

Key Clinical Indicators for Sexual Health:

Action 12 Subgroup Report on the Baseline Data for 2005

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Introduction

The World Health Organization defines sexual health as:

"A state of physical, emotional, mental and social wellbeing related to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sex experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled."

"Respect and Responsibility: Strategy and Action Plan for Improving Sexual Health" highlighted the need to monitor sexual health service development both nationally and at an NHS Board level. A set of five key clinical indicators (KCIs) has been developed for which baseline data is required. This report sets out these data for 2005 (calendar year) and provides a commentary. The report covers Argyll and Clyde and thus reports on 15 territorial NHS Boards.

One of the overarching aims of Respect and Responsibility is 'to improve the quality, range, consistency, accessibility and cohesion of sexual health services from primary care to genitourinary medicine services, in line with the principles of providing services which are safe, local and appropriate.'

The Key Clinical Indicators for Sexual Health have been developed by the Action 12 subgroup on behalf of the National Sexual Health Advisory Committee (NSHAC). NSHAC provides advice on policy and monitors and supports the implementation of **Respect and Responsibility**. The KCIs are submitted to and approved by the Minister for Health and Community Care, the Chair of NSHAC.

The KCIs are part of the wider quality framework for sexual health. The indicators are informing the development of the Quality Improvement Scotland (QIS) Sexual Health Clinical Standards and also the National Sexual Health System (NaSH) with its associated datasets, developed by the National Clinical Dataset Development Programme (NCDDP).

The indicators are as follows

1: Chlamydia The proportion of the population within each NHS Board having a chlamydia test and the proportion of those tests which are positive. The data will be analysed by gender and be age stratified.

2: Access to Male & Female Sterilisation The number of female tubal ligation procedures and male vasectomies performed by each NHS Board per women and men of reproductive age and the waiting times for these procedures.

3: Termination of Pregnancy Percentage of termination of pregnancy procedures taking place at less than or equal to nine weeks gestation per NHS Board.

4: HIV therapy The proportion of HIV positive people in specialist care and eligible for anti-retroviral therapy (ART) who have been treated and the proportion of those treated who have an undetectable viral load.

5: Hepatitis B Vaccination for MSM The proportion of men who have sex with men (MSM) attending a GUM clinic and eligible for hepatitis B vaccine who receive their first dose in this setting.

Purpose of the report

The report sets out the data available for the Key Clinical Indicators for sexual health in Scotland. These data provide a baseline for the indicators and provide information on the current position for individual NHS Boards.

The Key Clinical indicators for Sexual Health, as agreed by the Minister for Health and Community Care, will allow NHS Boards to monitor some aspects of the progress of sexual health services in the long term.

Key Clinical Indicator 1: Chlamydia

The proportion of the population within each NHS Board having a chlamydia test and the proportion of those tests which are positive. The data will be analysed by gender and be age stratified.

Evidence Base / Reasons for selection

Chlamydia trachomatis is the most prevalent bacterial cause of sexually transmitted infection (STI) in the United Kingdom. Consequences of chlamydia infection may include pelvic inflammatory disease, which can progress to ectopic pregnancy and infertility. However, as an estimated 70% of infected women are asymptomatic, identification remains a challenge (Scottish Intercollegiate Guidelines Network. *Management of Genital Chlamydia trachomatis Infection. A national clinical guideline*. No.42. Edinburgh: SIGN, March 2000.)

In Scotland, laboratories return counts of the number of positive chlamydia tests to Health Protection Scotland (HPS) on a weekly, monthly or quarterly basis. Information is not routinely collected centrally from laboratories about the number of samples testing negative for chlamydia. Accordingly, it has not been possible in the past to describe chlamydia testing activity across Scotland, nor to define differences in testing or prevalence of infection in those undergoing testing by age, sex and NHS board region.

The new data presented in this report allows the reporting of these differences.

Data Collection

A proforma was sent to each of the NHS laboratories that perform chlamydia testing in Scotland. Using this proforma, aggregate data (by age and gender) about chlamydia tests performed during 2005 were collected. Data on persons undergoing chlamydia testing were available for 2005 from 14 of the 15 testing laboratories throughout Scotland.

Baseline Data, 2005

In 2005, 222,709 chlamydia tests were performed in Scotland. The tables and figures display data for those aged 15–24 and 25–49 only, as these are considered to be the key groups affected by chlamydia. It should be noted that this total contains some duplicate tests for the same individual. It is estimated that approximately 5–20% of tests (11,135 - 44,541) in a calendar year are repeat tests for the same individual as a result of: (i) repeat samples taken at a single consultation; (ii) samples taken at different consultations for the same clinical episode, and (iii) samples taken for clinical episodes occurring more than once.

Table 1a
Number of chlamydia tests performed and percentage of positive tests
by age group,* gender and NHS Board, Scotland 2005.

Sex		Total number of tests performed (% samples testing positive)			
		Men		Women	
Age		15 to 24 years	25 to 49 years	15 to 24 years	25 to 49 years
NHS board region of testing [^]	Argyll and Clyde# (AC)	831 (21)	765 (9)	5408 (12)	6604 (3)
	Ayrshire and Arran (AA)	1245 (20)	1090 (11)	4425 (14)	5053 (3)
	Borders (BR)	298 (18)	448 (6)	1136 (12)	1166 (4)
	Dumfries and Galloway (DG)	566 (19)	484 (10)	2569 (11)	3104 (2)
	Fife (FF)	1280 (21)	1389 (9)	4857 (11)	5605 (3)
	Forth Valley (FV)	1091 (19)	923 (10)	3929 (11)	3737 (3)
	Grampian (GR)	2418 (20)	3055 (10)	9215 (11)	11147 (3)
	Greater Glasgow (GG)	4857 (16)	6239 (8)	16282 (12)	16514 (3)
	Highland (HG)	993 (17)	1118 (9)	3558 (11)	4332 (3)
	Lanarkshire (LN)	1462 (18)	1734 (10)	5302 (12)	8543 (3)
	Lothian (LO)	4326 (16)	6679 (8)	15831 (11)	16721 (3)
	Tayside (TY)	2101 (22)	1814 (10)	6472 (14)	6354 (3)
	Scotland	21468 (18)	25738 (9)	78984 (12)	88880 (3)

*The results for those aged under 15 and over 50 have been omitted

One laboratory in this NHS board area was unable to return data by the deadline and therefore, data for Argyll and Clyde is incomplete

[^]Island NHS Boards are omitted as samples are sent to mainland laboratories

Commentary

Of those tested: 18% of young men (3,945) aged less than 25 were positive for chlamydia compared to 12% of young women (9,217); in those aged over 25, 9% of men (2,316) versus 3% (2,572) women were positive.

Almost four times as many positive diagnoses were made in women undergoing testing who were aged less than 25 than in older women. In Scotland as a whole, the **highest proportion of samples testing positive was identified among women aged 15-19 (14%) and men aged 20-24 (18%)**; the proportion of positive tests declined in older age groups.

The proportion of positive tests was higher in men, compared to women, among all age groups. The higher proportion of positive tests in men, compared to women can be explained by the fact that the majority of tests on

men are performed in the GUM setting and/or on symptomatic men. However, the total number of tests performed on women was over three times higher than on men.

Across all NHS board areas, there was little variation in the percentage of positive chlamydia tests among women;

- in those aged 15-24, this ranged from 11% to 14% (median 11.5%) and,
- in those aged 25-49, from 2% to 4% (median 3%).

Across all NHS board areas, the percentage of positive tests among men ranged from;

- 16% to 22% (median 19%) among those aged 15-24 and,
- 6% to 11% (median 9.5%) among those aged 25-49.

Figure 1a
Rates of chlamydia tests performed per 1000 women and percentage of positive tests by age group, and NHS Board region of testing, Scotland 2005.

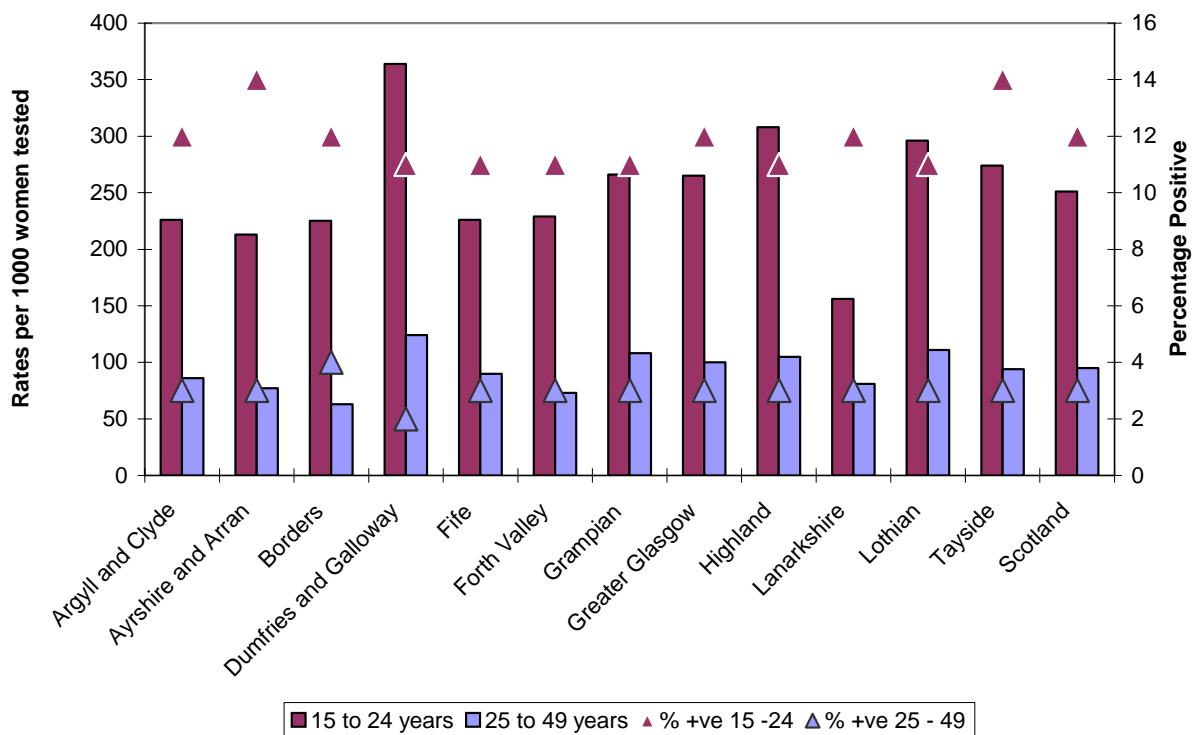
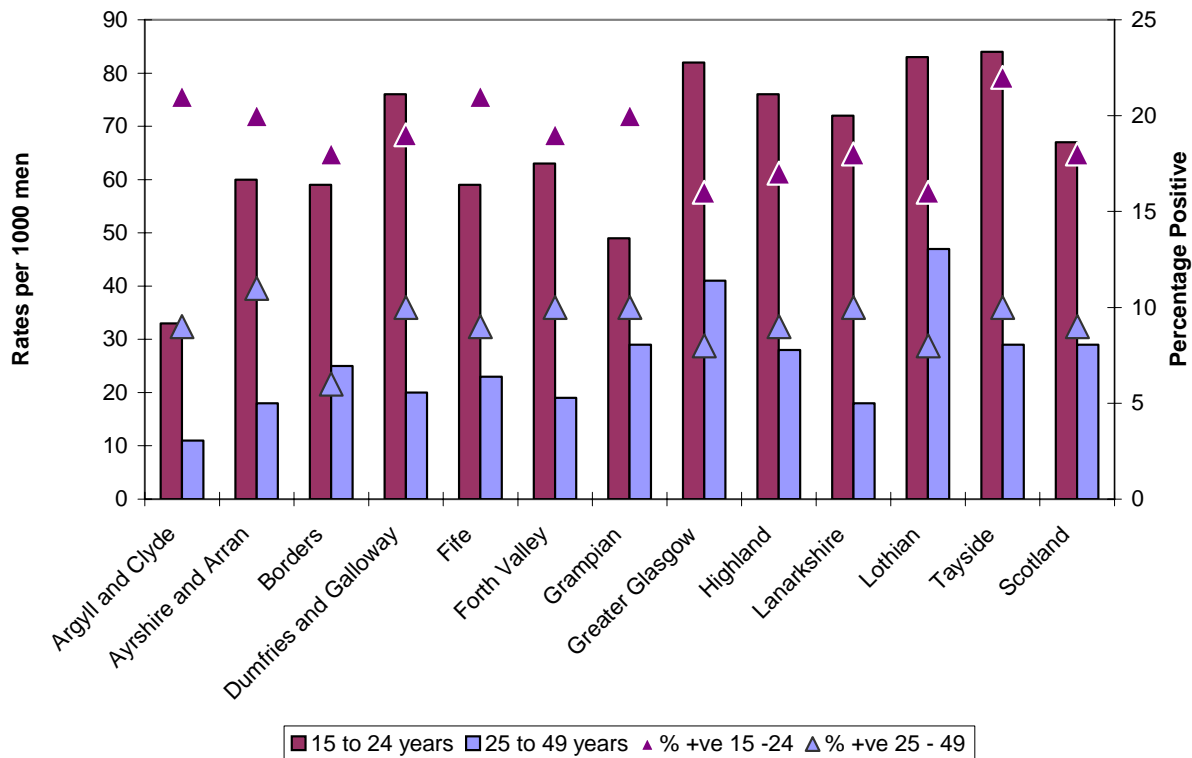


Figure 1b
Rates of chlamydia tests performed per 1000 men and percentage of positive tests by age group, and NHS Board region of testing, Scotland 2005.



It is estimated that 0.6% (1,336) of the tests were performed on non-genital (ophthalmic) samples. Although the laboratories were not asked to give a breakdown of the samples, data collected by HPS suggests that these samples are usually from babies. Evidence suggests that if mothers have genital chlamydia infection, there is a risk that their babies may be born with chlamydia conjunctivitis.

In 2005, there was little regional variation in chlamydia testing rates among women. Bearing in mind that an estimated 5-20% of chlamydia tests undertaken on individuals in a calendar year are repeats, **the data indicate that between 20% and 30% of women, aged 15-24, in each NHS board region had a test performed.** There were two exceptions: the highest rate of testing among women in this age group was observed in Dumfries and Galloway NHS Board (36%) and the lowest rate was observed in Lanarkshire NHS Board (15%)

Testing is encouraged among young people in Dumfries & Galloway NHS Board, as a result of increased awareness of the need for testing among primary care staff; this is enhanced by the availability of youth clinics in every town with a secondary school – these operate during lunch times and after school where possible. In Lanarkshire NHS Board the lower testing rates in

2005 may be linked to a lack of testing in women undergoing termination of pregnancy and also to lower rates of opportunistic testing in young people. This is being addressed by the proposed introduction of opt-out chlamydia testing in those aged less than 25 (i.e. all patients under 25 will be tested unless they actively opt out of testing).

Among men aged 15-24, the data indicate that between 3% and 8.4% of the population in each NHS Board region had a test performed. The highest rates were observed in Tayside (8.4%), Lothian (8.3%), Greater Glasgow (8.2%) and Dumfries and Galloway (7.6%) NHS Boards. The lowest rates among men in this age group were observed in Argyll and Clyde (3.3%) and Lanarkshire (4.2%) NHS Boards.

Conclusion

The SIGN guideline on the Management of Genital *Chlamydia trachomatis* Infection recommends the opportunistic testing of women younger than 25 years and sexually active.

Although the majority of samples testing positive (73%, 13,162) were from persons aged less than 25, 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. The ratio of testing in the older vs. younger populations is 1.14: 1.

The majority of testing (78%, 173,112) was performed on women, although the proportion of positive tests was higher in men.

The data for 2005 would suggest that NHS Boards should be working toward targeting and testing the most at risk groups, namely both men and women under 25.

Key Clinical Indicator 2: Access to Male & Female Sterilisation

The number of female sterilisation procedures and male vasectomies performed by each NHS Board per women and men of reproductive age and the waiting times for these procedures.

Evidence Base / Reasons for Selection of Indicator

The ONS Omnibus Survey on Contraception and Sexual Health reports that in 2005/6 10% of women under 50 were sterilised for contraceptive purposes with an additional 3% having had an operation for which sterilisation was an effect, but not the primary purpose of the operation. 97% reported that their surgery had been carried out within the NHS. 18% of men under 70 had undergone a vasectomy of whom 73% stated their operation had been performed within the NHS.

Sterilisation, particularly male sterilisation, is highly cost effective, and failure rates are extremely low (*Male and Female Sterilisation Guideline, Royal College of Obstetricians and Gynaecologists, January 2004*).

Female Sterilisation

Data Collection

Female sterilisation data are routinely collected by Information Services Division (ISD) and these data are obtained from Scottish Morbidity Records for acute hospital discharge and maternity episodes (SMR01 and SMR02). Very few sterilisations are recorded on SMR02 (415 procedures in 2005), but waiting times data can only be obtained from SMR01, where almost all female sterilisations are recorded. Waiting times are not applicable for SMR02 as the sterilisation procedure takes place during the maternity episode.

Baseline Data, 2005

Baseline data on female sterilisation for 2005 have been collated from SMR01 and SMR02.

Table 2a

**Female Sterilisation (SMR01 Acute Discharge Summary)
Rates and Waiting Times* of Female Sterilisation Episodes in Scotland
By NHS Board of Treatment and Calendar Year of Discharge**

	2005	
	Rates per 10,000	% waiting >3 months
Argyll and Clyde	24	12%
Ayrshire and Arran	25	53%
Borders	40	13%
Dumfries and Galloway	22	43%
Fife	33	38%
Forth Valley	30	33%
Grampian	13	47%
Greater Glasgow	12	22%
Highland	16	58%
Lanarkshire	22	53%
Lothian	17	61%
Orkney Islands	29	20%
Shetland Islands	17	28%
Tayside	21	37%
Western Isles	29	15%
Scotland	20	42%

* Waiting times calculations include patients with ASCs - Availability Status Codes - certain specified circumstances when it may not be possible to meet a waiting time standard. The recording of ASCs on inpatient/day case discharge data is not mandatory and consistency of recording will vary across NHSScotland.

Table 2b
Female Sterilisation (SMR02 Maternity Discharge Summary)
Rates of Female Sterilisation Episodes in Scotland
By NHS Board of Treatment and Calendar Year of Discharge

	2005
	Rates per 10,000
Argyll and Clyde	5.8
Ayrshire and Arran	4.8
Borders	1.5
Dumfries and Galloway	5.4
Fife	5.8
Forth Valley	3.7
Grampian	3.5
Greater Glasgow	3.4
Highland	8.8
Lanarkshire	3.5
Lothian	3.8
Orkney Islands	5.8
Shetland Islands	—
Tayside	—
Western Isles	9
Scotland	3.9

Commentary

SMR01 Acute Discharge Summary - In this context, the waiting time is calculated as the difference between the date the decision was made to operate to the actual date of operation. Waiting times figures for 2005 data show considerable variation between NHS Boards.

Data in Table 2a show that only 13% of patients waited more than three months for sterilisation in the Borders (40 patients per 10,000 women of reproductive age population) whereas Highland (16 per 10,000) and Lothian (17 per 10,000) are showing percentage waits of 58% and 61% respectively. Borders data not only shows lower waiting times but also higher rates of treatment.

Greater Glasgow shows a low proportion of women waiting for more than three months (22%) but has lower rates of procedure at 12 per 10,000 compared with, for example, 17 per 10,000 in Lothian. There appears to be no correlation between urban centres and high levels of sterilisation and/or low waiting times.

Five of the NHS Boards are reporting sterilisation rates lower than the total figure for Scotland of 20 per 10,000. Argyll and Clyde, Borders and the Western Isles show the lowest percentage of women waiting more than three months.

SMR02 Maternity Discharge Summary - In 1985 1,214 female sterilisations were recorded on SMR02, by 1995 this had reduced to 570 and in 2005 to 415. Numbers for each NHS Board are small, with Borders only recording three in 2005 and Tayside and Shetland recording none at all.

Other than Borders, Greater Glasgow shows the lowest rates of procedure (three per 10,000), which reflects the SMR01 data (12 per 10,000). Argyll and Clyde and Highland are showing the highest rates of procedure at 6 and 9 per 10,000.

The small numbers for this procedure would appear to reflect recommendations of the Royal College of Obstetricians and Gynaecologists that sterilisation should be performed as an interval procedure whenever possible, (i.e. an appropriate time after the pregnancy) rather than in association with pregnancy. Current evidence suggests that in sterilisation associated with pregnancy regret rate and failure rate may be higher than that from an interval procedure. Sterilisation associated with vaginal delivery is no longer a common procedure in the UK and when associated with pregnancy is most likely to occur at the same time as a caesarean section (*Male and Female Sterilisation Guideline, Royal College of Obstetricians and Gynaecologists, January 2004*).

Male Sterilisation

Data Collection

Male sterilisation data can be reliably obtained from SMR01. However, the procedure is performed in various settings including family planning clinics and GP surgeries where SMR01 data are not routinely collected. In order to obtain this information, the Lead Clinicians for Sexual Health were asked to collate these data for their NHS Board and return it to ISD. After discussion with the lead clinicians a letter and template were sent, detailing the data required.

Baseline Data, 2005

Information on vasectomy for 2005 has been obtained in three ways: through SMR01, directly from the NHS Boards and from hospital laboratories that carry out post vasectomy semen testing (Table 2c).

Table 2c
Vasectomy Numbers in 2005
SMR01, NHS Board and laboratory sample testing data by calendar year and NHS Board

	Number Performed (SMR01)	Number Performed (Recorded elsewhere)	Total (SMR01+recorded elsewhere)	Number Semen Samples Tested ¹
Argyll and Clyde ²	436	84	520	960
Ayrshire and Arran	529	N/A - all performed as daycase / inpatient	529	802
Borders	136	N/A - all performed as daycase / inpatient	136	101
Dumfries and Galloway	95	N/A - all performed as daycase / inpatient	95	158
Fife	443	N/A - all performed as daycase / inpatient	443	772
Forth Valley	50	382	432	936
Golden Jubilee	31	N/A	N/A	N/A
Grampian	133	165	298	3184 [^]
Greater Glasgow	238	1401	1639	3003
Highland	378	N/A - all performed as daycase / inpatient	378	1000
Lanarkshire	24	513	537	523
Lothian	235	650	885	2021
Orkney Islands	25	N/A - all performed as daycase / inpatient	25	See Grampian
Shetland Islands	26	N/A - all performed as daycase / inpatient	26	See Grampian
Tayside ³	361	119	480	1477
Western Isles	34	N/A - all performed as daycase / inpatient	34	29
TOTAL	3174	3314	6457	11782

[^] Also covers Orkney and Shetland samples

¹ Vasectomy data is currently difficult to obtain quickly. To add to the 2005 baseline, numbers of semen samples post vasectomy have been collated from the hospital laboratories throughout Scotland

² One laboratory was unable to provide these data due to resource constraints

³ Approximately 60 outpatient procedures are not included in Tayside's total due to a data management issue. This problem has now been rectified.

In 2005 SMR01 recorded a total of 3,174 vasectomies in Scotland performed in hospital as an inpatient or daycase. The NHS Board data, which cover acute, outpatient and community procedures, includes those procedures recorded under SMR01, and shows that from the data available, there were 6,457 vasectomies carried out in total in 2005.

Table 2d
Total Average Wait for Vasectomy in 2005 by Health Board of Treatment
Data Provided Directly From NHS Boards

Ayrshire and Arran	36 weeks
Borders	12 weeks
Clyde	
Sandyford	14 weeks
RAH	13 weeks
IRH	15 weeks
Vale of Leven	26 weeks
Dumfries and Galloway	16 weeks
Fife	18 weeks
Forth Valley	52 weeks
Glasgow (Sandyford Initiative)	
Argyll & Clyde	16 weeks
Glasgow	12 weeks
Ayrshire	11 weeks
Forth Valley	9 weeks
Lanarkshire	10 weeks
Grampian	
Inpatient	17 weeks
Outpatient	12 weeks
Highland	24 weeks
Lanarkshire	
GP	5 weeks
Sandyford	10 weeks
Lothian	
Hospital	32 weeks
Dean Terrace	32 weeks
Orkney	12 weeks
Shetland	12 weeks
Tayside	
Inpatient	9 weeks
Outpatient	20 weeks
Western Isles	18 weeks

When hospitals are using SMR data to record patients, the waiting times are calculated by the date the decision was made to admit the patient to procedure – they do not record the ‘total wait’ from referral to procedure. The NHS Boards were asked to supply the ‘total wait’. NHS Boards presented an average/estimated wait. The longest wait is usually between referral and counselling. However it is important to note that **many services build in a wait of around 4 – 5 weeks between counselling and procedure**. This is good practice to allow men the time to change their minds, if necessary.

The data presented in table 2d has been estimated by each Board and is intended as exploratory information rather than accurate statistics.

Table 2e
Vasectomy rates per 10, 000 and waiting times*
2005 by NHS Board of Treatment
SMR01 (Acute Discharge Summary)

	2005		
	Rates per 10 000	Percentage waiting >3 months	Percentage waiting >6 months
Argyll and Clyde	42	25%	7%
Ayrshire and Arran	50	87%	41%
Borders	44	51%	17%
Dumfries and Galloway	23	50%	4%
Fife	42	80%	28%
Forth Valley	51	91%	89%
Grampian	18	44%	10%
Greater Glasgow	61	23%	9%
Highland	60	64%	28%
Lanarkshire	32	58%	54%
Lothian	36	97%	90%
Orkney Islands	43	12%	8%
Shetland Islands	38	11%	4%
Tayside	43	73%	18%
Western Isles	43	23%	6%

*The data presented in the table above represent a combination of SMR01 data and that presented by the NHS Boards directly. It should be noted that while SMR counts waiting time from the date the decision was made to operate, to the actual date of operation, the Boards were asked for the wait from GP/Self referral to procedure. SMR01 Waiting times calculations include patients with ASCs - Availability Status Codes - certain specified circumstances when it may not be possible to meet a waiting time standard. The recording of ASCs on inpatient/day case discharge data is not mandatory and consistency of recording will vary across NHSScotland.

All patients on the inpatient/daycase waiting list must be treated within the national maximum waiting time of 18 weeks by the end of 2007.

Commentary

Data were requested from the NHS Boards as the SMR01 data only records those who have the procedure in hospital.

All 15 of the NHS Boards returned data.

Of those 15, 13 refer patients to hospital for the procedure, via GP or Family Planning referral. Four refer patients to Family Planning for vasectomy; this can be via self-referral or through the GP. Lanarkshire has a GP service to which patients are referred via their usual practice and also refers to the Sandyford clinic in Glasgow. The "Clyde region" (part of the former Argyll and Clyde Health Board, now within Greater Glasgow) and Lothian can refer to hospital or to family planning services.

Two major pathways can be identified (Appendix I).

1. GPs or Family Planning clinics refer the patient to the hospital for an outpatient clinic appointment. Once that has taken place, the patient is given an appointment for a procedure. Alternatively, the GP or FP clinic will carry out the counselling and the patient only attends hospital for the procedure.
2. Referrals are made to the Family Planning clinic by the patient themselves, the GP or by the hospital - usually when the hospital is trying to reduce its waiting list. This happened, for example, in 2005 when the hospital waiting list for vasectomy in Lanarkshire grew large. The patients were referred onto the Sandyford by the hospital to reduce the waiting list. In this type of referral, the patient has both counselling and the procedure at the family planning clinic. The patient is given the date for the procedure after the counselling appointment has taken place.

It was anticipated that a great deal more procedures were taking place outwith the hospital sector – in general practice, family planning, and in outpatients. Although Outpatient data are collected via SMR00, outpatient procedure activity is not consistently recorded throughout NHSScotland so does not provide an accurate picture. However, the information from the NHS Boards did not support this picture of vasectomies being performed in a variety of settings.

GPs - The Lead Clinicians for Sexual Health report that very few GPs are carrying out the procedure, and the data returned revealed that only Lanarkshire offer a GP run service, as part of minor surgery arrangements. This may be attributed the GMS Contract since GPs no longer receive a fee for carrying out this procedure. GPs do continue to refer patients to hospital or to family planning clinics.

Family Planning clinics refer patients to hospital for vasectomy, whether that is inpatient/day case or outpatients. Some clinics are also able to offer a vasectomy service within the clinic.

- The Dean Terrace practice in Lothian carries out approximately 650 vasectomies annually at full capacity.
- The Sandyford Initiative Family Planning clinic provides the vasectomy service for the whole of Greater Glasgow and Clyde, apart from those who require general anaesthetic. This includes patients resident in other NHS Boards. In 2005, the Sandyford clinic carried out 1,401 vasectomies.
- Forth Valley has combined the Family Planning services and acute services, to create a 'vasectomy clinic'. Family Planning provides counselling, nursing and clerical input and organises the clinics, and the acute surgeons then provide the procedure.

Between 2004 and 2005 the SMR01 data show that some NHS Boards exhibited a decline in numbers of vasectomies, which may be associated with the cessation of fees for this procedure. Lanarkshire, Lothian and Greater Glasgow showed the largest change, and interestingly, these three boards

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make great use of community facilities, namely Dean Terrace Family Planning Clinic, the Sandyford Initiative and Lanarkshire's GP service. The Family Planning clinics are also able to suggest other contraceptive options to couples, such as Long Acting Reversible contraception. Those men discussing their contraception options with urologists or general surgeons may not be given information about LARC as frequently.

This drop in numbers is mirrored in the data obtained from the Pathology laboratories where 73% show a decline in numbers of samples tested between 2003 and 2005 and the Scotland total shows a similar drop of over 3000. St Johns Hospital in Lothian commented that the sudden drop in 2005 from 771 in 2003 to 301 in 2005 is due to the fact that the Urologists no longer perform the procedure there.

Semen samples post vasectomy

Vasectomy data are currently difficult to obtain quickly. In order to add to the picture for the 2005 baseline, numbers of semen samples post vasectomy have been collated from the hospital laboratories throughout Scotland. These data include repeat sampling and duplicates. It is not, therefore, intended to provide accurate patient numbers but instead a broad picture of the health board activity. The data were obtained from each NHS Board for 2003, 2004 and 2005. Some NHS Boards have all their samples analysed in one laboratory, for example Ayrshire and Arran, but others use more than one laboratory, for example three laboratories cover Lanarkshire sample testing.

It is difficult to calculate numbers of patients from semen samples, although some centres were able to provide this. Practice varies between centres, with some asking for three samples before declaring the patient clear and others being less specific. It should also be noted that not all hospitals or clinics would necessarily send samples to the local laboratory.

NHS Board data, combined with the SMR data and the information obtained through semen sampling post vasectomy, has given us a broad picture of vasectomy activity in Scotland. However, the collection of the NHS Board data has been resource intensive. Vasectomy data will be one of the considerations for the National Data Collection Framework for Sexual Health.

Long term data – male and female sterilisation

Figure 2a
Numbers of female and male sterilisations
1985 – 2005 by NHS Board of Treatment

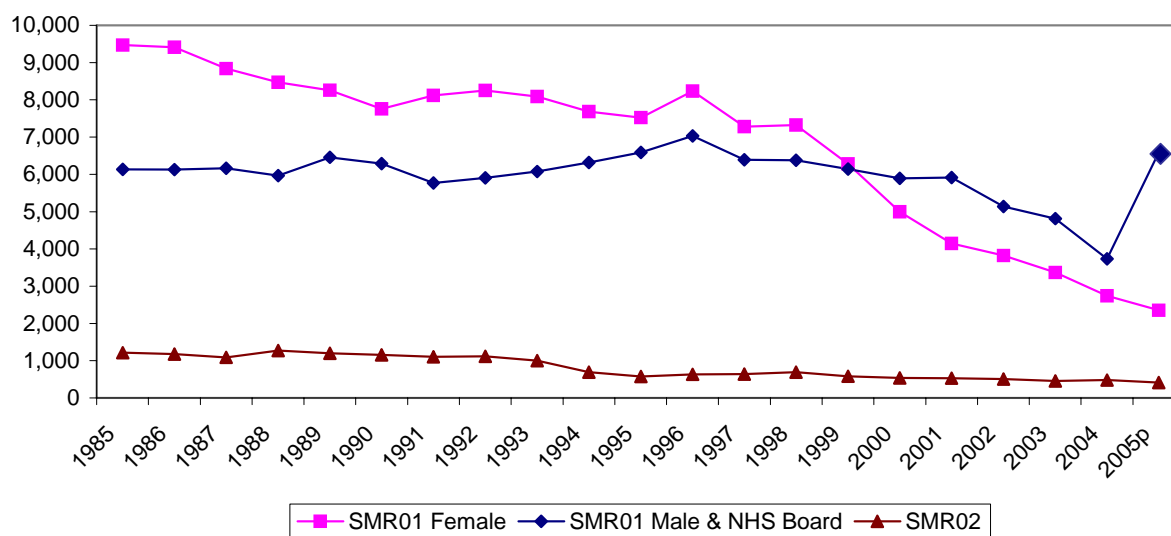


Figure 2a shows the national trend in male and female sterilisation over the last 20 years, from SMR01 and SMR02. For 2005, the vasectomy data includes those procedures not performed as an inpatient or daycase. It shows a clear reduction in female sterilisation; acute female sterilisations having reduced by more than 75%. Vasectomies performed in hospital have reduced by almost half.

It should be noted that as SMR01 only covers NHS hospital inpatient and daycase procedures it does not include all vasectomies undertaken during this time. In 2005, 49% of all vasectomies were not performed as inpatient or daycase procedures, as represented on figure 2a for vasectomies in 2005. Once added to the SMR01 data, the numbers of vasectomies performed rise sharply and are almost doubled for 2005.

Figure 2a clearly shows the downward trend in female sterilisation over the past 20 years. The SMR01 figures show that between 1985 and 2005 the number of female sterilisations has reduced by 76%. The SMR02 female sterilisation data reflect this trend, although the numbers are much smaller. The possible reasons for these changes are discussed in the commentary below, the most significant being the technical advances around long acting reversible methods of contraception (LARC).

- **Waiting times** – As female sterilisation can only take place in the acute setting, there is the potential for waits, and unlike male sterilisation there are no community based alternative facilities in which the procedure can take place. In 2005 over 40% of women waiting for

sterilisation were waiting over three months. Increasing reluctance to wait is one possible explanation for the downward trend in numbers of procedures.

- **Long Acting Reversible Methods of Contraception (LARC)** - The increased availability of LARC allows women to avoid an invasive procedure in hospital and still not have to worry about forgetting to take or use a contraceptive. GP surgeries offer injections but intrauterine devices (IUD), intrauterine systems (IUS) and implants are offered less often and sometimes not at all. Family Planning clinics are able to offer women all four methods. No accurate national data are currently available on LARC, however an additional indicator for LARC has been proposed (see section 'Potential Indicators').
- The withdrawal of payments for Family Planning procedures in December 2005 (*NHS Circular PCS (DD) 2005/13*) means that doctors are no longer receiving fees for carrying out these procedures. Although not immediately evident in the current data, it should be noted that this change might contribute to a change in numbers and waiting times in the future.

The SMR01 figures for vasectomy show that between 1985 and 2005 the number of male sterilisations performed in hospital have reduced by just under 50%. As with the female sterilisation data, it is not possible to know why this has occurred.

Conclusion

The reduction in female sterilisation over the last 20 years would imply that women are increasingly looking for safer and less intrusive ways of ensuring long term contraception. The availability of LARC means that women no longer have to go through a general anaesthetic to prevent pregnancy reliably in the long term and this decline in numbers should perhaps not be viewed negatively.

Vasectomy, however, offers men a safe and reliable method of contraception and should be easy to access.

Services are organised differently through Scotland but the numbers of NHS Boards offering vasectomy within the general and urology lists rather than specific vasectomy lists suggests that the availability of this procedure is restricted.

Those services outwith hospital are offering a more easily accessible service, for example the Family Planning clinics in Edinburgh and Glasgow which the patient can approach directly. However, these services are limited.

The development of more community services has the potential to significantly increase the availability of this contraceptive procedure.

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Key Clinical Indicator 3: Termination of Pregnancy

Percentage of termination of pregnancy procedures taking place at less than or equal to nine weeks gestation per NHS Board.

Evidence Base / Reasons for Selection of Indicator

The earlier a termination of pregnancy procedure is performed, the less physical complications and psychological distress experienced (*The Care of Women Requesting Induced Abortion Guideline, Royal College of Obstetricians and Gynaecologists, September 2004*). In addition, there are cost efficiencies to the NHS which have been demonstrated in England and Wales (*'The Economics of Sexual Health' Nigel Armstrong and Cam Donaldson fpa 2005*).

There is a wide variation in the gestation at which termination of pregnancy procedures are performed between NHS Boards. There is evidence that organisational change can improve access and efficiency. This indicator will promote access, choice and efficiency standards across the system, including primary care, sexual & reproductive health clinics, voluntary services and hospital services as well as improving how they work together.

All women need time to consider their position and seek counselling as necessary. For an individual woman, the earliest possible procedure may not be beneficial, but for women in general, the earlier the procedure is performed, the less the physical complications and psychological distress. This KCI seeks to promote optimal quality of care for this group of women, by removing bureaucratic delays or inefficiencies that increase suffering. It is recognised that a small minority of women may need longer to make a decision, present late or delay the decision; this is however a small proportion of women and will not substantially affect a Board's performance. Pursuing this KCI is likely to decrease the amount of time a woman has to wait to access advice or have a procedure if she has made a decision.

Data Collection

No additional data was required over and above that already collected in accordance with the 1967 Abortion Act.

The data also are analysed by age and deprivation category to help identify inequalities in opportunities to access services due to poverty.

Baseline Data 2005

Table 3a
Abortions ¹ performed in Scotland
Percentage of women having terminations at <10 weeks gestation
By NHS Board of Residence and calendar year

	2005
	% terminations at <10 weeks (estimated gestation)
Argyll & Clyde	66.2
Ayrshire & Arran	45.3
Borders	80.1
Dumfries & Galloway	65.6
Fife	75.2
Forth Valley	74.3
Grampian	69.5
Greater Glasgow	73.8
Highland	60.3
Islands ²	59.3
Lanarkshire	43.8
Lothian	64.1
Tayside	77.1
Scotland	66.5

1 Refers to therapeutic abortions notified in accordance with the Abortion Act 1967.

2 Orkney, Shetland and Western Isles NHS board areas.

p Provisional.

Source : Notifications (to the Chief Medical Officer for Scotland) of abortions performed under the Abortion Act 1967.

Commentary

In 2005 there were 12,603 therapeutic abortions performed compared to 12,461 in 2004. This is consistent with the pattern seen in recent years. In 2005, the rate per 1,000 women aged 15-44 was 11.9, compared to 10.9 in 1996.

The rate of terminations for every 1,000 women aged 15-44 is highest in Tayside and Lothian NHS Boards of residence, 16.4 and 14.1 respectively, whilst the Islands (Orkney, Shetland and Western Isles) and Argyll & Clyde have the **lowest** rates, 4.9 and 8.3 respectively.

In 2005, the rate of termination per 1,000 women was **highest** in women aged 16-19 (23.1) and 20-24 (22.9), **reducing** for women aged 25-29 (15.6) to 2.0 for women aged over 40. The rate of therapeutic abortions in most deprived areas was **higher** than in areas of low deprivation, 15.4 and 8.5 respectively.

The vast majority (96.0%) of terminations were undertaken under Ground C (the pregnancy has NOT exceeded its 24th week and that the continuance of

the pregnancy would involve risk, greater than if the pregnancy were terminated, of injury to the physical or mental health of the pregnant woman).

The use of medical methods continues to increase, with 58.8% of all terminations performed medically in 2005 compared to 16.4% during 1992.

Of the 12,603 therapeutic abortions performed in Scotland during 2005, 99.1% of these were carried out in NHS premises.

The proportion of early terminations has been relatively stable since 2000, with 66.5% of all terminations performed at less than 10 weeks in 2005. This compares to 55.8% of terminations performed at less than 10 weeks in 1992.

Figure 3a
Percentage of terminations <10 weeks estimated gestation by NHS Board of Residence for 2005

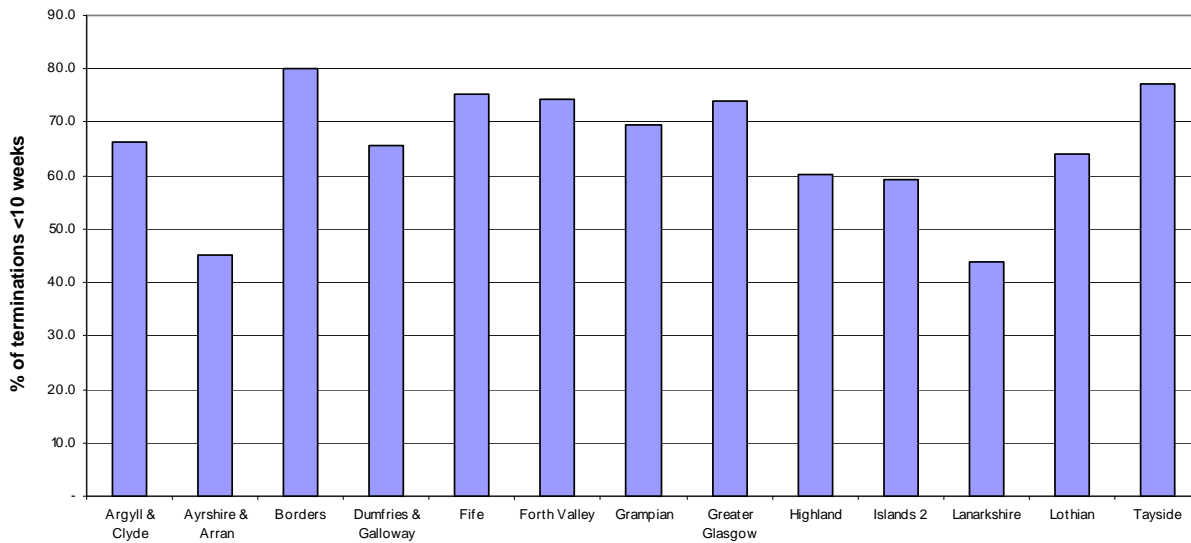


Table 3a and Figure 3a (above) illustrate that the percentage of women undergoing terminations at less than 10 weeks was highest in Borders and Tayside, 80.1% and 77.1% respectively. Lanarkshire and Ayrshire and Arran have the lowest percentages, 43.8% and 45.3% respectively.

Abortion by Age and Deprivation

In 2005 the total number of abortions for all age groups increased steadily with increased levels of deprivation, from SIMD1 (1,792) to SIMD5 (3,499) (Table 3b and Figure 3b).

Table 3b
Abortions ¹ performed to residents in Scotland in 2005^p
By deprivation, estimated gestation in weeks and age group.

	SIMD ² 1			SIMD ² 2			SIMD ² 3			SIMD ² 4			SIMD ² 5			All Scottish residents		
	<10 weeks	Total	%	<10 weeks	Total	%	<10 weeks	Total	%	<10 weeks	Total	%	<10 weeks	Total	%	<10weeks	Total	%
<16	19	37	51.4	36	50	72.0	35	73	47.9	47	79	59.5	60	101	59.4	197	340	57.9
16-19	284	428	66.4	326	484	67.4	355	555	64.0	413	667	61.9	509	815	62.5	1,887	2,949	64.0
20-24	354	512	69.1	358	538	66.5	412	617	66.8	598	930	64.3	737	1,148	64.2	2,459	3,745	65.7
25-29	211	276	76.4	259	374	69.3	328	451	72.7	351	527	66.6	450	691	65.1	1,599	2,319	69.0
30-34	184	244	75.4	209	294	71.1	212	299	70.9	262	404	64.9	277	437	63.4	1,144	1,678	68.2
35-39	156	196	79.6	143	204	70.1	161	232	69.4	149	221	67.4	151	238	63.4	760	1,091	69.7
40+	72	99	72.7	70	100	70.0	61	80	76.3	43	73	58.9	37	69	53.6	283	421	67.2
Grand Total	1,280	1,792	71.4	1,401	2,044	68.5	1,564	2,307	67.8	1,863	2,901	64.2	2,221	3,499	63.5	8,329	12,543	66.4

1 Refers to therapeutic abortions notified in accordance with the Abortion Act 1967.

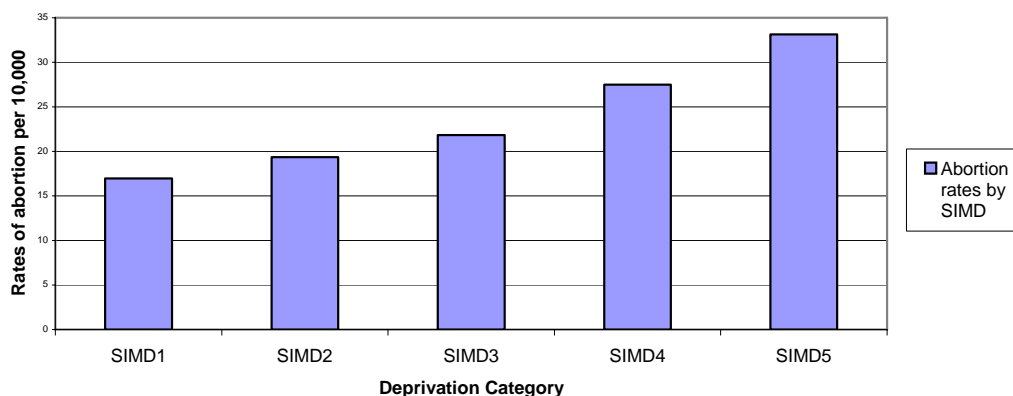
[2 Scottish index of multiple deprivation.](#)

p Provisional.

Source: Notifications (to the Chief Medical Officer for Scotland) of abortions performed under the Abortion Act 1967.

ISD Scotland Ref: IR2006-03076, MM.

Figure 3b
Rate per 10,000 of total abortions for Scotland
By deprivation category



SIMD5 represents 28% of the total abortions for Scotland, which is double that of SIMD1. However, the percentage of women having abortions at <10 weeks is lower at 63.5% than SIMD1 at 71.4%.

Table 3c
Percentage point difference in abortions under 10 weeks
By deprivation and NHS Board of Residence

Abortions at under 10 weeks	
NHS Board	Percentage point difference between SIMD 1 and SIMD 5
Argyll and Clyde	12.30%
Ayrshire and Arran	7.40%
Borders	12.40%
Dumfries and Galloway	23.70%
Fife	5.30%
Forth Valley	3.60%
Grampian	-4.80%
Greater Glasgow	10.30%
Highland	-4.30%
Island Boards ²	N/A*
Lanarkshire	16.50%
Lothian	14.30%
Tayside	3.50%

* No SIMD5 population in the Island Health Boards

1 Refers to therapeutic abortions notified in accordance with the Abortion Act 1967.

2 Orkney, Shetland and Western Isles NHS Boards..

p Provisional.

There is a clear link between abortion and deprivation. In 2005, 8.5 women per 1000 had an abortion in SIMD1 compared to 15.4 in SIMD5. Nine out of 12 of the NHS Boards in table 3c show a percentage point difference between deprivation categories SIMD1 and SIMD5. This suggests that there may be a link between deprivation category and the proportion of women having abortions at under 10 weeks.

It appears that women from deprived populations are either more likely to present later (perhaps as they delay the decision), have limited access to abortion services or they may not be referred quickly enough to abortion services. The QIS Sexual Health Services Project preliminary report states that in some parts of Scotland referral for abortion can involve 'unacceptable delays'.

Dumfries and Galloway and Lanarkshire show the highest percentage point difference between SIMD1 and 5. In addition, Lanarkshire also shows the lowest percentage nationally of abortion at under 10 weeks at 43.8%, the national figure being 66.5% (table 3a).

Grampian and Highland show a higher percentage of women having an abortion at under 10 weeks in the most deprived population rather than the most affluent implying a more equitable service in these NHS Board areas.

Conclusion

The inequalities in the abortion data would seem to suggest that there is wide variation in service access, most notably in deprived areas. In addition to poor service access and delayed referrals, social or cultural factors, may also be a factor to consider.

NHS Boards should ensure that there are no barriers in referral pathways that might prevent women from accessing services and examine discrepancies to ensure that all women are able to access abortion services quickly and easily.

It should be noted that small numbers may affect a Board's apparent performance in the data above.

Key Clinical Indicator 4: HIV therapy

The proportion of HIV positive people in specialist care and eligible for anti-retroviral therapy (ART) who have been treated and the proportion of those treated who have an undetectable viral load.

Evidence Base / Reasons for Selection of Indicator

Initiation of anti-retroviral therapy (ART) is recommended for individuals with CD4 cell counts below 200 per cubic millimetre and should be considered in those with counts of 201–350 per cubic millimetre (*British Association for Sexual Health and HIV (BASHH) 2004*). The effectiveness of ART, introduced in 1996/97, in improving survival and reducing morbidity among people who are HIV positive has been demonstrated in Scotland and indeed worldwide.

People living with HIV who have ever had a CD4 count under 200 per cubic millimetre have severe immunodeficiency; accordingly, they should normally be offered ART. The proportion of such people, who have been treated with ART and who have an undetectable viral load, is a robust indicator of the effectiveness of HIV clinic services in getting the individuals who are most in need of ART onto therapy, and in ensuring that optimal therapeutic regimens are administered and compliance in taking these is achieved.

Data Collection

Health Protection Scotland, HPS, in association with Scottish HIV and Immunology testing laboratories, runs a surveillance system which involves the collection of immunological, viral load and treatment data on all HIV diagnosed and clinically managed individuals in Scotland.

The data are derived from an immunological and viral load test request form used by clinicians managing HIV-infected patients; the form allows the recording of current treatment status, numbers of antiretroviral agents administered in the previous month, current antiretroviral therapy, significant clinical events in the previous three months and CD4 cell count and viral load test results. The data are collected by clerical officers within the testing laboratories, collated by HPS and routinely reported through the HPS weekly report.

This formalised data collection process will be addressed as part of the Data Collection Framework for Sexual Health.

Baseline Data 2005

Throughout Scotland, 11 NHS Boards provide treatment services for HIV-infected persons; 10 of which participated in the national surveillance programme in 2005. The data presented in Table 4a do not include cases from NHS Highland attending for ART within this NHS Board area. Highland did not participate in national CD4 monitoring in 2005, as the data were unavailable at that time. This situation has now been rectified.

Table 4a

HIV infected persons under CD4 and viral load monitoring, receiving antiretroviral therapy (ART), by NHS Board of Treatment; 2005

NHS Board of Treatment ¹	Cases undergoing CD4 monitoring during 2005	CASES WHO HAVE ATTENDED FOR CD4 MONITORING FOR AT LEAST 6 MONTHS ⁴						
		Cases undergoing CD4 monitoring during 2005 who have ever recorded a CD4 count of < 200		Cases undergoing CD4 monitoring during 2005 who have ever recorded a CD4 count of < 200	Cases undergoing CD4 monitoring during 2005 who have ever recorded a CD4 count of < 200 and who received anti-retroviral therapy ² during 2005		Cases receiving treatment with an undetectable viral load ³ at latest attendance in 2005	
		No. (A)	% (B/A)		No. (D)	% (D/C)	No. (E)	% (E/D)
Argyll & Clyde	0	0	-	0	0	-	0	-
Ayrshire & Arran	30	21	70.0%	21	20	95.2%	18	90.0%
Borders	*	*	*	*	*	*	*	*
Dumfries & Galloway	29	16	55.2%	11	11	100.0%	10	90.9%
Fife	59	43	72.9%	40	37	92.5%	30	81.1%
Forth Valley	26	*	*	*	*	*	*	*
Grampian	141	96	68.1%	86	80	93.0%	52	65.0%
Greater Glasgow	707	381	53.9%	362	339	93.6%	271	79.9%
Highland	0	0	-	0	0	-	0	-
Lanarkshire	72	41	56.9%	36	34	94.4%	24	70.6%
Lothian	916	575	62.8%	549	511	93.1%	406	79.5%
Shetland	0	0	-	0	0	-	0	-
Tayside	186	116	62.4%	109	90	82.6%	66	73.3%
Western Isles	0	0	-	0	0	-	0	-
Total	2166	1289	59.5%	1214	1122	92.4%	877	78.2%

Notes: Source - Health Protection Scotland. *Due to the small numbers involved, Borders and Forth Valley are excluded from this table

1. Cases who are resident in health board areas which do not offer a full range of treatment services may attend clinics in other NHS Board areas for treatment

2. For the purpose of this analysis, antiretroviral therapy includes all levels of therapy (i.e. mono, dual, triple or more)

3. The objective of therapy is to suppress viral load to <50 copies

4. Rates of ART uptake and undetectable viral load are restricted to persons who have been in specialist care for at least 6 months to allow for treatment to be administered and a response to be achieved.

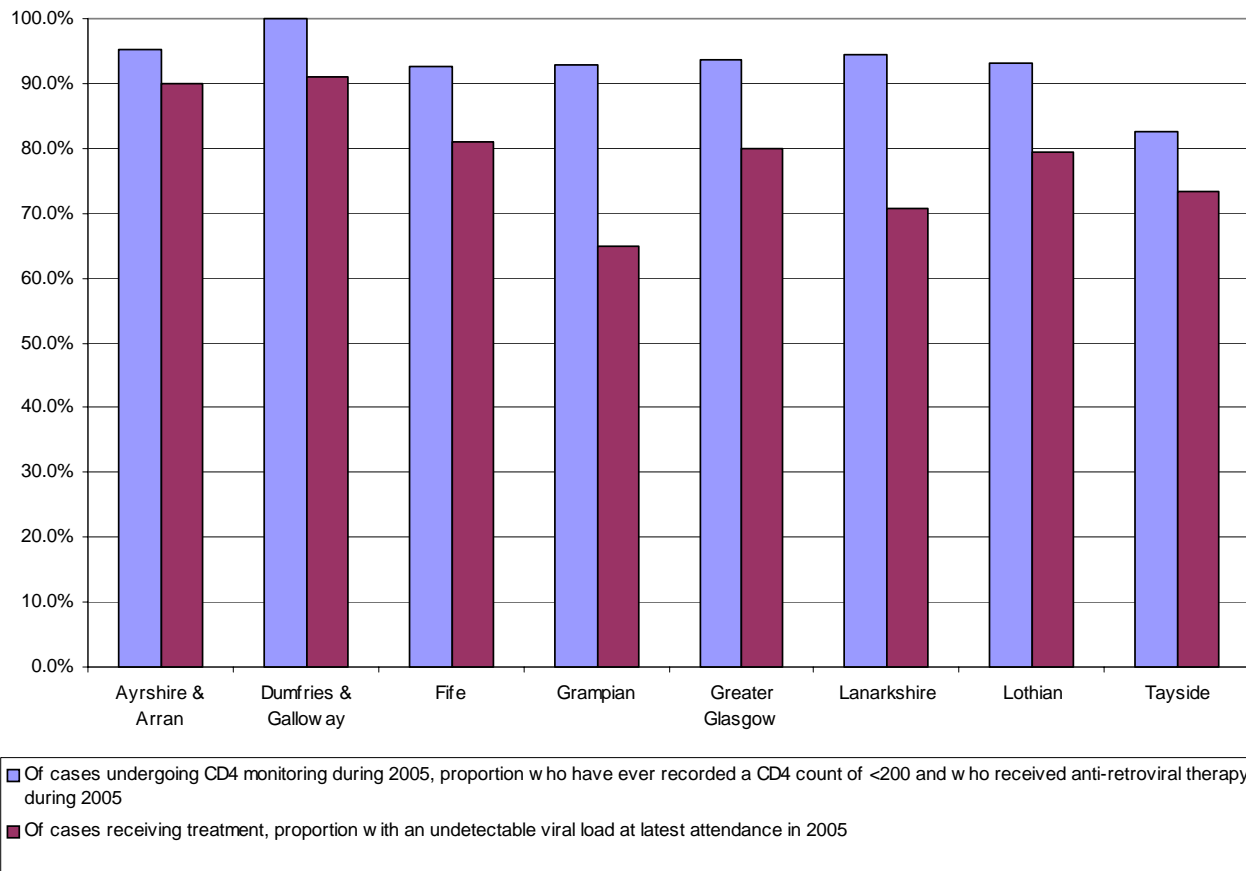
Commentary

Small Numbers - Both the Borders and Forth Valley NHS Boards show very few cases (under 10) for 2005. Due to the sensitive nature of these data it was decided it would be inappropriate to show these small numbers in the report.

Treatment services were not locally available within Argyll and Clyde, Shetland or Western Isles NHS Boards during 2005.

Figure 4a

The proportion of cases eligible for therapy who received anti-retroviral therapy during 2005 and the proportion who had an undetectable viral load at latest attendance in 2005, having attended CD4 monitoring for at least 6 months.



- In 2005, 2,166 HIV-infected persons attended for CD4 cell count monitoring across Scotland.
- The majority of cases undergoing CD4 cell count monitoring attended clinics in Greater Glasgow (707; 33%) and Lothian (916; 42%) NHS Boards.
- Of those cases undergoing CD4 monitoring, 1,289 (59%) had recorded a CD4 cell count $\leq 200/\text{mm}^3$, at some point since being diagnosed HIV positive, and were therefore eligible for ART; the proportion of cases eligible for ART varied by NHS Board of Treatment from 54% in Greater Glasgow to 73% in Fife.
- Of those cases eligible for ART in 2005, 1,214 (94%) had attended for CD4 monitoring and treatment for at least 6 months.
- Of those cases receiving ART in 2005, 877 (78%) had an undetectable viral load (≤ 50 copies/ml) at the latest attendance; for NHS Boards with more than 15 cases, the proportion of cases achieving viral suppression varied from 65% of cases treated in Grampian to 90% of those treated in Dumfries & Galloway.

There are many reasons for differences in percentage terms between those receiving ART and those who have an undetectable viral load. This will depend on the patient being treated. (Please see Appendix II).

Conclusion

Across Scotland, 92% of cases who had ever recorded a CD4 cell count $\leq 200/\text{mm}^3$ and who had attended for monitoring and treatment for at least 6 months, received ART during 2005; for NHS Boards with more than 15 cases, the proportion of eligible cases ranged from 83% - 95%.

It should be noted that not all patients with a CD4 cell count $\leq 200/\text{mm}^3$ receive ART. This may be because they have recently presented, they have drug intolerance or because the patient has declined therapy.

Patients that are receiving ART therapy do not necessarily have an undetectable viral load – this may be due to poor adherence, drug intolerance, resistant virus or because the patient has only recently started on ART.

Key Clinical Indicator 5: Hepatitis B Vaccination for MSM

The proportion of men who have sex with men (MSM) attending a GUM clinic and eligible for hepatitis B vaccine who receive their first dose in this setting.

Evidence-base / Reasons for Selected Indicator

Sexually transmitted hepatitis B amongst men who have sex with men contributes significantly to the level of total hepatitis B diagnoses in Scotland. 5-10% of symptomatic cases develop chronic disease with higher rates in immunocompromised individuals (*BASHH Guidelines 2005*).

Hepatitis B is a serious disease, which can be prevented by vaccination. Uptake of vaccination in GUM clinics in the UK overall is known to be sub-optimal (*The Green Book. Hepatitis B, Chapter 19 (new replacement chapter). London: Department of Health, 1996*). Improved vaccination rates would lead to health improvement in this population group.

Data Collection

Data on vaccination activity according to sexuality are available electronically from GUM clinics using the IT system known as STISS.

A new field on hepatitis B vaccination has been added to STISS and all clinics are collecting these data. This data item is mandatory and the STISS system has been modified to enforce the collection of this information for MSM. This will ensure that data are collected and therefore provide an accurate and comprehensive picture for this KCI.

Baseline Data 2005

Data entry on hepatitis B for MSMs became mandatory in September 2006. Data entry into STISS is approximately three months in arrears and therefore it is not possible to produce meaningful analyses at this stage. We anticipate, however, that STISS will provide useful and highly reliable information on this indicator in the future.

Conclusion

Although this indicator refers specifically to vaccination within GUM clinics, it should be noted that in some NHS Boards the hepatitis B vaccination is given within addiction clinics and Primary Care. With sexual health care now moving toward an integrated service, it is anticipated that the vaccination will increasingly take place in many different environments. NHS Boards should be engaging proactively with all those vulnerable to hepatitis B and offering the vaccination throughout the service.

Potential Indicators

Indicators '6 – 9' are for development in 2006/2007 and are being presented to the National Sexual Health Advisory Committee (NSHAC) for ministerial approval. Work is being progressed to develop indicators around;

- 6. Long Acting Reversible Methods of Contraception (LARC)
The subgroup is currently examining this indicator in more detail, for Summer 2007
- 7. HIV Sexual Health Screen (includes those that acquired HIV at birth)
- 8. Sexual Health Services Staff
- 9. Service Access