

# A Global Look at Sexually Transmitted Infections

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**SUMMARY** This paper will give a resume of many of the important factors, which form the immense problems in sexually transmitted infections in the world in 2007. STI is the term used to include sexually transmitted diseases and HIV/AIDS. It aims to enlighten both the specialist dermato-venereologist as well as all interested readers.

**KEY WORDS:** sexually transmitted infections, sexually transmitted diseases, HIV/AIDS

## INTRODUCTION

Human situations never change. The theme of sexuality runs throughout history from ancient civilizations, the Greeks, Romans, into the Renaissance and in non European civilizations. Sex, of course, brings pleasures of the sex act and the begetting of children but it also has its unpleasant side among which are sexually transmitted infections (STIs). While sexually transmitted diseases (STDs) are well recorded in Europe in medieval times, it is the outbreak of syphilis after the siege of Naples (1495) which, of course, brought to the Continent the dangers of the epidemic and its serious consequences, very much in the same way that the first recorded cases of what is now known as AIDS in the United States of America in 1981 were the first recorded cases of the devastating epidemic, now pandemic throughout the world. Sexuality is well recorded in the panoramic carvings on the ancient Hindu temples in India. Chinese porcelain remains have been shown in some rare cases to have beautiful paintings of the sex act fired onto them. Even syphilis gets its name from the poem of Fracastorius, 1530 *Syphilis sive Morbus Gallicus* (1). The first literature in Europe on syphilis is, of course, the Italian descriptions in the late fifteenth century but very soon afterwards

are those from the German speaking countries of which the description of "The Syphilitic Knight" attributed to Dürer, in a public health broadsheet from Nuremberg of 1496 is the most famous one (2). AIDS from its early start affecting men who had sex with men (3) was soon seen to be passed in any unsafe sex act as well as by infected blood products and from mother to child, and has become a disease of the poor and ill educated with the vast pool of infection now seen especially in sub Saharan Africa and to a potentially high incidence in some Asian countries. It was called "AIDS, A Shadow on our World" by the World Health Organisation (WHO) in 1988 (4).

## SEXUALITY, SOCIOLOGY AND EPIDEMIOLOGY

To understand the transmission of STIs, the educated reader needs to know at least some simple epidemiology and the meanings of the words such as incidence, frequency and prevalence. The reader also needs to cast away prejudice and understand the sexual behaviour of human beings through all sexualities and in all societies. He needs to know about education to foster safer sexual behaviour and the correct use of the condom.

He needs to understand the education of society, be it to the young, to women who have more power over the family unit and in society than men, and to understand the difficulty in getting seemingly simple messages on safer sex across the groups such as sex workers, street drug users, inner city adolescents, male and female usually young migrants and those throughout the world down trodden by society. A condom is much better used correctly as a prophylactic measure than being just carried in the back pocket of the jeans.

### **SOME FACTS ON HIV/AIDS**

In late 2005, UNAIDS informed that there were over 40 million infected with HIV: 17.5 million women and 2.3 million children under 15; 3.1 million had died of AIDS in the previous year, of which 570,000 were children; 14,000 persons would become infected in the year. Of those to become infected, 95% would be in sub Saharan Africa, which only has 10% of the world's population but 60% of the world's HIV infection (28.5 million persons). The estimate we now see from southern Africa may have been a low forecast. There are several other dreadful consequences of the morbidity and mortality in Africa. Life expectancy has dropped alarmingly. South Africa, Botswana and Zimbabwe had all seen a rise to 60 by 1985 but it has now dropped down to the mid-30s (5). The economic consequences on poor nations with little gross national product are dreadful. There is also loss of that essential core that any nation needs, the fit young thirty-year-old person who knows how to run things. In fact, it was the business community lobbying in Thailand that saw those consequences, which made for a campaign and turn around by the end of the 1990s in that country. The next continent to be infected hugely is Asia with 8.3 million persons. It was forecast that 1.1 million more would be infected in 2005. By 2003, 5.1 million were infected in India (6). The populations of Asian countries are huge. China now acknowledges the potential for an enormous epidemic which would not only cause immense suffering but cause havoc to its economy. There had already been a rise each year in the reported incidence of STDs since 1980 (7). On top of this, HIV infection was seen to rise firstly from south-west China but more recently with the rise of industrialization HIV has occurred in major cities. There has also been an alarming rise in sex workers, often HIV infected in China, a group who need much help. China has sought technical help from experts in AIDS control from a number of countries. In the

developed countries, there have been unnecessary rises in new HIV infection in groups such as men who have sex with men through unsafe sex such as unprotected anal sex (bare-backing), and through the mistaken belief that HIV is easily cured with modern antiretroviral drugs. Shared intravenous street drugs have not only helped in the rise of HIV but also of hepatitis B and C. Clean needle exchange is a necessity. There will be ongoing migration into Western Europe from sub Saharan Africa and much new HIV infection often presenting late is seen in this group of people (8).

In Russia, and the Ukraine there has been a very large rise in HIV infection, often made worse by many social factors, poor education, poor housing, shared intravenous drugs, often primitive "kompot", non-useful public health responses, official difficulties and chronic infection such as tuberculosis.

We know very little about HIV/AIDS in the Moslem world but individual physicians report cases, however, often only to close medical colleagues. In Indonesia, certainly despite sometimes official non recognition, HIV prevalence in some groups, drug addicts, men who have sex with men, sex workers has been rising, which all means that it goes into the general population in a society where education on sex is a taboo.

There is worry about Oceania where populations are small but where HIV infection makes a large impact in small island societies. Papua is the worse affected, especially in women of childbearing age.

### **EUROPE AND STIs – TRENDS**

Europe is a wealthy continent with a highly developed society. There have been very great changes in the last 20 years among which are the end of the closed society of Eastern Europe and Russia since the downfall of Communism. EEC has widened allowing for mainly east to west migration of young people within Europe. There of course will be for many years to come migration from the poorer countries of this world into Europe such is the inherent need of the poor to better themselves. All the time there has been a liberalization of sexual mores to the point where almost anything goes. All this allows for a permanent increase of the incidence of STIs. There is available much information on AIDS and STDs and migration in Europe (9). More recently, advisory guidelines have been published about HIV in

migrants from Africa in the United Kingdom (10). There are not only the medical needs such as increased paediatric and gynaecology services but the myriad societal needs for basic human provision.

### **TRENDS IN STIs IN MEN WHO HAVE SEX WITH MEN (MSM)**

There are many STIs which have serious consequences to health in this group. The same pattern is repeated all over Western Europe and is being increasingly recognized in central and Eastern Europe. Despite availability of vaccines against hepatitis A and B, morbidity has been reported increasingly to hepatitis A and C. So, it would seem that education on safer sex is needed to accommodate the needs of MSM. In Denmark, there is a rise of hepatitis A from MSM who use saunas where increased ano-oral sex (rimming) is frequent. In Paris, there has been a rise often also associated with HIV and syphilis in men who have casual sex into traumatic anal intercourse involving fisting, the practice associated with inserting the fist into the rectum for sexual pleasure. This is much more common than realized in the older still sexually active MSM group. Similarly, in 2006 Turner *et al.* (1) found in London an association in hepatitis C acquisition in MSM often already HIV positive who were into heavy anal sex activity unprotected with multiple partners, often associated with taking street drugs such as cocaine.

### **SYPHILIS**

Early infectious syphilis has been increasing in incidence very much in the last 10 years throughout Western Europe in MSM. The trend was first noticed by public health physicians in Amsterdam. It seemed to have come about by there no longer being a fear of death from HIV infection once HAART (highly active anti retroviral therapy) revolutionized the treatment of HIV from 1996 onwards. Unsafe sex without a condom (bare backing) then became most popular. There has been an enormous increase in syphilis in all western countries with MSM as the biggest group. In United Kingdom between 1996 and 2005 cases of syphilis increased from 137 to 2814, an increase of 2054% (12). Norway (13) and Australia have suggested syphilis and HIV serology checks with counselling annually. It would also seem that gonorrhoea in MSM has differing strains from heterosexual groups.

### **LYMPHOGRANULOMA VENEREUM**

Another formerly rarely seen STD first seen in the Netherlands in MSM, often associated with HIV and syphilis, is lymphogranuloma venereum (LGV) (14). It was reported from the Netherlands in 2003 but since it has been reported, it was found as bloody proctitis with often inguinal lymphadenopathy and fever, in most countries with large urban populations of MSM into anal sex throughout Western Europe, even being reported from Austria in 2007. There are some experts from California who doubt that the outbreak of LGV in Western Europe is new but rather part of an entity that has not been recognized over years. Significant essential laboratory tests for LGV are only available in a few centers of excellence in Europe.

### **HETEROSEXUAL STDs**

There has been increasing awareness for many years on the role played by *Chlamydia (C.) trachomatis* in causing common genital infection in the sexually active group. Community studies have shown a prevalence of up to 200 per 100,000 population in the 16-19 age groups in urban women. Most testing for *C. trachomatis* is made using polymerase chain reaction (PCR), a molecular technique that allows a small amount of DNA to be amplified exponentially. *C. trachomatis* is the most common STI with *Neisseria gonorrhoea*, the second most common bacterial STI in the United Kingdom, the figures from venereal clinics in 2005 being 109958 and 19392, respectively. Many infections, especially in women, are asymptomatic with a large proportion undiagnosed. Untreated genital chlamydial infection may have long-term consequences being a cause of pelvic inflammatory disease, ectopic pregnancy and infertility. The advent of a quadrivalent vaccine for HPV (15) is surely going to change how we look at prevention, especially of cervical cancer. It will need to be given before the start of sex life and the possibility of being infected with HPV (human papilloma virus). The best time will be at age 10 or 11. At the moment, trials have not been published on the effectiveness in males but it will surely need to be given to that group to prevent spread into the population. Future results are eagerly anticipated.

### **STD TREATMENT GUIDELINES AND HELP FOR STDs**

WHO and CDC Atlanta publish treatment guidelines for STDs. Both can be found on the web. Similarly, IUSTI has published guidelines

(www.iusti.org). STDs affect mostly the young, often poorly educated and difficult to get into care facilities. There are problems enough in Europe but expert teaching, health care and research advice need to be given from Europe to parts of the world where resources are much less for many years to come.

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