documented seroconversion or fourfold or greater increase in titer of a nontreponemal test during the previous 12 months
- \* Documented seroconversion of a treponemal test during the previous 12 months
- A history of symptoms consistent with primary or secondary syphilis during the previous 12 months
- A history of sexual exposure to a partner within the previous 12 months who had primary, secondary, or early latent syphilis (documented independently as duration < 12 months)</li>
- Only sexual contact was within the last 12 months (sexual debut)

## Syphilis, Late Latent

**Clinical Description**: a subcategory of latent syphilis (a stage of infection caused by *T. pallidum* in which organisms persist in the body of the infected person without causing symptoms or signs) when initial infection has occurred >12 months previously.

**Probable**: a person with no clinical signs or symptoms of syphilis who has one of the following:

\* No past diagnosis of syphilis, AND a reactive nontreponemal test (e.g., VDRL, RPR, or equivalent serologic methods), AND a reactive treponemal test (e.g., FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods),

#### OR

\* A past history of syphilis therapy and a current nontreponemal test titer demonstrating fourfold or greater increase from the last nontreponemal test titer

**AND** who has no evidence of having acquired the disease within the preceding 12 months (see Syphilis, early latent).

## Syphilis, Late with clinical manifestations (including late benign syphilis and cardiovascular syphilis)

Clinical Description: clinical manifestations of late syphilis may include inflammatory lesions of the cardiovascular system, (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis) or other tissue. Rarely, other structures (e.g., the upper and lower respiratory tracts, mouth, eye, abdominal organs, reproductive organs, lymph nodes, and skeletal muscle) may be involved. Late syphilis usually becomes clinically manifest only after a period of 15–30 years of untreated infection. If only neurologic manifestations of syphilis (e.g., tabes dorsalis, dementia) are present and infection occurred more than 12 months ago, the case should be reported as "late syphilis".

## Syphilis, Late with clinical manifestations (including late benign syphilis and cardiovascular syphilis)

**Laboratory Criteria for Diagnosis**: demonstration of *T. pallidum* in late lesions by special stains (although organisms are rarely visualized in late lesions), or equivalent methods, or by polymerase chain reaction (PCR) or equivalent direct molecular methods.

**Probable**: characteristic abnormalities or lesions of the cardiovascular system (e.g., aortitis, coronary vessel disease), skin (e.g., gummatous lesions), bone (e.g., osteitis), or other tissue AND a reactive treponemal test (e.g., FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods), in the absence of other known causes of these abnormalities. CSF abnormalities and clinical symptoms or signs consistent with neurologic manifestations of syphilis might be present.

**Confirmed**: a case that meets the clinical description of late syphilis that is laboratory confirmed

## Syphilis, Primary

**Laboratory Criteria for Diagnosis**: demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, or by polymerase chain reaction (PCR) or equivalent direct molecular methods.

**Probable**: a case that meets the clinical description of primary syphilis with a reactive serologic test (nontreponemal: Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], or equivalent serologic methods; treponemal: fluorescent treponemal antibody absorbed [FTA-ABS], *T. pallidum* particle agglutination [TP-PA], enzyme immunoassay [EIA], chemiluminescence immunoassay [CIA], or equivalent serologic methods). These treponemal tests supersede older testing technologies, including microhemagglutination assay for antibody to *T. pallidum* [MHA-TP].

**Confirmed**: a case that meets the clinical description of primary syphilis that is laboratory confirmed.

## Syphilis, Secondary

Clinical Description: a stage of infection caused by *T. pallidum* characterized by localized or diffuse mucocutaneous lesions (e.g., rash — such as non-pruritic macular, maculopapular, papular, or pustular lesions), often with generalized lymphadenopathy. Other symptoms can include mucous patches, condyloma lata, and alopecia. The primary ulcerative lesion may still be present. Because of the wide array of symptoms possibly indicating secondary syphilis, serologic tests for syphilis and a thorough sexual history and physical examination are crucial to determining if a case should be classified as secondary syphilis.

## Syphilis, Secondary

**Laboratory Criteria for Diagnosis**: demonstration of *T. pallidum* in clinical specimens by darkfield microscopy, or by polymerase chain reaction (PCR) or equivalent direct molecular methods.

**Probable**: a case that meets the clinical description of secondary syphilis with a nontreponemal (VDRL, RPR, or equivalent serologic methods) titer ≥4 AND a reactive treponemal test (FTA-ABS, TP-PA, EIA, CIA, or equivalent serologic methods

**Confirmed**: a case that meets the clinical description of secondary syphilis (with at least one sign or symptom) that is laboratory confirmed.

## Comment on Neurosyphilis

#### **Comment:**

- \* Neurosyphilis can occur at any stage of syphilis. If the patient has neurologic manifestations of syphilis, the case should be reported with the appropriate stage of infection (as if neurologic manifestations were not present) and neurologic manifestations should be noted in the case report data. If no other stage is appropriate, the case should be staged as "late, with clinical manifestations".
- \* Neurosyphilis can apply to all stages of infection of syphilis including: primary syphilis, secondary syphilis, early latent syphilis, late latent syphilis, and late syphilis with clinical manifestations.

## Trichinellosis

\* 2014 Changes: addition of suspected and probable case classification categories.

**Suspected**: instances where there is no clinically compatible illness should be reported as suspect if the person shared an epidemiologically implicated meal, or ate an epidemiologically implicated meat product, and has a positive serologic test for trichinellosis (and no known prior history of *Trichinella* infection).

**Probable**: a clinically compatible illness in a person who shared an epidemiologically implicated meal or ate an epidemiologically implicated meat product, **OR** a clinically compatible illness in a person who consumed a meat product in which the parasite was demonstrated.

**Confirmed**: A clinically compatible illness that is laboratory confirmed in the patient.

## Malaria

\* 2014 Changes: includes reporting requirements for malaria species and quantification of the parasitemia.

### **Laboratory Criteria for Diagnosis:**

- \* Detection of circulating malaria-specific antigens using rapid diagnostic test (RDT) OR
- \* Detection of species specific parasite DNA in a sample of peripheral blood using a Polymerase Chain Reaction (PCR) test. (Note: Laboratory-developed malaria PCR tests must fulfill Clinical Laboratory Improvement Amendments [CLIA] requirements, including validation studies) **OR**
- \* Detection of malaria parasites in thick or thin peripheral blood films, determining the species by morphologic criteria, and calculating the percentage of red blood cells infected by asexual malaria parasites (parasitemia).

**Suspected:** Detection of *Plasmodium* species by rapid diagnostic antigen testing without confirmation by microscopy or nucleic acid testing in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country.

## Malaria

#### Confirmed:

- \* Detection and specific identification of malaria parasite species by microscopy on blood films in a laboratory with appropriate expertise in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country. **OR**
- \* Detection of *Plasmodium* species by nucleic acid test in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country. **OR**
- \* Detection of unspeciated malaria parasite by microscopy on blood films in a laboratory with appropriate expertise in any person (symptomatic or asymptomatic) diagnosed in the United States, regardless of whether the person experienced previous episodes of malaria while outside the country.

### \* **2014 Changes:**

- Removal of fever as a required clinical criterion for case classification
- Revisions to the laboratory criteria
- \* Revisions to the non-neuroinvasive definition include the substitution of subjective fever or chills in place of measured temperature in the clinical criteria.

Clinical Criteria: a clinically compatible case of arboviral disease is as defined as follows:

- \* **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. (Removed Fever as reported by patient or health-care provider)
- \* **Non-Neuroinvasive disease**: Fever or chills as reported by the patient or a health-care provider, AND Absence of neuroinvasive disease, AND Absence of a more likely clinical explanation.

### **Laboratory Criteria for Diagnosis:**

- Isolation of virus from, or demonstration of specific viral antigen or nucleic acid in, tissue, blood, CSF, or other body fluid, OR
- Four-fold or greater change in virus-specific quantitative antibody titers in paired sera,
  OR
- \* Virus-specific IgM antibodies in serum with confirmatory virus-specific neutralizing antibodies in the same or a later specimen, **OR**
- \* Virus-specific IgM antibodies in CSF or serum.

(Removed Virus-specific IgM ab in CSF and a negative result for other IgM abs in CSF for arboviruses endemic to the region where exposure occurred)

### **Probable**

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

(No Changes from previous definition)

### Confirmed

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

(No Changes from previous definition)

#### Confirmed

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

(Removed Virus-specific IgM abs in CSF and a negative result for other IgM abs in CSF for arboviruses endemic to the region where exposure occurred)

## Novel Influenza A Virus Infection

\* 2014 Changes: changes to laboratory criteria for diagnosis, criteria for epidemiologic linkage, and to the probable case classification from the 2010 definition.

Note: The novel influenza A virus infection surveillance case definition from CSTE's 2013 interim position statement for this condition is identical to the 2014 definition.

\* The case definition for Novel Influenza A Virus Infection can be found at: www.cdc.gov/nndss

### \* **2014 Changes**:

- \* Changes to capture burden of pertussis among infants <1yo
- \* Addition of apnea to the list of case-defining clinical signs and symptoms for infants
- \* Classification of PCR positive or epi-linked cases occurring among infants with cough of any duration and one other clinical symptom as 'probable.'

Clinical Criteria: in the absence of a more likely diagnosis, a cough illness lasting ≥2 weeks, with at least one of the following signs or symptoms:

- \* paroxysms of coughing; OR
- \* inspiratory whoop; OR
- \* post-tussive vomiting; OR
- apnea (with or without cyanosis) (FOR INFANTS AGED <1 YEAR ONLY)</li>

**Laboratory Criteria for Diagnosis:** Isolation of *B. pertussis* from a clinical specimen or Positive PCR for pertussis

**Epidemiologic Linkage**: contact with a laboratory-confirmed case of pertussis\*.

\*Note: An illness meeting the clinical case definition should be classified as "probable" rather than "confirmed" if it occurs in a patient who has contact with an infant aged <1 year who is Polymerase Chain Reacton (PCR) positive for pertussis and has ≥1 sign or symptom and cough duration <14 days (classified as "probable" case).

**Probable**: in the absence of a more likely diagnosis, a cough illness lasting ≥2 weeks, with at least one of the following signs or symptoms:

- \* paroxysms of coughing; OR
- \* inspiratory "whoop"; OR
- \* post-tussive vomiting; OR
- \* apnea (with or without cyanosis) (FOR INFANTS AGED <1 YEAR ONLY)</p>
- \* AND absence of laboratory confirmation;
- \* AND no epidemiologic linkage to a laboratory-confirmed case of pertussis.
- \* **OR** (continued)

### **Probable (continued)**

- \* OR, FOR INFANTS AGED <1 YEAR ONLY:
  - \* Acute cough illness of any duration, with at least one of the following signs or symptoms: paroxysms of coughing; OR inspiratory "whoop"; OR post-tussive vomiting; OR apnea (with or without cyanosis)
  - \* And polymerase chain reaction (PCR) positive for pertussis.
- \* **OR**, FOR INFANTS AGED <1 YEAR ONLY:
  - Acute cough illness of any duration, with at least one of the following signs or symptoms: paroxysms of coughing; OR inspiratory "whoop"; OR post-tussive vomiting; OR apnea (with or without cyanosis)
  - And contact with a laboratory-confirmed case of pertussis.

### **Confirmed:**

- Acute cough illness of any duration, with isolation of B. pertussis from a clinical specimen.
- \* **OR** cough illness lasting  $\geq$  2 weeks, with at least one of the following signs or symptoms:
  - paroxysms of coughing; OR inspiratory "whoop"; OR post-tussive vomiting; OR apnea (with or without cyanosis) (FOR INFANTS AGED <1 YEAR ONLY)</li>
  - \* And polymerase chain reaction (PCR) positive for pertussis.
- \* **OR** cough illness lasting  $\geq$  2 weeks, with at least one of the following signs or symptoms:
  - paroxysms of coughing; OR inspiratory "whoop"; OR post-tussive vomiting; OR apnea (with or without cyanosis) (FOR INFANTS AGED <1 YEAR ONLY)</li>
  - \* And contact with a laboratory-confirmed case of pertussis\*

## New Condition Under National Surveillance

### Leptospirosis

- Confirmed and probable cases are asked to be submitted to CDC after approval from Office of Management and Budget (OMB)
  - Expect approval by the end of January 2014
  - \* Current case definition can be found at <a href="http://wwwn.cdc.gov/NNDSS/script/casedef.aspx?CondYrID=907&DatePu">http://wwwn.cdc.gov/NNDSS/script/casedef.aspx?CondYrID=907&DatePu</a> b=1/1/2013%2012:00:00%20AM
- Leptospirosis is and has been reportable to State of Michigan in the past
- \* Use the Leptospirosis Case Investigation Report form in MDSS to report cases

