Ministry of Health

Ontario Public Health Standards:
Requirements for Programs, Services and Accountability

Infectious Disease Protocol

Appendix 1: Case Definitions and Disease-Specific Information

Disease: Syphilis

Effective: August 2025

Ontario

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Syphilis

☒ Communicable
☒ Virulent

Health Protection and Promotion Act **(HPPA)**[1]
Ontario Regulation (O. Reg.) 135/18 (Designation of Diseases)[2]

Provincial Reporting Requirements

☒ Confirmed case
☒ Probable case (congenital syphilis only)

As per Requirement #3 of the "Reporting of Infectious Diseases" section of the *Infectious Diseases Protocol, 2018* (or as current), the minimum data elements to be reported for each case are specified in the following:

- O. Reg. 569 (Reports) under the HPPA;[3]
- The iPHIS User Guides published by Public Health Ontario (PHO); and
- Bulletins and directives issued by PHO.

For additional information, refer to the iPHIS Quick Reference: Congenital syphilis: iPHIS data entry scenarios. This resource is intended to help boards of health classify cases of congenital syphilis and enter information into iPHIS.

Type of Surveillance

Case-by-case

Section 1: Syphilis

Case Definition

Confirmed Case

Confirmed Case - Primary Syphilis

Laboratory confirmation of infection:

- Identification of *Treponema pallidum* (*T. pallidum*) by dark-field microscopy,

fluorescent antibody microscopy, nucleic acid amplification test (NAAT), 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 rise of fourfold or greater in the titre over the last known non-treponemal test in individuals with a past history of appropriate syphilis treatment.

Confirmed Case - Secondary Syphilis

Laboratory confirmation of infection:

- Identification of *T. pallidum* from mucocutaneous lesions or condylomata lata by dark-field microscopy, fluorescent antibody microscopy, NAAT or equivalent examination 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 rise of fourfold or greater in titre of a non-treponemal test.

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 year had one of the following:
  - Non-reactive serology; OR
- Signs/symptoms suggestive of primary or secondary syphilis; OR
  - Exposure to a sexual partner with primary, secondary, or early latent syphilis.

Confirmed Case - Late Latent Syphilis (>1 year after infection) or Syphilis Infection of Unknown Duration

Laboratory confirmation of infection:

- An asymptomatic patient with reactive serology* (treponemal and/or non-treponemal) who does not meet the criteria for early latent syphilis;

  AND

- One of the following:
  - Previous syphilis with inadequate treatment; OR
  - Has previous syphilis with inadequate treatment and a rise of fourfold or greater in titre of a non-treponemal test completed >1 year ago.

Confirmed Case - Neurosyphilis

Infectious (<1 year after infection)

Laboratory confirmation of infection:

- Fits the criteria for a laboratory confirmed primary, secondary OR early latent syphilis case;

AND

- One of the following:
  - Reactive venereal disease research laboratory (VDRL) test in non-bloody cerebrospinal fluid (CSF); OR
  - Clinical evidence of neurosyphilis and either elevated CSF leukocytes or elevated CSF protein in the absence of other known causes.

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

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*_T pallidum_ is rarely seen in these lesions, although when present, is considered diagnostic.

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.

AND

- No clinical or laboratory evidence of neurosyphilis.

Outbreak Case Definition

The outbreak case definition varies with the outbreak under investigation. Please refer to the *Infectious Diseases Protocol, 2023* (or as current) for guidance in developing an outbreak case definition as needed.[4]

The outbreak case definitions are established to reflect the disease and circumstances of the outbreak under investigation. The outbreak case definition should be developed for each individual outbreak based on its characteristics, reviewed during the course of the outbreak, and modified, if necessary, to ensure that the majority of cases are captured by the definition.

Outbreak cases may be classified by levels of probability (i.e., confirmed or probable).

Clinical Information

Clinical Evidence

Syphilis is characterized by a primary lesion, a secondary eruption involving skin and mucous membranes, long periods of latency, and late lesions of skin, bone, viscera, the central nervous system (CNS), and the cardiovascular system.[5]

A clinical consultation is necessary for diagnosis and staging.

Persons co-infected with HIV may have modified signs and symptoms of syphilis.[6]

Clinical Presentation

Syphilis is a treponemal disease that progresses through four stages if left untreated: primary, secondary, latent and tertiary.[7]

Primary syphilis is characterized by one or more superficial ulcerations or chancres, which may differ considerably in appearance, at the site of exposure and by regional lymphadenopathy. The primary lesion usually appears three weeks after exposure (range 10 to 90 days).[6]

Secondary syphilis generally develops following resolution of the primary ulcerative lesion though the primary ulcerative lesion may still be present. It is characterized by macular, maculopapular or papular lesions or a rash, typically involving the trunk, palms, and soles, generalized lymphadenopathy, fever, sore throat, malaise, and mucosal lesions. A small number of cases may experience alopecia, meningitis, headaches, uveitis, or retinitis.

Latent syphilis is characterized by serological evidence of infection in the absence of symptoms, and is further categorized as:

- Early latent syphilis: syphilis acquired within the preceding year, and
- Late latent syphilis: syphilis acquired greater than 1 year or of unknown duration. If left untreated, late latent syphilis can progress to tertiary syphilis.[5,6,8]

Tertiary syphilis is rare, may manifest as gummas of the skin, musculoskeletal system, or internal organs, with cardiovascular and neurological involvement, and typically is not infectious.

During secondary, latent and tertiary stages of syphilis, the central nervous system (CNS) can be infected causing **neurosyphilis**.[6] Individuals with neurosyphilis can be asymptomatic or experience headache, vertigo, dementia, changes to their personality, and ataxia. Co-infection with HIV increases the risk of development of neurosyphilis.

Laboratory Evidence

Laboratory Confirmation

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

- Detection of *T. pallidum* or its DNA by validated methods.

Additional Laboratory Evidence

The following may be used to support a confirmed case classification of syphilis:

- Reactive non-treponemal and treponemal serology;
- Reactive treponemal serology regardless of non-treponemal serology in persons with no previous history of syphilis; or

- A rise of fourfold or greater in non-treponemal titre.

Approved/Validated Tests

- Dark-field/direct fluorescent antibody microscopy for *T. pallidum*;
- Non-treponemal tests (rapid plasma reagin [RPR], VDRL);
- Treponemal tests (*T. pallidum* particle agglutination [TP-PA], chemiluminescent immunoassay [CLIA], fluorescent treponemal antibody absorbed [FTA-ABS]); and
- NAAT for *T. pallidum*.

Indications and Limitations

- Diagnosis of syphilis may require a 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 appropriate 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;
- Performance of serological tests depends on the type of test and stage of disease (e.g., non-treponemal tests have reduced sensitivity in primary syphilis and late latent syphilis); and
- Persons from endemic countries infected with other treponemes such as yaws, pinta and bejel can cause biological false positive serological results.

For further information about diagnostic testing, contact Public Health Ontario's laboratory.

Case Management

In addition to the requirements set out in the Requirement #2 of the "Management of Infectious Diseases – Sporadic Cases" and "Investigation and Management of Infectious Diseases Outbreaks" sections of the *Infectious Diseases Protocol, 2023* (or as current), the board of health shall investigate cases to determine the source of infection.[4] Refer to Provincial Reporting Requirements above for relevant data to be collected during case investigation.

Case management should also consider the Provincial Infectious Diseases Advisory Committee (PIDAC) Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations (2009, or as current).[9]

Syphilis management (e.g., staging, treatment, and serological follow-up) depends on the stage of infection and is at the responsibility of the attending health care provider. Health care providers should refer to clinical guidelines, such as the Canadian Guidelines on Sexually Transmitted Infections and the Canadian Simplified algorithm for clinical syphilis staging and treatment in adolescents and adults to support their decision making on syphilis management, including for pregnant people. For syphilis cases for which there is uncertainty around the duration of infection, health care providers should use a conservative approach to treatment (i.e., to treat the case as a late latent infection to ensure adequate treatment).

The Board of Health should provide education about the infection and methods of preventing spread. Cases should refrain from sexual activity for 7 days after treatment is completed and symptoms have resolved. Individuals with syphilis should be tested for HIV and other sexually transmitted and bloodborne infections.

Note: Syphilis case classifications are for surveillance purposes and are not intended to be used by health care providers for syphilis management. For surveillance purposes, syphilis cases of unknown duration are grouped together with late latent syphilis cases in the category of late latent syphilis or syphilis infection of unknown duration. PHUs should enter syphilis cases into iPHIS based on the surveillance case definitions, regardless of the stage determined by the health care provider. For syphilis cases for which there is uncertainty about the duration of infection, PHUs should use a conservative approach for contact management and monitoring (i.e., as an early latent infection to support identification of any contacts that are cases). Although non-treponemal titres alone cannot reliably differentiate between infections acquired greater or less than 12 months, PHUs may opt to prioritize cases of syphilis of unknown duration for follow-up if they suspect the cases may be infectious (e.g., cases with higher non-treponemal titres).

Contact Management

Sexual partners should be assessed, tested, treated, and counselled appropriately. The trace back period for sexual partners is dependent on the stage of syphilis infection.

For recommendations on contact management refer to PIDAC Sexually Transmitted Infections Case Management and Contact Tracing Best Practice Recommendations (2009, or as current), the Canadian Guidelines on Sexually Transmitted Infections, and the *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2019* (or as current).[9,6,10]

Outbreak Management

See the *Infectious Diseases Protocol, 2023* (or as current) for the public health management of outbreaks or clusters in order to identify the source of illness, manage the outbreak and limit secondary spread.[4]

Prevention and Control Measures

Personal Prevention Measures

Actions that can be taken to prevent syphilis may include:

- Education about safer sex practices including use of barrier methods;
- Early detection of infection by screening of people at risk;
- Effective treatment of persons with infectious syphilis and their contacts;
- STI antibiotic prophylaxis for individuals at high risk of syphilis;[11] and
- Prenatal screening for syphilis should continue to be recommended as one of the routine tests provided during a prenatal workup.[5]

For more information on prevention measures refer to the ministry document: the *Sexual Health and Sexually Transmitted/Blood-Borne Infections Prevention and Control Protocol, 2019* (or as current), and the references listed below.[10]

Infection Prevention and Control Strategies

Refer to PHO's Infection Prevention and Control webpage to search for the most up-to-date information on Infection Prevention and Control (IPAC).

Disease Characteristics

Aetiologic Agent - The spirochete *Treponema pallidum* (*T. pallidumq*), subspecies *pallidum* is the infective agent.[5]

Modes of Transmission - The primary mode of transmission is by sexual contact, including vaginal, oral and anal sex.[5] Kissing (oral-oral contact), sharing of needles and injection equipment, blood transfusion, accidental inoculation (e.g., needle stick injury) and solid organ transplantation have rarely been reported as routes of transmission.[6]

Incubation Period – From 10 days to 3 months; usually 3 weeks.[5]

Period of Communicability - Communicability exists when moist mucocutaneous lesions of primary and secondary syphilis are present.[6] Primary, secondary and early latent stages are considered infectious, with an estimated risk of transmission per partner of around 60%.[12] Direct (often intimate) contact with lesions of primary and secondary syphilis poses the greatest risk of transmission. Early latent syphilis is considered infectious because of the 25% chance of relapse to secondary stage.[6] Late latent and tertiary syphilis are not infectious.

Reservoir - Humans.[6]

Host Susceptibility and Resistance - Universal susceptibility; approximately 30% of exposures result in infection.[5] Untreated infection leads to gradual development of immunity against *T. pallidum*. Patients treated during the primary and secondary stages do not typically develop immunity and therefore are susceptible to reinfection.[5]

Refer to PHO's Infectious Disease Trends in Ontario tool and PHO's Sexually Transmitted Infections (STIs) page for the most up-to-date information on infectious disease trends in Ontario.[13,14]

For additional national and international epidemiological information, refer to the Public Health Agency of Canada and the World Health Organization.

Section 2: Congenital Syphilis

Case Definitions

Confirmed Case

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

Laboratory confirmation of infection:

- Identification of *T. pallidum* by NAAT, fluorescent antibody microscopy or equivalent examination of material in an appropriate clinical specimen (see Laboratory Evidence: Indications and Limitations)

  OR

- Reactive serology (non-treponemal **and** treponemal) from venous blood (not umbilical cord blood) in an infant or child **with** clinical, radiographic or other laboratory evidence of congenital syphilis†

  OR

- Infant's RPR titre is at least fourfold or greater than the mother's/birthing parent's RPR titre (using the same non-treponemal test) in samples collected during the immediate postnatal period

  OR

- Reactive treponemal serology in a child older than 18 months of age **without** clinical, laboratory or radiographic evidence of congenital syphilis†

AND

- The infant/child is younger than 2 years of age at the time of meeting the case definition **and** there are no other suspected sources of exposure.

Confirmed Case-Late Congenital Syphilis

Laboratory confirmation of infection:

- Identification of *T. pallidum* by NAAT, fluorescent antibody microscopy or equivalent examination of material in an appropriate clinical specimen (see Laboratory Evidence: Indications and Limitations);

  OR

- Reactive serology (non-treponemal **and** treponemal) from venous blood in a child **with** clinical, radiographic or other laboratory evidence of congenital syphilis†

AND

- The child is 2 or more years of age at the time of meeting the case definition **and** there are no other suspected source of exposure.

Confirmed Case - Syphilitic Stillbirth

A fetal death that occurs after 20 weeks gestation or in which the fetal weight is 500g or more with laboratory confirmation of infection (i.e., identification of *T. pallidum* by NAAT, fluorescent antibody microscopy or equivalent examination of material) in an

† See Clinical Information.

appropriate clinical specimen from the fetus (see Laboratory Evidence: Indications and Limitations).

Probable Case

Probable Case - Early Congenital Syphilis

- Reactive serology (non-treponemal **and/or** treponemal) from venous blood (not umbilical cord blood) in an infant or child **without** clinical, radiographic or other laboratory evidence of congenital syphilis whose mother/birthing parent had:
  - Untreated or inadequately‡ treated syphilis prior to delivery; OR
  - Evidence of reinfection during the pregnancy (i.e., non-treponemal titres increasing fourfold or greater)

AND

- The infant/child is younger than 18 months of age at the time of meeting the case definition **and** there are no other suspected sources of exposure.

Probable Case - Syphilitic Stillbirth

- A fetal death that occurs after 20 weeks gestation or in which the fetal weight is 500g or more where the mother/birthing parent had:
  - Untreated or inadequately‡ treated syphilis prior to delivery; OR
  - Evidence of reinfection during the pregnancy (i.e., non-treponemal titres increasing by fourfold or greater); AND
  - No other cause of stillbirth established.

‡ Inadequate treatment is defined as i. any non-penicillin therapy, ii. penicillin regimen per existing guidelines **completed** less than 30 days before delivery, iii. evidence of inadequate response to treatment (e.g., an inadequate drop in non-treponemal titres despite treatment as per guidelines, titre at delivery is four-fold higher than the pre-treatment titre, or mother/birthing parent has clinical signs and symptoms at time of delivery), or iv. lack of documentation of treatment.

Clinical Information

Clinical Evidence

The clinical manifestations of early and late congenital syphilis are varied and may be similar to those associated with other neonatal conditions. There is no single diagnostic criterion for congenital syphilis. As such, a thorough evaluation of the mother's/birthing parent's syphilis history, as well as findings from physical examinations, laboratory testing, and diagnostic imaging (e.g., ultrasound or magnetic resonance imaging [MRI]), and auditory/ophthalmologic testing), may be necessary to support a diagnosis. The clinical evaluations needed to assess for congenital syphilis may vary by case and will be determined by the responsible health care provider.

Clinical Presentation

Severe pregnancy outcomes occur in about one-third of untreated maternal syphilis infections and include spontaneous abortion, fetal demise and late-term stillbirth.[11] Abnormalities, if present, can be visible on fetal ultrasound as of 18-20 weeks gestation and can include hepatomegaly, placentomegaly, and ascites. Abnormal fetal ultrasound findings are associated with treatment failure and a higher risk of congenital syphilis.[15,16]

50%-90% of infants with early congenital syphilis are asymptomatic at birth. Clinical signs of infection typically develop weeks to months after delivery, usually by five weeks of age. Manifestations of early congenital syphilis may include, but are not limited to:[6,11]

- Anemia
- Ascites
- Condyloma lata
- Dental abnormalities (e.g., mulberry molars)
- Fever
- Hepatosplenomegaly
- Intrauterine growth restriction
- Jaundice
- Low birth weight/small for gestational age
- Lymphadenopathy
- Meningitis
- Mucocutaneous lesions
- Non-immune hydrops
- Osteochondritis
- Periostitis

- Prematurity
- Pseudoparalysis
- Rhinitis (snuffles)
- Sensory neural hearing loss
- Skeletal abnormalities
- Features suggestive of congenital syphilis on radiographs of long bones
- Any other abnormality not better explained by an alternative diagnosis.

Untreated infants (i.e., early congenital or maternal infections), regardless of whether symptoms were observed in early infancy, often develop clinical manifestations (>2 years of age) that are the consequence of inflammation or scarring from earlier infection.[5,6,11] Late manifestations of congenital syphilis include, but are not limited to: [5,6,11]

- Eighth cranial nerve (vestibulocochlear nerve) deafness
- Gummas
- Hutchinson's teeth
- Interstitial keratitis
- Mulberry molars
- Perichondritis
- Sabre shins
- Saddle-nose deformity

Laboratory Evidence

Laboratory Confirmation

Any of the following will constitute a confirmed case of congenital syphilis:

- Detection of *T. pallidum* or its DNA by validated methods from an appropriate clinical specimen
- Persistent positive treponemal serology in a child older than 18 months of age
- Infant's RPR titre at least fourfold higher than the mother's/birthing parent's RPR titre in samples collected during the immediate postnatal period

Additional Laboratory Evidence

The following may be used to support a confirmed or probable classification of congenital syphilis:

- Reactive non-treponemal and treponemal serology collected from venous blood (not cord blood)

- Reactive VDRL in non-bloody CSF
- A rise of fourfold or greater in infant non-treponemal titre

Approved/Validated Tests

- Dark-field/direct fluorescent antibody microscopy for *T. pallidum*;
- Non-treponemal tests RPR, VDRL);
- Treponemal tests (treponema pallidum particle agglutination [TP-PA], chemiluminescent immunoassay [CLIA], fluorescent treponemal antibody absorbed [FTA-ABS]); and
- NAAT for *T. pallidum*.

Indications and Limitations

In addition to venous blood samples, appropriate clinical specimens for the diagnosis of congenital syphilis include nasal secretions, skin lesions, fluid from blisters or exudative rashes, placenta, umbilical cord, or autopsy clinical material. Umbilical cord blood should not be used for infant testing.

Syphilis serological results can be affected by the timing of maternal/birthing parent infection. If syphilis is acquired close to the time of delivery, maternal/birthing parent and newborn serological tests may initially be negative. Reactive syphilis serological tests in an infant can represent infant infection or trans-placental passage of antibodies. In the absence of congenital infection, antibodies are expected to decline and clear by 18 months of age, regardless of treatment history. A four-fold or greater rise in infant non-treponemal titre supports a diagnosis of congenital syphilis.

For further information about diagnostic testing, contact Public Health Ontario Laboratory.

Additional Comments

Maternal/birthing parent non-treponemal and treponemal immunoglobulin G (IgG) antibodies transfer passively to the fetus via the placenta unless the infection occurs late in the third trimester or in the peripartum period. In uninfected infants, the non-treponemal test should be negative by six months of age and the treponemal test should be negative by 18 months of age.[11] Persistently reactive non-treponemal or treponemal tests beyond 18 months of age is indicative of congenital infection.[11]

Findings from CSF may contribute to the clinical suspicion of congenital syphilis, including reactive VDRL or elevated cell count or protein without another cause. The diagnosing or treating health care provider should be consulted to interpret CSF values for the specific patient.

Case Management

In addition to Requirement #2 of the "Management of Infectious Diseases – Sporadic Cases" and "Investigation and Management of Infectious Diseases Outbreaks" sections of the Infectious Diseases Protocol, 2023 (or as current), the board of health shall investigate cases to determine the source of infection.[4] Refer to Provincial Reporting Requirements above for relevant data to be collected during case investigation. Refer to iPHIS Quick Reference Guide: Syphilis, and the Ontario Investigation Tool - Congenital syphilis[17] for additional information.

Public health case management of confirmed and probable cases of congenital syphilis and syphilitic stillbirths should prioritize:

- Contacting the attending health care provider to collect information regarding infant clinical presentation, complications, laboratory findings and treatment;
- Linkage to appropriate health care provider for ongoing infant follow-up;
- Timely case classification of the infant/stillborn/child as per case definitions outlined above for purposes of public health surveillance, including data entry into iPHIS;
- Investigating maternal history and ensuring adequate follow-up of maternal cases as per attending health care provider, including staging, confirmation of appropriate treatment, serological response to treatment, and establishing responsibility of partner notification.

Active public health follow-up of repeat infant serology to confirm persistence or seroreversion of a reactive treponemal result until the infant is greater than 18 months of age **AND/OR** an adequate decrease in non-treponemal titres is observed (i.e., non-reactive or fourfold or greater decrease) is at the discretion of the local public health unit. PHUs can update case classifications if laboratory results or other evidence reported to public health indicate a change (Refer to the *iPHIS Entry Scenario Guide* for guidance as needed).

PHUs that opt to follow infant repeat serology should consider prioritizing the follow-up of infants born to a parent with reactive syphilis serology who were:

- Not offered treatment at the time of birth

  AND

- Meet the probable case definition

  OR

- Have reactive non-treponemal titres at time of birth.

Contact Management

Contact follow-up for individuals who have direct contact with an untreated infant presenting with dermatological manifestations of congenital syphilis should be determined on a case-by-case basis and will rely on factors such as the infant's clinical presentation, nature of exposure (e.g., duration, use of PPE), and relationship to the infant (e.g., household contact, care provider, etc.).

Prevention and Control Measures

Measures include:

- Appropriate treatment of pregnant people with infectious and latent syphilis as well as their contacts;
- Education of pregnant persons with syphilis on the importance of timely treatment and potential consequences to fetus/infant if infection is untreated;
- Prenatal screening for syphilis should continue to be recommended as one of the routine tests provided during prenatal care as per recommendations in the Canadian Guidelines for Sexually Transmitted Infections or in accordance with locally issued recommendations. Whenever feasible, maternal/birthing parent syphilis testing results should be known prior to the discharge of all newborn infants from hospital.[6,11] This includes testing of any mother/birthing parent in the event of a stillbirth after 20 weeks gestation.
- Enabling access to culturally appropriate and culturally informed prenatal care services that are accessible to those at high-risk for syphilis infection in pregnancy.

Disease Characteristics

Aetiologic Agent - The spirochete *Treponema pallidum* (*T. pallidum*), subspecies *pallidum* is the infective agent.[5]

Modes of Transmission - Transmission of syphilis from an infected pregnant person to their fetus can occur via the placenta. Transmission of syphilis can also occur at time of delivery through contact with infectious genital lesion(s). Transplacental transmission can occur as early as nine weeks gestation but is more likely after 16 weeks gestation and can occur at any stage of the infection.

The risk of transmission to the fetus is dependent on the stage of maternal infection and gestational age at the time of infection. The highest risk of transmission to the fetus is if the mother/birthing parent has primary or secondary infection, but transmission is also possible if the mother/birthing parent has early or late latent infection. Compared to those who have untreated syphilis infection that was acquired prior to pregnancy, the risk of transmission is increased when maternal/birthing parent infection is acquired during pregnancy, particularly later in pregnancy.[11,12]

While uncommon, there is a risk of congenital syphilis for infants born to people adequately treated for syphilis in pregnancy. The risk of congenital syphilis is increased for infants who are born to a mother/birthing parent with secondary syphilis, high non-treponemal titres at time of treatment, or an infection acquired in the third trimester, in the event of a short interval between treatment and delivery, and for infants who had fetal abnormalities identified on ultrasound during pregnancy, particularly when involving the liver or the spleen.[15,18,19]

Infected infants may have moist mucocutaneous lesions that are more widespread than in adult syphilis and are a potential source of infection.[6] Breastfeeding by mothers with primary or secondary syphilis lesions carries a theoretical risk of transmission of syphilis to the baby.[7]

Incubation Period – The incubation period for congenital syphilis is not clearly defined as most exposures occur *in utero*.

Period of Communicability - Congenitally infected newborns are generally non-infectious following at least 24 hours of adequate antibiotic therapy.[19]

Reservoir - Humans.[5]

Host Susceptibility and Resistance - Universal susceptibility treated infants and children are susceptible to acquiring syphilis later in life.

Refer to PHO's Infectious Disease Trends in Ontario tool and PHO's Sexually Transmitted Infections (STIs) page for the most up-to-date information on infectious disease trends in Ontario.[13,14]

For additional national and international epidemiological information, refer to the Public Health Agency of Canada and the World Health Organization.

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Document History

Revision Date	Document Section	Description of Revisions
August 2025	Entire Document	• Syphilis and Congenital Syphilis: Separated into two sections • Table of Contents Added • Clinical Information: Minor content updates • Laboratory Evidence: Minor content updates • Case Management: Minor content updates • Contact Management: Minor content updates • Prevention and Control Measures: Minor content updates • Disease Characteristics: Minor content updates • Congenital Syphilis Case Definitions: Update to confirmed case- early congenital syphilis definition. Added case definitions for confirmed case – syphilitic stillbirth; confirmed case – late congenital syphilis; probable case – early congenital syphilis; probable case – syphilitic stillbirth. • References: Updated
April 2022	Entire Document	New template. Appendix A and B merged. No material content changes.

Revision Date	Document Section	Description of Revisions
April 2022	Epidemiology: Occurrence section	Removed.
April 2022	ICD Codes	Removed.