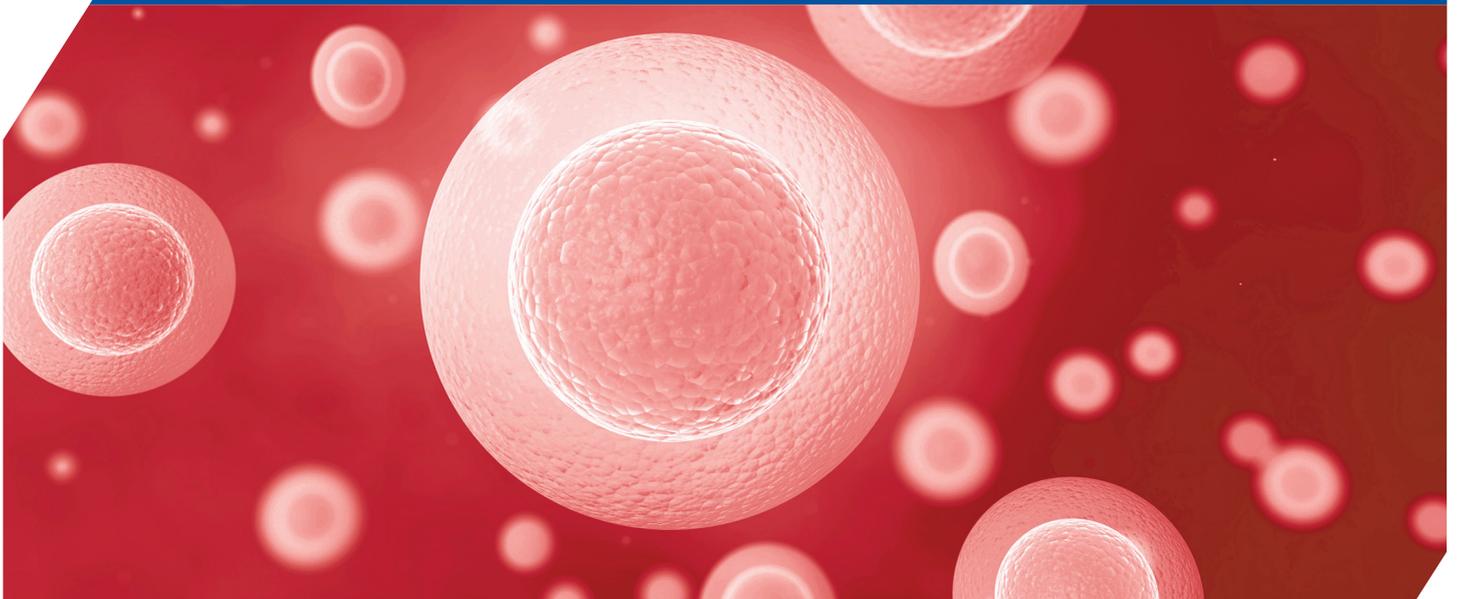




The  
Fertility Society  
of Australia

## Pre-Conception Health Special Interest Group



### Sexually transmitted infections (STIs)

Sexually transmitted infections (STIs) are prevalent across Australia and the incidence of some STIs is rising. STIs can impact fertility in both men and women, affect a woman's ability to carry a pregnancy, and influence child health outcomes. The STIs that can affect fertility and/or neonatal health include chlamydia, gonorrhoea, human immunodeficiency virus (HIV), genital herpes, syphilis and *Mycoplasma genitalium*.



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## Sexually transmitted infections (STIs)

### Evidence review

#### **Chlamydia (*Chlamydia trachomatis*)**

Chlamydia is the most commonly notified infectious disease in Australia [1] and worldwide [2]. In 2012 there were 82,707 new diagnoses of chlamydia in Australia, which is an increase of 17% since 2009 [1]. The population rate of reported diagnoses more than doubled in both the male and female populations, from 125 in 2003 to 307 per 100 000 male population in 2012, and from 181 in 2003 to 419 per 100 000 female population in 2012 [1]. Infections are most common in the 15 to 29 years age-group, which accounts for 80% of cases [3]. The risk of infection is higher for women than men and in those aged 15-24 years than in those who are older [2,4]

Chlamydia is often asymptomatic so people can have the infection for some time without being diagnosed or treated [2]. In women, undetected or multiple chlamydia infections can cause pelvic inflammatory disease (PID), which in turn can lead to ectopic pregnancy and tubal infertility [2,4,5]. In men, chlamydia can affect sperm quality and function and cause urethritis, prostatitis and epididymitis [4,5]. It is thought that the immune response to the infection rather than the infection itself causes the damage [6].

#### **Gonorrhoea (*Neisseria gonorrhoea*)**

Gonorrhoea infection can cause similar adverse effects on fertility as chlamydia but is more commonly symptomatic. If left untreated it can lead to PID in women and infertility in both men and women. In 2011, infection rates for gonorrhoea were second only to chlamydia with over 11,000 notifications [7]. The rate of diagnosis of gonorrhoea increased by 67%, from 35.1 per 100 000 population in 2008 to 58.9 in 2012 [1].

While chlamydia is more common in females, gonorrhoea is more common in males [5]. The groups most commonly affected are men who have sex with men, Indigenous Australians in remote areas and people who have had heterosexual contact overseas [5].

#### **HIV (*human immunodeficiency virus*)**

HIV can be transmitted through sexual intercourse and can also be transmitted to a baby during pregnancy and through breastfeeding. HIV cannot be cured and there is currently no vaccine to prevent it, but safer sex practices can prevent transmission. With effective antiviral medications, many people are able to survive and live relatively normal lives. HIV can impair female fertility [8]. Use of assisted reproductive technology can minimise the risk of transmission in HIV discordant couples wishing to have children [8,10,11].

HIV is most common in men who have sex with men. In 2008, there were almost 1000 new cases of HIV in Australia [3]. Of these cases, 66% were men who have sex with men and 24% were through heterosexual contact [3]. Of 1 364 cases of HIV infection newly diagnosed in 2008 – 2012, for which exposure to HIV was attributed to heterosexual contact, 58% were in people from high prevalence countries or their partners [1].

#### **Genital herpes**

Genital herpes, caused by the herpes simplex virus (HSV), is not a notifiable STI but is common among sexually active people. Genital symptoms include small, painful blisters, painful urination and vaginal discharge. Nearly 75% of women with herpes can expect at least one flare-up during pregnancy. HSV can be transmitted to the baby through direct contact with the virus during birth. To reduce the risk of transmission, it is often recommended that a caesarean be offered to women with active lesions [12].

#### **Syphilis (*Treponema pallidum*)**

Syphilis can be transmitted from mother to foetus during pregnancy [13]. This is known as congenital syphilis and can result in health problems for the child at birth and later in life.

Notifications for syphilis in Australia have increased in recent years, mostly among men who have sex with men. However, notifications of congenital syphilis remain low. This is likely to be due to screening and treatment of pregnant women [1].

#### ***Mycoplasma genitalium***

*Mycoplasma genitalium* is an increasingly common bacterial STI [14] which can result in vaginal discharge, urethritis, cervicitis and PID in women. PID can lead to other reproductive complications and infertility [14]. Studies have shown a strong association between *Mycoplasma genitalium* and infertility [14].

### Summary

STIs such as chlamydia, gonorrhoea, HIV, genital herpes, syphilis and *Mycoplasma genitalium* can adversely affect fertility and/or neonatal health. Notifications of some STIs continue to rise. In particular, diagnoses of chlamydia and gonorrhoea more than doubled in Australia between 2008 and 2012.

### Recommendations

Screening is an important tool in preventing the spread of chlamydial infection. Opportunistic screening may decrease infection rates and increase detection rates, allowing for earlier treatment of the infection. Bowden et al . [5] recommend opportunistic screening of sexually active young women attending their doctor for other reproductive health matters such as Pap smears, contraceptive advice, antenatal care or termination of pregnancy. Transmission of STIs can be reduced or even prevented by use of safer sex practices including the use of condoms. Screening of both men and women prior to pregnancy can detect STIs and allow for treatment before pregnancy occurs. This would minimise the risk of transmission from mother to baby and prevent health problems in the unborn child.

The Department of Health and Ageing have produced helpful STI symptoms and treatment tools for health professionals [15,16].

#### **Guidelines for testing of donors**

In Australia, assisted reproduction clinics are required to minimise the risk of donor gametes transmitting STIs to recipients. Guidelines produced by the National Health and Medical Research Council state that clinics should not accept gamete donations from people at increased risk of transmissible infections and that potential donors should undergo testing for such conditions [17].

The Code of Practice for reproductive technology units issued by the Reproductive Technology Accreditation Committee of the Fertility Society of Australia also requires that clinics minimise the risk of “transmission of infectious agents” between gamete/embryo donors and recipients [18].

### For more information about pre-conception health visit





## Sexually transmitted infections (STIs)

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