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Introduction

This is the fourth annual report produced by the Sexually Transmitted Infection Epidemiology Advisory Group (STIEAG) for Scotland. Similar to last year, a number of different data sources have been used to describe a wider picture of sexual health, rather than sexually transmitted infections (STIs) alone. The aim of the report remains the same - to promote a better understanding of sexual health in Scotland.

This report is a more succinct ‘digest’ document. The introduction of more data into the report in 2007 developed the document into a more useful resource for all sexual health services, but also significantly increased its size. This new digest version of the annual sexual health report provides readers with the headline data and most important developments since the previous year’s report (http://www.isdscotland.org/isd/5717.html).

Whilst all of the chapters are shorter, one is noticeably so – the STI chapter. However, the full chapter is available online at the HPS website (http://www.hps.scot.nhs.uk/bbvsti/sexuallytransmittedinfection.aspx), with all the tables and charts that have been present in previous years.

We hope that readers will take advantage of the signposting to delve deeper into the resources that Health Protection Scotland (HPS) and Information Services Division (ISD) provide on a range of subjects including STIs, teenage pregnancies and sexual health surveys.

As always, we are keen to receive feedback from readers. Please tell us whether this new approach is useful and what further information you would find helpful in future.

National Statistics

National Statistics is a quality marker applied to some of the UK’s official statistics. It is important that official statistics are trusted and statistics labelled as National Statistics must meet certain criteria. They should, for example, be fit for purpose, methodologically sound, politically independent and transparently produced.

All National Statistics are produced in accordance with the Framework for National Statistics (http://www.isdscotland.org/isd/3760.html) and they must comply with the principles embodied in the Code of Practice (http://www.isdscotland.org/isd/3761.html). The majority of statistics released by ISD are published under National Statistics. HPS data and publications, however, are not bound by National Statistics.

Scotland’s Sexual Health Information (SSHI) report contains data collected and analysed by both HPS and ISD. A list of tables has been compiled that indicates which of the tables and charts in the report are defined as being National Statistics. The table can be found in the appendix.

NHS boards

In this report, the NHS board level data presented are based on the 14 NHS board areas in existence since April 2006. In 2007, comparisons of data for Greater Glasgow & Clyde and Highland NHS Board areas with previous years will, therefore, be limited.
Conclusions and Challenges

Workload

Conclusions
• Workload in the genitourinary medicine (GUM) clinic setting continues to increase with more men and women attending than ever before.
• In contrast, consultations in general practice for sexually transmitted infections and contraception have decreased.

Challenges
• Providing a range of local sexual health services to meet the needs of all clients.
• Establishing a system for monitoring workload in the sexual and reproductive health setting.

Sexually Transmitted Infections (STIs)

STIs among men who have sex with men (MSM)

Conclusions
• While syphilis diagnoses among MSM remained steady between 2006 and 2007, the 27% decrease in gonorrhoea diagnoses during this period is encouraging; it is too early, however, to know if innovative awareness-raising campaigns have had a sustained impact.
• Uptake of HIV testing among MSM attending GUM clinics continued to increase across Scotland.
• It is evident that MSM continue to cross NHS board boundaries to access clinics with dedicated MSM services.

Challenges
• Maintaining, even improving upon, the progress made at this time - both in increasing HIV test uptake and in effecting behavioural change among high risk MSM who attend GUM clinics and for whom there is evidence of unprotected anal intercourse (UAI).

STIs among heterosexual men and women

Conclusions
• STI diagnoses among heterosexual men and women continue to increase - young people, aged less than 25, are the group most at risk of being diagnosed with an STI.
• The increase in infections among young women, aged less than 25, is of particular concern.
• Chlamydia testing opportunities should be improved with the focus on the testing of young people.

Challenges
• Effecting behavioural change amongst young people who fail to use condoms consistently with new partners.
• Improving access to, and uptake of, a broad range of local services, providing advice, testing (especially for chlamydia) and treatment, that are particularly suited to the needs of young people.

Pregnancy and abortion

Conclusions
• Teenage pregnancy rates have remained stable during the past decade.
• There is a strong association between deprivation and high rates of teenage pregnancy. There have been some changes in the balance between teenage pregnancies which are aborted and pregnancies which are delivered. Over recent years, there has been a slight rise in the rate of abortions in all the teenage age groups.
• Abortion amongst those aged 40 and over has remained static since 1994.

Challenges
• Effecting behavioural change amongst young people who practice unprotected sexual intercourse (USI).
• Understanding the attitudes and behaviours that lie behind teenage pregnancy.
• Helping young men and women to avoid unplanned pregnancy through good sex and relationships education (SRE) and by encouraging young women, especially in areas of deprivation, to remain in education and to make informed choices about their future.

Contraception and fertility control

Conclusions
• STI and abortion rates show that young people continue to take risks with their contraception.
• Good quality information on all methods of contraception and where to find them should be easily available to all.

Challenges
• Encouraging people to use contraception effectively for preventing pregnancy (including long acting methods for women, where appropriate) and for preventing transmission of infection.
Future enhancements of data

- Work is ongoing within HPS and ISD to add to, and improve, the data available on sexual health in Scotland.
- NaSH, the national sexual health system, will provide comprehensive data from GUM and sexual and reproductive health clinics.
- Good quality behavioural surveys such as the National Survey of Sexual Attitudes and Lifestyle (NATSAL), the Medical Research Council Gay Men’s Sexual Health Survey, and the Scottish Health Survey provide invaluable 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.

The next steps

- The second three-year phase (2008-2011) of the sexual health strategy Respect and Responsibility has commenced.
- The National Sexual Health Advisory Committee (NSHAC), renamed to National Sexual Health and HIV Advisory Committee (NSHHAC), are including a focus on HIV during this phase: in 2009, the following publications are due;
  - recommendations arising from the HIV treatment and care needs assessment of people living with HIV and,
  - an HIV prevention plan.
- It is important that NHS boards continue to develop services in line with the recommendations stemming from the strategy.
- Performance against the sexual health services standards will be monitored by QIS in each NHS board, commencing in 2009.
1 - POLICY AND WORKLOAD

POLICY OUTLINE

Respect and Responsibility


This strategy was supported by an extra investment of £15 million over the three financial years April 2005 to March 2008. An additional £15 million has also been invested to support the strategy until 2011.

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. More information and reports on progress against the indicators can be accessed at [www.isdscotland.org/kci](http://www.isdscotland.org/kci).

- **Action 13** seeks to improve data collection and make recommendations regarding a national data collection framework for sexual health. The existing data sources were catalogued and stakeholders consulted to identify information inadequacies. This allowed data deficits to be identified and options generated for addressing these inadequacies. More information on the data collection framework can be found at [www.isdscotland.org/dash](http://www.isdscotland.org/dash).

Actions 12 and 13 have now been formally closed but the work they generated in support of the strategy continues as part of the work of the Data Augmentation for Sexual Health (DASH) project, an HPS and ISD cross-divisional project.

Development of NHS QIS Sexual Health Services Standards

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

The sexual health services standards were published in April 2008 and can be accessed at: [www.nhshealthquality.org/nhsqis/files/SEXHEALTHSERV_STANF_MAR08.pdf](http://www.nhshealthquality.org/nhsqis/files/SEXHEALTHSERV_STANF_MAR08.pdf)

NHS QIS are currently developing a Self Assessment Framework to support NHS boards in providing information. Staff from NHS QIS will visit each NHS board to establish their performance against the standards. These visits are scheduled to begin in 2009/2010.

National Sexual Health System (NaSH)

NaSH is the new clinical 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 is initially intended for use in the genitourinary medicine (GUM) and sexual and reproductive health clinics.
- Eventually, it may be used in other settings providing sexual health care, for example Primary Care.
- The system is currently being rolled out throughout Scotland.
- In addition to providing an electronic patient record for sexual health, the system will provide secondary data for national reporting.
- For further information see: [www.nash.scot.nhs.uk](http://www.nash.scot.nhs.uk)

HIV Testing

Chief Medical Officer, Harry Burns, and Chief Nursing Officer, Paul Martin, recently wrote to colleagues in the health services to emphasise the importance of improving detection and diagnosis of HIV in non-HIV specialties (including Primary Care). [www.sehd.scot.nhs.uk/mels/CEL2007_15.pdf](http://www.sehd.scot.nhs.uk/mels/CEL2007_15.pdf)
WORKLOAD

Workload in the GUM clinic setting

In 2007, a four-fold 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 rate was observed among the residents of NHS Lothian; this is a similar observation to that in 2006.

The variation in rates is partly due to the lack of provision of local GUM clinic services in some NHS board areas; it is clear that some patients cross NHS boundaries to access services.

Workload in the primary care setting

These data are based on the numbers of consultations with general practitioners (GPs) within the Practice Team Information (PTI) sample of practices (see appendix for further details).

Overall workload (all diagnoses, screens and conditions seen) continues to rise; a 13% increase was observed between 2006 and 2007 - this is the same as that observed between 2005 and 2006.


This is largely due to the decline in the number of consultations by women for chlamydia; this has reduced by more than half between 2003/2004 and 2006/2007.
• Whilst it is not possible to state conclusively why this decrease has occurred, it should be noted that the PTI practices, although representative of the population in terms of age, gender, deprivation and urban/rural mix, may not accurately reflect the population undergoing chlamydia testing (www.isdscotland.org/pti).

![Figure 1.5: Estimated numbers of consultations for family planning seen in primary care, 2003/2004–2006/2007.](image)

**Workload in the sexual and reproductive health clinic setting**

• There are currently no national data which provide information on the workload of sexual and reproductive health planning clinics.

• The new national sexual health (NaSH) clinical management system, currently being rolled out throughout Scotland, should address this gap and provide additional information from specialist sexual health services.
2 - SEXUALLY TRANSMITTED INFECTIONS

- The data on sexually transmitted infections (STIs) presented in this chapter use a combination of both diagnoses made in the GUM clinic setting (STISS) and those made in all settings, represented by laboratory diagnoses. 2,3
- Please note a more detailed analysis of these data is available online at the HPS website (http://www.hps.scot.nhs.uk/bbvsti/sexuallytransmittedinfection.aspx)
- During the previous five years, the trends for the four major STIs, genital chlamydia, gonorrhoea, genital herpes and genital warts, indicate a general increase in diagnoses, with the exception of gonorrhoea infection in men.
- In women, notwithstanding yearly fluctuations, the largest overall increase, during this time period, was observed for diagnoses of episodes of gonorrhoea infection (88%, from 129 to 242).

- In comparison to the rest of the UK, the rates of new episodes of infection per 100 000 population in Scotland were lower, in general, for both men and women than those observed in most of the ten strategic health authorities in England but higher than those reported among men and women in Wales and Northern Ireland. The one notable exception is the rate of diagnoses of infectious syphilis in men - fifth highest of thirteen regions; this can be explained by the ongoing outbreak in men who have sex with men (MSM) in several areas of Scotland, (Table 2.1).4

Table 2.1: Comparison of rates of diagnoses of selected sexually transmitted infections in Scotland by rank order versus Wales, Northern Ireland, and the ten Strategic Health Authority regions in England, 2007.

<table>
<thead>
<tr>
<th>INFECTION</th>
<th>RANKING (OF 13 AREAS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN</td>
<td>WOMEN</td>
</tr>
<tr>
<td>GENITAL CHLAMYDIA</td>
<td>8TH</td>
</tr>
<tr>
<td>GONORRHOEA</td>
<td>7TH</td>
</tr>
<tr>
<td>GENITAL HERPES</td>
<td>10TH</td>
</tr>
<tr>
<td>INFECTIOUS SYPHILIS</td>
<td>5TH</td>
</tr>
<tr>
<td>GENITAL WARTS</td>
<td>9TH</td>
</tr>
</tbody>
</table>

Data source: All new STI episodes made at genitourinary medicine (GUM) clinics in the UK. Available at: http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1195733775264

Figure 2.1: Diagnoses of selected sexually transmitted infections in women, 1998-2007.

Figure 2.2: Diagnoses of selected sexually transmitted infections in men, 1998-2007.

GENITAL CHLAMYDIA

- Chlamydia trachomatis is the most frequently diagnosed bacterial STI in GUM clinics. It is readily treated with antibiotics but infection is asymptomatic in up to 80% of women and 50% of men.
- Undiagnosed, untreated and/or repeated genital chlamydia infection causes pelvic pain and scarring of the fallopian tubes in women which can result in ectopic pregnancy and infertility. However, the levels of these sequelae are much lower than previously believed. For men, the complications of genital chlamydia infection can include urethritis, epididymitis, chlamydia-associated arthritis (Reiter’s syndrome) and, in some cases, infertility. 5,6
- The number of chlamydia diagnoses in Scotland, after increasing rapidly in the first five years of this century, has remained stable over the past two years with a total of 17 928 in 2007. There were almost twice as many diagnoses in women as in men (ratio 1.7:1). 2
- Of note is that there has been little change in the number of tests performed; an overall increase of 4% between 2005 and 2007 was observed.
GONORROHEA

- Molecular tests for the detection of *Neisseria gonorrhoeae* are increasingly being used in laboratories due to their high sensitivity compared to conventional techniques. This has led to an increase in the number of cases detected, particularly in community settings and in those who are asymptomatic; during 2007, 1017 laboratory diagnoses of gonorrhoea were made - this is a 13% increase on that reported in 2006. These data, however, are not comparable to those in previous years. Please see the HPS Weekly Report for more details on these diagnoses.  
- In Scotland’s GUM clinics, the number of diagnoses of gonorrhoea (864) decreased in 2007 for the first time in five years; this was due to the 27% decrease in infection diagnosed in MSM. 
- Almost three quarters (72%) of gonorrhoea diagnoses were among men; 45% of these were MSM. This proportion was higher than that for any other country of the UK. Please see the MSM section of Chapter 3 for more details.
- Three quarters of female diagnoses, compared to almost one half of male diagnoses, were aged less than 25. 
- The increase in diagnoses among women is reflected by an increase in all age groups but predominantly in those aged less than 25. 
- Co-infection is common; over one fifth of MSM and >40% of women diagnosed with gonorrhoea had chlamydia co-infection. 
- Resistance to one or more antibiotics was detected in 41% of all gonococcal isolates; this is a decrease from that observed in 2005 (49%) and 2006 (46%).
Reassuringly, there were no detectable levels of resistance to the antibiotic therapies currently in use - cefixime and ceftriaxone - and these remain the recommended first line therapies for gonococcal infection.

**GENITAL HERPES**

- Genital herpes is caused by infection with the herpes simplex viruses (HSV) of which there are two types (types 1 and 2). HSV infection may cause ulceration but may also be asymptomatic. Genital herpes is diagnosed on the first clinical presentation with genital symptoms.
- The burden of infection with genital herpes in Scotland is described using the data on diagnoses made in the GUM clinic setting – this allows differentiation of infection into first and recurrent attacks; this is not possible using the data on laboratory diagnoses.
- In 2007, 1511 persons attending GUM clinics were diagnosed with genital herpes for the first time; in men and women, increases in diagnoses of 7% and 10%, respectively, were observed. More than half of new genital herpes diagnoses made in GUM clinics (59%) were in women.
- Genital herpes is a lifelong infection; following initial infection, HSV remains dormant in cells and can reactivate with varying frequency. Thus, some people may experience recurrent symptoms; in 2007, care was provided in the GUM clinic setting for an additional 943 recurrent episodes.
- Since 2002, the number of new diagnoses in GUM clinics has risen steadily; a 43% increase has been observed.
- Of all new genital herpes diagnoses observed in 2007, half (54%) of those in women and one third (34%) of those in men were made in persons aged less than 25.
- Between 2006 and 2007, the largest increases in diagnoses were among men and women aged 20-24; the number of diagnoses rose by one fifth (20%) in men and by more than one quarter (27%) in women.

**INFECTION SYPHILIS**

- Syphilis re-emerged in Scotland during 2000/2001 following outbreaks elsewhere in the UK and Europe; since then, the number of diagnoses has increased annually. This has mostly been driven by the increasing number of infections in the MSM population; a five-fold increase was observed between 2003 and 2007. Please see the MSM section of Chapter 3 for more details.
- In 2007, 249 infectious cases were recorded at GUM clinics; this is the highest annual total recorded since 1952, but represents a similar number of cases to that reported for 2006 (246). The majority of diagnoses (55%) were made in GUM clinics in Greater Glasgow & Clyde and Lothian NHS Boards.
- 94% (235/249) of all diagnoses were men, the majority of whom were MSM (84%; 197/235); this finding is consistent with observations in the past six years.
Almost three quarters of diagnosed MSM, two thirds of heterosexual women and half of heterosexual men probably acquired their infection in Scotland.

The number of cases of heterosexually acquired syphilis increased by 28% between 2006 and 2007 (from 32 to 41); this followed a period of stability between 2004 and 2006 when 20 to 30 diagnoses were reported annually. This rise is mostly due to an increase in the diagnosis of male heterosexual cases (19 to 27).

Partner management continues to present a challenge, particularly with regard to the multiple anonymous contacts reported by MSM.

In the past five years, the largest increase in diagnoses was observed in those aged 15-19; increases of 53% and 46% were observed in young men and women, respectively.

Many cases of genital warts are managed by general practitioners (GPs) with self-applied therapies; since 2001, there has been a three-fold increase in community prescribing for genital warts.

From 1st September 2008, HPV vaccination against types 16 and 18 will be included as part of the routine childhood immunisation programme; all girls in second year of secondary school will be offered the vaccine, Cervarix. Further details of the immunisation programme for girls aged 13-17, are available at: http://www.fightcervicalcancer.org.uk and at http://www.sehd.scot.nhs.uk/cmo/CMO(2008)03.pdf. Note that this vaccine does not protect against the virus types which cause genital warts.

Genital warts are the result of infection with the human papilloma virus (HPV). Over 30 types of the virus can infect the genital tract; these are divided into low risk and high risk types. Over 90% of genital warts are caused by the low risk types 6 and 11. High risk types include types 16 and 18 which cause 70% of all cervical cancers in the UK.

The majority of genital HPV infections are asymptomatic; the diagnosis of genital warts is based on clinical examination when warts are visible.

In 2007, 7258 new cases were diagnosed; the annual number of new diagnoses has increased by 35% over the past ten years.

Genital warts can recur, causing significant distress and requiring repeated clinic visits for treatment; in 2007, an additional 4191 episodes of care were provided for people attending GUM clinics for treatment with recurrent infection.

There are almost equal numbers of new diagnoses in men and women but there are age differences – notably a younger age of acquisition in women; two thirds of new diagnoses in women were in those aged 15-24 compared to 50% in young men.
HIV INFECTION

- In 2007, 453 new cases of HIV were identified in Scotland; this is the highest annual total of newly identified cases since recording began in 1984. Some of these newly identified cases in Scotland will have been diagnosed elsewhere and are transferring their care to Scotland for the first time.
- There were 207, 224 and ten new reports of infection among MSM, among non-injecting drug using (IDU) heterosexual men and women and IDUs, respectively.
- In 2007, almost 80% of MSM probably acquired their infection within the UK; in contrast, over 80% of non-IDU heterosexual cases probably acquired their infection outside the UK, predominantly in African countries.
- There is a continuing downward trend in AIDS diagnoses and AIDS related deaths due to a combination of increased testing and early diagnosis and the provision of high quality HIV care and therapies. There were 36 reports of AIDS and eight AIDS related deaths recorded in 2007; this represents respective three-fold and twelve-fold decreases since the introduction of effective therapies in 1996.
- In 2007, 2668 HIV-infected persons were receiving HIV specialist care in Scotland; the majority of the cases resided in Lothian (967), Greater Glasgow & Clyde (786), Tayside (203) and Grampian (203) NHS Boards.
- Therapy for HIV continues to be highly successful: 87% of all patients treated in 2007, including those newly commenced on therapy, had evidence of reasonable viral control indicated by a viral load measure of <400 copies per ml.
- HIV test uptake is increasing: since opt-out testing began in 2002/2003 the number of tests per year has more than doubled, rising to over 37,000 in 2007; this is particularly noticeable in the GUM clinic setting where the increase was over three-fold. 82% of testing is undertaken in this setting.
- Recent screening policies, both the opt-out and the antenatal screening policies introduced in 2003, have been effective at reducing undiagnosed HIV infection.\textsuperscript{11,12}

Figure 2.10: HIV diagnoses, AIDS registrations and deaths, and individuals undergoing CD4 monitoring by year of report/death, Scotland, 1992-2007.

Data source: HIV/AIDS diagnosis and death reports
The prevalence of HIV varies by exposure category and these data are illustrated in Table 2.2.13

The 4% prevalence of HIV among MSM in 2007 is an increase compared to 3% in 2006 but similar to that reported in the previous three years.

Unpublished investigations examining the incidence of infection among MSM undergoing repeat named HIV testing during thirteen years of testing, indicate that incidence increased from 1% (during 1990-2003) to approximately 4% in 2004; this finding is consistent with the increase in the incidence of other STIs, notably syphilis, and the increase in risk-taking behaviour among MSM in recent years.

Among men and women who have not had any high risk exposure outside the UK, the prevalence (1 in 1000) has remained stable for several years. This finding indicates that the incidence of HIV among heterosexual men and women in Scotland is low and not increasing.

Among men and women who have had high risk exposure in (and probably originated from) African countries and have had an attributable HIV test in 2007, prevalence was 10% and 12% among men and women respectively.

Among IDUs who had an attributable HIV test in 2007, prevalence was 0.3%; the corresponding figure in 2006 was 0.8%; HIV transmission among IDUs in Scotland remains very uncommon.

Table 2.2: Prevalence of HIV among adults in Scotland, by exposure category, 2007.

<table>
<thead>
<tr>
<th>Group</th>
<th>Setting</th>
<th>Year</th>
<th>Proportion HIV positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDU</td>
<td>All clinics*</td>
<td>2007</td>
<td>0.3</td>
</tr>
<tr>
<td>Heterosexual (UK exposure)</td>
<td>All clinics*</td>
<td>2007</td>
<td>0.1</td>
</tr>
<tr>
<td>Heterosexual (African exposure)</td>
<td>All clinics*</td>
<td>2007</td>
<td>11</td>
</tr>
<tr>
<td>Pregnant women</td>
<td>Unlinked anonymous monitoring programme*</td>
<td>2007</td>
<td>0.08</td>
</tr>
<tr>
<td>MSM</td>
<td>All clinics*</td>
<td>2007</td>
<td>4</td>
</tr>
</tbody>
</table>

*Adults (aged 15 and over) undergoing attributable testing in Grampian, Greater Glasgow & Clyde, Lothian and Tayside NHS Boards only

# Testing of all pregnant women proceeding to live birth in Scotland

Figure 2.11: HIV diagnoses in Scotland by transmission category, 1998-2007.

![HIV diagnoses in Scotland by transmission category, 1998-2007.](source)

Data source: HIV/AIDS diagnoses reports
3 - SEXUAL HEALTH IN POPULATION SUB-GROUPS

MEN WHO HAVE SEX WITH MEN (MSM)

Background and recent trends

In 2007, among men who have sex with men (MSM):

- 207 cases of HIV were newly identified; this is the highest annual figure since recording began in 1984 and represents a 39% increase on the 2006 total (147). (Note: 113 of these cases are presumed to have been infected in Scotland.)

- 197 new diagnoses of infectious syphilis were recorded; this represents little change on the total observed in 2006 (199).

- A 27% decline was observed in the total number of gonorrhoea diagnoses between 2006 and 2007. A 15% decrease in diagnoses was noted in England.

- An increase in diagnoses of genital chlamydia and genital warts in the GUM clinic setting was also noted between 2006 and 2007.

- There were eight cases of lymphogranuloma venereum (LGV), a resurgent STI affecting MSM across Europe. Note that in previous years, since the UK enhanced surveillance began in 2004/2005, there have been 2, 7, and 4 cases in 2004, 2005 and 2006, respectively.

Acute STIs 2007: rectal infections

- Rectal chlamydia infection accounted for over half (52%) of all 474 chlamydia diagnoses in MSM.

- Note that routine rectal chlamydia testing is performed in MSM in most clinics in Scotland: the revised SIGN 42 guideline (currently at consultation phase) recommends rectal chlamydia testing in MSM reporting receptive anal intercourse.

- In 2007, one third of MSM (91 of 278) with gonorrhoea had a rectal infection.

- Although the annual total of gonorrhoea diagnoses among MSM fell between 2006 and 2007, the upward trend in the proportion of rectal gonorrhoea infections, observed over the last ten years, continued.

- Rectal gonorrhoea is a key marker for unprotected anal intercourse (UAI) and a major co-factor in HIV transmission.
Acute STIs 2007: co-infections

- During 2007, 22% of MSM (60 of 278) diagnosed with gonorrhoea had concurrent chlamydia infection; the corresponding rate for heterosexual men was 32% (111 of 344). These data indicate an overall decrease in the proportion of all men who were co-infected.
- Data from enhanced surveillance indicates that 20% of those with infectious syphilis, among MSM whose HIV status was known, were co-infected with HIV.
- Of a total of twenty-one cases of LGV diagnosed since 2004, fourteen (67%) had HIV infection. The current UK figure (which includes the Scottish data) is 73%.
- 13% of MSM with acute STIs attending GUM clinics were known to be co-infected with HIV.

Table 3.1: Acute STIs in MSM attending GUM clinics, 2007.

<table>
<thead>
<tr>
<th>Infection</th>
<th>Number</th>
<th>Number in HIV-infected MSM (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious syphilis</td>
<td>197</td>
<td>31 (16)</td>
</tr>
<tr>
<td>Gonorrhoea</td>
<td>278</td>
<td>40 (14)</td>
</tr>
<tr>
<td>Of which rectal</td>
<td>91</td>
<td>18 (20)</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>474</td>
<td>71 (15)</td>
</tr>
<tr>
<td>Of which rectal</td>
<td>247</td>
<td>48 (19)</td>
</tr>
<tr>
<td>Genital warts (first episode)</td>
<td>275</td>
<td>25 (9)</td>
</tr>
<tr>
<td>Genital herpes (first episode)</td>
<td>68</td>
<td>16 (24)</td>
</tr>
<tr>
<td>HIV infection (newly diagnosed)</td>
<td>86</td>
<td>N/A</td>
</tr>
<tr>
<td>Other*</td>
<td>362</td>
<td>49 (14)</td>
</tr>
<tr>
<td>Total</td>
<td>1740</td>
<td>232 (13)</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, 2007

- In MSM, the age at diagnosis ranged from 16 to 72 years with a median age of 36 years.
- Over half (52%) of diagnosed MSM probably acquired their syphilis infection through oral sex. 10
- Of the MSM who described their social network(s), 13% reported that they used more than one venue or network to meet potential partners; internet chatrooms, gay bars and/or clubs were the most popular venues for meeting partners.
- A total of 884 partners during the three months prior to syphilis diagnosis, were reported by 188 diagnosed MSM.

Table 3.2: Social networks and types of venues described by 109 MSM, 2007.

<table>
<thead>
<tr>
<th>Social Networks</th>
<th>Frequency of reporting use of venues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet chatrooms/chatlines</td>
<td>33</td>
</tr>
<tr>
<td>Other (regular or ex partner)</td>
<td>29</td>
</tr>
<tr>
<td>Bars and/or Clubs</td>
<td>28</td>
</tr>
<tr>
<td>Sauna</td>
<td>19</td>
</tr>
<tr>
<td>Public sex environments/cruising</td>
<td>16</td>
</tr>
</tbody>
</table>

Data source: NESISS

Table 3.3: Number of contacts for cases of infectious syphilis among MSM, 2007.

<table>
<thead>
<tr>
<th>Reported No. Partners</th>
<th>No. of cases reporting</th>
<th>Total No. Contacts</th>
<th>% Traced</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>57</td>
<td>57</td>
<td>65</td>
</tr>
<tr>
<td>2</td>
<td>55</td>
<td>110</td>
<td>66</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>90</td>
<td>58</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>32</td>
<td>56</td>
</tr>
<tr>
<td>5-9</td>
<td>19</td>
<td>126</td>
<td>33</td>
</tr>
<tr>
<td>10-19</td>
<td>8</td>
<td>105</td>
<td>10</td>
</tr>
<tr>
<td>20-29</td>
<td>7</td>
<td>154</td>
<td>15</td>
</tr>
<tr>
<td>&gt;30</td>
<td>4</td>
<td>210</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>188</td>
<td>884</td>
<td>30</td>
</tr>
</tbody>
</table>

Data source: NESISS

HIV: 2007

- 86% of HIV tests on MSM were performed in the GUM clinic setting.
- Although the number of MSM undergoing HIV testing in 2007 dropped slightly from that in 2006 (3530 versus 3744), there has been a 67% increase in testing since 2003.
- Among MSM having an STI screen in the GUM clinic setting, the uptake of HIV testing ranged from 69% to 89%. In nine NHS boards, the proportion of MSM accepting an HIV test was greater than 80%. (Note: 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.)
In Glasgow, during January to June 2007, 570 MSM were recruited into the unlinked anonymous test programme: of 13 HIV-infected MSM whose HIV status was unknown at the time of their GUM clinic visit, one, who presented with an acute STI, remained undiagnosed after that visit. 

• The main foci of diagnosed HIV infection in MSM occurred in Lothian (30%) and Greater Glasgow & Clyde (29%) NHS Boards.
• 55% (113 of 207) of diagnosed infections were likely acquired in Scotland and a further 24% (49 of 207) within the UK.
• The majority (70%) of those diagnosed were aged 25-44 with a median age of 33; this figure is slightly lower than observations in recent years and, similarly, is lower than the median age observed among syphilis cases in 2007 (36 years).

Geographical issues: access to services, 2007

• As in previous years, the 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).
• The proportion of STI screens in men, which are performed on MSM, ranges from 3% in Lanarkshire NHS Board GUM clinics to 17% and 21% in Greater Glasgow & Clyde and Lothian GUM clinics, respectively. This observation is similar to that in both 2005 and 2006.
• The majority of STI screening in MSM is performed in Lothian and Greater Glasgow & Clyde NHS Boards. There is clear evidence of travel into those areas by MSM from neighbouring NHS boards.
• Between 2006 and 2007, a 19% increase in the total number of screens among MSM was evident; an increase was observed in nine of the eleven NHS board areas where there is access to a GUM clinic.
• Episodes of infection also increased by 25% overall across nine NHS boards.
Prevention

Certain indicators of high risk sexual behaviour among MSM continue to be of considerable concern.

- There is evidence of unprotected anal intercourse (UAI) from both the infection data presented and the behavioural data collected in the gay men’s sexual health cross-sectional surveys, including UAI with multiple and/or casual partners in recent years.\(^{15}\)
- The incidence of infectious syphilis shows no sign of decreasing, and levels of rectal gonorrhoea infection remain high in this group; there is, thus, a genuine risk of HIV acquisition – the data indicate that HIV transmission is occurring.
- In a community sample of men surveyed and anonymously tested for HIV in Glasgow and Edinburgh through the 2005 MRC Gay Men’s Sexual Health Survey, 64% (16/25) of those with undiagnosed HIV infection perceived themselves as HIV negative.

### Table 3.4: MSM accessing GUM clinics: proportion of males screened who are MSM according to location of screening and residence.

<table>
<thead>
<tr>
<th>NHS Board¹</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 population²</th>
<th>Annual MSM screens done on board residents per 100 000 population³</th>
<th>Proportion of screens in MSM done in own NHS board area (%)⁴</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>Ayrshire &amp; Arran</td>
<td>45</td>
<td>41</td>
<td>2.8</td>
<td>35.3</td>
<td>95.5</td>
</tr>
<tr>
<td>Borders</td>
<td>72</td>
<td>38</td>
<td>7.6</td>
<td>108.4</td>
<td>145.4</td>
</tr>
<tr>
<td>Dumfries &amp; Galloway</td>
<td>37</td>
<td>31</td>
<td>8.8</td>
<td>67.4</td>
<td>80.5</td>
</tr>
<tr>
<td>Fife</td>
<td>159</td>
<td>139</td>
<td>6.7</td>
<td>118.3</td>
<td>173.6</td>
</tr>
<tr>
<td>Forth Valley</td>
<td>127</td>
<td>75</td>
<td>5.9</td>
<td>79.9</td>
<td>134.2</td>
</tr>
<tr>
<td>Grampian</td>
<td>433</td>
<td>300</td>
<td>10.9</td>
<td>164.0</td>
<td>159.1</td>
</tr>
<tr>
<td>Greater Glasgow</td>
<td>2 591</td>
<td>1 851</td>
<td>17.4</td>
<td>465.7</td>
<td>359.8</td>
</tr>
<tr>
<td>Highland</td>
<td>88</td>
<td>54</td>
<td>5.5</td>
<td>53.3</td>
<td>115.5</td>
</tr>
<tr>
<td>Lanarkshire</td>
<td>47</td>
<td>37</td>
<td>2.5</td>
<td>20.3</td>
<td>123.7</td>
</tr>
<tr>
<td>Lothian</td>
<td>2 895</td>
<td>1 710</td>
<td>20.9</td>
<td>623.0</td>
<td>561.8</td>
</tr>
<tr>
<td>Tayside</td>
<td>387</td>
<td>241</td>
<td>7.6</td>
<td>191.9</td>
<td>180.8</td>
</tr>
<tr>
<td>Scotland</td>
<td>6 881</td>
<td>4 517</td>
<td>13.8</td>
<td>266</td>
<td>266</td>
</tr>
</tbody>
</table>

There were no data available for Orkney, Shetland and Western Isles NHS Boards.

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.

Where the proportion is greater than 100%, this indicates that screening is being performed on MSM residents from another NHS board.

The denominator is the male population aged 15-64 years.

Mid-year population data for 2007 available from GROS¹.

Data source: STISS.

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1. Data source: STISS.
Targeted health promotion continues and key initiatives during 2007 include:

- **NHS Lothian**, in partnership with a number of voluntary agencies, launched the second phase of the award winning “The HIV Comeback Tour” in November 2007. Posters were displayed and distributed on the Lothian buses and in community venues, libraries and community centres alongside gay venues including pubs and clubs. The three-year campaign aims to raise awareness of HIV among MSM, encourage the use of condoms and regular testing. [http://www.nhslothian.scot.nhs.uk/news/mediaroom/news_release/08_01_17_hiv_dangers.asp](http://www.nhslothian.scot.nhs.uk/news/mediaroom/news_release/08_01_17_hiv_dangers.asp)

  - An evaluation of the first phase of the HIV Comeback Tour indicated that HIV awareness had been raised and that both visits to the specialist GUM clinic service (including a three-fold increase in new patients attending) and HIV testing had increased between 2006 and 2007.  

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

  - Evaluation of the EQUAL project (by the TASC agency) indicated support for the positive sexual health messages conveyed by the materials. These had been successful in raising awareness of HIV and STI issues; one quarter of men had been prompted to discuss HIV with someone else and just over 50% were more aware of both sexual health and other support services available.

- **Peer education and outreach health promotion work using internet chat rooms (Netreach) and going to venues and environments used by MSM** are key activities: these are ongoing and used by most of the voluntary agencies.

- **‘EasyTest,’ a community syphilis testing intervention, was launched in January 2007.** Testing was offered over a two week period in one of Glasgow’s busiest gay bars. This initiative was designed to promote regular six-month sexual health check ups. Sixty per cent of clients (23/38) had never previously used a sexual health service. Most of the testing (60%) was performed in those aged less than 25.

- In **NHS Greater Glasgow and Clyde** there has been a successful roll-out of integrated sexual health services which are designed to be ‘gay-friendly’ and which are supported by peer-outreach from the voluntary sector and which run in partnership with the MSM-only Steve Retson Project (SRP) service.
Young people are defined as those aged less than 25.

- In this section, data on STIs, teenage pregnancy, and contraception use, particularly long acting reversible contraception, are presented.
- In addition, information derived from surveys of sexual behaviour is also included.

Who was affected: 2007

Young people bear the burden of sexually transmitted infections:

- 61% of all STI diagnoses made in the GUM clinic setting are in those aged less than 25.
- 72% of all chlamydia diagnoses were in persons aged less than 25; the majority of these were observed among those aged 20-24
- Three quarters of women, compared to half 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 among those aged less than 25.
Between 2006 and 2007:

- Increases of 27% and 20% in the numbers of genital herpes diagnoses were noted among women and men aged 20-24, respectively.
- A 12% increase in the number of diagnoses of genital warts among women aged 15-19 was observed.
- The number of diagnoses of gonorrhoea in women aged less than 25 rose by 30%.
- There was a 14% decrease in the number of diagnoses of gonorrhoea among men aged 20-24.

**Geographical Issues: genital chlamydia**

**Figure 3.11: Diagnoses of genital chlamydia, made in all settings, in men and women aged less than 19 and aged 20-24, 1998–2007.**

**Access to services: 2007**

**Figure 3.13 Rates of diagnoses of acute sexually transmitted infections in women aged less than 25, made in GUM clinic settings, by NHS board of residence, 2007.**

**Figure 3.14: Rates of diagnoses of acute sexually transmitted infections in men aged less than 25, made in GUM clinic settings, by NHS board of residence, 2007.**

- 35% of young people had one or more acute STIs diagnosed in the GUM clinic setting.
- An increase in acute STI diagnoses in those aged less than 25 was observed across almost all NHS boards during 2007.
- Young people comprise 50% of the workload at GUM clinics throughout Scotland.

**Data source:** Laboratory reports
Chlamydia testing

Young people are at the greatest risk of chlamydia infection through both risk behaviour and their increased biological susceptibility to infection.

- In 2007, 231,776 chlamydia tests were performed; less than half of all testing (47%) was undertaken on persons aged less than 25.\(^8\)
- The majority of samples testing positive (71%, 12,856) were from young people.
- The prevalence in those undergoing testing was 17% and 11%, respectively, in young men and women.
- A greater focus of testing in young people, especially in men, is required to reduce the prevalence of infection and the risk of chlamydia-associated sequelae.

Teenage Pregnancy: 2006 conceptions

- 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).

- There is a strong association between deprivation and rates of teenage pregnancy.
- The most deprived groups have approximately ten times the rate of delivery as the least deprived, and twice the rate of abortion. These rates have varied little between 2000 and 2006. Note there was little variation with age.
- 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

- More information on the analyses of these data can be found at [www.isdscotland.org/teenpregs](http://www.isdscotland.org/teenpregs).
Contraceptive use: 2006

- Young women are being encouraged, where appropriate, to use reliable long term methods of contraception, known as long acting reversible contraception (LARC), to prevent unplanned pregnancy.
- LARC has been included as one of the Key Clinical Indicators (KCIs) for sexual health, in order to encourage boards to increase the availability, and therefore the usage, of long acting methods. The KCI measures LARC uptake by board, and the reports can be accessed at www.isdscotland.org/kci.
- The authors of a paper, published in 2008, examining the attitudes of women in Scotland to contraception found that, using focus groups, women aged less than 25 expressed that an unplanned pregnancy would represent a “shock” and a “disaster”. However, the participants also admitted taking risks with their contraception. The use of LARC should be promoted through the discussion of lasting protection and reversibility.

Sexual behaviour: 2006

- Surveys such as the Omnibus Contraception and Sexual Health UK survey and NATSAL (National Survey of Sexual Attitudes and Lifestyle) provide useful information on this aspect of sexual health and supplement existing clinical data.
- In 2006/07 the Omnibus Contraception and Sexual Health UK survey reported that the youngest women (16–19) were the least likely to be using contraception: 63% of women in this age group were using at least one method of contraception compared with 73–84% of those in other age groups.
- The survey reports that the overall percentage of women using at least one method of contraception has changed little in the 7 years that Omnibus has measured usage.
- For more information on the ongoing work on sexual health surveys and for survey data go to www.isdscotland.org/dash.

Prevention

There are a number of initiatives for young people in operation both at NHS board and national level. A few examples of these are:
- The Sandyford Initiative in Glasgow operates a drop-in service for young people, targeted at the under 18s (The Place, http://www.sandyford.org/); this is being rolled out across the hubs.
- The Healthy Respect project works in partnership with local organisations to provide sexual health education, information and services for young people in Lothian aged 18 and under (www.healthy-respect.com).
- Text 4 U is a mobile phone service providing confidential sexual health advice for young people in NHS Greater Glasgow & Clyde.
- The C card scheme provides free condoms for those who sign up to this service - this operates throughout Scotland. http://www.ccard.org.uk/
- An award winning alcohol support project and brief intervention operated by the Sandyford clinic in Glasgow.
- The first Speakeasy course in Scotland was run by NHS Dumfries & Galloway in 2008. This is a Family Planning Association course specifically developed for parents and carers to help them feel more confident talking to children and young people about sex, relationships and growing up.

Sources: Health Opportunities Team, Edinburgh, Caledonia Youth, NHS Health Scotland, and The Sandyford Initiative
SEXUAL HEALTH IN THOSE AGED 40 AND OVER

Background and recent trends

- Although data show that sexually transmitted infections, unplanned pregnancy and abortion are more prevalent in those aged less than 25, these issues also affect older age groups.
- The demographic changes of recent years 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 aged 40 and over, and has the potential to create new and previously unforeseen sexual health problems in a population which, historically, had not been recognised as having such worries.
- The increasing diagnoses of the same STIs that affect young people are attracting growing public health and media attention. Furthermore, it is recognised that this older age group may have additional sexual health problems, such as erectile dysfunction, which can seriously and adversely affect relationships. Few data concerning such issues are available.

Acute STIs: 2007

- There has been an overall increase in the numbers of acute STIs managed in the GUM clinic setting between 2006 and 2007; this is similar to the trend seen in young people and may be in part 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 less than 25.
- The majority of acute STIs among those aged over 40 are being diagnosed in the 40-49 year age group - 72% compared to 28% in those aged 50 and over.
- The number of infections diagnosed is higher in men than in women which may in part be attributed to the high number of infections in men who have sex with men (MSM), and also that women may be more likely to consult in primary care or sexual and reproductive health clinic settings.

- Amongst women aged over 40:
  - Genital warts are the most prevalent diagnoses.
  - Between 1998 and 2007, diagnoses of genital herpes have increased almost three-fold and genital warts diagnoses have almost doubled. Diagnoses of chlamydia infection have more than doubled.
- Amongst men in this age group:
  - Diagnoses of gonorrhoea and chlamydia increased five-fold and four-fold, respectively, between 1998 and 2007.
  - Diagnoses of genital herpes and of genital warts have doubled since 1998.
  - MSM represent 89%, 64% and 43% of all male diagnoses of infectious syphilis, gonorrhoea and chlamydia, respectively.
In those aged 40 and over:

- Annual numbers of chlamydia diagnoses were consistently higher in women until 2003 when the number of infections in men notably increased.
- Chlamydia diagnoses in men aged 40 and over have increased by 72% since 2003 while diagnoses in women have remained steady at between 160 and 190 per year during this same time period.

Geographical Issues: genital chlamydia

- In men, an increase in diagnoses rates in Borders and Tayside NHS Boards, between 2006 and 2007, was notable.
- Increase in diagnoses rates among women, between 2006 and 2007, were observed in Ayrshire & Arran, Borders and Tayside NHS Boards.
- Between 2006 and 2007, decreases in diagnoses rates among women were observed in five NHS boards: Dumfries & Galloway, Fife, Forth Valley, Lanarkshire, and Lothian NHS Boards.
Those aged over 40 comprise 12% of the workload at GUM clinics throughout Scotland; 14%, 31% and 12% of all consultations were made by heterosexual men, MSM and women, respectively in 2007.

This age group comprise 8% of acute STI diagnoses (including warts) made in the GUM clinic setting; 9% (991), 28% (481) and 5% (483) of diagnoses were made in heterosexual men, MSM and women, respectively.

The rate of acute STIs diagnoses made in the GUM clinic setting in all men aged 40 and over is three times that of women - 168 per 100 000 versus 52 per 100 000; this reflects the high proportion of diagnoses in MSM in this age group.

Genital warts was the most frequently diagnosed infection for both men and women – 48 and 24 per 100 000 for men and women, respectively.

Abortion: 2007

Although the rate of abortion in women aged over 40 has increased from 1.5 per 1000 in 1990 to 2.1 per 1000 in 2007, the rates have remained steady since 1994.

This contrasts with the increase in STI diagnoses 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, and thus a lower risk of unplanned pregnancy.

Alternatively, hormonal methods of contraception may be preferred to barrier methods which offer protection from pregnancy but not from STIs.

Contraceptive use: 2007

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

UK data in the Omnibus survey 2006/07 reports that:

- Older women are more likely to rely on surgical rather than hormonal methods.
- 30% of women aged 40-44 reported having a partner who had undergone a vasectomy compared with fewer than one in a hundred aged 20-24.
- 9% of women under 50 had been sterilised.

ISD publish annual data on sterilisation as one of the Population Based Key Clinical Indicators for Sexual Health. More information can be found at www.isdscotland.org/kci
Sexual behaviour: 2007

- Contrary to popular thinking, a recently published study of the sexuality of older people reported that sex is an important and positive part of the lives of the 70 year old participants.¹⁹
- In 2000 around two thirds of these men and women reported high sexual satisfaction.¹⁹

Prevention

- *Respect and Responsibility, Scotland’s sexual health strategy,* recognises the need to provide good sexual health information, advice and support for older people. There are no current targeted interventions which engage directly with this age group. Results from a recent study in England indicated a significant rise in STIs in those aged over 45, between 1996 and 2003; thus, risk-taking behaviour is occurring.²⁰ Future policy initiatives may need to consider sexual health programmes for this group.
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.
- 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. Ideally, users of health services should be asked to provide details of their own perceived ethnicity.
- Ethnicity is particularly relevant to STIs as different ethnic groups may 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 3.6%.

Table 3.5: Ethnic group as a percentage of all new episodes of care in GUM clinic settings during 2007: ethnic group distribution.

<table>
<thead>
<tr>
<th>Ethnic Group</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>White - Scottish</td>
<td>78.3</td>
<td>74.8</td>
</tr>
<tr>
<td>White - Other British</td>
<td>7.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Irish</td>
<td>1.2</td>
<td>1.0</td>
</tr>
<tr>
<td>White - Other</td>
<td>4.2</td>
<td>4.7</td>
</tr>
<tr>
<td>Mixed</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Indian</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Pakistani</td>
<td>0.5</td>
<td>0.2</td>
</tr>
<tr>
<td>Bangladeshi</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Chinese</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Other Asian</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Black - Caribbean</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>Black - African</td>
<td>1.1</td>
<td>1.1</td>
</tr>
<tr>
<td>Black - Other</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Other Ethnic Background</td>
<td>0.3</td>
<td>0.2</td>
</tr>
<tr>
<td>Not offered</td>
<td>2.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Not provided</td>
<td>2.7</td>
<td>7.4</td>
</tr>
</tbody>
</table>

Data source: STISS

GUM Clinics

- The STISS system requires all patients to have a self-assigned ethnicity recorded if possible.
- 83% 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.

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 2007 data, 10 of 22 HIV positive mothers were born outside the UK. This compares with five of 14 in 2006.

NHS Health Scotland’s Sexual Health Briefing Papers

- NHS Health Scotland’s Wellbeing in Sexual Health (WISH) published two briefing papers in 2007, which looked at two of the more neglected populations in sexual health - young black and minority ethnic people and young people with learning disabilities.
- These papers present evidence on effective and promising practice and highlight the views of these young people. The papers also identify key areas for action and the next steps required to help sexual health and education services meet the needs of these young people. These briefing papers can be accessed at www.healthscotland.com/sexual-health-publications.aspx.
In this section, a summary of the key data for each NHS board is provided. 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 the STISS coding system, boards with low capacity or no GUM services may show low activity or low rates of STISS-coded infection but may still have significant STI-related activity in other health services they provide. Detailed analysis of NHS board data is available online at http://www.hps.scot.nhs.uk/bbvsti/sexuallytransmittedinfection.aspx

Data from the island NHS boards have been excluded as, at the time of data collection, no island board i) had a dedicated sexual health service, or ii) returned STISS data.

When interpreting these data, it is important to consider the following:
- High rates of diagnosed infection can reflect both a high community burden of infection and/or good access to GUM services.
- Low rates of diagnosed infection may reflect the opposite.
- NHS board residents may choose to be diagnosed and/or treated in their board of residence. 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 missing, cases are assumed to be residents of the board of diagnosis.
- The comparison of 2006 and 2007 annual data for Greater Glasgow & Clyde and Highland NHS Boards is limited as a result of the dissolution of the former Argyll & Clyde NHS Board in April 2006 when Clyde was inherited by Greater Glasgow NHS Board, and Argyll was inherited by Highland NHS Board.

Key Points

Among mainland NHS boards:
- A nine-fold variation in gonorrhoea rates in men and women was evident.
- Laboratory-diagnosed chlamydia infection rates among the under 25s varied two-fold for women and for men (figure 3.12).
- Uptake of HIV testing in MSM having a sexual health screen varied from 69% to 89% (figure 3.4).
- A thirty-one fold variation in the rates of sexual health screens for MSM as a proportion of the general population was observed; this finding reflects the concentration of MSM sexual health work undertaken in Greater Glasgow & Clyde and Lothian NHS Board areas.

NHS Ayrshire & Arran
- Outside the island NHS boards, the lowest rates of genital herpes diagnoses among men and women, made in the GUM clinic setting, were observed in Ayrshire & Arran residents.
- Amongst MSM:
  - The lowest uptake of HIV testing amongst those having an STI screen (69%) was observed (figure 3.4).
  - An appreciable proportion of sexual health screens on MSM residents were performed outside the NHS board area (figure 3.6).

NHS Borders
- The lowest mainland rate of diagnoses of chlamydia among women, made in all settings, was observed among residents of Borders.
- Amongst Borders residents, the lowest mainland rate of infectious syphilis diagnoses among men, made in the GUM clinic setting, was observed.
- No gonorrhoea diagnoses were observed among female residents.
- Borders has the lowest mainland teenage pregnancy rate in Scotland (figure 3.17).

NHS Dumfries & Galloway
- The rate of chlamydia diagnoses in women aged less than 25 made in all clinical settings is the highest in Scotland (figure 3.12). The equivalent rate among male residents of NHS Dumfries & Galloway aged less than 25 is the second highest in Scotland (figure 3.12).
- The lowest rates for all acute STIs in women and men aged less than 25 were observed in residents of Dumfries & Galloway (figures 3.13 & 3.14).
- The lowest acute STI rate in men aged over 40 was observed (figure 3.23).
- Outside the island NHS boards, the lowest rates of genital warts diagnoses among men and women in the GUM clinic setting and the lowest rate of chlamydia diagnoses in women in the GUM clinic setting were observed among residents of Dumfries & Galloway.
- No gonorrhoea diagnoses were observed among female residents.
- The lowest rates of abortion in those aged over 40 was observed (figure 3.25).
NHS Fife
- In 2007, the highest rate of genital warts diagnoses among women, made in the GUM clinic setting, was observed in residents of Fife.
- There was a low rate of infectious syphilis diagnoses among men in the GUM clinic setting.
- The highest acute STI rate in women aged over 40 was observed in residents of Fife (figure 3.22).

NHS Forth Valley
- An increase was observed in the diagnoses rate of genital warts among men resident in Forth Valley between 2006 and 2007.
- A high rate of acute STI diagnoses in women aged over 40 was noted (figure 3.22).

NHS Greater Glasgow & Clyde
- In the GUM clinic setting, the highest diagnoses rates of genital chlamydia among men and gonorrhoea among men and women resident in Greater Glasgow & Clyde were observed.
- The rate of gonorrhoea diagnoses among women in Greater Glasgow & Clyde doubled between 2006 and 2007.
- In NHS Greater Glasgow & Clyde during 2007:
  i. a high number of new syphilis cases, and
  ii. the largest number of newly identified HIV cases were observed.

NHS Grampian
- The rate of gonorrhoea diagnoses in men, made in the GUM clinic setting, decreased among residents of Grampian between 2006 and 2007.
- The highest rate of ciprofloxacin-resistant gonorrhoea (66%) was observed in isolates in this area.
- A high proportion (88%) of MSM in Grampian who attended a GUM clinic for an STI screen accepted an HIV test (figure 3.4).
- The lowest acute STI diagnoses rate among women aged over 40 was observed in residents of Grampian (figure 3.22).

NHS Highland
- Amongst MSM having an STI screen, NHS Highland residents have the highest uptake of HIV testing (89%) (figure 3.4).
- The rates of genital chlamydia diagnoses among men, made in all clinical settings and made in the GUM clinic setting, were the lowest in Scotland.
- A high incidence of ciprofloxacin-resistant gonorrhoea (55%) was recorded in residents of Highland.

NHS Lanarkshire
- There is an appreciable number of NHS Lanarkshire residents accessing GUM services outside the NHS Lanarkshire Board area; the largest proportion of sexual health screens on all GUM clinic attendees, including MSM, are performed outside the board area (figure 3.6).
- A high rate of infectious syphilis diagnoses among men was observed in Lanarkshire residents.

NHS Lothian
- The following data are of note in NHS Lothian residents:
  - The highest rates of genital herpes diagnoses in men and women made in the GUM clinic setting.
  - The largest increase in the rate of genital chlamydia diagnoses among men in the GUM clinic setting.
  - The highest rate of rectal chlamydia diagnoses among men.
  - The highest rate of infectious syphilis diagnoses among men in the GUM clinic setting.
  - The highest acute STI rate in men aged over 40 are observed (figure 3.23).
  - The largest proportion of individuals receiving HIV specialist care in Scotland resided in Lothian.
  - The highest rate of abortion was observed in those aged over 40.

NHS Tayside
- The highest acute STI rates in women and men aged less than 25 were observed in Tayside residents (figures 3.13 & 3.14).
- The rates of genital chlamydia diagnoses among both men and women in all clinical settings, and in women in the GUM clinic setting, are the highest in Scotland.
- In male residents of Tayside aged less than 25, the highest rate of genital chlamydia diagnoses, made in all clinical settings, was observed (figure 3.12).
- The rate of genital warts diagnoses in men, made in the GUM clinic setting, is the highest in Scotland.
- Tayside has the highest mainland teenage pregnancy rate in Scotland (figure 3.17).
Sexual Health in Scotland

Sexual health is addressed in a variety of healthcare settings in Scotland. These include:
- Genitourinary Medicine (GUM) clinics
- Community Sexual Health & 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 in addition to some infection specific systems.

1. Laboratories
Data on positive diagnoses of selected STIs, including HIV, are reported from all microbiological laboratories throughout Scotland. These include data on:

2. STISS
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.
- Diagnostic, screening and treatment information.

Definition of an episode of clinical care in STISS:
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 contact tracing, repeat syphilis/HIV screening post-window 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 three 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 three months of the initial attendance, e.g. a patient attending with warts develops gonorrhoea two months later - the gonorrhoea is a new episode.

3. Primary Care Data (Practice Team Information (PTI))
Data on STI consultations with a general practitioner are recorded by the Practice Team Information (PTI) 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, NHS board of residence.

4. Infection-specific systems
(i) 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. 21
- 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. 22

(ii) The National Enhanced Surveillance of Infectious Syphilis in Scotland (NEISS) 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. 23

(iii) Gonococcal Antibiotic Surveillance in Scotland (GASS) is monitored by the Scottish Bacterial Sexually Transmitted Infections Reference Laboratory (SBSTIRL) and data on the prevalence, pattern and trends of antibiotic resistance are available. 9
Acute STIs are defined as:
• Infectious syphilis
• Gonorrhoea
• Genital herpes (first episode)
• Genital warts (first episode)
• NSGI (non-chlamydial)
• 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,

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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 contagiousum, hepatitis A, acute and chronic hepatitis B.
Teenage pregnancy data and sources

Teenage pregnancy data are derived from:

i) registered births and stillbirths (GROS), and,

ii) Notifications (to the Chief Medical Officer for Scotland) of terminations of pregnancy performed under the Abortion Act 1967.

The date of conception for each pregnancy is calculated from the recorded gestation minus fourteen days for stillbirths and abortions. The correction is used 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. Thus, it is 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 per thousand in 2000-2002 to 8.4 per thousand 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, NHS board of residence, amongst other variables, making it possible to monitor where there are potential problem areas.

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 others, 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) are used to determine; (i) the numbers of men and women who have a sterilisation procedure in Scotland, and (ii) 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. 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 sexual and reproductive health settings 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 the sexual and reproductive health settings. The system will be able to provide patient level data on LARC prescribing and usage.

Contraception data utility

Information on contraception usage not only allows the monitoring of the type of contraception used and its popularity, but also the efficacy of various methods, and their relationship to unplanned pregnancies and abortions.
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References


Abbreviations

ART – Antiretroviral therapy
BASHH – British Association of Sexual Health and HIV
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
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
KCI(s) – Key Clinical Indicator(s)
LARC – Long acting reversible contraception
LGV – Lymphogranuloma venereum
MIC – Minimum inhibitory concentration
MRC – Medical Research Council
MSM – Men who have sex with men
NAATs – Nucleic acid amplification tests

NaSH – National Sexual Health System
NATSAL – National Survey of Sexual Attitudes and Lifestyles
NEISS – National Enhanced Surveillance of Infectious Syphilis in Scotland
NHS – National Health Service
NSGI – non specific, non chlamydial, genital tract infection
NSSHAC – 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
SNCGRL – 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
STI – Sexually Transmitted Infection
STI – Unprotected anal intercourse
STI – Unprotected sexual intercourse
UK – United Kingdom