

# Appendix B: Provincial Case Definitions for Reportable Diseases

Disease: Syphilis

Revised January, 2011

# Syphilis

## 1.0 Provincial Reporting

Confirmed cases of disease

## 2.0 Type of Surveillance

Case-by-case

## 3.0 Case Classification

### 3.1 Confirmed Case-Primary Syphilis

Laboratory confirmation of infection:

- Identification of *T. pallidum* by dark-field microscopy, direct fluorescent antibody microscopy, nucleic acid testing, or equivalent examination of material from a chancre or a regional lymph node  
**OR**
- Presence of one or more typical lesions (chancres), and reactive treponemal serology, regardless of non-treponemal test reactivity, in individuals with no previous history of syphilis  
**OR**
- Presence of one or more typical lesions (chancres) and a significant (i.e., fourfold or greater) rise in the titre over the last known non-treponemal test in individuals with a past history of appropriate syphilis treatment

### 3.2 Confirmed Case-Secondary Syphilis

Laboratory confirmation of infection:

- Identification of *T. pallidum* by dark-field microscopy, direct or indirect fluorescent antibody microscopy, nucleic acid amplification test (NAT) or equivalent examination of mucocutaneous lesions, condylomata lata and reactive serology (non-treponemal and treponemal),  
**OR**
- Presence of typical signs or symptoms of secondary syphilis (e.g., mucocutaneous lesions, alopecia, loss of eyelashes and lateral third of eyebrows, iritis, generalized lymphadenopathy, fever, malaise or splenomegaly) **and** either a reactive serology (non-treponemal and treponemal) or a significant (i.e., fourfold or greater) rise in titre of a non-treponemal test

### 3.3 Confirmed Case-Early Latent Syphilis (<1 year after infection)

Laboratory confirmation of infection:

- An asymptomatic patient with reactive serology (treponemal and/or non-treponemal) who within the past 12 months had one of the following:
  - Non-reactive serology
  - Previous signs/symptoms suggestive of primary or secondary syphilis
  - Exposure to a sexual partner with primary, secondary or early latent syphilis

### 3.4 Confirmed Case-Late Latent Syphilis (>1 year after infection or of unknown duration)

Laboratory confirmation of infection:

- An asymptomatic patient with persistently reactive treponemal serology (regardless of non-treponemal serology reactivity) who does not meet the criteria for early latent disease and who has not been previously treated adequately for syphilis

### 3.5 Confirmed Case-Neurosyphilis

#### 3.5.1 Infectious (<1 year after infection)

Laboratory confirmation of infection:

Fits the criteria in 3.1, 3.2 OR 3.3 above,

**AND** one of the following:

- Reactive cerebrospinal fluid – venereal diseases research laboratory (CSF-VDRL) in non-bloody cerebrospinal fluid (CSF)
- Clinical evidence of neurosyphilis and either elevated CSF leukocytes or elevated CSF protein in the absence of other known causes

#### 3.5.2 Non-infectious (>1 year after infection)

Laboratory confirmation of infection:

Reactive treponemal serology regardless of non-treponemal serology reactivity

**AND** one of the following:

- Reactive CSF-VDRL in non-bloody CSF
- Clinical evidence of neurosyphilis and either elevated CSF leukocytes or elevated CSF protein in the absence of other known causes

### 3.6 Confirmed Case-Early Congenital Syphilis (within 2 years of birth)

Laboratory confirmation of infection:

- Identification of *Treponema pallidum* by dark-field microscopy, direct fluorescent antibody microscopy or equivalent examination of material from nasal discharges, skin lesions, placenta, umbilical cord or autopsy material of a newborn (up to 4 weeks of age)
- OR**
- Reactive serology (non-treponemal and treponemal) from venous blood (not cord blood) in an infant/child with clinical, laboratory or radiographic evidence of congenital syphilis
- OR**
- Detection of *Treponema pallidum* deoxyribonucleic acid (DNA) in an appropriate clinical specimen

### 3.7 Confirmed Case-Tertiary Syphilis Other than Neurosyphilis

Laboratory confirmation of infection:

- Reactive treponemal serology (regardless of non-treponemal test reactivity) together with characteristic late abnormalities of the cardiovascular system, bone, skin or other structures, in the absence of other known causes of these abnormalities. (*T. pallidum* is rarely seen in these lesions, although when present, is considered diagnostic.)
- AND**
- No clinical or laboratory evidence of neurosyphilis

## 4.0 Laboratory Evidence

### 4.1 Laboratory Confirmation

Any of the following will constitute a confirmed case of Syphilis:

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- Detection of *T. pallidum* or its DNA by validated methods
- Reactive non-treponemal and treponemal serology
- Reactive treponemal serology regardless of non-treponemal serology in persons with no previous history of syphilis
- A significant (i.e., fourfold or greater) rise in non-treponemal titre

#### 4.2 Approved/Validated Tests

- Darkfield/direct fluorescent antibody microscopy for *T. pallidum*
- Non-treponemal tests (rapid plasma reagin [RPR], venereal diseases research laboratory [VDRL], unheated syphilis reagent [USR] test, toluidine red unheated serum reagent test [TRUST])
- Treponemal tests (treponema pallidum particle agglutination [TP-PA], fluorescent treponemal antibody absorbed [FTA-ABS], enzyme immunoassay [EIA], Western blot)
- NAT for *T. pallidum*

#### 4.3 Indications and Limitations

- Diagnosis of syphilis requires combination of history including epidemiologic risk factors or exposure, physical examination and laboratory tests as there is no single optimum diagnostic criterion
- Dark-field microscopy testing for *T. pallidum* is not reliable for oral/rectal lesions, as non-pathogenic treponemes may be present. Instead, direct fluorescent antibody test for *T. pallidum* should be used on such specimens
- Reliability of serological tests depends on the type of test and stage of disease.
- Non-treponemal tests have reduced sensitivity in primary syphilis and late latent syphilis

#### 5.0 Clinical Evidence

A clinical consultation is necessary for diagnosis

#### 6.0 ICD Code(s)

##### 6.1 ICD-10 Code(s)

###### **Primary Stage**

ICD 10 Code A51.2 Syphilis, Primary Other Sites

###### **Secondary Stage**

ICD 10 Code A51.4 Syphilis, Secondary, Other

###### **Early Latent**

ICD 10 Code A51.5 Syphilis Early Latent

###### **Late Latent**

ICD 10 Code A52.8 Syphilis, Late Latent

###### **Neurosyphilis, unspecified**

ICD 10 Code A52.3 Syphilis, Neurosyphilis, Unspecified

###### **Early Congenital Syphilis, Unspecified**

ICD 10 Code A50.2 Early Congenital Syphilis, Unspecified

#### 7.0 Comments

N/A

#### 8.0 References

- Public Health Agency of Canada. Canadian guidelines on sexually transmitted infections. Rev. ed. Ottawa: Public Health Agency of Canada; 2008. Available from [http://www.phac-aspc.gc.ca/std-mts/sti\\_2006/pdf/Guidelines\\_Eng\\_complete\\_06-26-08.pdf](http://www.phac-aspc.gc.ca/std-mts/sti_2006/pdf/Guidelines_Eng_complete_06-26-08.pdf).
- National Notifiable Diseases Surveillance System. Case Definitions. [Internet]. Syphilis (*Treponema pallidum*); 1996. Atlanta, GA: Centers for Disease Control and Prevention (CDC); 2008. [cited 2009 Feb 12]. Available from <http://www.cdc.gov/ncphi/diss/nndss/casedef/syphiliscurrent.htm>. See also: Syphilis, Congenital. Available from <http://www.cdc.gov/ncphi/diss/nndss/casedef/syphiliscurrent.htm>.
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