

Syphilis rates continue to rise

New Zealand is in the midst of a syphilis epidemic. Men who have sex with men are at the greatest risk, however, cases among heterosexual males and females are also increasing. Syphilis testing should be routinely offered as part of a sexual health check in primary care. Syphilis infection can be asymptomatic, therefore, increased testing and prompt treatment are essential to prevent complications developing and transmission of the infection to others. Syphilis infection during pregnancy carries a significant risk of congenital abnormalities and stillbirth.

The number of syphilis cases reported in New Zealand has increased dramatically in recent years

Syphilis infection rates in New Zealand and other developed countries have markedly increased in recent years. In 2017, 470 cases of syphilis were reported in New Zealand, more than double the number reported in 2015 and nearly six times the number reported in 2013.^{1,2} Trends for 2018/19 indicate that the number of cases is continuing to rise. The highest rates of infection are reported in the Auckland and Wellington regions.¹

Men who have sex with men (MSM) are at the greatest risk of acquiring syphilis infection; 70% of new cases reported in 2017 were in this group. However, the incidence of syphilis is also increasing steadily among heterosexual people.¹ Similar trends have been observed internationally.¹ There has been an increase in syphilis cases across all ethnicities in New Zealand.^{3,4} Among males, including both heterosexuals

and MSM, the highest rates of infection are reported in New Zealand Europeans.^{3,4} Among females, the highest rates of infection are reported in Māori.³

The rising rates of syphilis among heterosexual females is of particular concern due to the potential for transmission of infection to the fetus during pregnancy. In 2017 and 2018, eight cases of congenital syphilis were reported in New Zealand; two stillbirths and two live births each year.⁴

Infectious syphilis became notifiable to the local Medical Officer of Health in 2017. Like other notifiable STIs, syphilis notification is anonymised to reduce the likelihood that people will avoid seeking testing and treatment. There is some regional variability in the notification process and clinicians should familiarise themselves with local protocols.

Recently, DHBs have been directed to formulate regional syphilis action plans to manage local outbreaks. This includes promotional campaigns to target at-risk groups, ensuring that sexual health services are accessible and that primary care providers and midwives are able to diagnose and refer syphilis

cases to sexual health services for treatment, and providing assistance with contact tracing.

Approximately half of people with syphilis infection are asymptomatic

Syphilis is a bacterial infection caused by *Treponema pallidum* subspecies *pallidum*. The infection is transmitted by contact with muco-cutaneous skin, i.e. through vaginal, anal or oral sex. Using condoms does not fully protect against transmission of syphilis, as not all infectious areas may be covered.

Syphilis infection is characterised by primary, secondary, latent and tertiary stages, with differing symptoms and signs at each stage. As these are often non-specific, diagnosis based upon symptoms and signs alone can be challenging. Approximately half of people who contract syphilis are asymptomatic.⁵ Syphilis is most infectious in the primary and secondary stages; infectivity declines over the latent stage and people with tertiary syphilis are no longer infectious.⁵

Primary syphilis has an incubation period of 10–90 days (average 21 days). It typically manifests as a large, usually painless, genital ulcer (chancre) that spontaneously heals within a few weeks.⁵ The ulcer may also occur around the anus, cervix or in the mouth; approximately 30% of people will have multiple ulcers.⁵ People often present with a unilateral, painless, swollen and rubbery inguinal or cervical lymph node.⁵


Secondary syphilis may occur 2–24 weeks after primary syphilis (average six weeks). It is characterised by a generalised rash, which may involve the trunk or be limited to the soles and palms.⁵ Patients may also have fever, malaise, headache and lymphadenopathy, alopecia or warty growths in the anogenital area.⁵ If untreated, symptoms will typically resolve over several weeks.⁵

Skin lesions at the primary or secondary stages may be extremely infectious; gloves should always be worn during examination of any rash or genital lesion.

Latent syphilis is defined by the absence of clinical symptoms or signs. Early latent syphilis is less than two years duration and cases are treated as infectious.⁵ Late latent syphilis is more than two years without symptoms or signs.⁵ People with late latent syphilis are no longer infectious to sexual contacts, however, pregnant females can still pass the infection on to the fetus.⁵

Tertiary syphilis occurs months or years after the latent stage and involves cardiovascular and neurological disease (neurosyphilis), and granulomatous lesions referred to as gummas.⁵ Gummas are painless rubbery nodules mostly seen on the skin, mouth and throat that may ulcerate, or form as lesions in the long bones, which typically cause bone pain at night. Tertiary syphilis is not infectious.⁵

N.B. Neurosyphilis and ocular syphilis, characterised by symptoms such as deafness, ocular nerve paralysis, uveitis and meningitis, may occur at any stage of infection.⁶

 For further information on syphilis, see: www.bpac.org.nz/BT/2012/June/06_syphilis.aspx

Syphilis serology should be included as part of routine STI testing

It is recommended that serology for syphilis be included as part of routine STI testing for all patients. Annual syphilis testing is recommended for MSM. Syphilis testing is offered as part of the first antenatal blood tests, however, testing should be repeated at 28 weeks if there has been any change in risk factors, e.g. new sexual partner.

Syphilis testing is also recommended in people presenting with:⁵


- Herpes simplex virus-negative genital ulcer(s) or atypical or non-healing genital ulcer(s); or
- Unexplained neurological or ophthalmological signs, e.g. cranial nerve palsy or uveitis

Also consider the possibility of syphilis in a patient with the following features, if they have other potential risk factors for syphilis infection:⁵

- Generalised rash (particularly involving the soles and palms)
- Lymphadenopathy
- Unexplained liver function disturbance, pyrexia or alopecia

If syphilis infection is suspected, e.g. based on serology and/or presenting symptoms and signs, discussion with or referral to a sexual health physician is recommended to assist with interpreting serology results and determining an appropriate treatment regimen.


Infectious syphilis is treated with a single intramuscular dose of benzathine benzylpenicillin; late latent syphilis, i.e. asymptomatic for more than two years, is treated with a single intramuscular dose of benzathine benzylpenicillin, once weekly for three weeks.⁵ Repeat serology is recommended at various timepoints after treatment has been initiated, depending on the stage of infection.⁵

 For further information on laboratory testing for syphilis and interpretation of the serology results, see: www.bpac.org.nz/BT/2012/June/06_syphilis.aspx

Contact tracing can be complex

Contact tracing for people with infectious syphilis can be complex; contacts from the last three months to one year or

more may need to be informed, depending on the patient's stage of infection. Referral to a sexual health service is recommended.

 A Goodfellow podcast on the re-emergence of syphilis in New Zealand presented by Dr Massimo Giolo is available from: www.goodfellowunit.org/podcast/syphilis-new-zealand

References

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