Overview: Some common Sexually Transmitted Infections (STIs) / Diseases (STDs) – Methods of Transmission, Symptoms, and Possible Complications

**Human Papillomavirus (HPV)**

Human Papillomavirus (HPV) is a very common STI which affects both men and women. HPV is transmitted through skin-to-skin contact e.g. close genital contact, which can occur during sexual intercourse (vaginal, anal, or oral), and through sharing of contaminated sex toys.

There are more than 100 different strains of HPV, grouped into high-risk (cancer-causing) and low-risk (non-cancer-causing) strains. High-risk strains can cause cervical, vaginal, and vulvar cancer in women, and less commonly, anal or penile cancer in men. These strains do not cause any signs or symptoms.

Other strains may lead to genital or oral warts, or affect the mouth, throat, face, and hands.

In most cases, the body’s immune system can fight off the infection and clear the virus. However, sometimes the infection can persist and cause abnormal changes to the cells, which may develop into cervical cancer.

Some risk factors for the development of cervical cancer include the individual’s immune status (those who are immunocompromised are more likely to have persistent HPV infections and an accelerated progression to pre-cancer and cancer) and co-infection with other STI agents.

Regular screenings, coupled with getting the HPV vaccination, are recommended means for the prevention and/or early detection of the HPV infection, alleviating one’s risk of cervical and other HPV-related cancers.

**Hepatitis B**

Hepatitis B is an infectious illness caused by the hepatitis B virus which infects the liver. It is transmitted through sexual intercourse (vaginal, anal, or oral), from mother to child (during childbirth), contaminated blood transfusion, sharing of injection needles and other piercing instruments, and contaminated needle stick injury.

The hepatitis B virus may not cause any symptoms or may present with severe liver disease upon screening. Individuals with acute hepatitis B will experience symptoms such as a low-grade fever, nausea, loss of appetite, dark tea-coloured urine, and jaundice.

**Chlamydia**

Chlamydia was reported as the top-occurring STI in Singapore in 2018, affecting both men and women. It is transmitted through sexual intercourse (vaginal or anal) and sometimes can be passed on via oral sex. It often does not cause symptoms, especially in women.

Some of the symptoms include abnormal bleeding or vaginal discharge, pelvic pain, pain when urinating (for women); as well as discharge from the penis, increased frequency of urination, and burning sensation in the penis when urinating (for men).

Possible complications in women include Pelvic Inflammatory Disease (PID), which involves infection in the womb, fallopian tubes, and ovaries. PID can cause infertility and ectopic (abnormal) pregnancy. Chlamydia can increase the risks of premature birth and stillbirth; babies of infected mothers can be infected in the eyes and lungs during delivery.
Possible complications in men include Epididymitis (painful and swollen testicles) and infection in the rectum.

Having chlamydia (or any STI) can also increase one’s risk of contracting HIV.

**Gonorrhoea**

Gonorrhoea was reported as the second most occurring STI in Singapore in 2018, affecting both men and women. If left untreated, it may spread locally causing health complications. It is transmitted through sexual intercourse (vaginal, anal, or oral), as well as from mother to child during childbirth.

Symptoms include thick white genital discharge and pain when urinating. Possible complications include Pelvic Inflammatory Disease (for women) and Epididymitis (for men).

**Syphilis**

Syphilis was reported as the third most occurring STI in Singapore in 2018, affecting both men and women. Men who have sex with men are observed to have a higher rate of contracting syphilis.

Syphilis is transmitted through sexual intercourse (vaginal, anal, or oral), from mother to child (trans-placental infection), contaminated blood transfusion, or sharing of injection needles and contaminated needle stick injury.

Many do not have symptoms or may not be aware as symptoms may go unnoticed.

Symptoms of syphilis occur in four stages, as follows:

- **Primary** – Painless sores on the genitals and sometimes in the mouth
- **Secondary** – Rash on palms and soles, swollen neck and armpit glands, growths on the genitals and anus, patchy hair loss, brain infection
- **Latent** – Disease may cause damage to the internal organs
- **Tertiary** – Permanent damage occurs to organs

Syphilis can cause an individual to be more susceptible to other STIs.

**HIV / AIDS**

Human Immunodeficiency Virus (HIV) is an STI that can lead to Acquired Immune Deficiency (AIDS). HIV is transmitted through sexual intercourse (vaginal or anal), sharing of injection needles, from mother to child (during pregnancy, at birth, or through breastfeeding), and contaminated blood transfusion.

HIV disrupts an individual’s immune system and weakens the body’s natural defences against even minor infections. AIDS occurs at the end of a HIV infection and can be fatal due to complications.

Most individuals with HIV do not display obvious signs or symptoms, hence, the importance of regular screenings for those who engage in high-risk activities.

Under the National HIV Testing Recommendations, it is recommended that every adult at the age of 21 years and above should get tested for HIV at least once in their lifetime.
regardless of risk factors, and people at higher risk of HIV infection should be tested more frequently.

Some Myths (and Facts) of STI / STD Transmission

**Fact #1:** STIs or STDs **CANNOT** be transmitted through sharing of food, utensils, toilet seats, swimming pool, or through handshakes and hugs.

**Fact #2:** Some STIs can be transmitted through deep, wet kissing, especially when the individual has active symptoms or oral infections. These include syphilis, herpes, oral HPV, chlamydia and gonorrhoea.

**Fact #3:** Mosquitoes, ticks, or other insects cannot transmit STIs. In the case of mosquito bites, the virus is destroyed in the mosquito’s gut. Mosquitoes also have separate one-way channels for the sucking of blood, and for the inoculating of saliva into the people they bite.