

# Sexual transmitted disease and its prevention: Indian overview

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## Abstract

Sexually transmitted infections are recognized as major public health problem. This is not only a medical problem but also a social and behavioral problem. This requires preventive strategies to be more focused and consolidated.

**Key words:** Sexually Transmitted Infections, HIV, Syndromic Management, Venereal Disease

Sexually transmitted Diseases (STDs) are a major public health problem for both developing and developed countries [1]. In developing countries STDs are ranked among the top five diseases for which adults seek health care services [2]. Sexually Transmitted Diseases (STD), also known as Sexually Transmitted Infection (STI) or Venereal Disease (VD) is transmitted between human through sexual contacts, including vaginal, anal and oral sex but can also be spread through non-sexual means such as via blood or blood products or from mother to their child during pregnancy or child birth [3].

STIs gained importance not only because of their severe complications but also because they increase the risk for transmission of the human immunodeficiency virus (HIV) [4]. STIs can be act as a proxy indicator for HIV infection level in populations where the HIV cannot be measured directly [5]. There are more than 30 different pathogens associated with STIs out of which eight (syphilis, gonorrhoea, Chlamydia, trichomoniasis, hepatitis B, herpes simplex virus (HSV), HIV, and human papillomavirus (HPV) are linked with greatest incidence. Of these 8 infections, first four bacterial infections are curable and last four viral infections are incurable but can be reduced or modified [6].

The National AIDS Control Organisation (NACO) estimated that 12% of females and 6% of males attend Primary Health Centers for complaints related to STIs and that the prevalence of STIs among sexually active adults is about 5-6% but the STI burden is much higher among subpopulations practicing high-risk behavior [7].

Like the developed countries, in India the bacterial STIs like chancroid and gonorrhea are declining, while viral STIs like HPV and herpes genitalis are increasing [8]. The reason for this may be due to better living standards, improvement in medical and educational facilities, treatment in the peripheral centres and improved pharmacotherapy. Another important reason may be the fear of AIDS, forcing people to practice of safe sex and seek early treatment [9]. The disease varies from one region to another within a country, depending upon ethnographic, demographic, socioeconomic and health factors [8]. A proper understanding of the patterns prevailing in different geographic

regions of a country is necessary for proper planning and implementation of control strategies [1].

The common presenting symptoms of STIs include vaginal discharge, urethral discharge or burning, genital ulcers, and abdominal pain. Some has mother-to-child transmission that can result in stillbirth, neonatal death, low-birth-weight and prematurity, sepsis, pneumonia, neonatal conjunctivitis, and congenital deformities. HPV infection causes cervical cancer. Gonorrhoea and Chlamydia are major causes of pelvic inflammatory disease (PID) and infertility in women [6].

A number of screening and diagnostic tests are available for STIs. Some rapid tests are available only for some STIs. Rapid syphilis and HIV tests have been shown to increase the number of pregnant women tested. Effective treatment is currently available for several STIs. Three bacterial (chlamydia, gonorrhoea and syphilis) and one parasitic STI (trichomoniasis) are generally curable with 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) can slow damage to the liver. Resistance of gonorrhea to antibiotics has increased rapidly in recent years and has reduced treatment options [6].

Many developing countries like India rely on Syndromic Management that is identifying consistent, easily recognizable signs and symptoms (Clinical algorithms) to guide treatment, without the use of laboratory tests. Syndromic management is simple, assures rapid, same-day treatment, and avoids expensive or unavailable diagnostic tests [6]. This approach increased the accessibility of patients to health facilities. The main aim of Syndromic management at primary health care level is to integrate STI services with existing health care system. However, this approach misses infections that do not demonstrate any syndromes [8].

At present, the National AIDS control program of India (NACP) collects service statistics on STI syndromes and syphilis screening among STI and antenatal clinic attendees through the computerized management information system (CMIS). The

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reporting units include designated STI/RTI clinics (DSRCs) and STI clinics of targeted interventions (TIs). There is non uniformity in data due to suboptimal adherence to NACO's STI syndromic case definitions and national guidelines for data collection and reporting mechanisms by the staff responsible for data collection and reporting [10]. Recently, NACO has also initiated reporting of STI syndromes at sub district levels through the Health Management Information System [11]. Innovative approaches like linking Suraksha Clinics to a group of factories or working places may also help in reducing the burden [12]. WHO is also developing 3 new 2016-2021 Global Health Sector Strategies for HIV/AIDS, Viral Hepatitis, and STIs [6].

Prevention strategies play a vital role in controlling the disease. There are various approaches for prevention of STIs like comprehensive sexuality education, safer sex/risk-reduction counselling, STI and HIV pre- and post-test counselling; condom promotion and Interventions targeted at key populations, such as sex workers, MSMs, IDUs; and adolescents. Some safe and highly effective vaccines are also available for hepatitis B and HPV [6].

The epidemiological features of STIs in India are remained constant due to reasons such as high proportion of sexually active population, rural to urban migration, stigma associated with STIs, irrational use of antibiotics, antimicrobial resistance, and behavior change subsequent to the HIV epidemic. Migrant workers act as a bridge population between high risk groups and general population. So hitting at this point can alter the course [4, 12]. Apart from physical morbidity, there are some social factors which make an individual more vulnerable to indulge into risk-taking behaviours. These social factors include educational status, socio-economic status, marital status, type of family, religion, social disharmony, etc. This makes the control of STIs a challenging public health problem [4].

Major challenges suffered in STIs management are limited resources, stigmatization, poor quality of services, and little or no follow-up of sexual partners. Some other issues like STI services are provided separately and not available in primary health care, family planning and other routine health services, services are often unable to provide screening for asymptomatic infections, lacking trained personnel, laboratory capacity and adequate supplies of appropriate medicines and marginalized populations with the highest rates often do not have access to adequate health services[6]. In a resource-limited setting, a mixed approach of passive and active surveillances will give a better way to control the problem [11]. It was also observed that most of the published data are institution based. There is a paucity of community-based data, except for information obtained from high-risk groups [8].

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