

Sexually transmitted infections

fact sheet

More than 1 million people acquire a sexually transmitted infection every day.



Key facts

- ▶ More than 1 million people acquire a sexually transmitted infection (STI) every day.
- ▶ Each year, an estimated 500 million people become ill with one of 4 STIs: chlamydia, gonorrhoea, syphilis and trichomoniasis.
- ▶ More than 530 million people have the virus that causes genital herpes (HSV2).
- ▶ More than 290 million women have a human papillomavirus (HPV) infection.
- ▶ The majority of STIs are present without symptoms.
- ▶ Some STIs can increase the risk of HIV acquisition three-fold or more.
- ▶ STIs can have serious consequences beyond the immediate impact of the infection itself, through mother-to-child transmission of infections and chronic diseases.
- ▶ Drug resistance, especially for gonorrhoea, is a major threat to reducing the impact of STIs worldwide.

What are sexually transmitted infections and how are they transmitted?

STIs are caused by more than 30 different bacteria, viruses and parasites and are spread predominantly by sexual contact, including vaginal, anal and oral sex.

Some STIs may be spread via skin-to-skin sexual contact. The organisms causing STIs can also be spread through non-sexual means such as blood products and tissue transfer. Many STIs – including chlamydia, gonorrhoea, hepatitis B, HIV, HPV, HSV2 and syphilis – can also be transmitted from mother to child during pregnancy and childbirth.

A person can have an STI without having obvious symptoms of disease. Therefore, the term “sexually transmitted infection” is a broader term than “sexually

transmitted disease” (STD). Common symptoms of STDs include vaginal discharge, urethral discharge in men, genital ulcers, and abdominal pain.

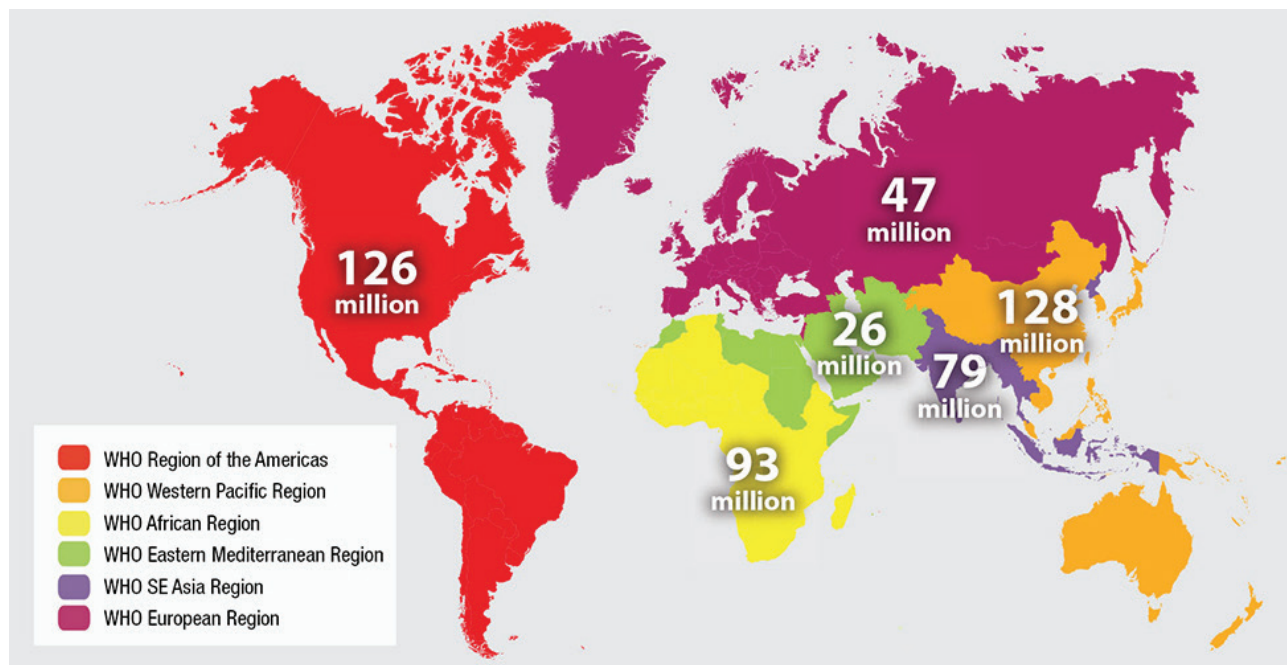
Eight of the more than 30 pathogens known to be transmitted through sexual contact have been linked to the greatest incidence of illness. Of these 8 infections, 4 are currently curable: syphilis, gonorrhoea, chlamydia and trichomoniasis. The other four are viral infections and are incurable, but can be mitigated or modulated through treatment: hepatitis B, herpes, HIV, and HPV.

Scope of the problem

STIs have a profound impact on sexual and reproductive health worldwide, and rank among the top 5 disease categories for which adults seek health care.

More than 1 million people acquire a sexually transmitted infection every day. Each year, an estimated 500 million people acquire one of four sexually transmitted infections: chlamydia, gonorrhoea, syphilis and trichomoniasis. More than 530 million people are living with HSV2. More than 290 million women have an HPV infection, one of the most common STIs.

Estimated new cases of curable sexually transmitted infections (gonorrhoea, chlamydia, syphilis and trichomoniasis) by WHO region, 2008



STIs can have serious consequences beyond the immediate impact of the infection itself.

- Some STIs can increase the risk of HIV acquisition three-fold or more.
- Mother-to-child transmission of STIs can result in stillbirth, neonatal death, low birth weight and prematurity, sepsis, pneumonia, neonatal conjunctivitis, and congenital deformities. Syphilis in pregnancy leads to approximately 305 000 fetal and neonatal deaths every year and leaves 215 000 infants at increased risk of dying from prematurity, low birth weight or congenital disease.
- HPV infection causes 530 000 cases of cervical cancer and 275 000 cervical cancer deaths each year.
- STIs such as gonorrhoea and chlamydia are major causes of pelvic inflammatory disease, adverse pregnancy outcomes and infertility.

Prevention of STIs

Counselling and behavioural approaches

Counselling and behavioural interventions offer primary prevention against STIs (including HIV),

as well as against unintended pregnancies. These include:

- comprehensive sexuality education, STI and HIV pre- and post-test counselling;
- safer sex/risk-reduction counselling, condom promotion; and
- interventions targeted at key and vulnerable populations, such as adolescents, sex workers, men who have sex with men and people who inject drugs.

In addition, counselling can improve people’s ability to recognize the symptoms of STIs and increase the likelihood they will seek care or encourage a sexual partner to do so. Unfortunately, lack of public awareness, lack of training of health workers, and long-standing, widespread stigma around STIs remain barriers to greater and more effective use of these interventions.

Barrier methods

When used correctly and consistently, condoms offer one of the most effective methods of protection against STIs, including HIV. Female condoms are effective and safe, but are not used as widely by national programmes as male condoms.

Diagnosis of STIs

Accurate diagnostic tests for STIs are widely used in high-income countries. These are especially useful for the diagnosis of asymptomatic infections. However, in low- and middle-income countries, diagnostic tests are largely unavailable. Where testing is available, it is often expensive and geographically inaccessible; and patients often need to wait a long time (or need to return) to receive results. As a result, follow up can be impeded and care or treatment can be incomplete.

The only inexpensive, rapid blood test currently available for an STI is for syphilis. This test is already in use in some resource-limited settings. The test is accurate, can provide results in 15 to 20 minutes, and is easy to use with minimal training. Rapid syphilis tests have been shown to increase the number of pregnant women tested for syphilis. However, increased efforts are still needed in most low- and middle-income countries to ensure that all pregnant women receive a syphilis test.

Several rapid tests for other STIs are under development and have the potential to improve STI diagnosis and treatment, especially in resource-limited settings.

Treatment of STIs

Effective treatment is currently available for several STIs.

- Three bacterial STIs (chlamydia, gonorrhoea and syphilis) and one parasitic STI (trichomoniasis) are generally curable with existing, effective single-dose regimens of antibiotics.
- For herpes and HIV, the most effective medications available are antivirals that can modulate the course of the disease, though they cannot cure the disease.
- For hepatitis B, immune system modulators (interferon) and antiviral medications can help to fight the virus and slow damage to the liver.

Resistance of STIs – in particular gonorrhoea – to antibiotics has increased rapidly in recent years and has reduced treatment options. The emergence of decreased susceptibility of gonorrhoea to the “last line” treatment option (oral and injectable cephalosporins) together with antimicrobial resistance already shown to penicillins, sulphonamides, tetracyclines, quinolones and macrolides make

gonorrhoea a multidrug-resistant organism.

Antimicrobial resistance for other STIs, though less common, also exists, making prevention and prompt treatment critical.

STI case management

Low- and middle-income countries rely on syndromic management, which is based on the identification of consistent groups of symptoms and easily recognized signs (syndromes) to guide treatment, without the use of laboratory tests. This approach, which often relies on clinical algorithms, allows health workers to diagnose a specific infection on the basis of observed syndromes.

Syndromic management is simple, assures rapid, same-day treatment, and avoids expensive or unavailable diagnostic tests. However, this approach misses infections that do not demonstrate any syndromes - the majority of STIs globally.

Vaccines and other biomedical interventions

Safe and highly effective vaccines are available for two STIs: hepatitis B and human papillomavirus (HPV). These vaccines have represented major advances in STI prevention. The vaccine against hepatitis B is included in infant immunization programmes in 93% of countries and has already prevented an estimated 1.3 million deaths from chronic liver disease and cancer.

HPV vaccine is available as part of routine immunization programmes in 45 countries, most of them high- and middle-income. HPV vaccination could prevent the deaths of more than 4 million women over the next decade in low- and middle-income countries, where most cases of cervical cancer occur, if 70% vaccination coverage can be achieved.

Research to develop vaccines against herpes and HIV is advanced, though no viable vaccine candidates for either infection have yet emerged. Research into vaccines for chlamydia, gonorrhoea, syphilis and trichomoniasis is in earlier stages of development.

Other biomedical interventions to prevent some STIs include adult male circumcision and microbicides.

- Male circumcision reduces the risk of heterosexually acquired HIV infection in men by approximately 60% and provides some protection against other STIs, such as herpes and HPV.

- Tenofovir gel, a microbicide with the potential to allow women to actively avert HIV acquisition, reached “proof of concept” stage in clinical trials in 2010. Further clinical research to support regulatory approval of its safety and effectiveness is underway.

Current efforts to contain the spread of STIs are not sufficient

Behaviour change is complex

Despite considerable efforts to identify simple interventions that can reduce risky sexual behaviour, behaviour change remains a complex challenge. Research has demonstrated the need to focus on carefully defined populations, consult extensively with the identified target populations, and involve them in design, implementation and evaluation.

Health services for screening and treatment of STIs remain weak

People seeking screening and treatment for STIs face numerous problems. These include limited resources, stigmatization, poor quality of services, and little or no follow-up of sexual partners.

- In many countries, STI services are provided separately and not available in primary health care, family planning and other routine health services.
- In many settings, services are often unable to provide screening for asymptomatic infections, lacking trained personnel, laboratory capacity and adequate supplies of appropriate medicines.
- Marginalized populations with the highest rates of STIs – such as sex workers, men who have sex with men, people who inject drugs, prison inmates, mobile populations and adolescents – often do not have access to adequate health services.



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WHO response

WHO develops global norms and standards for STI treatment and prevention, strengthens systems for surveillance and monitoring, including those for drug-resistant gonorrhoea, and leads the setting of the global research agenda on STIs.

Our work is guided by Millennium Development Goals 4, 5 and 6, the global strategy for the prevention and control of STIs adopted by the World Health Assembly in 2006 and the 2010 United Nations Secretary-General’s Global Strategy for Women’s and Children’s Health, which highlights the need for a comprehensive, integrated package of essential interventions, including information and services for the prevention of HIV and other sexually transmitted infections.

WHO works with countries to:

Scale-up effective STI services including:

- STI case management and counseling
- syphilis testing and treatment, in particular for pregnant women
- hepatitis B and HPV vaccination.

Promote strategies to enhance STI-prevention impact including:

- integrate STI services into existing health systems
- promote sexual health
- measure the burden of STIs
- monitor and respond to STI antimicrobial resistance.

Support the development of new technologies for STI prevention such as:

- point-of care diagnostic tests for STIs
- additional drugs for gonorrhoea
- STI vaccines and other biomedical interventions.

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