

Publication Report



Sterilisation Key Clinical Indicator (KCI)

Year ending 31 December 2010

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About ISD

Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.

Mission: Better Information, Better Decisions, Better Health

Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics

Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of 'Official Statistics'. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

ISD's statistical publications are currently classified as one of the following:

- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD's statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the [ISD website](#).

Introduction

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

The ONS Omnibus Survey on Contraception and Sexual Health reports that in the UK in 2006/2007:

- 9% of women under 50 were sterilised
- 17% of men under 70 had undergone a vasectomy

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

These data are presented by NHS board of residence and NHS board of treatment. The rates for NHS board of treatment are calculated using board of residence population data so may not account for those patients who have cross border treatment.

Female Sterilisation

Data collection

Female sterilisation data are routinely collected by the Information Services Division (ISD) and these data are available from Scottish Morbidity Records (SMR) for acute hospital discharge (SMR01) and for maternity episodes (SMR02).

The denominator used for calculating the rate per 10,000 women is those aged 15-49 years, to reflect the age band used for women of reproductive age.

SMR02 Data

Very few sterilisations are recorded on SMR02 and waiting times are not applicable for SMR02 as the sterilisation procedure in this instance takes place during the maternity episode. Data therefore are published by SMR01 only.

Data for 2010

Important note:

1) Until 2008 waiting times data for female sterilisation procedures had only been obtainable from SMR01, which is where almost all female sterilisations are recorded. However, with the introduction of *New Ways* (www.isdscotland.org/newways) to record waiting times, the recording of waiting times data is no longer attached to SMR01 data. In 2008 comparison of data between *New Ways* recording and SMR01 showed significant under recording in *New Ways*. The under recording experienced was attributed to the change in the data collection method and it was not expected to affect future year's data however the same comparison using 2009 and 2010 data shows a similar under recording in *New Ways*.

As a result it is not possible to report on waiting times for female or male sterilisation procedures for the third consecutive year.

2) Due to the implementation of a new patient management system NHS Grampian have not been able to submit any SMR data for December 2010 onward.

The implementation of new systems has also affected SMR submissions for NHS Ayrshire & Arran, NHS Borders, and NHS Lanarkshire. Submissions for these boards are incomplete for November 2010 onward.

Figures for the month ending December 2010 are likely to be affected by the adverse weather conditions which were experienced during this time.

All of these factors will affect data for calendar year 2010 and this should be taken into account when making data comparisons.

Male Sterilisation (Vasectomy)

Data Collection

Information on those patients who have their procedure as an inpatient/daycase patient in hospital can be reliably obtained from SMR01. However the procedure is also performed in other settings, including sexual and reproductive health clinics and GP surgeries, where SMR01 data are not routinely collected.

A number of vasectomies are performed as outpatients. In previous years it has not been possible to obtain accurate data on this from SMR00 due to the waiting times component however SMR00 data can be used for reporting on the number of procedures performed.

In order to obtain information on procedures performed outwith the acute setting, the Lead Clinicians for Sexual Health were asked to collate these data for their NHS board and return it to ISD.

Data for 2010

Information on vasectomy procedures has been obtained in two ways

- SMR01 and SMR00
- Directly from the NHS boards

It should be noted that at this time it is not possible to quality assure the data provided directly by the NHS boards to the same extent as the national data returns (e.g. SMR01). Where possible any known caveats with the data are explained.

Important note:

1) Until 2008 waiting times data for male sterilisation procedures had only been obtainable from SMR01, which is where the majority of male sterilisations are recorded. However, with the introduction of *New Ways* (www.isdscotland.org/newways) to record waiting times, the recording of waiting times data is no longer attached to SMR01 data. In 2008 comparison of data between *New Ways* recording and SMR01 showed significant under recording in *New Ways*. The under recording experienced was attributed to the change in the data collection method and it was not expected to affect future year's data however the same comparison using 2009 and 2010 data shows a similar under recording in *New Ways*.

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Figures for the month ending December 2010 are likely to be affected by the adverse weather conditions which were experienced during this time.

All of these factors will affect data for calendar year 2010 and this should be taken into account when making data comparisons.

Key points

- 9.6 women per 10,000 (aged 15-49) had a sterilisation procedure in 2010, compared with 10.9 in 2009.
- A total of 5,367 vasectomies were carried out in 2010 across multiple settings in Scotland. This compares with 5,974 vasectomies performed in 2009.
- Of the total number of vasectomies performed in 2010, 2,222 were performed as inpatient/day case procedures.

Results and Commentary

Female Sterilisation Results

SMR01 Acute Discharge Summary

Table 1.1

Rates of female sterilisation episodes per 10,000 women (aged 15-49) by NHS board of treatment, 2010

NHS Board	Rate	Rates 95% Confidence Intervals
Ayrshire & Arran	18.6	15.7 to 21.5
Borders	15.6	10.5 to 20.7
Dumfries & Galloway	17.2	12.5 to 21.9
Fife	13.4	10.9 to 15.9
Forth Valley	7.0	5.0 to 9.0
Grampian	5.6	4.2 to 7.0
Greater Glasgow & Clyde	10.0	8.8 to 11.2
Highland	5.6	3.8 to 7.4
Lanarkshire	8.7	7.1 to 10.3
Lothian	5.7	4.7 to 6.7
Orkney Islands	*	*
Shetland Islands	*	*
Tayside	14.1	11.7 to 16.5
Western Isles	*	*
Scotland	9.6	9.0 to 10.2

* Less than 10 records – data not disclosed.

Table 1.2

Rates of female sterilisation episodes per 10,000 women (aged 15-49) by NHS board of residence, 2010

NHS Board	Rate	Rates 95% Confidence Intervals
Ayrshire & Arran	18.7	15.8 to 21.6
Borders	15.6	10.5 to 20.7
Dumfries & Galloway	17.2	12.5 to 21.9
Fife	14.2	11.7 to 16.7
Forth Valley	7.6	5.6 to 9.6
Grampian	5.5	4.1 to 6.9
Greater Glasgow & Clyde	9.0	8.0 to 10.0
Highland	9.0	6.6 to 11.4
Lanarkshire	10.0	8.2 to 11.8
Lothian	5.6	4.6 to 6.6
Orkney Islands	*	*
Shetland Islands	*	*
Tayside	13.4	11.0 to 15.8
Western Isles	*	*
Scotland	9.7	9.1 to 10.3

* Less than 10 records – data not disclosed.

Commentary

- 9.6 women per 10,000 (aged 15-49) had a sterilisation procedure in 2010, compared with 10.9 in 2009.
- Five NHS boards of treatment (NHS Forth Valley, Grampian, Highland, Lanarkshire and Lothian) recorded rates lower than this, however it is not possible to determine whether this is due to lack of availability of the procedure or good availability of other long term contraceptive options such as LARC (long acting reversible contraception).
- NHS Ayrshire and Arran had the highest rate of sterilisation per 10,000 women at 18.7 (showing an increase of 2.5 from 2009), followed by NHS Dumfries and Galloway at 17.2 (showing an increase of 1.5 from 2009).
- Waiting times data for female sterilisations in 2010 are unavailable for comparison to previous years.

Male Sterilisation (Vasectomy) Results

Table 1.3

Total vasectomy numbers by NHS board of treatment, 2010

NHS Board	Number performed in hospital (SMR01 HBT)	Number recorded elsewhere	Where recorded	Total
Ayrshire & Arran	302	0	SMR01	302
Borders	118	0	SMR01	118
Dumfries & Galloway	178	0	SMR01	178
Fife	39	0	SMR01	39
Forth Valley	20	179	SMR01 & SMR00	199
Grampian	64	666	SMR01, SMR00 & Primary care	730
Greater Glasgow & Clyde	306	1276	SMR01 & NaSH	1582
Highland	286	0	SMR01	286
Lanarkshire	13	317	SMR01 & Primary care	330
Lothian	46	688	SMR01 & Local systems	734
Orkney Islands	21	0	SMR01	21
Shetland Islands	15	0	SMR01	15
Tayside	784	19	SMR01 & SMR00	803
Western Isles	30	0	SMR01	30
Scotland	2222	3145	-	5367

In 2010 SMR01 recorded a total of 2,222 vasectomies in Scotland performed in hospital.

The data supplied by the NHS boards and from SMR00 in addition to SMR01 shows that 5,367 vasectomies were carried out in total in 2010 across multiple settings in Scotland. This compares with 5,974 vasectomies performed in 2009.

Table 1.4

Total rates of vasectomy per 10,000 men (aged 15-59) by NHS board of treatment, 2010

NHS Board	Rate	Rates 95% Confidence Interval
Ayrshire & Arran	29.4	26.1 to 32.7
Borders	38.3	31.4 to 45.2
Dumfries & Galloway	45.1	38.4 to 51.8
Fife	3.7	2.5 to 4.9
Forth Valley	23.2	20.1 to 26.3
Grampian	42.8	39.7 to 45.9
Greater Glasgow & Clyde	42.4	40.2 to 44.6
Highland	32.2	28.5 to 35.9
Lanarkshire	19.9	17.7 to 22.1
Lothian	28.0	26.0 to 30.0
Orkney Islands	36.8	21.1 to 52.5
Shetland Islands	22.3	11.1 to 33.5
Tayside	69.5	64.8 to 74.2
Western Isles	40.9	26.2 to 55.6
Scotland	34.4	33.4 to 35.4

Table 1.4 presents the information supplied directly from the NHS boards combined with the SMR01 and SMR00 data.

SMR01 (Acute Discharge Summary)

Table 1.5

Vasectomy rates per 10,000 men (aged 15-59) by NHS board of treatment, 2010

NHS Board	Rate	Rates 95% Confidence Interval
Ayrshire & Arran	29.4	26.1 to 32.7
Borders	38.3	31.4 to 45.2
Dumfries & Galloway	45.1	38.4 to 51.7
Fife	3.7	2.5 to 4.9
Forth Valley	2.3	1.4 to 3.3
Grampian	3.8	2.8 to 4.7
Greater Glasgow & Clyde	8.2	7.2 to 9.2
Highland	32.2	28.5 to 36.0
Lanarkshire	0.8	0.4 to 1.2
Lothian	1.8	1.2 to 2.3
Orkney Islands	36.8	21.1 to 52.4
Shetland Islands	22.3	11.1 to 33.5
Tayside	67.8	63.1 to 72.5
Western Isles	40.9	26.2 to 55.6
Scotland	14.2	13.7 to 14.8

Table 1.6

Vasectomy rates per 10,000 men (aged 15-59) by NHS board of residence, 2010

NHS Board	Rate	Rates 95% Confidence Interval
Ayrshire & Arran	30.7	27.3 to 34.0
Borders	37.7	30.8 to 44.5
Dumfries & Galloway	44.8	38.2 to 51.5
Fife	40.8	36.9 to 44.7
Forth Valley	2.2	1.2 to 3.2
Grampian	4.1	3.1 to 5.1
Greater Glasgow & Clyde	6.6	5.8 to 7.4
Highland	37.0	33.1 to 40.9
Lanarkshire	1.1	0.5 to 1.7
Lothian	1.8	1.2 to 2.4
Orkney Islands	36.8	21.1 to 52.4
Shetland Islands	23.8	12.2 to 35.3
Tayside	33.7	30.3 to 37.0
Western Isles	40.9	26.2 to 55.6
Scotland	14.3	13.7 to 14.8

Tables 1.5 and 1.6 show the rates per 10,000 based on those procedures recorded by SMR01 (i.e. inpatient/day case).

Commentary

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

Two major referral pathways can be identified:

1) GP/ Sexual and Reproductive health clinic → Outpatient consultation → Hospital procedure

GP/ Sexual and Reproductive health clinic → Hospital procedure

2) Self-referral/GP/Hospital → Sexual and Reproductive health clinic

Where patients are referred by a GP or a sexual and reproductive health clinic to a hospital for their procedure they are either invited for an initial outpatient consultation appointment after which they are then placed on a waiting list for the procedure; or they are sent an information pack containing a consent form to return back to the hospital. On receipt of the completed consent form the patient is then placed on a waiting list for the procedure. This results in the procedure being performed on the patient's initial visit.

Vasectomies are performed as inpatient/daycase in all of the boards, with 8 out of 14 (57%) performing the procedures only as inpatient/daycase (i.e. they do not perform any of the procedures as outpatient appointments).

GPs

- GPs perform vasectomies in 2 NHS board, NHS Grampian and NHS Lanarkshire.

Sexual and Reproductive health clinics

- Refer patients to hospital for vasectomy
- Offer a vasectomy service within the clinic

Two boards, NHS Lothian and NHS Greater Glasgow & Clyde, offer vasectomies in sexual and reproductive health clinics.

NHS Forth Valley are showing a large decrease in the number and rate for procedures performed in this health board (2.3 per 10,000 in 2010 compared to 22.5 per 10,000 in 2009). On further exploration of the SMR01 data, this difference is due to a large reduction of patients being referred from other health boards to NHS Forth Valley facilities for their procedure. On comparison of board of residence data, NHS Forth Valley show more consistent rates (2.2 per 10,000 in 2010 compared to 3.7 per 10,000 in 2009) and display a similar reduction as noted in other health boards.

NHS Lanarkshire display low rates for board of treatment SMR01 data as procedures are carried out in NHS Greater Glasgow and Clyde on their behalf. The low rate noted in board of residence data from SMR01 is likely to reflect men being able to access a vasectomy procedure either through primary care in their own health board or by self referring to a sexual and reproductive health clinic in NHS Greater Glasgow & Clyde.

Similarly NHS Fife display low rates for board of treatment data as procedures are carried out at Stracathro in Tayside on their behalf. It can be seen from SMR01 board of residence data for NHS Fife that they have one of the highest rates of vasectomies for men living in that health board area.

Long Term Data - male and female sterilisation since 2000

Figure 1.1

Numbers of female and male sterilisations 2000-2010, by NHS board of treatment

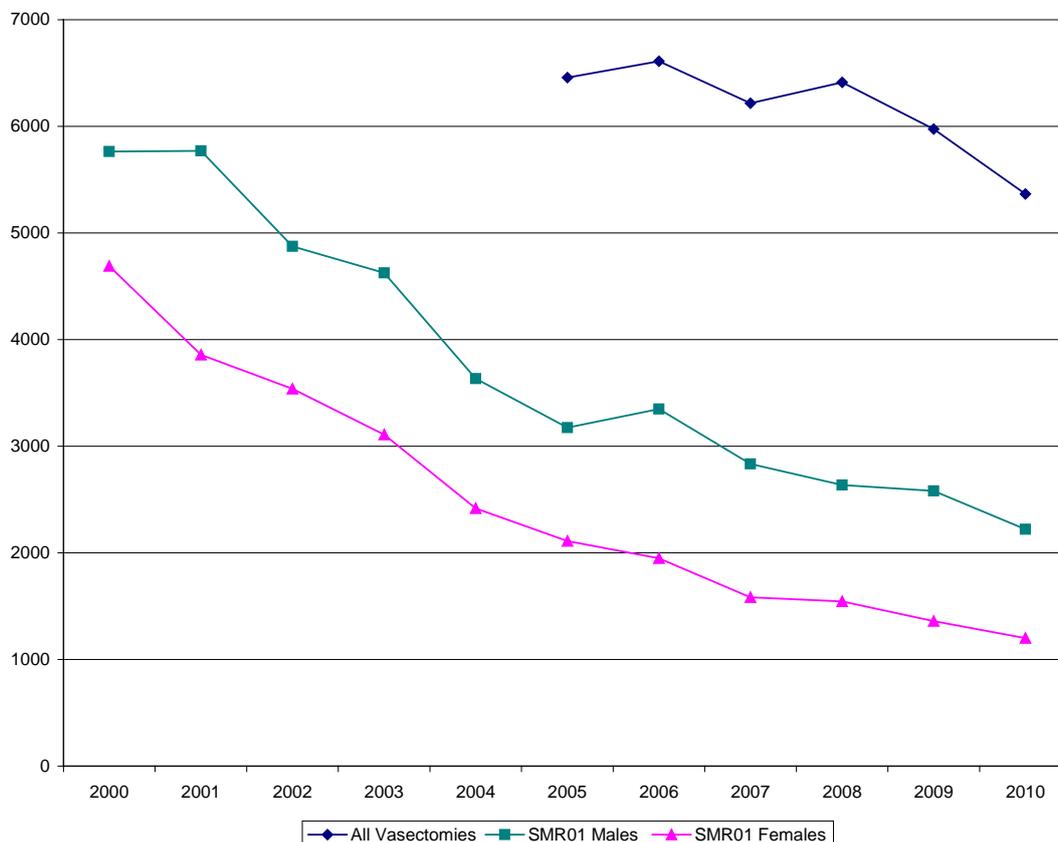


Figure 1.1 shows the national trend in male and female sterilisation since 2000 using SMR01 data and data supplied directly by the boards.

It should be noted that SMR01 only covers NHS hospital procedures and does not include all vasectomies undertaken since 2000.

- Since 2000, female sterilisations have reduced by 74.4%.
- From 2009 to 2010 there has been a 12% reduction in female sterilisations.
- Vasectomies performed in hospitals have decreased by 55.2% since 2000.
- From 2009 and 2010 there has been a 13.9% reduction in vasectomies performed in hospitals.
- In 2009, 58.6% of all vasectomy procedures were not performed as inpatient or daycase procedures (i.e. not recorded on SMR01). This is a slight increase from 56.8% in 2008 and similar to 58.5% in 2008.
- A total of 37.4 per 10,000 men (aged 15-59) in Scotland had a vasectomy in 2010, compared with 38.4 in 2009.
- 2010 data shows a slight decrease in the numbers of vasectomies performed in hospital since 2000 (2,222 v 2,581). The total number performed also show a decrease (5,367 v 5,974).

Figure 1.1 clearly shows the downward trend in female sterilisation. The possible reasons for these changes are discussed in the commentary below, the most significant being the increasing popularity of long acting reversible methods of contraception (LARC). The report published on the LARC indicator, in 2011, shows the uptake of very long acting reversible methods of contraception in Scotland is increasing. The report can be found at <http://www.isdscotland.org/Health-Topics/Sexual-Health/Publications/>

Conclusion

The reduction in female sterilisation since 2000 implies that women may be looking for less intrusive ways of ensuring long term contraception, such as long acting reversible methods of contraception. Although it cannot be proven that the decline in numbers of sterilisations and the increase seen in the uptake of LARC are directly related, the relationship between these statistics should not be dismissed.

Vasectomy offers men a safe and reliable method of contraception. A number of boards offer the procedure via general and urology lists indicating that the availability of this procedure may be restricted.

Those services outwith hospitals are offering a more easily accessible service, for example in NHS Lothian and NHS Greater Glasgow & Clyde, to which the patient can self-refer or be referred via the GP. This also means that the patient is not sharing a hospital waiting list with other patients who might be deemed to be of higher priority surgically.

Thanks to:

The lead clinicians for Sexual Health in Scotland for providing their local vasectomy data.

Glossary

LARC
SMR

Long acting reversible method of contraception
Scottish Morbidity Record

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Further Information

Further information can be found on the [ISD website](#)

Appendix

A1 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Sterilisation Key Clinical Indicator (KCI)
Description	Annual update on 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.
Theme	Health and social care
Topic	Sexual Health services
Format	Word document
Data source(s)	Female sterilisations – SMR01 Male sterilisations – SMR00, SMR00 and local health board data (taken from primary care systems and/or sexual health IT system)
Date that data are acquired	Data returned by end of July 2011
Release date	27/09/2011
Frequency	Annual
Timeframe of data and timeliness	Calendar year
Continuity of data	Baseline data first established in 2005 for this particular indicator. Waiting times information have been unavailable for the past 3 years.
Revisions statement	Where any totals from the previous year's data are revised then this is indicated in the report.
Revisions relevant to this publication	There are no relevant revision statements to this publication.
Concepts and definitions	
Relevance and key uses of the statistics	Making information publicly available for planning, epidemiology, provision of services, assessing impact of policies/initiatives.
Accuracy	Data from SMR are quality assured however data supplied directly from health boards relating to figures from primary care and/or sexual health services can not be assured.
Completeness	Due to the implementation of a new patient management system NHS Grampian have not been able to submit any SMR data for December 2010 onward. The implementation of new systems has also affected SMR submissions for NHS Ayrshire & Arran, NHS Borders, and NHS Lanarkshire. Submissions for these boards are incomplete for November 2010 onward. Figures for the month ending December 2010 are likely to be affected by the adverse weather conditions which were experienced during this time. All of these factors will affect data for calendar year 2010 and this should be taken into account when making data comparisons.
Comparability	The DASH project, which reports these data, was set up to address

	deficits in sexual health reporting in Scotland. Therefore these data are reported in a way unique to monitoring the indicator and are not likely to be comparable with other information available at national level.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .
Coherence and clarity	PDF document which is accessed via the ISD website: http://www.isdscotland.org/Health%2DTopics/Sexual%2DHealth/Publications/
Value type and unit of measurement	Raw numbers, rates and confidence intervals.
Disclosure	The ISD protocol on Statistical Disclosure Protocol is followed.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	Awaiting assessment by UK Statistics Authority
Last published	28 th September 2010
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Date of first publication	February 2007 (which reports on data taken from 2005)
Help email	NSS.isddash@nhs.net
Date form completed	09 September 2011

A2 – Early Access details (including Pre-Release Access)

Pre-Release Access

Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access and, separately, those receiving extended Pre-Release Access.

Standard Pre-Release Access:

Scottish Government Health Department
NHS Board Chief Executives
NHS Board Communication leads

Extended Pre-Release Access

Extended Pre-Release Access of 8 working days is given to a small number of named individuals in the Scottish Government Health Department (Analytical Services Division). This Pre-Release Access is for the sole purpose of enabling that department to gain an understanding of the statistics prior to briefing others in Scottish Government (during the period of standard Pre-Release Access).

Scottish Government Health Department (Analytical Services Division)

Early Access for Management Information

These statistics will also have been made available to those who needed access to 'management information', ie as part of the delivery of health and care:

Lead clinicians for Sexual Health in Scotland

Early Access for Quality Assurance

These statistics will also have been made available to those who needed access to help quality assure the publication:

Lead clinicians for Sexual Health in Scotland