Sexually Transmitted Infections and Other Sexual Health Information for Scotland

Year of publication - 2007
INTRODUCTION

This is the third annual report produced by the Sexually Transmitted Infection Epidemiology Advisory Group (STIEAG) and it is significantly different from its predecessors. In the previous reports, we have used a number of different data sources to describe Sexually Transmitted Infections (STIs) but we are now starting to introduce data relating to other aspects of sexual health.

There are two main reasons for this change:

◊ Promoting better understanding of the data. STIs are only one consequence of sexual behaviour. Any change in their incidence is the result of a number of factors, which include: the nature of the organism, the health of the individual, and the frequency and type of sexual contact. Data relating to other aspects of sexual behaviour, such as pregnancy and contraception can give an insight into some of these factors. In the "Conclusions" chapter, we have attempted to use the information derived from different sources to produce a synoptic view of sexual health in Scotland.

◊ Development of a sexual health data depository. Much of the information presented here has been published already, but has not previously been brought together in one publication. By bringing it together we will be building a valuable and accessible resource for people interested in sexual health in Scotland. This approach to sexual health information is one of the strands of the Action 13 workstream of the National Sexual Health Advisory Committee (NSHAC). One of the other NSHAC workstreams (Action 12) has produced a number of Key Clinical Indicators (KCIs) for sexual health, and these data have also been used in this document.

This report should be regarded as a start in the process of drawing together information on sexual health and we hope to make further progress in future reports. As always, we are keen to receive feedback from readers. Please tell us whether this approach is useful and what further information you would find helpful in future.

During the preparation of this report, we have liaised with colleagues in the Health Protection Agency (HPA) in London and have arranged that the HPA's UK report and our Scottish report will be published at approximately the same time. This will enable readers to see the Scottish information in the context of the situation in the rest of the UK. Both reports are being published shortly before World AIDS day in order to maximize the impact of the information.

Data for 2006 are presented as prior to the dissolution of Argyll and Clyde on 1 April 2006; in subsequent reports we will present data according to the new boards, NHS Greater Glasgow and Clyde or NHS Highland. The exception is Chapter 2 on HIV which is presented by the new NHS boards.
CONCLUSIONS AND CHALLENGES

◊ The Scottish Government strategy ‘Respect and Responsibility’ and local NHS Board initiatives are helping to support the improvement of sexual health and sexual health services nationwide.
◊ Key Clinical Indicators and the National Data Collection Framework for Sexual Health will support NHS board’s efforts to improve services and promote best practice.
◊ This is the first time this report has included data on aspects of sexual health other than STI.
◊ The development of the national sexual health clinic management system (NaSH) will support local services as well as providing data for monitoring services.

STIs

Heterosexual Men and Women

Conclusions
◊ STI diagnoses among heterosexual men and women continue to increase. The increase in chlamydia diagnoses may be due to a rise in the numbers of tests performed but the increase in diagnoses of genital herpes and genital warts, particularly among young people under the age of 25 but also among those aged over 40, indicates that the number of individuals engaging in unprotected sexual intercourse (USI) may be increasing.

Challenges
◊ Effecting behavioural change among, particularly young, people who practise unprotected sexual intercourse.
◊ Improving access to and uptake of a broad range of local services, providing advice, testing and treatment that are attractive to young people.

MSM

Conclusions
◊ The incidence of acute STIs among MSM continue to increase in spite of innovative awareness-raising campaigns; HIV/acute STI co-infection remains a problem.
◊ Despite an increase in the proportion of MSM offered an HIV test at GUM clinics and an increase in uptake of testing, undiagnosed infection remains an issue.
◊ The use of GUM clinics by MSM varies widely throughout Scotland; there is evidence that MSM cross NHS board boundaries to access clinics with dedicated MSM services.

Challenges
◊ Effecting behavioural change among high risk MSM who attend GUM clinics and for whom there is evidence of unprotected anal intercourse (UAI).
◊ Encouraging HIV testing among MSM who attend GUM clinics but are unaware of their HIV status.

Workload

Conclusions
◊ GUM clinic workload is rising.
◊ Data on workload in primary care shows family planning consultations are falling whereas consultations regarding STIs are static.

Challenges
◊ Monitoring specialist community family planning workload where there are currently no data.
◊ Managing the increase in screening of the ‘worried well’ in GUM whilst continuing to encourage personal responsibility for good sexual health.
◊ Providing appropriate local service provision as variation in activity between NHS boards suggests there may be some lack of provision in local GUM services.
Pregnancy and abortion

Conclusions

◊ Teenage pregnancy rates have remained steady during the past decade.
◊ There is a strong association between deprivation and high rates of teenage pregnancy.
◊ Abortion amongst those aged 40 and over has remained static since 1994.
◊ Abortion rates in those aged under 20 continue to rise, although those under 16 remain static.

Challenges

◊ Effecting behavioural change amongst young people who practise unprotected sexual intercourse.
◊ Encouraging young women to be confident enough to insist on the use of contraception at all times.

Contraception and fertility control

Conclusions

◊ Sterilisation in women reduced by 76% between 1985 and 2005, indicating a decrease in popularity of this method of contraception.

Challenges

◊ Encouraging men and women to use the most effective and suitable contraception methods available.
◊ Improving services to ensure women have access to all methods of contraception within their NHS board area.
◊ The use of condoms should be encouraged in all age groups.

Future enhancements of data

◊ Work is ongoing within HPS and ISD to improve the data available on sexual health in Scotland.
◊ NaSH, the national sexual health system, will provide comprehensive data from GUM and family planning clinics.
◊ The use of the CHI number in ePharmacy prescribing data will enhance data on contraception prescribing in the community, where many women access contraception. These will allow more detailed analysis of primary care information and the ability to monitor contraceptive choices.
◊ Surveys such as NATSAL 22 and the Scottish Health Survey 24 provide useful data on behaviour and attitudes and this information can be used in conjunction with clinical data to provide a richer picture of sexual health in Scotland. Work is ongoing to improve the amount of quality survey data that is available. This data will allow services and initiatives to tackle the attitudes and behaviours that lie behind poor sexual health.

The next steps

◊ It is important that NHS boards can continue to develop services in line with the recommendations stemming from the sexual health strategy ‘Respect and Responsibility’ 4.
POLICY AND WORKLOAD

Policy Outline

Respect and Responsibility

In January 2005, after extensive consultation, ‘Respect and Responsibility: A Strategy and Action Plan for Improving Sexual Health’ was published by the Scottish Executive. This strategy has been supported by an extra investment of £15 million over the three financial years April 2005 to March 2008.

To support the implementation of Respect and Responsibility, a National Sexual Health Advisory Committee (NSHAC) was formed. This committee identified a number of actions, two of which are of particular relevance to the information aspects of sexual health:

◊ **Action 12** relates to the development of key clinical indicators to help monitor the progress of the strategy. The following are the identified issues for which indicators have been developed or are in development. The first five indicators were published in February 2007:

1. Chlamydia testing
2. Access to male & female sterilisation
3. Termination of pregnancy
4. HIV therapy
5. Hep B vaccination for men who have sex with men (MSM)

Further indicators were identified for subsequent development:

» Long acting reversible methods of contraception (LARC). Data will be available in autumn 2007.
» Sexual health care for people living with diagnosed HIV.
» Service access. This was examined using a ‘mystery shopper’ approach whereby GUM and family planning clinics were telephoned by volunteers attempting to book appointments for various clinical scenarios. The results were published in July 2007.

◊ **Action 13** seeks to improve data collection and make recommendations regarding a national data collection framework for sexual health:

» The first step involved cataloguing the existing data sources. This demonstrated that there is a variety of high quality data available but some gaps in key areas. The next step involved considering the production of the agreed Key Clinical Indicators and consulting stakeholders to identify information inadequacies. These two steps allowed data deficits to be identified and options generated for addressing these inadequacies. This list of options was then refined and further work has been done on developing some of the data streams.
Development of service standards

One of the recommendations within Respect and Responsibility was specifically that NHS Quality Improvement Scotland (NHS QIS) would develop clinical standards in order to examine and improve the quality of sexual health service provision in Scotland.

◊ The development of NHS QIS service-level standards commenced in the summer of 2006. A set of draft standards have now been developed which have been disseminated for consultation.

Development of data standards

The National Clinical Dataset Development Programme (NCDDP) has developed data standards for sexual health. This standardizes the descriptions of data collected in sexual health care settings so that any information developments in Scotland which relate to sexual health will all use the same definitions.

http://www.datadictionary.scot.nhs.uk/ and http://www.clinicaldatasets.scot.nhs.uk/

National Sexual Health System (NaSH)

NaSH is a new clinic management system which is being developed to support sexual health services throughout Scotland. This is part of the NHSScotland National eHealth Strategy.

◊ The NaSH system will be provided for GUM and Family Planning clinics. Eventually, it may be used in other settings providing sexual health care.

For further information see: http://www.nash.scot.nhs.uk/index.html
Workload

Data on workload in GUM clinics, Primary Care and Family Planning are presented.

Workload in GUM clinics

◊ A sixfold variation in rates of episodes of care (diagnosis and/or screening and/or treatment) by NHS board of residence of patients was evident; the highest rates were observed among the residents of Lothian. See the appendix, page 45, for a definition of ‘episode of care’.

◊ Some of the variation in rates is considered to relate to lack of provision of local GUM clinic services and it is clear that some patients cross NHS boundaries to obtain treatment.

◊ Overall workload (all diagnoses, screens and conditions seen) continues to rise: a 13% increase was observed between 2005 and 2006.
Workload in Primary Care

◊ These data are based on the numbers of consultations with general practitioners within the PTI sample of practices (for further detail see appendix).

◊ Workload for STIs in primary care is fairly static, or at least, not showing the level of increase found in GUM clinics.

◊ The estimated numbers of consultations within primary care for syphilis, gonorrhoea, chlamydia, herpes and warts are high, with approximately 14,000 consultations per year, generated by 12,000 patients.

◊ A proportion of these patients will have been seen in both primary care and a GUM clinic.

◊ Primary care workload for family planning appears to be falling slightly.

◊ The estimated number of consultations for contraceptive management are high, with 380,000 generated in 2005/06.

◊ Numbers of consultations for GPs are two fold higher than those for Practice Nurses.

Workload in Community Family Planning Clinics

◊ There are no national data which provide information on the workload performed in community family planning clinics.

◊ The proposed new National Sexual Health (NaSH) clinical management system, to be phased in over the next 2-3 years, should address this shortcoming as well as providing other valuable information from both GUM and Family Planning clinics.
SEXUALLY TRANSMITTED INFECTIONS

Genital Chlamydia

Background and recent trends

◊ Genital chlamydia is caused by infection with the organism *Chlamydia trachomatis* and is the most commonly diagnosed bacterial STI in GUM clinics.

◊ Chlamydia infection is readily treatable. Up to 80% of chlamydia infection in men and women is asymptomatic; therefore, without adequate testing opportunities for those at risk, a large pool of undiagnosed infection will exist.

◊ Undiagnosed, untreated genital chlamydia infection in women can result in pelvic pain and scarring of the fallopian tubes which can progress to ectopic pregnancy and infertility. In men, complications include urethritis, epididymitis, chlamydia-associated arthritis (Reiter’s syndrome) and, possibly, infertility.

◊ In GUM clinics across the UK, a 4% increase in genital chlamydia was observed between 2005 and 2006.

◊ The number of chlamydia diagnoses in Scotland increased by 4% (17,289 to 17,926) between 2005 and 2006 and by 45% (12,391 to 17,926) between 2002 and 2006.

◊ Half of all chlamydia infections were diagnosed and managed in non-GUM clinic settings.

Who was affected: 2006?

◊ Almost twice the number of genital chlamydia diagnoses were made in women (female to male ratio - 1.8:1); this may relate to the fact that chlamydia SIGN guidelines on opportunistic testing only apply to women.

◊ 5% and 3% rises in the number of diagnoses in men and women, respectively, were observed between 2005 and 2006. This was most pronounced in the GUM clinic setting, where a 12% and 7% increase in diagnoses among women and men, respectively, was noted.

◊ Two thirds of women were diagnosed in clinical settings other than the GUM clinic; in contrast two thirds of men were diagnosed at GUM clinics.

◊ Over 70% of genital chlamydia diagnoses were in those aged less than 25 and the majority of these were in men and women aged 20-24. The largest increases in positive diagnoses between 2002 and 2006 were observed in both men and women aged 15-19.

◊ 3.5% of all women diagnosed at GUM clinics had ‘complicated chlamydia,’ defined as upper genital tract or pelvic infection; this finding was most prevalent among women aged less than 25.

◊ 6% of men diagnosed with chlamydia had a rectal infection; two thirds of rectal infections were among men aged 25-44. Rectal chlamydia infection is a marker of unsafe anal intercourse and can increase the risk of HIV transmission.
Geographical distribution: 2006

In all clinical settings where chlamydia testing occurs:

◊ Between 2005 and 2006, diagnoses rates in women in all clinical settings increased in eight of the 15 NHS boards; the largest increases were observed in Forth Valley, Dumfries & Galloway and Ayrshire & Arran.

◊ The highest rates in women were observed in Tayside – this is a similar observation to that in 2005.

◊ For men, an increase in diagnoses rates was observed in seven NHS boards; the largest increases were observed in Dumfries & Galloway, Forth Valley, and Lanarkshire.

In the GUM clinic setting:

◊ The highest rates of diagnoses among women were observed among residents of Tayside, Forth Valley and Fife NHS Boards; this has been a consistent finding during the past three years.

◊ For women, an increase in diagnoses rates at GUM services was observed in nine NHS boards.

◊ The largest increases in diagnoses among women were observed among residents of Lothian, Ayrshire & Arran and Greater Glasgow NHS boards.
For men, an increase in diagnoses rates at GUM services was observed in seven NHS boards.

The largest increases in diagnoses rates among men, excluding the island NHS boards, were observed among residents of Lothian, Forth Valley and Grampian NHS Boards.

As in previous years, the highest rates of rectal chlamydia were observed in Lothian and Greater Glasgow NHS Boards; this is consistent with higher attendances of men who have sex with men, (MSM), at GUM clinics in these locations.

The highest rates of pelvic infection, diagnosed in the GUM clinic setting, were observed in Forth Valley and Lothian NHS Boards.

Figure 2.5a: Rates of diagnoses of genital chlamydia in women, made in GUM clinic settings, by NHS board of residence, 2006.

Only those who were resident in Scotland are included in these data. The denominator is the female population aged 15-64.

Mid-year population data for 2006 available from GROS®

Data source: STISS

Figure 2.5b: Rates of diagnoses of genital chlamydia in men, made in GUM clinic settings, by NHS board of residence, 2006.

Only those who were resident in Scotland are included in these data. The denominator is the male population aged 15-64.

Mid-year population data for 2006 available from GROS®

Data source: STISS
Gonorrhoea

Background and recent trends

In 2006, 900 laboratory diagnoses of gonorrhoea were made. This figure is similar to that for 2005 (904) which was the highest number of diagnoses recorded during the past ten years.

There was an increase in the number of diagnoses in men (4%) and a decrease in those among women (13%).

In 2006, 86% and 56% of laboratory confirmed infections among men and women, respectively, were diagnosed in GUM clinics. This proportion is similar to that noted in previous years.

In Scotland, the number of diagnoses of gonorrhoea doubled in the ten year period, 1997-2006; much of this increase reflects transmission among men who have sex with men (MSM).

At the UK level, in the GUM clinic setting, diagnoses of gonorrhoea have decreased during recent years; this is due mainly to a reduction in heterosexually acquired infection. This trend varies by region – while a decline in numbers of diagnoses has been observed in England and Wales since 2002, these have increased in Scotland and Northern Ireland.

In 2006, gonorrhoea diagnoses rates per 100 000 population among women and men in Scotland attending GUM clinics were the second and fifth lowest, respectively, when compared to those among the ten English Strategic Health Authority regions and the other countries of the United Kingdom.

Resistance to one or more antibiotics was detected in 46% of all gonococcal isolates.

Roll out of molecular testing for gonorrhoea (combined with chlamydia testing) is likely to increase the proportion of cases detected in community settings and in those who are asymptomatic. Guidance on the use of molecular testing for gonorrhoea has recently been published on the HPS website.

Who was affected: 2006?

More than three quarters (80%) of gonorrhoea diagnoses were among men.

Half (53%) of all men with gonorrhoea infection were MSM. This proportion was higher than that for any other country of the UK.

Seventeen per cent of infected men had rectal gonorrhoea - an indicator of recent, unprotected anal intercourse. This is higher than that reported in both 2004 and 2005 (12%).

One quarter of MSM with gonorrhoea had chlamydia co-infection; this proportion increased from 14% in 2005 and is similar to that reported in 2004.
Over one third of all women with gonorrhoea had chlamydia co-infection.

Three quarters of women, compared to almost one half of men, infected with gonorrhoea, were aged less than 25.

The ages of those diagnosed with gonorrhoea ranged from 15 to 68 with a median age of 24; analysis by gender indicates that the median age is 20 and 26 in women and men, respectively.

Most diagnoses of gonorrhoea were in men and women aged 15-24 and in men aged 20-34.

Between 2005 and 2006, the largest increase in diagnoses among men was observed in those aged 20-24.

Despite an overall decrease in the total number of diagnoses among women, an increase in those aged 15-19 was noted.

Geographical distribution: 2006

In comparison to 2005, an increase in diagnoses rates among women was noted in residents of five NHS Boards, notably Lanarkshire and Fife; in men, an increase was observed in residents of five NHS boards, particularly Lanarkshire and Ayrshire & Arran.

The highest rates of diagnoses were made in men resident in Lothian and Greater Glasgow NHS boards - a consistent finding since 2004.

Between 2005 and 2006 the largest decrease in diagnoses rates among women was observed among residents of Greater Glasgow NHS Board; this decreased from 15 per 100 000 to 7 per 100 000.

Around 90% of gonorrhoea infections diagnosed in Scotland were probably acquired within Scotland.
Antibiotic resistance: 2006

- Overall resistance to one or more antibiotics was detected in 46% of gonococcal isolates. This compares with 34% and 49% in 2004 and 2005, respectively.
- Over one third (35%) of all gonorrhoea isolates in Scotland were resistant to the antibiotic, ciprofloxacin, despite its discontinued use since 2003 as a first line blind treatment. This represents a statistically significant increase on that reported during 2005 (24%, p<0.001).
- During 2006, levels of resistance to ciprofloxacin were highest (>60%) in isolates circulating in Grampian and Ayrshire & Arran NHS Boards. In a further eight of eleven NHS boards, the level was >30%.
- Molecular studies indicate that the observations above are due to increased transmission of a few common sequence types of *Neisseria gonorrhoeae* which are associated with ciprofloxacin resistance.
- No resistance to the first-line antibiotic therapies currently in use, (oral cefixime and injectable ceftriaxone), has been identified, and, accordingly, these remain the recommended first line therapy for gonorrhoea infection.\(^\text{14}\)
Genital Herpes

Background and recent trends

- Genital herpes is caused by the herpes simplex virus (HSV), types 1 and 2. These viruses are transmitted through close contact with the mucous membranes or body fluids of infectious persons. It is possible to be infected with both viruses at the same time.
- HSV infection may cause ulceration but may also be asymptomatic. Following initial infection, HSV remains dormant in cells and can reactivate, with varying frequency, causing recurrent infection.
- Genital herpes is diagnosed on the first clinical presentation with genital symptoms; laboratory confirmation is ideal but not always possible.
- In 2006, 76% of suspected diagnoses in GUM clinics were confirmed by detecting HSV through laboratory testing. The data presented include information on both the laboratory confirmed and unconfirmed clinical diagnoses made in the GUM clinic setting.
- In 2006, 1390 persons attending GUM clinics were diagnosed with genital herpes for the first time; this represents a 4% increase on the 2005 figure. A 3% decrease and 16% increase in diagnoses were observed in women and men, respectively.
- The majority (63%) had self-referred and one quarter had been referred by their GP.
- The number of new diagnoses in GUM clinics increased by almost one third during the last five years.
- In 2006, there were over 800 further episodes of care provided in the GUM clinic setting for those attending with recurrent genital herpes; consultations at GUM clinics for the management of recurrent herpes have increased by 78% since 1997.
- The number of new diagnoses in Scotland during 2006 represents 6% of the total in the UK. The rates per 100 000 population in both men and women were lower than those for all ten of the strategic health authorities in England but higher than those for Wales and Northern Ireland.\(^\text{28}\)
Who was affected: 2006?

◊ More than half of genital herpes diagnoses made in GUM clinics (58%) were in women.

◊ More diagnoses of genital herpes were made in women aged 20-24 and men aged 25-34, than in any other age group; this is similar to observations in previous years.

◊ Between 2005 and 2006, the largest increases in diagnoses were among men aged 25-34 (30%) and men aged over 45 (23%).

◊ Half (54%) of the genital herpes diagnoses in women and almost one third (31%) of those in men were made in persons aged less than 25; this observation is consistent with those during the previous ten years.

Figure 2.13: Diagnoses of genital herpes in women, made in GUM clinic settings, by age group, 1997-2006.

Figure 2.14: Diagnoses of genital herpes in men, made in GUM clinic settings, by age group, 1997-2006.

◊ Of those for whom the virus type was determined, diagnoses due to HSV type 1 predominated in women (63%) and those due to HSV type 2 predominated in men (60%). These observations are similar to those in the previous two years.

Figure 2.15: Diagnoses of genital herpes, made in GUM clinic settings, by gender and virus type, 2006.
Geographical distribution: 2006

◊ In GUM clinics, the highest diagnoses rates of genital herpes in women were observed among Greater Glasgow NHS Board residents and, in men, among Lothian NHS board residents; these observations are the same as those for 2005.

◊ In women, an increase in diagnoses rates, between 2005 and 2006, was observed among residents of six NHS boards: Argyll & Clyde, Ayrshire & Arran, Forth Valley, Lanarkshire, Lothian and Dumfries & Galloway.

◊ In men, an increase in diagnoses rates between 2005 and 2006 was observed among residents of six NHS boards: Highland, Shetland, Greater Glasgow, Grampian, Lanarkshire and Lothian.

◊ Between 2005 and 2006, the largest decrease in diagnoses rates among women was noted in residents of NHS Tayside.

◊ In men, the largest decrease in diagnoses rates was noted in residents of NHS Borders.

Figure 2.16a: Rates of diagnoses of genital herpes in women, made in GUM clinic settings, by NHS board of residence, 2006.

Figure 2.16b: Rates of diagnoses of genital herpes in men, made in GUM clinic settings, by NHS board of residence, 2006.
Infectious Syphilis

**Background and recent trends**

- Infectious syphilis is a bacterial infection characterised by three phases, primary, secondary, and early latent – all representing cases diagnosed within two years of infection.
- Syphilis re-emerged in Scotland during 2000/2001 following outbreaks elsewhere in the UK; since then, the number of diagnoses has increased annually.
- In 2006, 246 infectious cases were recorded at GUM clinics; this is the highest annual total recorded since 1952 and represents a 31% increase on that reported for 2005 (188).
- Between 2002 and 2006, there has been a five-fold increase in diagnoses; this is primarily due to a six-fold increase in those among MSM.
- During 2006, the syphilis diagnoses rate per 100 000 population among men, in Scotland, attending GUM clinics was the fourth highest when compared to those for the ten English Strategic Health Authority regions and the other countries of the United Kingdom. 28
- Information from enhanced surveillance indicates steady numbers of cases of heterosexually acquired syphilis in recent years; 29 and 25 in 2005 and 2006, respectively.

**Who was affected: 2006?**

- 95% of all diagnoses were in men, the majority of whom were MSM (85%).
- The highest number of diagnoses was in men aged 25-34; between 2005 and 2006, the largest increases were noted in those aged 15-19 and in those over 45.
- In MSM, age at diagnosis ranged from 18-72 with a median age of 36.
Geographical distribution: 2006

◊ An increase in the number of diagnoses was observed across most NHS boards during 2006.
◊ The majority of diagnoses in men (including MSM) were made in residents of Lothian, Fife and Greater Glasgow NHS Boards; this observation is similar to that in 2005.
◊ The small number of diagnoses in women were made in residents of Greater Glasgow, Lanarkshire, Lothian and Highland NHS boards.
◊ Almost three quarters of diagnosed MSM and women probably acquired their infection in Scotland.
◊ For 25 cases with multiple possible locations of possible exposure, 20 (80%) also included a Scottish locality.

Figure 2.20: Rates of diagnoses of infectious syphilis in men, made in GUM clinic settings, by NHS board of residence, 2006.

Figure 2.21: Location where syphilis infection was likely acquired, by sexual orientation, 2006.
Genital Warts

Background and recent trends

◊ Genital warts result from infection with human papillomavirus (HPV). Over 30 types can infect the genital tract and these are divided into low risk and high risk types: >90% of genital warts are caused by low risk types 6 and 11.

◊ The majority of genital HPV infections are asymptomatic; the diagnosis of genital warts is based on clinical examination when warts are visible. No diagnostic laboratory tests are performed.

◊ Genital warts are the most common acute viral STI diagnosed in the GUM clinic setting; 6891 new cases were seen during 2006, a figure which represents a 7% increase on the total for 2005. Thirty per cent were referred by their GP.

◊ The total number of new diagnoses in both men and women increased by 24% over the previous five years.

◊ Genital warts can recur, causing significant distress and requiring repeated clinic visits for treatment; in 2006, an additional 3904 episodes of care were provided for people attending GUM clinics for treatment with recurrent infection.

◊ During 2006, genital warts diagnoses rates per 100 000 population in Scotland were the fourth lowest in women and seventh highest in men when compared with those for the ten English Strategic Health Authorities and the other countries of the United Kingdom. 28

◊ Two prophylactic HPV vaccines have been developed in the European Community. Both vaccines protect against infection with the two types of the virus, HPV 16 and HPV 18, associated with the development of 70% of cervical cancers. One of these also protects against infection with HPV types 6 and 11 which cause over 90% of genital warts.

◊ Both vaccines have been shown to have excellent safety profiles and are highly immunogenic and efficacious in protecting against HPV infection with the vaccine types and their associated clinical outcomes in large scale studies. 15,16

◊ Following recommendations from the UK Joint Committee on Vaccination and Immunisation, the Scottish Government’s Department of Health has agreed to introduce an HPV vaccination programme, to immunise girls aged 12-13, commencing in Autumn 2008.
Who was affected: 2006?

◊ Just over half of all new diagnoses of genital warts were in men (54%). This has been a consistent finding during the previous 10 years.
◊ Most diagnoses were made in men and women aged 20-24.
◊ Two thirds of new diagnoses in men were in those aged 20-34; two thirds of those in women were aged 15-24.
◊ In the past five years, the largest increase in diagnoses was observed in those aged 15-19; a 74% and 40% increase in young men and women, respectively.
◊ Seven percent of diagnoses among men were MSM – this is a similar finding to that in the previous five years.
Geographical distribution: 2006

◊ There was an increase in the numbers of diagnoses among women resident in seven of the 15 NHS boards: the largest increases were evident in Lanarkshire, Fife and Tayside.
◊ An increase in the diagnoses rates was observed among male residents of seven NHS boards; the largest increases were noted in Argyll & Clyde, Lothian, and Lanarkshire.
◊ Outside the island NHS boards, the lowest rates were observed among male and female residents of Dumfries & Galloway and Borders NHS Boards; this finding is similar to those reported in the previous two years and may reflect increased management in non-GUM settings in these areas.

Diagnoses recorded are of the first occurrence of genital warts.
The denominator is the female/male population aged 15-64.
Data source: STISS

Treatment in the Primary care setting

◊ Many cases are managed by general practitioners (GP) with self-applied therapies, such as Imiquimod cream and Podophyllin cream or solution.
◊ Treatment is cosmetic, not curative, and helps to relieve the discomfort and distress experienced by patients. Recurrence following treatment is common.
◊ Since 2001, there has been a two fold increase in GP prescribing for genital warts.
◊ In the UK, the estimated cost of managing incident, recurrent and persistent genital warts is approximately £22.4 million per annum. 17

Figure 2.25a: Rates of new diagnoses of genital warts in women, made in GUM clinic settings, by NHS board of residence, 2006.

Figure 2.25b: Rates of new diagnoses of genital warts in men, made in GUM clinic settings, by NHS board of residence, 2006.

Figure 2.26: Number of prescriptions issued by General Practitioners for the treatment of genital warts, 2001-2006.
HIV Infection

Background and recent trends

Please note that in this section, the data has been presented using the new fourteen NHS board areas which came into existence in April 2006.

◊ In 2006, 345 cases of HIV were newly reported in Scotland; this includes 127 presumed infected in Scotland, 37 elsewhere in the UK and 172 outwith the UK, some of whom will have been previously diagnosed outside Scotland.

◊ Annual diagnoses rose from between 150 and 180 during the 1990s to 407 in 2005, the highest annual number of newly identified cases on record.

◊ The numbers of AIDS diagnoses and AIDS-related deaths in HIV infected individuals have fallen by a factor of three and ten respectively, since the introduction of effective therapies in 1996. In 2006, there were 41 reports of AIDS and 32 deaths.

Figure 2.27: HIV diagnoses, AIDS registrations and deaths, and individuals undergoing CD4 monitoring by year of report/death, Scotland, 1990-2006.

Data source: HIV/AIDS diagnosis and death reports

◊ In 2006, 2416 HIV infected persons were receiving HIV specialist care in Scotland; the majority of the cases in specialist care attended for treatment in Lothian (986), Greater Glasgow & Clyde (778), Tayside (188) and Grampian (160) NHS Boards.

◊ Therapy for HIV continues to be highly successful with 80% of all 1619 treated patients, including those newly commenced on it, having an undetectable HIV viral load at the end of 2006.

◊ Of those cases undergoing CD4 monitoring, 1415 (59%) had recorded a CD4 cell count ≤200/mm³ at some point since being diagnosed HIV positive, and were therefore eligible for ART.

◊ Across Scotland, 1219 of the 1329 cases (92%) who have ever recorded a CD4 cell count ≤200/mm³ - and who had attended for monitoring for at least 6 months - received ART (at any level) during 2006; 963 (79%) of these cases had an undetectable HIV viral load (≤50 copies/ml) at the latest attendance.
Who was affected: 2006

◊ Over two thirds of new cases identified were men.
◊ The 147 cases among MSM represents a decrease in the numbers recorded for this population group compared to 2005 (173); 10% of these were aged less than 25.
◊ Of the 164 HIV infections diagnosed among non-IDU (injecting drug users) heterosexual men and women, 53% were women.
◊ Twenty three diagnoses were made in IDUs during 2006; this figure compares with 27 for 2005 and 15 for 2004. Two thirds of these diagnoses were in people aged over 35. Eight diagnoses were among non-indigenous Scots who were probably infected outside Scotland.

Geographical issues: 2006

◊ The majority (61%) of new diagnoses were identified in Lothian (98) and Greater Glasgow & Clyde (111) NHS Boards.
◊ Lothian and Greater Glasgow & Clyde reported the highest number of new cases in MSM (53 and 47 of 147, respectively), and non-IDU heterosexuals (both reporting 61, a total of 122 of 164).
◊ Approximately one fifth of MSM probably acquired their infection outside the UK.
◊ Over 80% of non-IDU heterosexual cases probably acquired their infection outside the UK, predominantly in African countries.
◊ The number of non-IDU heterosexuals who probably acquired their HIV in Africa has decreased during the past two years.
◊ The number of non-IDU heterosexual cases thought to have acquired their infection within the UK remained low; 27 were identified in 2006.
◊ 60% of all cases reported from 2004-2006 are presumed to have acquired their infection outwith Scotland. This compares with 29% of cases reported from 1994-1996.
HIV Testing: 2006

- Outwith HIV screening programmes (e.g. blood donor, antenatal), the numbers of persons having at least one HIV test in Greater Glasgow, Lothian, Tayside and Grampian, increased by 7% (from 28 510 to 30 386) between 2005 and 2006; most of the testing occurred in the GUM clinic setting (82%).

- Between 2002 and 2006, a two-fold increase in the numbers of persons undergoing an HIV test was observed; in the GUM clinic setting the increase was nearly three fold – a trend which stems from Scottish Government policy recommending that all attendees suspected of having an STI be offered and recommended an HIV test.

![Figure 2.30: The proportion* of HIV infected attendees of GUM clinics, excluding those diagnosed prior to the clinic visit, who remained undiagnosed after attendance.](figure)

- The proportion of previously undiagnosed infection among heterosexual men and women and MSM attending GUM clinics, which remain undiagnosed following the clinic visit has been improving in recent years. In 2006, 38% of MSM remained undiagnosed following their clinic visit; the corresponding proportions for 2003, 2004 and 2005 were 50, 49 and 24% respectively.

- The universal antenatal HIV screening programme, introduced in 2003 has been successful in reducing the number of women who remain undiagnosed during their pregnancy. In 2006, 86% (6/7) of women who gave birth during January-June and who were previously unaware of their HIV status were diagnosed during their pregnancy; this compares with 82%, 79%, 55% and 39% in 2005, 2004, 2003 and 2002, respectively.
MSM: evidence for HIV transmission, 2006

◊ The HIV prevalence among MSM undergoing an attributable HIV test was 3% - this compares with an average of 4% in the previous three years.
◊ Among those undergoing a repeat attributable HIV test in a calendar year, the number of seroconversions (a negative test result followed by a positive one) increased from an average of four between 1996 and 2003 to 15 in 2004, eight in 2005 and ten in 2006.
◊ Unpublished investigations examining the incidence of infection among MSM undergoing repeat HIV testing during thirteen years of testing, indicate that incidence was stable at around 1% during 1990-2003 and then increased to approximately 4% in 2004; this finding is consistent with the increase in the incidence of other sexually transmitted infections, notably syphilis, and increase in risk-taking behaviour among MSM in recent years.

Heterosexual men and women (non-injecting drug user): evidence for HIV transmission, 2006

◊ Among men and women who did not have any high risk exposure outside the UK and who had an attributable HIV test, prevalence was approximately 0.1% (1 in 1000); this rate has remained stable for several years.
◊ Among men and women who had high risk exposure in (and probably originated from) African countries and had an attributable HIV test in 2006, prevalence was 5% and 7% among men and women, respectively.
◊ Among women, born in the UK, who gave birth in 2006, prevalence was 0.05% (5 in 10 000).
◊ These findings indicate that the incidence of HIV among heterosexual men and women in Scotland is low and not increasing.

Injecting Drug Users: evidence for HIV transmission, 2006

◊ Among those who had an attributable HIV test in 2006, prevalence was 0.7%; the corresponding figure in 2005 was 0.9%.
◊ Most diagnoses were among older IDUs who probably acquired their infection in the 1980’s.
◊ HIV transmission among IDUs in Scotland remains very uncommon.
SEXUAL HEALTH IN POPULATION SUB GROUPS

Men who have sex with men (MSM)

Background and recent trends

In 2006, among men who have sex with men (MSM) there were:

◊ 147 newly identified cases of HIV; this represents a 15% reduction on the 2005 total (173) which was the highest annual figure recorded. (Note: 54 cases are presumed to have been infected elsewhere in the UK or overseas).
◊ 199 new diagnoses of infectious syphilis; this represents a 14% increase on the total observed in 2005.
◊ An overall 20% rise in the major acute STIs diagnosed in GUM clinics between 2005 and 2006, continuing the upward trend observed in the last ten years.
◊ Four cases of lymphogranuloma venereum (LGV), a resurgent STI affecting MSM across Europe.

Acute STIs 2006: rectal infections

◊ Rectal chlamydia infection accounted for almost 60% of all 430 chlamydia diagnoses in MSM.
◊ Almost one third of MSM (116 of 381) with gonorrhoea had a rectal infection; this represents the highest number of diagnoses of rectal gonorrhoea over the ten-year period, 1997-2006.
◊ Between 2005 and 2006, a 59% increase in the number of rectal gonorrhoea infections was observed.
◊ Rectal gonorrhoea is a key marker for unprotected anal sex and a major co-factor in HIV transmission.
Acute STIs 2006: co-infections

- During 2006, 26% of MSM (99 of 381) with gonorrhoea had concurrent chlamydia infection; the corresponding rate for heterosexual men was 36% (123 of 340). These data indicate an increase in the percentage co-infection in all men but more notably in MSM for whom the corresponding figure, in 2005, was 14%.

- Data from enhanced surveillance indicates that 22% of syphilis cases, in whom HIV status was known, were co-infected with HIV.

- Of a total of seventeen cases of LGV diagnosed since 2004, eleven (65%) had HIV infection. The UK figure (which includes the Scottish data) is 74%. 19

- 10% of MSM with acute STIs attending GUM clinics were known to be co-infected with HIV. This observation is similar to that observed during the previous two years.

<table>
<thead>
<tr>
<th>Table 3.1: Acute STIs in MSM attending GUM clinics, 2006.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infection</strong></td>
</tr>
<tr>
<td>Infectious syphilis</td>
</tr>
<tr>
<td>Gonorrhoea</td>
</tr>
<tr>
<td>Of which rectal</td>
</tr>
<tr>
<td>Chlamydia</td>
</tr>
<tr>
<td>Of which rectal</td>
</tr>
<tr>
<td>Genital warts (first episode)</td>
</tr>
<tr>
<td>Genital herpes (first episode)</td>
</tr>
<tr>
<td>HIV infection (newly diagnosed)</td>
</tr>
<tr>
<td>Other*</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

*N/A not applicable
*Other includes: Non-specific, non-chlamydial, (upper and lower) genital tract infection, non-specific proctitis, Trichomoniasis, chancroid, lymphogranuloma venereum, granuloma inguinale, genital scabies, pubic lice, molluscum contagiosum, hepatitis A, acute and chronic hepatitis B.

Data source: STISS

Syphilis: enhanced surveillance data, 2006 20

- Over half (59%) of diagnosed MSM probably acquired their syphilis infection through oral sex. This is a higher proportion than that observed in 2005.

- Of the MSM who described their social network(s), 22% said they used more than one venue or network for meeting potential partners; gay bars and/or clubs and internet chatrooms were the most popular. 21

- Eighty percent of diagnosed MSM reported between one and four partners during the three months prior to their syphilis diagnosis.

- A total of 840 partners during the three months prior to syphilis diagnosis, were reported by 174 diagnosed MSM during the three months prior to syphilis diagnosis.

- Partner management is challenging among MSM diagnoses due to the number of multiple anonymous contacts; the percentage of traceable contacts decreased from 57% to 20% when more than five partners were reported.

<table>
<thead>
<tr>
<th>Table 3.2: Social networks and types of venues described by 105 MSM, 2006.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Networks</strong></td>
</tr>
<tr>
<td>Bars and/or Clubs</td>
</tr>
<tr>
<td>Internet chatrooms/chatlines</td>
</tr>
<tr>
<td>Other (regular or ex partner)</td>
</tr>
<tr>
<td>Sauna</td>
</tr>
<tr>
<td>Public sex environments/ cruising</td>
</tr>
</tbody>
</table>

Data source: NESISS

<table>
<thead>
<tr>
<th>Table 3.3: Number of contacts for cases of infectious syphilis among MSM reported to HPS, 2006.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reported No. Partners</strong></td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>5-9</td>
</tr>
<tr>
<td>10-19</td>
</tr>
<tr>
<td>20-30</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Data source: NESISS
HIV: 2006

- 88% of HIV tests on MSM were performed in the GUM clinic setting.
- Between 2005 and 2006, HIV testing in MSM at GUM clinics in Scotland increased by 32% (2491 to 3296); a near two-fold increase in HIV testing since 2003 is evident.
- Among MSM having an STI screen in the GUM clinic setting, the uptake of HIV testing ranged from 64% to 92%. In five NHS boards, the proportion accepting tests was >80%. (Note: The number of visits by MSM to the clinic is recorded on the figure. In clinics where a large number of MSM attend frequently, it is not always appropriate to offer a test at each visit, thus actual test uptake per visit will be reduced.)

Figure 3.3: Uptake of HIV testing in MSM accessing GUM clinics for any reason, by NHS board of screening, 2006.

Figure 3.4: Uptake of HIV testing in MSM accessing GUM clinics for an STI screen, by NHS board of screening, 2006.

- In Glasgow, during January to June, 2006, 685 MSM were recruited into the unlinked anonymous test programme: of 16 HIV infected MSM whose HIV status was unknown at the time of their GUM clinic visit, six remained undiagnosed after that visit – two of these six had presented with an acute STI.
- In the Glasgow GUM clinic, the proportion of MSM infected with HIV is higher in those who decline an HIV test than in those who accept, (4.2% versus 1.9%). This suggests those declining a test may suspect they have HIV and wish not to know, or have, in general, higher risk taking behaviour and also less concern about sexual health testing.
- The main foci of HIV infection in MSM occur in Lothian (36%) and Greater Glasgow & Clyde (32%) NHS Boards; 82% of infections were likely acquired within the UK.
- The majority of those diagnosed were aged 25-44 with a median age of 36; this has been a consistent finding over the past ten years and reflects the same median age observed among syphilis cases.
Geographical issues: access to services, 2006

Data from the GUM clinic setting show wide geographic variation in uptake of STI screening among MSM; this observation reflects service provision, (for example the availability of specific gay men’s services in some locations), and the likely population distribution of MSM. (Note: it is not possible to produce reliable denominator population data for this group).

Table 3.4: MSM accessing GUM clinics: proportion of men screened who are MSM according to location of screening and residence, 2006.

<table>
<thead>
<tr>
<th>NHS Board</th>
<th>Number of:</th>
<th>Proportion of men having screens who are MSM (%)</th>
<th>Annual MSM screens done in NHS board area per 100 000 population¹</th>
<th>Annual MSM screens done on board residents per 100 000 population</th>
<th>Proportion of screens in MSM done in own NHS board area (%)³</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Episodes (n)</td>
<td>Screens (n)²</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arg &amp; Clyde</td>
<td>85</td>
<td>59</td>
<td>6.8</td>
<td>44</td>
<td>104</td>
</tr>
<tr>
<td>Ayr &amp; Arran</td>
<td>52</td>
<td>32</td>
<td>2.1</td>
<td>28</td>
<td>88</td>
</tr>
<tr>
<td>Borders</td>
<td>31</td>
<td>27</td>
<td>7.4</td>
<td>78</td>
<td>113</td>
</tr>
<tr>
<td>Dumfr &amp; Gall</td>
<td>20</td>
<td>14</td>
<td>5.2</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Fife</td>
<td>132</td>
<td>115</td>
<td>5.8</td>
<td>98</td>
<td>145</td>
</tr>
<tr>
<td>Forth Valley</td>
<td>139</td>
<td>90</td>
<td>7.6</td>
<td>97</td>
<td>147</td>
</tr>
<tr>
<td>Grampian</td>
<td>372</td>
<td>290</td>
<td>12.3</td>
<td>160</td>
<td>156</td>
</tr>
<tr>
<td>Grtr Glasgow</td>
<td>1760</td>
<td>1350</td>
<td>16.5</td>
<td>464</td>
<td>327</td>
</tr>
<tr>
<td>Highland</td>
<td>82</td>
<td>63</td>
<td>6.3</td>
<td>90</td>
<td>73</td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>34</td>
<td>28</td>
<td>1.9</td>
<td>15</td>
<td>87</td>
</tr>
<tr>
<td>Lothian</td>
<td>2537</td>
<td>1577</td>
<td>19.7</td>
<td>584</td>
<td>522</td>
</tr>
<tr>
<td>Tayside</td>
<td>248</td>
<td>151</td>
<td>6.1</td>
<td>121</td>
<td>126</td>
</tr>
<tr>
<td>Scotland</td>
<td>5492</td>
<td>3796</td>
<td>13.2</td>
<td>226</td>
<td>226</td>
</tr>
</tbody>
</table>

1. There were no data available for Orkney, Shetland and Western Isles NHS Boards.
2. The data are based on the new STISS codes which includes those patients where a sexual history was taken and at least a chlamydia test performed.
3. The denominator is the male population aged 15-64 years
4. Where the proportion is greater than 100%, this indicates that screening is being performed on MSM resident in another NHS board
N/A - not applicable

The proportion of STI screens in men, which are performed on MSM, ranges from 2% in Ayrshire and Arran NHS Board GUM clinics to 16% and 20% in Greater Glasgow and Lothian NHS Board GUM clinics, respectively. This observation is similar to that in both 2004 and 2005.

The majority of STI screening in MSM is performed in Lothian and Greater Glasgow NHS Boards. There is clear evidence of travel into those areas by MSM from neighbouring NHS boards.

Between 2005 and 2006, a 14% increase in the total number of screens among MSM was evident; an increase was observed in eight of the twelve NHS board areas where there is access to a GUM clinic.

Episodes of infection also increased by 7% overall across nine NHS boards.
Prevention

Certain indicators of high risk sexual behaviour among MSM are of considerable concern.

◊ Repeat cross-sectional surveys of MSM in Glasgow and Edinburgh indicated an increase in unprotected anal intercourse with casual partners, during the previous 12 months, from 11% in both 1996 and 1999 to 19% in 2002 and 2005.

◊ In a community sample of men surveyed in Glasgow and Edinburgh through the 2005 MRC Gay Men’s Sexual Health Survey, 42% were unaware of their HIV infection – 56% of these men perceived themselves to be uninfected on the basis that their most recent test was negative.21

Targeted health promotion continues and key initiatives during 2006 include:

◊ Launch of “HIV The Comeback Tour” in Lothian – a multiagency collaboration to raise HIV awareness, promote testing and condom use by using a series of leaflets, postcards, website and posters specifically designed with the Comeback Tour brand.

◊ ‘Changing the Focus’ – Scotland’s first national conference on the sexual health and wellbeing of MSM was held in June 2006 to bring together people from a range of statutory and voluntary organisations. http://www.changingthefocus.org/

◊ Promotion of six-monthly sexual health check-ups by the EQUAL social marketing campaign, a joint project between NHS Greater Glasgow, NHS Ayrshire and Arran and NHS Lanarkshire.

◊ Peer education and outreach health promotion work using internet chat rooms and going to venues and environments used by MSM are key activities: these are ongoing and used by most of the voluntary agencies.
Young People

Young people refers to those aged less than 25.

◊ In this section we present data on STIs and teenage pregnancy.
◊ As well as presenting data on these issues, we also include some information derived from surveys of sexual behaviour which we have augmented with some data on contraception use, particularly long acting reversible contraception.
◊ The majority of diagnoses of STIs occur in young people. This is most notable for chlamydia.
◊ For all STIs the median age for women is less than that for men.
◊ The median ages for syphilis and HIV diagnoses among men are higher than those for all other STIs except Trichomoniasis. This may relate to the fact that syphilis and HIV are more prevalent in men who have sex with men.

Acute STIs: 2006

![Figure 3.8: Median age for STIs in women and men, diagnosed in the GUM clinic setting, 2006.](image)

![Figure 3.9: Diagnoses of acute STIs in women aged less than 25, made in the GUM clinic setting, 1997–2006.](image)

![Figure 3.10: Diagnoses of acute STIs in men aged less than 25, made in the GUM clinic setting, 1997–2006.](image)
Who was affected: 2006?

◊ 72% of all chlamydia diagnoses were in those aged less than 25.
◊ The largest number of chlamydia diagnoses was observed among those aged 20-24.
◊ 81% of women, compared to 44% of men, infected with gonorrhoea were aged less than 25.
◊ Two thirds of diagnoses of genital warts in women and half of those in men were in those aged less than 25.
◊ A 15% increase in the number of diagnoses of gonorrhoea in men aged less than 25 was observed.

Geographical Issues: genital chlamydia
Access to services: 2006

Figure 3.13: Diagnoses of acute STIs in women aged less than 25 in the GUM clinic setting by NHS Board of residence, 2006.

Figure 3.14: Diagnoses of acute STIs in men aged less than 25 in the GUM clinic setting by NHS Board of residence, 2006.

◊ 34% of persons aged less than 25 who attended GUM and had an STI screen had one or more acute STIs.
◊ An increase in acute STI diagnoses in the under 25 age group was observed during 2006 across almost all NHS Boards.

Chlamydia screening

The most recent data available show that, in 2005, the majority of samples testing positive (73%, 13,162) were from persons aged less than 25; however, less than half of all testing (46%, 100,452) was performed on persons belonging to this age group, despite evidence that the under 25s are at the greatest risk of genital chlamydia infection.
Teenage Pregnancy: 2005 conceptions

ISD has recently introduced a new method of calculating teenage pregnancy. This is based on data derived from abortion notifications and birth registrations rather than information from SMR02 data (maternity hospital returns) and SMR01 data (acute hospital returns providing information on therapeutic abortions and miscarriages). This new method is compatible with that used in England and Wales and allows direct comparisons. ([http://www.isdscotland.org/teenpregs](http://www.isdscotland.org/teenpregs))

◊ The teenage pregnancy rate is counted as the number of deliveries combined with the number of abortions. It does not include miscarriages.

◊ The date of conception for each pregnancy is calculated from the recorded gestation minus fourteen days for stillbirths and abortions. (See appendix for further detail)

◊ The data are presented for the following two age groups:
  » Age <20 (denominator is women aged 15-19)
  » Age <16 (denominator is women aged 13-15)

◊ The teenage pregnancy rate has remained steady during the past decade. In 2005 there were 56.7 pregnancies per 1000 females aged less than 20 and 7.1 pregnancies per 1000 females aged less than 16.

◊ There have been some changes in the balance between teenage pregnancies which are aborted and pregnancies which are delivered.

◊ Between 2001 and 2005, there has been a slight rise in the rate of abortions in all the teenage age groups. Among younger teenagers (aged less than 16) a fall in the rate of deliveries was observed; among all teenagers (aged less than 20) however, a slight rise in the rate of deliveries was evident.

◊ There is a strong association between deprivation and rates of teenage pregnancy.

◊ Those living in the most deprived areas have approximately ten times the rate of delivery as those in the least deprived, and twice the rate of abortion. These proportions varied little during 2000 to 2005.

◊ Teenagers in the least deprived areas are more likely to have an abortion than continue the pregnancy whereas in the more deprived areas the converse is true.
Geographical Issues

Figure 3.17: Rates of teenage pregnancy by NHS board, 2005.

<table>
<thead>
<tr>
<th>NHS board</th>
<th>Rate per 100 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tayside</td>
<td></td>
</tr>
<tr>
<td>Dumf &amp; Gall</td>
<td></td>
</tr>
<tr>
<td>Ayr &amp; Arran</td>
<td></td>
</tr>
<tr>
<td>Grt Glasgow</td>
<td></td>
</tr>
<tr>
<td>Fife</td>
<td></td>
</tr>
<tr>
<td>Lothian</td>
<td></td>
</tr>
<tr>
<td>Scotland</td>
<td></td>
</tr>
<tr>
<td>Lanarkshire</td>
<td></td>
</tr>
<tr>
<td>Forth Valley</td>
<td></td>
</tr>
<tr>
<td>Highland</td>
<td></td>
</tr>
<tr>
<td>Arg &amp; Clyde</td>
<td></td>
</tr>
<tr>
<td>Borders</td>
<td></td>
</tr>
<tr>
<td>Grampian</td>
<td></td>
</tr>
</tbody>
</table>

Data source: Abortion notifications and birth registrations

International comparisons

◊ Data relating to age at conception are not readily available in many countries but it is possible to look at data by the age of the mother at the time of the event.
◊ The most recent data for comparison are available for 2003.
◊ Although Scotland has slightly lower rates of abortion and birth than the UK as a whole, only Sweden has higher teenage abortion rates, and most countries have less than half the live birth rate.

Contraceptive use: 2006

The Omnibus Contraception and Sexual Health UK survey for 2005/06 reported that:
◊ The youngest women were the least likely to be using contraception.
◊ 51% of women aged 16-17 were using at least one method of contraception compared with 70-82% of those aged 20-49.
◊ Use of the male condom was more prevalent among younger women decreasing from over 50% in those aged 16-19 to 14% in those aged 45-49.
◊ Reliance on hormonal injections or implants was more common among younger women.
◊ It is anticipated that the promotion and increased use of long acting reversible contraceptives (LARC), such as the contraceptive implant (Implanon), will help young women who do not reliably use oral contraceptives to prevent pregnancy.
◊ Currently, it is not possible to obtain national clinical data on the method of contraception that an individual woman is using.
In order to try and determine the uptake of very long acting methods of contraception in Scotland, data were obtained from prescriptions via the Prescribing team at ISD and from hospital pharmacies who provided data on the distribution of products to community family planning clinics and to hospitals. Using these data a rate per 1000 women was calculated for Scotland. These data do not, however, take into account factors such as a change in the method used.

Nationally, the estimated uptake of very long acting methods of contraception – the implant, the Intrauterine device (IUD) and the Intrauterine system (IUS) - stands at 34 women per 1000 (in those aged 15-49).

More accurate data on contraception uptake will be available with the implementation of the national sexual health system (NaSH) in GUM and community family planning clinics.

Sexual behaviour: 2006

Survey Information

Scottish data from the National Survey of Sexual Attitudes and Lifestyle (NATSAL) 2000 indicates:

- The average age of first sexual intercourse for both sexes is 16
- 9% of young men and 13% of young women, respectively, had had an STI at some time
- Young people consider their personal risk of HIV infection to be low

Although, for the majority of Scottish respondents, prevention of pregnancy was the principal reason for using condoms amongst young people, a quarter of Scottish men reported that they used condoms to prevent pregnancy and protect against infection and young women were the group most likely to report that their main reason for using condoms was to protect against infection.

5% of Scottish women aged 18-44 years reported having had a child before the age of 18 years. This is the same proportion as the whole British sample. (NATSAL defines early parenthood as a birth before age 18 years).

An analysis of factors associated with early motherhood showed that prevalence was higher among those who had first intercourse before age 16 years and those who left school at 16 years.
Healthy Respect

Healthy Respect is a Scottish Executive funded national health demonstration project which is hosted by NHS Lothian and was set up to support young people make positive choices in their sexual health and wellbeing. ([www.healthy-respect.com](http://www.healthy-respect.com))

A number of ‘drop in’ clinics have been established and these are intended to make service access easier for young people who may not feel comfortable accessing standard sexual health and reproductive services or their GP.

The majority of young people who accessed the Healthy Respect drop in centres sought the c:card which allows young people to obtain free condoms.

Prevention and health promotion

There are a number of initiatives for young people in operation both at an NHS board and national level. A few examples of these are:

- **Caledonia Youth**, in operation for more than 30 years, supports local organisations in promoting the sexual health and wellbeing of young people, particularly teenagers and the under 25s. ([www.caledoniayouth.org](http://www.caledoniayouth.org))

- **Healthy Respect**, a Scottish Government funded National Health Demonstration Project focusing on young people’s sexual health, works in partnership with local organisations to provide sexual health education, information and services for young people aged 18 and under in Lothian. ([www.healthy-respect.com](http://www.healthy-respect.com))

- The ‘C2U’ scheme provides a confidential drop-in for young people, particularly those under 20, in Dumfries and Galloway NHS Board. ([www.c4urself.org.uk](http://www.c4urself.org.uk))

- **Talk2** is a new project open to parents and carers in Glasgow ([www.talk2glasgow.com](http://www.talk2glasgow.com/)). The project offers support to help parents and carers feel prepared to talk with their children and teenagers about growing up, puberty, relationships and sexual health.

- **Books and a website targeted at young people aged 13-15; Be Books (Be Safe. Be Sure. Be Yourself)** is a joint publication between NHS Greater Glasgow & Clyde, NHS Lanarkshire and NHS Ayrshire & Arran. ([www.bebooksonline.co.uk](http://www.bebooksonline.co.uk))
Sexual Health in those aged 40 and over

- Although data show that STIs, unplanned pregnancy and abortion are more prevalent in those aged under 25, these issues also affect older age groups.
- Demographic changes mean that sexual health in ‘older people’ is somewhat different to that of a generation ago. Couples are marrying later, and more marriages are ending, resulting in an older population embarking on new relationships with different partners.
- The age of first child bearing has increased, as has the number of women having very late babies, or no children.
- All this has an impact on the sexual health of those 40 and above, and has the potential to create new and previously unforeseen sexual health problems in a population that previously had not been seen as having such worries.
- As well as increasing diagnoses of the same STIs that affect young people, those in this older age group may also have additional sexual health problems, such as erectile dysfunction, which can seriously and adversely affect relationships. Little data concerning such issues are available.
- Data on STIs and abortions (as an indicator of unplanned and unwanted pregnancy) are presented with survey information and information about contraception use.

Acute STIs: 2006

- There has been an increase in the numbers of STIs among those aged 40 and over, managed in the GUM clinic setting. This is similar to the trend seen in young people and may, in part, be attributed to increased testing and a reduction in the stigma around attending a GUM clinic.
- The number of infections in this older age group is much lower than in those aged under 25.
- The number of infections diagnosed is higher in men than in women – this may in part be attributed to the high number of infections in men who have sex with men, and also that older women are more likely to consult in primary care or family planning clinic settings.
Amongst women belonging to this age group:

» Bacterial vaginosis and genital warts are the most prevalent diagnoses.

» Diagnoses of candidiasis within the GUM clinic setting have remained steady whereas bacterial vaginosis has increased since 1997. This may indicate an increase in the use of GUM services, rather than an increase in the incidence of infection.

» Between 1997 and 2006, diagnoses of genital herpes, genital warts and chlamydia have increased markedly.

» HPV associated genital warts is the most prevalent infection.

Amongst men belonging to this age group:

» Diagnoses of gonorrhoea and chlamydia have increased five fold between 1997 and 2006.

» Diagnoses of genital herpes and of genital warts have doubled since 1997.

The data show that the prevalence of chlamydia infection amongst older people, as with those under 25, is increasing.

Diagnoses of chlamydia infection in men 40 and over have increased sharply since 2003; in contrast, the rise among women has been less pronounced.

Geographical Issues: genital chlamydia

Figure 3.23: Diagnoses of genital chlamydia, made in all settings, in men and women aged 40 and over, 1997 – 2006.

Data source: Laboratory reports

Figure 3.24a: Rates of diagnoses of genital chlamydia in women aged 40 and over, made in all settings, by NHS Board of diagnosis and treatment, 2006.

Data source: Laboratory reports

The denominator is the female population aged 40-64 years

Figure 3.24b: Rates of diagnoses of genital chlamydia in men aged 40 and over, made in all settings, by NHS Board of diagnosis and treatment, 2006.

Data source: Laboratory reports

The denominator is the male population aged 40-64 years
In the GUM clinic setting the rate of acute STIs in men is three times that of women (158 versus 47 per 100,000 population).

Scottish data from the Omnibus Contraception and Sexual Health survey 2005/06\(^23\) indicate that those reporting that ‘information about STIs had no effect on their behaviour’ tended to increase with age – 80% of men aged 50-69 compared to 22% of those aged 16-19.

In 2006 1,342 men and 419 women aged 40 and over were diagnosed with an acute STI in a GUM clinic in Scotland.

Genital warts was the most frequently diagnosed infection for both men (46/100000) and women (23/100000).
Abortion: 2006

◊ Whilst all other age groups show an increase in abortion rates, the rates for those over 40 have remained steady since 1994.
◊ This contrasts with the increase in STI diagnosis in both men and women in this age group.
◊ Whilst the increase in STIs may reflect an increase in risk taking behaviour, the steady rate of abortion may reflect the lower fertility levels in this older age group.

Geographical Issues

Contraceptive Use: 2006

There are currently no national clinical data on contraception usage by individual.

UK data in the Omnibus survey 2005/06 23 reports that:

◊ Older women are more likely to rely on surgical rather than hormonal methods: 29% of women aged 45-49 being sterilised compared to 1% of those aged 20-24. These figures are similar to those whose partner is sterilised.
◊ The oral contraceptive pill is a popular method in younger women with 63% of those aged 20-24 reporting its use. Fifteen percent of women aged 40-44 reported using the pill. Six percent of women aged 45-49 reported using the pill but 12% reported using an IUD.
◊ Intrauterine methods such as the intrauterine device (the coil) and intrauterine system (Mirena) are more popular with older women.

Sterilisation

◊ Data shows that between 1985 and 2005 the number of female sterilisations reduced by 76%.
◊ Between 1995 and 2005 vasectomies performed in hospital reduced by almost half.
◊ A key clinical indicator has been developed by NSHAC which reports on access to and waiting times for sterilisation.
◊ For more detailed information see the Key Clinical Indicators 1-5 Report 5
Ethnicity and Diversity

Background

◊ ‘Ethnic group’ relates to a combination of factors including skin colour and physical features, family origins, language and religion. It is mainly a social construction and its significance is determined to a large extent by society and self-ascription. Ideally, users of health services should be asked to provide details of their own perceived ethnicity.

◊ There is a statutory, legal requirement for public authorities to collect data on ethnic group under the Race Relations (Amendment) Act 2000 in the interests of eliminating racial discrimination and promoting equality of opportunity and good race relations.

◊ Ethnicity is particularly relevant to STIs as different ethnic groups may tend to have markedly different sexual behaviours.

◊ The 2001 Census recorded that 2% of the total Scottish population were from a (non-White) minority ethnic group; the corresponding proportion among those aged 16-44, attending GUM clinics, was 3.5%.

Table 3.5: Ethnic group as a percentage of all new episodes of care in GUM clinics during 2006: Ethnic Group Distribution.

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Men</th>
<th>Women</th>
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</thead>
<tbody>
<tr>
<td>White - Scottish</td>
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<td>77.0</td>
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<tr>
<td>White - Other British</td>
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<td>6.7</td>
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<td>White Irish</td>
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<td>1.1</td>
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<tr>
<td>White - Other</td>
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<td>3.9</td>
</tr>
<tr>
<td>Mixed</td>
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<td>0.6</td>
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<td>0.2</td>
</tr>
<tr>
<td>Pakistani</td>
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<td>0.2</td>
</tr>
<tr>
<td>Bangladeshi</td>
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<td>0.0</td>
</tr>
<tr>
<td>Chinese</td>
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<td>0.4</td>
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<tr>
<td>Other Asian</td>
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</tr>
<tr>
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<td>0.2</td>
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<td>0.4</td>
</tr>
<tr>
<td>Not Provided</td>
<td>1.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Data source: STISS
GUM Clinics

◊ The STISS system requires all patients to have a self-assigned ethnicity recorded if possible.
◊ 84% of attendees were ascribed to ‘White Scottish’ or ‘White – other British’ groups.
◊ There is considerable geographical variation in the proportion of people from ethnic minorities who attend GUM clinics.
◊ In Glasgow, The Sandyford Initiative has opened a number of community hub clinics in areas with ethnic minority populations, such as Springburn and Govanhill.
◊ There is some evidence that this has encouraged attendance from ethnic minority groups.

HIV and pregnancy

Some relevant information is available from the unlinked anonymous HIV testing scheme which uses the infant blood spot test to determine the presence of maternal-derived HIV antibodies. The self-reported ethnicity of the mother is unavailable, but the region of birth of the mother is recorded in terms of UK or non-UK.

◊ For the 2006 data, five of 14 HIV positive mothers were born outside the UK. This compares with nine of 19 in 2005.

Sexual behaviour and attitudes

◊ Some data, generated through the UK National Survey of Sexual Attitudes and Lifestyles (NATSAL) 22, on sexual behaviour and attitudes are collected by ethnic group. Unfortunately, the number of people from an ethnic minority within the Scottish subgroup is too small to allow any meaningful interpretation. However, work is ongoing regarding boosting the Scottish sample to make the data more usable.

Disability

◊ Data collection concerning patient disability among GUM clinic attendees has recently been piloted in Lothian using the STISS system. It is intended that, post pilot, this initiative be rolled out nationally. Although the data are collected to facilitate the patient experience of those attendees with a disability, they also highlight the levels of attendance at GUM clinic services by this population. These data will be published in future issues of this report.
NHS BOARD SUMMARY

This section provides a summary of the key data for each NHS board. These data are intended to inform boards about local trends in sexual health and to facilitate comparison with others. As some data are derived from STISS coding, boards with low capacity or no GUM services may show low activity or low rates of STISS-coded infection but still have significant STI-related activity in other parts of their health services.

◊ In general, the data from NHS island boards have been excluded as at the time of data collection, no island board had:
  » A dedicated sexual health service
  » Returns of STISS data.
◊ High rates of diagnosed infection can reflect both a high community burden of infection and/or good access to GUM services. Low rates of diagnoses may reflect the opposite (i.e. low rates of infection and/or lack of access to GUM services).
◊ NHS board residents may choose not to be diagnosed and/or treated in their board of residence and there is strong evidence for cross-board traffic in some areas, especially for populations such as MSM who value anonymity. Laboratory diagnoses do not always contain residence data and where this is missing cases are assumed to be board residents.
◊ Comparison are between 2005 and 2006.

Key Points

Among mainland NHS boards:

◊ A six-fold variation in the number of episodes of care in the GUM clinic setting was observed (fig 1.1).
◊ There was a five-fold variation in gonorrhoea rates in women (fig 2.10a).
◊ Rates of chlamydia diagnoses made in all settings vary two fold for all women and 2.8 fold for men aged less than 25.
◊ The uptake of HIV testing in MSM who have a sexual health screen varied from 64% to 92%.
◊ There was a seventeen-fold variation in the rates of sexual health screens for MSM as a proportion of the general population; this finding reflects the concentration of MSM sexual health work in Glasgow and Lothian.

Ayrshire & Arran

◊ Amongst MSM,
  » The lowest proportion of STI screens among GUM clinic MSM attendees was noted (fig 3.3).
  » Appreciable proportions of sexual health screens on MSM residents were performed outside the board area (fig 3.6).
  » There was a low uptake of HIV testing amongst MSM having an STI screen (67%) (fig 3.4).
◊ Rates of gonorrhoea diagnoses in men increased and there was a high rate of quinolone-resistant gonorrhoea (60%), albeit on a small number of isolates (fig 2.11).
◊ Amongst Ayrshire and Arran residents the highest rate of genital wart diagnoses in women (fig 2.25a) and low rates of genital herpes diagnoses in men were observed (fig 2.16b).

Argyll & Clyde (NHS Argyll and Clyde was subsumed into Greater Glasgow and Highland NHS boards in April 2006)

◊ Significant numbers of residents are accessing GUM services outside the board area (fig 1.1). In particular, appreciable proportions of sexual health screens on MSM are performed outside the Board area (fig 3.6).
◊ In Argyll and Clyde there was;
  » The lowest mainland rate of chlamydia diagnoses made in all clinical settings in all men, and in men aged less than 25 (fig 2.4b & fig 3.12b).
  » An increase in diagnoses of genital herpes in women between 2005 and 2006.
  » A relatively low incidence of quinolone-resistant gonorrhoea (11%) (fig 2.11).
**Borders**

- Data show that within NHS Borders there are low rates of chlamydia diagnoses made in all clinical settings in both men and women of all ages (fig 2.4 and fig 3.12).
- There is a high uptake of HIV testing in MSM having an STI screen (88%) (fig 3.4) and in male residents, the lowest rate of infectious syphilis diagnoses (fig 2.20).
- The lowest mainland rate of genital warts and genital herpes diagnoses among female residents was observed. In addition, diagnoses of genital herpes in women have fallen. (fig 2.16 & 2.25a).
- There were no gonorrhoea diagnoses in female residents recorded on STISS in 2006 (fig 2.10a).

**Dumfries & Galloway**

- The rate of chlamydia diagnoses made in all clinical settings among both men and women aged less than 25 is the highest in Scotland (fig 3.12a&b).
- The largest increase in male chlamydia diagnoses made in all settings, and the lowest rates of chlamydia diagnoses made in the GUM clinic setting for both men and women were observed in this area (fig 2.5).
- Amongst MSM having an STI screen, NHS Dumfries and Galloway have the lowest uptake of HIV testing (64%) (fig 3.4).
- The STISS data indicate that:
  - Among male residents, the lowest mainland rate of gonorrhoea, genital herpes and genital warts diagnoses (fig 2.10b, 2.16b &2.25b).
  - Among female residents aged less than 25, the lowest mainland rate of acute STIs (fig 3.13).
  - No gonorrhoea diagnoses among female residents (fig 2.10a).

**Fife**

- In 2006, the highest overall acute STI rate in Scotland was among male residents of NHS Fife aged less than 25.
- There was a high and increasing rate of gonorrhoea diagnoses among women resident in NHS Fife (fig 2.10a).
- High rates of genital wart diagnoses were made among both male and female residents (fig 2.26).
- There was a high rate of chlamydia diagnoses made in the GUM clinic setting among male residents (fig 2.26b).

**Forth Valley**

- The largest increase in chlamydia diagnoses made in all settings, in women aged less than 25 was observed.

**Greater Glasgow**

- In NHS Greater Glasgow during 2006, there were;
  - A high number of new syphilis cases (fig 2.20) and,
  - The largest number of new HIV diagnoses.
- The highest proportion of sexual health screens on MSM in out-of-board residents are performed in NHS Greater Glasgow NHS Board (fig 3.6).
- There was a high rate of diagnoses of both genital warts (fig 2.25b) and gonorrhoea (fig 2.10b) in male residents.

**Grampian**

- In boards where gonnorhoea diagnoses were recorded, the lowest rate occurred among female residents of NHS Grampian (fig 2.10a). Of note is that the highest proportion of quinolone-resistant gonorrhoea (74%) isolates were found in this area (fig 2.11).
- Outside the island NHS boards, Grampian has the lowest teenage pregnancy rate in Scotland.

**Highland**

- NHS Highland NHS Board has the highest uptake of HIV testing in MSM having a sexual health screen (92%) (fig 3.4).
- There are no diagnoses of gonorrhoea in female residents recorded on STISS (fig 2.10a).
Lanarkshire
◊ There are an appreciable number of NHS Lanarkshire residents accessing GUM services outside the NHS Lanarkshire area; the largest proportion of sexual health screens on all GUM clinic attendees, including MSM, are performed outside the board area (fig 1.1 and 3.6).
◊ There was a low rate of sexual health episodes recorded as a proportion of the population; (fig 1.1) this may be due to residents accessing services in other NHS board areas.
◊ The following data are of note in NHS Lanarkshire residents:
  » The highest rate of gonorrhoea diagnoses in women; (fig 2.10a)
  » The largest increase in gonorrhoea diagnoses in both men and women;
  » The largest rise in genital warts diagnosed in women, and
  » A rise in the rate of chlamydia diagnoses made in all clinical settings in men.

Lothian
◊ The highest rate of sexual health screens as a proportion of the population were recorded in NHS Lothian (fig 1.1).
◊ The rates of genital warts (fig 2.25b), gonorrhoea (fig 2.10b) and genital herpes (fig 2.16b) diagnoses in male residents are the highest in Scotland.
◊ The highest rate of chlamydia diagnoses made in the GUM clinic setting was observed among male residents of NHS Lothian (fig 2.5b).
◊ There were a large number of new syphilis cases (fig 2.20) and the highest number of rectal chlamydia cases (44%, 127/292) in NHS Lothian in 2006.

Orkney
◊ As NHS Orkney do not return STISS data, it is not possible to make data comparisons.

Shetland
◊ As NHS Shetland do not return STISS data, it is not possible to make data comparisons.

Tayside
◊ NHS Tayside has the highest teenage pregnancy rate in Scotland (fig 3.17).
◊ The rate of chlamydia diagnoses made in all clinical settings in men and women is the highest in Scotland (figs 2.4a & b).
◊ The board has a high acute STI rate in women aged less than 25 (fig 3.13).

Western Isles
◊ As NHS Western Isles do not return STISS data, it is not possible to make data comparisons.
APPENDIX

Sexual Health in Scotland

Sexual health is addressed in a variety of healthcare settings in Scotland. These include:

- Genitourinary Medicine (GUM) clinics
- Community Family Planning & Reproductive Healthcare clinics
- Integrated sexual health clinics
- Specialised outreach sexual health clinics (e.g. for young people or gay men)
- Specialised outreach testing programmes (e.g. postal chlamydia testing)
- General Practice
- Hospital outpatient clinics (e.g. gynaecology, coloproctology, urology)
- Hospital admission units (e.g. pelvic infection)
- Infectious disease units (e.g. HIV infection)

Data on sexual health are gathered from many of these settings and provide the basis for the surveillance of sexual health in Scotland.

STI Surveillance data and sources

Three main sources provide information on STI diagnoses:

◊ Data on positive diagnoses of selected STIs, including HIV, are reported from all microbiological laboratories throughout Scotland.

These include:

» Data on age, gender, and NHS board of diagnosis/treatment;

» Data that reflect testing performed at genitourinary medicine (GUM) and Infectious Disease clinics and other locations where sexual health services are available or when there is a clinical need to test e.g. family planning, antenatal clinics, primary care, and in the hospital setting.

◊ Data concerning all episodes of care within Scotland's GUM clinics are reported using the Sexually Transmitted Infection Surveillance System (STISS).

These include:

» Data on age, gender, sexual orientation, NHS board of diagnosis/treatment, NHS board of residence, and diagnostic, screening and treatment information.

» An episode of clinical care, for purposes of STISS coding, is an attendance or series of attendances for a specific clinical problem or infection, e.g. diagnosis of gonorrhoea and subsequent follow-up for test of cure, contact tracing, repeat syphilis/HIV screening postwindow period. In the instance of genital warts or recurrent genital herpes, where many visits may occur over several months, the diagnosis is only entered once in any 3 month period. Where a patient re-attends for a new sexual health problem within 3 months of a previous attendance, this is considered a new episode. Where a currently attending patient develops a new problem / infection a new episode is generated, even if it is within 3 months of the initial attendance, e.g. a patient attending with warts develops gonorrhoea 2 months later - the gonorrhoea is a new episode.
Data on STI consultations with a general practitioner, practice or community nurse are recorded by the Practice Team Information (PTI, formerly referred to as Continuous Morbidity Recording) system. Approximately 60 practices participate in the PTI scheme and these are broadly representative of the population of Scotland in terms of age, gender, deprivation and urban/rural mix. The reason for the consultation is recorded and then coded using a Read code. A limited amount of data is available for analysis.

These include:
- Data on age, gender and NHS board of residence.

In addition, there are a number of infection-specific systems:
- Detailed information to describe HIV infection in Scotland is available from a number of HIV-specific surveillance systems.

These include:
- Laboratory reports of all voluntary attributable HIV tests, i.e. data from both positive and negative tests.  
- Immunological and antiretroviral therapy data on all HIV infected persons in specialist care.
- Unlinked Anonymous HIV Test Programme, a UK-wide programme which monitors the prevalence of HIV among GUM clinic attendees and pregnant women.
- New diagnoses of AIDS cases reported by clinicians.
- Numbers of HIV-associated deaths reported by the General Register Office for Scotland (GROS).

The National Enhanced Surveillance of Infectious Syphilis in Scotland (NESISS) was established in 2002. All laboratory confirmed diagnoses of infectious syphilis are notified to HPS and demographic, sexual and social risk information is collected from the diagnosing clinician.

Gonococcal Antibiotic Surveillance in Scotland (GASS) is monitored by the Scottish Bacterial Sexually Transmitted Infections Reference Laboratory (SBSTIRL, formerly the Scottish Neisseria gonorrhoeae Reference Laboratory, SNGRL) and data on the prevalence, pattern and trends of antibiotic resistance are available.

Demographic and behavioral data are available from gonorrhoea diagnoses made in the GUM clinic setting using STISS.

Within this report, acute STIs are defined as:
- Infectious syphilis
- Gonorrhoea
- Genital chlamydia
- Genital herpes (first episode)
- Genital warts (first episode)
- Non specific, non chlamydial, genital tract infection (NSGI)
- Trichomoniasis
- HIV infection, newly diagnosed
- Chancroid
- Lymphogranulom venereum
- Granuloma inguinale
- Genital scabies
- Public lice
- Molluscum contagiousum
- Hepatitis A
- Acute Hepatitis B
STI Surveillance systems utility

◊ The surveillance systems complement each other but also offer different types of information to describe not only the epidemiology of infections but also the workload undertaken by those involved in the care and management of patients.

◊ The surveillance systems are useful epidemiological tools to inform, plan and target prevention and health promotion strategies.

◊ Some of the benefits of STISS include;
  » The facility for recording both clinically and laboratory diagnosed STIs.
  » The facility for recording more than one diagnosis in a single patient, i.e. those with co-infection

◊ The laboratory reporting system covers diagnoses made in all, as opposed to just GUM clinic-based, healthcare settings.

<table>
<thead>
<tr>
<th>Data Collected</th>
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<th>GUM Clinics (STISS)</th>
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<td>Other acute and non-acute STIs*</td>
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*Other includes: Non-specific, non-chlamydial, (upper and lower) genital tract infection, non-specific proctitis, trichomoniasis, chancroid, lymphogranuloma venereum, granuloma inguinale, genital scabies, pubic lice, molluscum contagiosum, hepatitis A, acute and chronic hepatitis B.
Teenage Pregnancy data and sources

- Teenage Pregnancy data are derived from abortion notifications to the Chief Medical Officer for Scotland, of terminations of pregnancy under the Abortion Act 1967 and birth registrations.
- The date of conception for each pregnancy is calculated from the recorded gestation minus fourteen days for stillbirths and abortions. The correction is because the period of gestation is traditionally measured from the first day of the last menstrual period, and it is assumed that conception starts two weeks after this date. For live births, the date of conception is presumed to be 38 weeks before birth.

Teenage Pregnancy data utility

- These data allow the monitoring of all teenage pregnancies by age, gestation, NHS board of residence, amongst other variables, making it possible to monitor potential problem areas including geographical area and socioeconomic status/deprivation.
- These data also allow monitoring against the Respect and Responsibility target for the reduction of teenage pregnancies.
  - To reduce by 20% the pregnancy rate (per 1000 population) in 13–15 year olds from 8.5 in 1995 to 6.8 by 2010 and,
  - To reduce teenage pregnancies among 13–15 year olds in the most deprived communities by 33% from a rate of 12.6 in 2000–2002 to 8.4 in 2007-2009.

Abortion data and sources

Abortion data are collected through notifications of terminations of pregnancy to the Chief Medical Officer for Scotland under the Abortion Act 1967.

Abortion data utility

- These data allow the monitoring of all abortions by age, gestation and NHS board of residence, amongst other variables, making it possible to monitor where potential problem areas lie.
- Gestation at the time of the termination also gives a good indication of whether women are experiencing delays. Respect and Responsibility states that no woman should have to wait longer than three weeks from initial referral to termination, and whilst later abortions may be due to the decision making process or late discovery of pregnancy, amongst other reasons, higher than average percentages of abortions at 10 weeks or over are a good indication of the possibility of long delays and/or waiting times in the service.

Contraception data and sources

- Hospital discharge data (SMR01) and hospital-based maternity and birth data (SMR02) are used to determine the numbers of men and women who have a sterilisation procedure in Scotland, and the waiting times for these procedures.
- SMR01 data are used in conjunction with data received directly from the NHS boards to determine the levels of vasectomy procedures and their locations.
- Community data: The Prescribing Team within ISD maintains a detailed database of all NHS prescriptions dispensed in the community in Scotland. The information is supplied to ISD by Practitioner Services Division (PSD) who are responsible for the processing and pricing of all prescriptions dispensed in the community in Scotland. GPs write the vast majority of these prescriptions, with the remainder written mainly by nurses and dentists. They also include prescriptions written in hospitals that are dispensed in the community, but exclude drugs dispensed within hospitals themselves.
- Hospital pharmacy data: used to collect data on long-acting contraceptive products distributed to family planning and the acute sector in order to determine levels of usage (in conjunction with community data) in NHS boards.
- Future data collection: NaSH. The national sexual health system will collect information from GUM and Family Planning. The system will be able to provide patient level data on LARC prescribing and usage.

Contraception data utility

- Future information on contraception usage not only allows the monitoring of type of contraception used and its popularity, but also the efficacy of various methods, and its relationship to unintended pregnancies and abortions.
REFERENCES


11. http://www.hps.scot.nhs.uk


ABBREVIATIONS

ART – Antiretroviral therapy
BASHH – British Association of Sexual Health and HIV
CD4: Absolute value of CD4-positive T cells per microlitre of blood (reduced by HIV infection)
GASS – Gonococcal Antibiotic Surveillance in Scotland
GP – general practitioner
GROS – General Register Office for Scotland
GUM - Genitourinary Medicine
HIV – Human Immunodeficiency Virus
HPA – Health Protection Agency
HIV – Human Immunodeficiency Virus
HPS – Health Protection Scotland
HPV – Human papillomavirus
HSV – Herpes simplex virus
IDU – Injecting drug use(r)
ISD – Information Services Division
IUD – Intrauterine device
IUS – Intrauterine system
KC1(s) – Key Clinical Indicator(s)
LARC – Long acting reversible contraception
LGV – Lymphogranuloma veneruem
MIC - Minimum inhibitory concentration
MRC – Medical Research Council
MSM - Men who have sex with men
NAA Ts – Nucleic acid amplification tests
NaSH – National Sexual Health System
NATSAL – National Survey of Sexual Attitudes and Lifestyles
NESSI S – National Enhanced Surveillance of Infectious Syphilis in Scotland
NHS – National Health Service
NSGI – non specific, non chlamydial, genital tract infection
NSHAC – National Sexual Health Advisory Committee
NSS – National Services Scotland
PSD – Practitioner Services Division
PTI – Practice Team Information
SIGN – Scottish Intercollegiate Guidelines Network
SMR – Scottish Morbidity Record
SNRGL – Scottish Neisseria gonorrhoeae Reference Laboratory (now the SBSTIRL)
SBSTIRL - Scottish Bacterial Sexually Transmitted Infection Reference Laboratory
STI – Sexually Transmitted Infection
STIEAG – Sexually Transmitted Infection Epidemiology Advisory Group
STISS – Sexually Transmitted Infection Surveillance System
UAI – unprotected anal intercourse
USI – unprotected sexual intercourse
UK - United Kingdom