# Non-HIV sexually transmitted infections

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## Abstract

This review covers in broad terms developments in epidemiology, diagnosis and management of sexually transmitted infections. It does not cover human immunodeficiency virus (HIV) and hepatitis because the management of these two conditions is rarely if ever undertaken by gynaecologists. Management of all sexually transmitted infections is being standardised by the British Association of Sexual Health and HIV and their protocols are heavily quoted from here.

**Keywords** Chlamydia; Gonorrhoea; HIV; HPV; sexually transmitted infections; syphillis

## Introduction

Sexually transmitted infections (STIs) are increasingly common in the UK and can have serious sequelae. They are often subclinical, for example 70% of women infected with Chlamydia are asymptomatic. STIs are commonly co-associated and the presence of one should prompt a screen for others. All STIs increase the potential for acquisition of human immunodeficiency virus (HIV), up to 10-fold. This is due to disruption of the epidermal integrity and recruitment of white cells by the immune response, which are then targeted by the retrovirus, HIV. Some STIs may be missed by health professionals unfamiliar with their presentation — for example, primary syphilis. The primary ulcer will spontaneously resolve but the infection will continue. Screening is, therefore, important.

## Epidemiology

The prevalence of STIs over time peaks and troughs. In the UK, there was a peak after World War II due to soldiers returning home having acquired STIs abroad. In the 1960s, with the advent of hormonal contraception and the sexual revolution, another peak occurred. A trough in the 1980s was associated with HIV awareness campaigns. Since then a steady steep increase in the incidence of STIs has been seen. This current peak represents a return to high-risk behaviours after their reduction during a time when an HIV epidemic was feared.

Globally, the highest incidence of STIs occurs in South and South East Asia, sub-Saharan Africa, Latin America and the Caribbean. Any area of violent unrest is associated with an increase in STIs and members of the armed forces returning from those areas may have acquired STIs. Sex tourism also contributes by clustering various STIs with various drug resistances within these areas for subsequent dissemination when the sex tourists return to their countries of origin.

## Recent developments

The past 10 years has seen change in both the incidence and management of STIs in the UK. All STIs have increased in incidence over the period 1998–2007 by 6%, see Figure 1. Syphilis has increased 19-fold. The most common STI presenting in the UK is now Chlamydia, previously it was genital warts.

The British Association for Sexual Health and HIV (BASSH) has, over the same time frame, produced a number of evidence-based guidelines for the investigation and management of STIs. It is strongly recommended that anyone wishing to draw up local protocols or undertake an audit in this area should consult the BASSH guidelines.

In 2007, the National Institute for Health and Clinical Excellence issued a guideline entitled 'Prevention of sexually transmitted infections and under 18 conceptions'. Whilst aimed principally at primary care, it is a document that gynaecologists should be aware of. It sets recommendations for risk assessment for STIs, behavioural changes in the at-risk group, contact tracing and partner notification and the provision of evidence-based information to patients.

Another recent step in prevention has been the decision by the UK Department of Health in 2007 to introduce vaccination against human papilloma virus (HPV) serotypes 16 and 18, which are most commonly associated with cervical cancer. The chosen vaccine is using Cervarix™. It is administered to 12–13 year old girls. The aim is prevention of cervical neoplasia.

HPV serotypes 6 and 11 are more commonly found in genital warts but are far less carcinogenic. A vaccine that covers serotypes 6 and 11, as well as 16 and 18, is available as Gardasil™.

The National Chlamydia Screening Programme (NCSP), set up in 2003, continues and has expanded to include more non-genitourinary medicine (GUM) health centres. These include family planning clinics, GP surgeries, prisons and military establishments. A total of 150,000 tests were performed as part of the NCSP from April 2006 to March 2007.

## At-risk populations

Screening for STIs should be considered in the following high-risk groups:

- Age range 15–34 years
  - ☐ The prevalence of Chlamydia is:
    - ■ 8% in under-20 year olds attending GP surgeries
    - ■ 5% in the 20–24 year old age group
  - ☐ Half of all 17 year-olds in the UK are sexually active
- Attendance at certain clinics
  - ☐ The background prevalence of Chlamydia is 5%
  - ☐ This increases as follows to:
    - ■ 10% at family planning clinics and in the NCSP
    - ■ 11% at youth clinics
    - ■ 12% at termination of pregnancy clinics
    - ■ 13% at antenatal clinics
    - ■ 17% at GUM clinics

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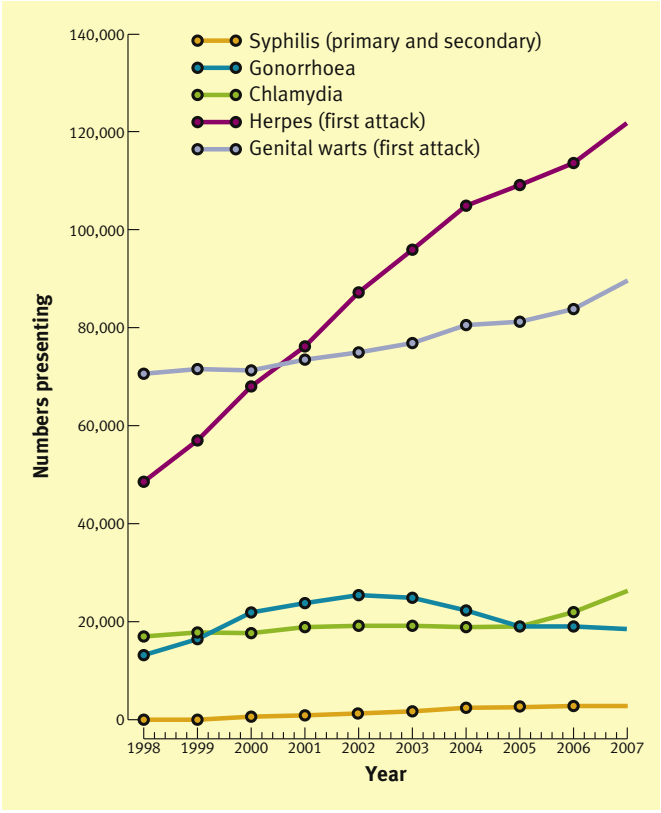


**Figure 1** Bivariate line graph showing the incidence of new diagnoses in the UK of five sexually transmitted infections from 1998 to 2007.

- Sexual behaviours
  - ☐ Multiple partners especially in a short period of time and little or no use of barrier contraception
  - ☐ The use of condoms in the UK fell by 3% in the 10 years leading up to 2000
- History of a previous STI
- Paying or receiving money for sex
- Drug abuse, especially intravenous
- Travel history (her and her partner)
  - ☐ Especially S and SE Asia, sub-Saharan Africa, Latin America and the Caribbean, also in areas of conflict

## Principles of STI care

- Access to care must be easy and rapid
- Systematic risk assessment of all patients is needed
- Investigations should not delay care
- Treatments should be easy (single dose is ideal)
- Condom and sexual health promotion
- Contact tracing

## Clinical presentations

The most common clinical scenario of an STI is no symptoms whatsoever! Asymptomatic patients are common and are detected by screening.

## Genital herpes

The infection is lifelong and has the potential for recurrence.

Herpes simplex virus 1 and 2 (HSV-1 and HSV-2) are species of *Herpes viridae* (large DNA viruses), which cause genital herpes. HSV enters a latent phase within the neurons (local sensory ganglia) between active symptomatic episodes. Reactivation leads to production of virions, which may then be passed to a new host by sexual contact.

Only about half those infected will get symptoms at the time of infection. In those that become symptomatic the incubation period is 7–14 days.

The first episode presents with multiple painful genital ulcers. Typical lesions begin as vesicles which become superficial tender ulcers. One-third of patients have systemic symptoms. Without treatment, the first episode lasts for 3–4 weeks. There may be secondary bacterial infection of lesions. Autoinoculation may occur, often to fingers and eyes.

Recurrent episodes occur in about a half of patients, tend to be less severe and relatively less common after the first year.

Diagnosis is by demonstrating HSV in swabs taken from the base of the genital lesion. HSV isolation in cell culture is the current routine diagnostic method in the UK. Specificity is virtually 100%, but sensitivity is very varied. HSV DNA detection by polymerase chain reaction (PCR) increases HSV detection rates by 11–71% compared with virus culture.

### Management of first-episode genital herpes

Saline bathing should be advised and oral analgesia provided. Topical anaesthetic agents – for example 5% lidocaine (lignocaine) ointment – may be useful. Oral antiviral drugs are indicated within 5 days of the start of the episode and while new lesions are still forming:

- Aciclovir 200 mg five times daily
- Aciclovir 400 mg three times daily
- Valaciclovir 500 mg twice daily
- Famciclovir 250 mg three times daily.

Hospitalisation may be required for urinary retention, meningism and severe constitutional symptoms. If catheterisation is required, suprapubic catheterisation is preferred to prevent theoretical risk of ascending infection.

### Recurrent genital herpes

Patient-initiated treatment with antiviral treatment (oral aciclovir, valaciclovir and famciclovir) can reduce the severity and duration of recurrent genital herpes by a median of 1–2 days.

### Management of herpes in pregnancy

First-episode genital herpes has been associated with first trimester miscarriage; however, there is no conclusive evidence that it causes developmental abnormality if the pregnancy continues. Management should be in line with the clinical condition, with the use of either oral or intravenous aciclovir. Although aciclovir is not licensed for use in pregnancy, there is substantial clinical experience supporting its safety. Vaginal delivery should be anticipated. Daily suppressive aciclovir from 36 weeks gestation may be considered.

Caesarean section should be offered to all women presenting with first-episode genital herpes lesions at the time of delivery, or within 6 weeks of the expected date of delivery or onset of labour. However, Caesarean section may not be of benefit in reducing transmission for women presenting with ruptured


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