

Syphilis Management

May 29, 2023



What is syphilis?

- Syphilis is a sexually transmitted infection caused by the bacterium *Treponema pallidum*.
- Syphilis is primarily transmitted through direct contact with a syphilis lesion during vaginal, anal, or oral sexual contact.
- Vertical transmission during pregnancy or birth can lead to congenital syphilis.
- Syphilis infection follows a progression of stages, that include primary, secondary, latent (early latent and late latent), and tertiary. See 'Staging' below.



Regional epidemiology

- Over the last ten years, infectious syphilis cases have increased steadily across Canada.
- In the HPEC region, the incidence of infectious syphilis increased 800% from 2017 to 2021¹.
- A change in demographic patterns among cases regionally and provincially has also been identified, with a larger proportion of females now being affected.
- Kingston, Frontenac, and Lennox and Addington (KFL&A) region identified a sudden increase in congenital syphilis cases with five congenital syphilis cases in 2022. Prior to 2022, the last detection of congenital syphilis in the KFL&A region was in 2012. In Ontario, congenital syphilis has increased from three cases in 2019 to 25 cases in 2022².
- While no cases of congenital syphilis have been identified in the HPEC region at the current time, Hastings Prince Edward Public Health (HPEPH) is working proactively to reduce the transmission of syphilis in our region and the corresponding risk of congenital cases.



Who should be screened?

- anyone presenting with symptoms of syphilis
- individuals reporting unprotected sex with a new, casual, or anonymous sexual partner
- individuals requesting STI testing
- individuals with a confirmed STI
- consider offering syphilis screening as routine care
- individuals who are pregnant

When conducting syphilis screening, offer patients a complete STI screen, ensuring to screen **all sites** exposed during sex (vaginal, rectal, pharyngeal).

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Screening

- Serological syphilis screening is the primary method for routine diagnosis and post-treatment monitoring of syphilis infection.
- The incubation period can range from 10 to 90 days. A negative syphilis screen within the incubation period does not rule out syphilis infection and the test should be repeated after four weeks or at the end of the incubation period.
- Public Health Ontario Lab (PHOL) completes syphilis serology using the following testing algorithm: Screening Test (Treponemal test; CMIA) > Confirmatory Test (Non-treponemal test; RPR). If the RPR does not confirm a reactive screening result, an additional Confirmatory Test (Treponemal test; TPPA) is performed. More details about syphilis serology are available at publichealthontario.ca.



Staging

- Primary, Secondary, and Early Latent stages of syphilis are considered infectious.
- Primary Syphilis: painless genital, anal or oral lesion (chancre). Regional lymphadenopathy may occur. Primary syphilis usually occurs three weeks after infection.
- Secondary Syphilis: typically begins with the development of a generalized maculopapular nonpruritic rash typically including the palms of hands and bottom of the feet. Rashes with a different appearance can also present on other parts of the body. Other symptoms in this stage can include fever, malaise, headaches, mucosal lesions, condylomata lata, lymphadenopathy, and patchy/diffuse alopecia. Secondary syphilis usually occurs between two to 12 weeks after infection but can present up to six months.
- Early Latent Syphilis: asymptomatic infection of less than one year. Only detected with serologic screening and complete patient history.
- Late Latent Syphilis: asymptomatic infection of more than one year. Only detected with serologic screening and complete patient history.
- Note: neurosyphilis, ocular syphilis and otosyphilis can occur at any stage of infection. Consult with an Infectious Disease specialist if neurological, ocular or vestibular/auditory symptoms are present.



Case notification to Public Health

- Health care providers who suspect or have confirmation of a patient with a Disease of Public Health Significance, as per Ontario Reg 135/18 and amendments under the Health Protection and Promotion Act, must report them to the local Medical Officer of Health.
- Cases of syphilis can be reported to HPEPH by completing and faxing the [Syphilis Surveillance Form](#) to 613-968-1482.

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Treatment

- Penicillin G Benzathine (Bicillin® L-A) is the only acceptable form of injectable treatment for syphilis.
- For dosage information and for treating individuals who are pregnant or have a penicillin allergy, please consult the [Canadian STI Guidelines](#).
- Jarisch-Herxheimer (JHR) reaction, characterized by acute febrile illness with headache, myalgia, chills, and rigors, can occur following treatment of syphilis with penicillin. It can occur following treatment at any stage of infection, though most commonly in individuals with secondary syphilis. JHR is not an allergic reaction. JHR may occur as early as two hours following treatment and will generally resolve within 24 hours. Symptoms can be managed conservatively (e.g. acetaminophen for fever).
- All individuals who are treated must abstain from sexual contact for seven days post treatment and until all lesions resolve.
- Publicly funded treatment is available at HPEPH. Treatment can be ordered for administration in your patient care setting by completing the [Vaccine/STI order form](#) or by calling HPEPH's Sexual Health Program at 613-966-5500 ext. 418. A complete [Syphilis Surveillance Form](#) must be received by HPEPH for all Bicillin® L-A orders.
- For assistance with staging and treatment, referrals to HPEPH can be made by completing the referral section on the [Syphilis Surveillance Form](#) and faxing to the Sexual Health Program at 613-968-1482.



Contact management

- Public Health is required to ensure all sexual contacts are notified, as per the Health Protection and Promotion Act, R.S.O. 1990, c.H.7, part II, sections 5 and 7, and the 2019 Ontario Public Health Standards.
- HPEPH's Sexual Health Program will complete a contact tracing interview with all confirmed cases.
- Sexual contact(s) of known syphilis cases must be tested and treated without waiting for test results.



Monitoring

- The follow-up testing schedule after syphilis treatment for primary, secondary, and early latent syphilis, is serology at three, six, and 12 months.
- For late latent syphilis, follow up serology is completed at 12 and 24 months.
- Response to treatment is assessed based on the patient's clinical picture and their RPR titre. Titres should be monitored until they are non-reactive or remain at a stable low titre such as $\leq 1:4$. The rate of titre decline is dependent on the stage of syphilis and treatment provided and may vary.

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Health equity

HPEPH understands that not all individuals have equitable access to care. The sexual health program applies a health equity lens when completing case management to ensure all individuals receive the treatment and follow-up care they need. If any of your patients are facing barriers accessing screening, treatment, or follow-up care for a STI please connect with the sexual health program.



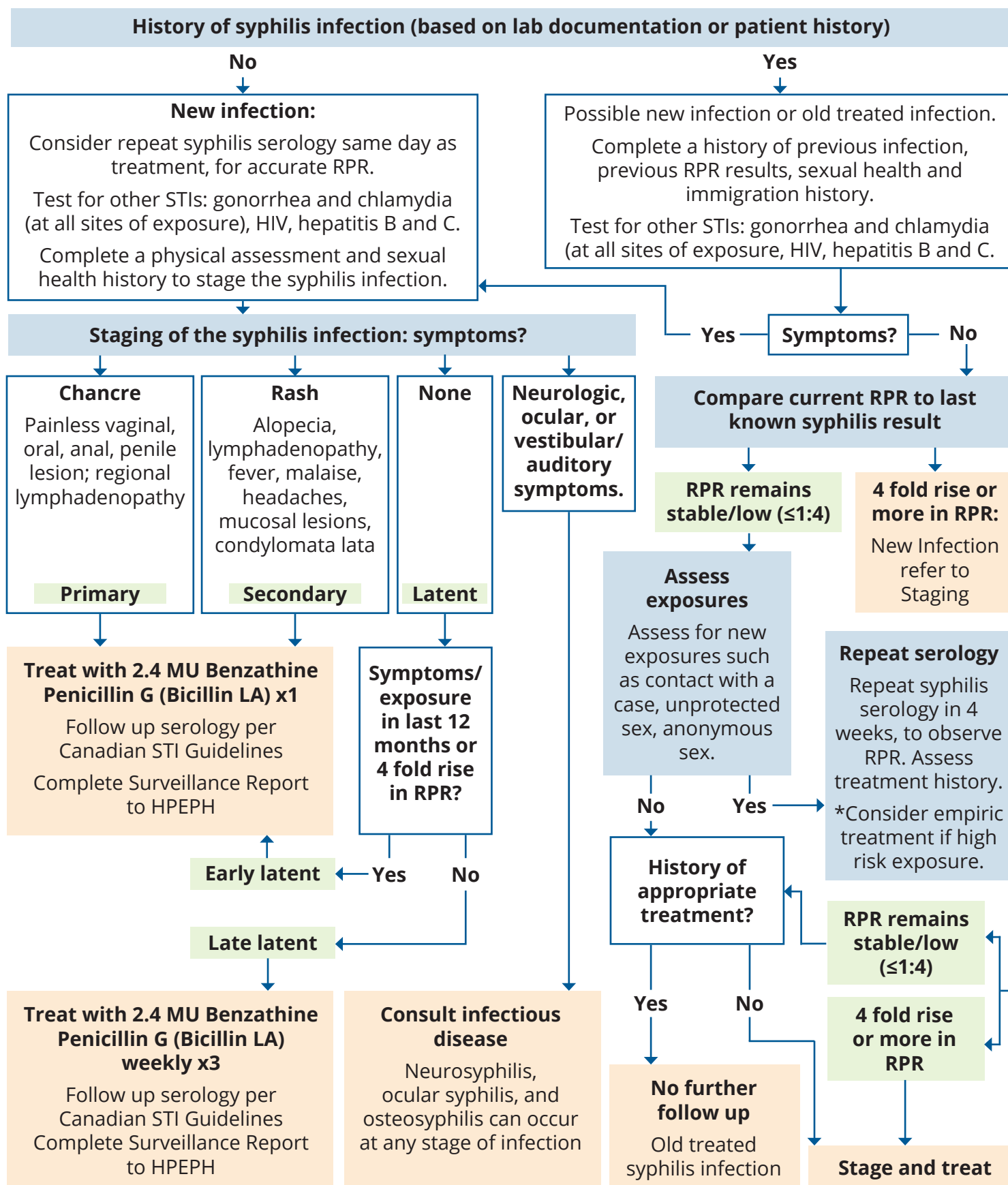
Where can I get more information or support?

- Consult with HPEPH Sexual Health Program at 613-966-5500 ext. 418
- Consult an Infectious Disease specialist for any patients with HIV coinfection, who are pregnant, or if congenital syphilis is suspected.
- [Canadian Guidelines on Sexually Transmitted Infections](#)
- [Public Health Ontario Enhanced Epidemiological Summary on Syphilis](#)
- [Bacterial STI Testing: Quick Reference \(chlamydia, gonorrhea and syphilis\)](#)
- [Syphilis Surveillance Form](#)
- [Public Health Ontario Syphilis Testing Information](#)
- [Syphilis Poster](#)

¹ <https://www.publichealthontario.ca/en/Data-and-Analysis/Infectious-Disease/ID-Query>

² <https://www.hpepublichealth.ca/fast-facts-2022/>

Reactive Syphilis Serology*



* Consult the Canadian STI Guidelines for possible interpretations of false positive or indeterminate results