

# Publication Report



## **Chlamydia Key Clinical Indicator (KCI)**

**Year ending 31 December 2010**

**Publication date – 27 September 2011**

## Contents

Contents.....	1
About ISD.....	2
Official Statistics.....	2
Introduction .....	3
Data Collection .....	3
Key points .....	4
Results and Commentary.....	5
Sexual Health Services Standards .....	10
Summary.....	12
Glossary.....	13
Contact.....	14
Further Information.....	14
Appendix .....	15
A1 – Publication Metadata (including revisions details).....	15
A2 – Early Access details (including Pre-Release Access) .....	17

## 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 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.

## Data Collection

A proforma was sent to each of the NHS laboratories that perform chlamydia testing in Scotland. Using this proforma, aggregate data (by 5-year age band and gender) about chlamydia tests performed during 2010 were collected. Note that this is the same method of data collection which has been used since the collection of test data began in 2005.

The data and report are collected and produced by Health Protection Scotland (HPS), a division of NHS National Services Scotland.

## Key points

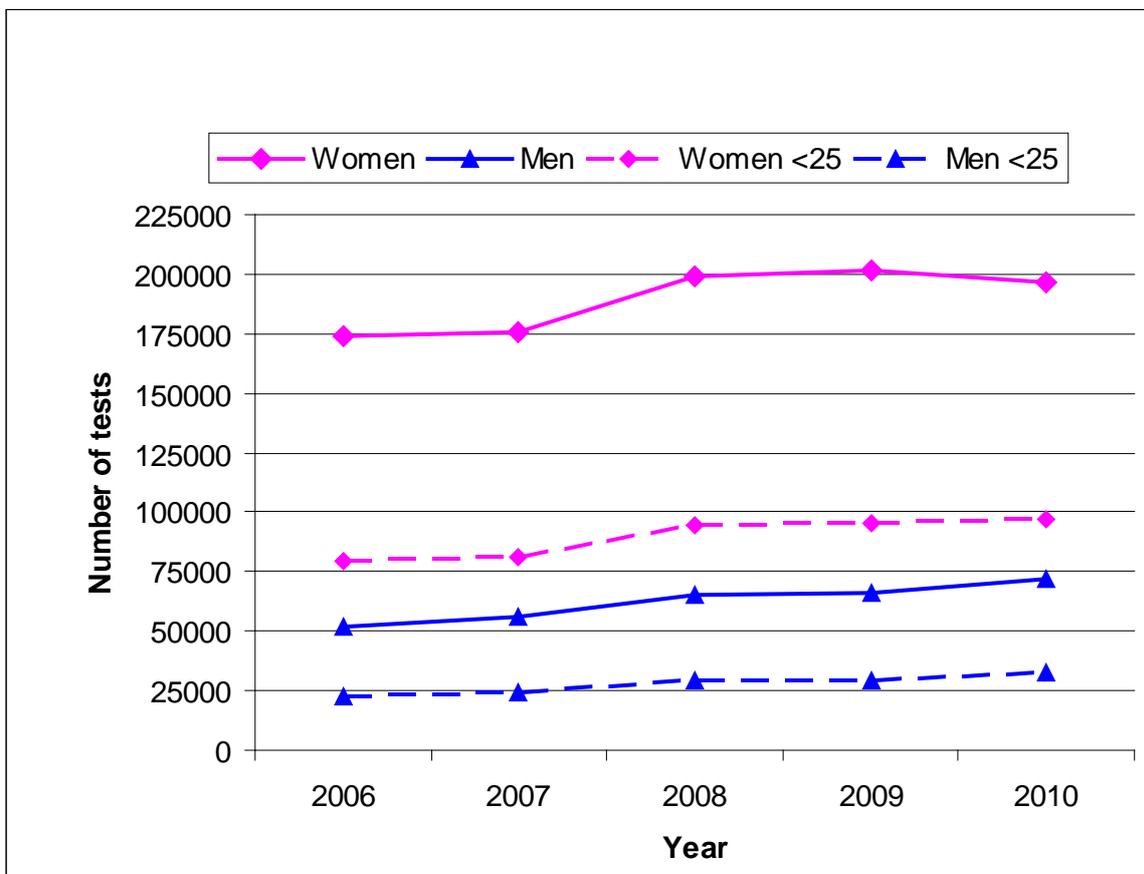
- In Scotland during 2010, the majority of chlamydia testing (73%) was performed on women; this has been a consistent observation over the past five years.
- As in previous years, while the majority of samples testing positive (73%) were from men and women aged less than 25, less than half of all testing (48%) was performed on individuals in this age group.

## Results and Commentary

In 2010, 268,690 chlamydia tests were performed in men and women aged 10 years and over. This compares with 267,854, 264,863, 231,776, and 226,528 tests performed in 2009, 2008, 2007 and 2006, respectively and represents a 19% increase on the total for 2006, but no change on that observed for 2009 (Figure 1.1). The data are aggregated and presented in two key age groups, 15-24 years and 25-49 years, for both men and women. Between 2009 and 2010, there was little change in the number of tests performed on men and women aged 15-49.

It should be noted that the total contains some equivocal, unconfirmed, or indeterminate results and samples demonstrating inhibition in the tests (overall average of 1.1% of tests although this will vary by laboratory) as well as some duplicate tests for the same individual. It is estimated that approximately 5-20% of tests in a calendar year are repeat ones on 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. In addition, an estimated 0.7% of tests are performed on non-genital (ophthalmic) samples.

**Figure 1.1: Number of chlamydia tests performed on all men and women and in men and women aged less than 25, Scotland, 2006-2010.**



Source: Health Protection Scotland

The majority (73%) of testing was performed on women; this is a similar proportion to those reported in the previous five years of monitoring (2005-2009). The majority of samples testing positive (73%) were from men and women aged less than 25; however, less than half of all testing (48%) was performed on individuals in this age group. This has been a consistent finding over the past five years.

Of those tested, 14% (4681) of young men aged less than 25 were positive for chlamydia compared to 10% (9706) of young women. These are the same proportions as those reported in 2009. In those aged greater than 25 who were tested for chlamydia, 7% (2662) of men versus 3% (2609) of women were positive. Thus, almost four times as many positive diagnoses were made in women undergoing testing who were aged less than 25 than in older women. In men, 64% of positive diagnoses were in those aged less than 25 years.

**Table 1.1: Number of chlamydia tests performed and proportion of positive tests by age group,\* gender and NHS board of testing, Scotland 2010.**

		Total number of tests performed (% samples testing positive)			
Sex		Men		Women	
Age		15 to 24 years	25 to 49 years	15 to 24 years	25 to 49 years
NHS board of testing	Ayrshire and Arran (AA)	1725 (15)	1434 (8)	5963 (10)	5581 (2)
	Borders (BR)	447 (21)	499 (10)	1844 (10)	1464 (3)
	Dumfries and Galloway (DG)	712 (18)	585 (8)	3057 (9)	2473 (2)
	Fife (FF)	1653 (16)	1449 (9)	5176 (12)	4254 (3)
	Forth Valley (FV)	1765 (17)	1166 (9)	4860 (11)	4216 (3)
	Grampian (GR)	4408 (11)	4019 (6)	12093 (8)	11831 (2)
	Greater Glasgow & Clyde (GGC)	9584 (14)	10781 (7)	26306 (10)	26732 (3)
	Highland (HG)	1133 (15)	1269 (8)	3481 (9)	3594 (2)
	Lanarkshire (LN)	2587 (17)	3315 (8)	8293 (12)	10855 (3)
	Lothian (LO)	5871 (13)	8085 (6)	17425 (9)	16604 (3)
	Tayside (TY)	2482 (18)	2780 (9)	6873 (13)	7415 (4)
	Scotland	32367 (14)	35382 (7)	95371 (10)	95019 (3)

\*The results for those aged less than 15 and over 50 have been omitted.

Note that the data are presented by NHS board of testing and not by NHS board of residence of the individuals undergoing chlamydia testing. It is not possible, using the current aggregated data collection system, to derive data by NHS board of residence from the laboratory testing data.

Note: Island NHS boards are not included as the samples are sent to laboratories on the mainland for testing.

Source: Health Protection Scotland

The highest proportions of samples testing positive were identified among both women and men aged 15-19 (13% and 15%, respectively); the proportion of positive tests declined in older age groups. However, the proportion of positive tests was higher in men, compared to women, among all age groups. This may reflect the fact that men are more likely to be tested when they present with symptoms.

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

- in those aged 15-24, this ranged from 8% to 13% (median 10%) and,
- in those aged 25-49, from 2% to 4% (median 3%).

The highest proportions of positive tests among women aged 15-24 and 25-49 were observed in Tayside NHS Board area (13% and 4%, respectively) (Table 1.1).

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

- 11% to 21% (median 16%) among those aged 15-24 and,
- 6% to 10% (median 8%) among those aged 25-49.

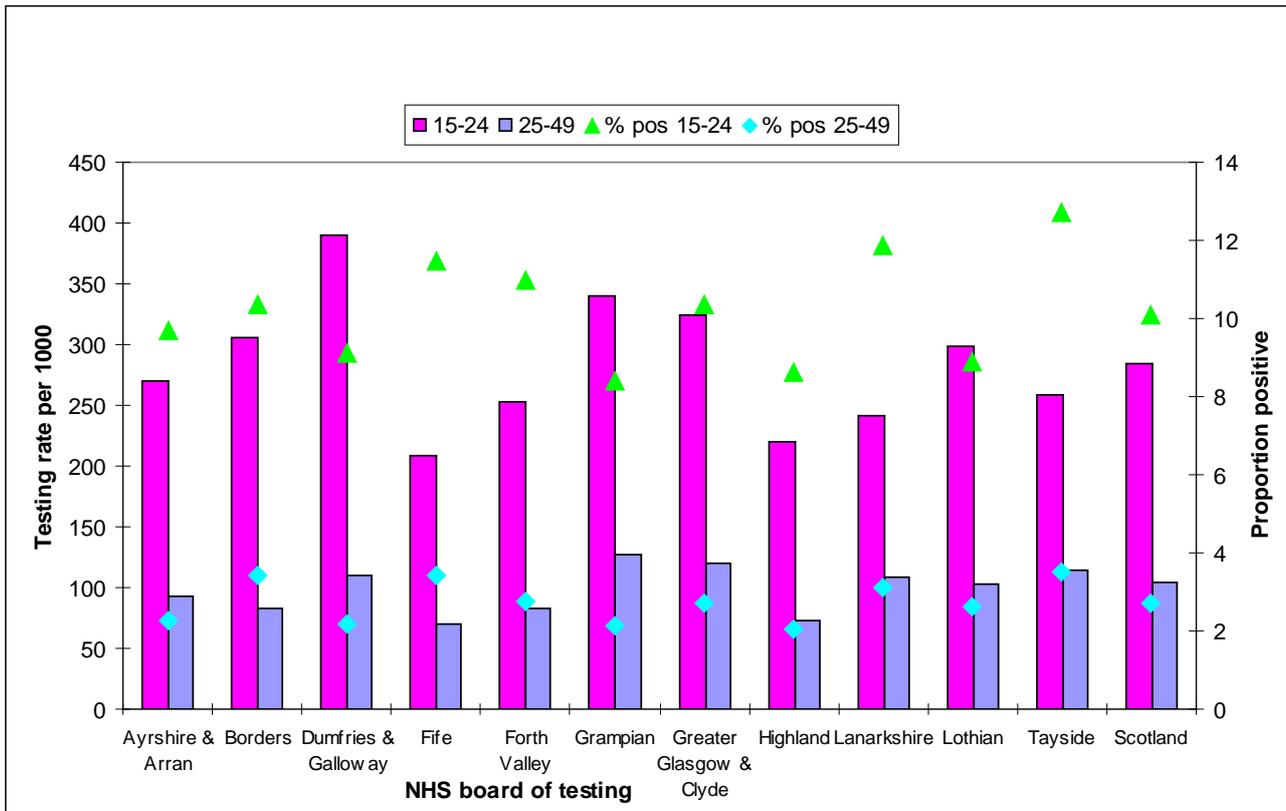
The highest proportions of positive tests among men aged 15-24 and 25-49 were observed in Borders NHS Board area (21% and 10%, respectively) (Table 1.1).

The data are presented by NHS board area of testing and not by NHS board of residence of those undergoing chlamydia testing. Although it is accepted that people do cross NHS board boundaries to access services, it is not possible using the current aggregated data collection system to derive data by NHS board of residence from the laboratory testing data. In addition, this is further highlighted with regard to the data for Greater Glasgow & Clyde and Highland NHS Boards; some chlamydia testing of Highland NHS Board residents is performed in the laboratories within the Greater Glasgow & Clyde NHS Board area and, thus, will be recorded in this area.

Although an estimated 5-20% of chlamydia tests undertaken on individuals in a calendar year are repeats, the data for 2010, indicate that between 21% and 39% of women, aged 15-24, in each NHS board had a test performed (Figure 1.2 and Table 1.4). Since 2005, the highest rate of testing among women in this age group has been observed in Dumfries and Galloway NHS Board (391 per 1000 in 2010) while the lowest rate for 2010 was observed in Fife NHS Board (208 per 1000).

In 2010, four NHS boards achieved the level of testing (300 per 1000) in women aged 15-24 described in the essential criteria for the NHS Quality Improvement Scotland (now NHS Healthcare Improvement Scotland) Sexual Health Services Standards; NHS Dumfries & Galloway (391 per 1000), NHS Grampian (340 per 1000), NHS Greater Glasgow & Clyde (324 per 1000), and NHS Borders (305 per 1000). Note, however, as described above, a small fraction of testing in the NHS Greater Glasgow & Clyde laboratories is performed on NHS Highland and other NHS board residents.

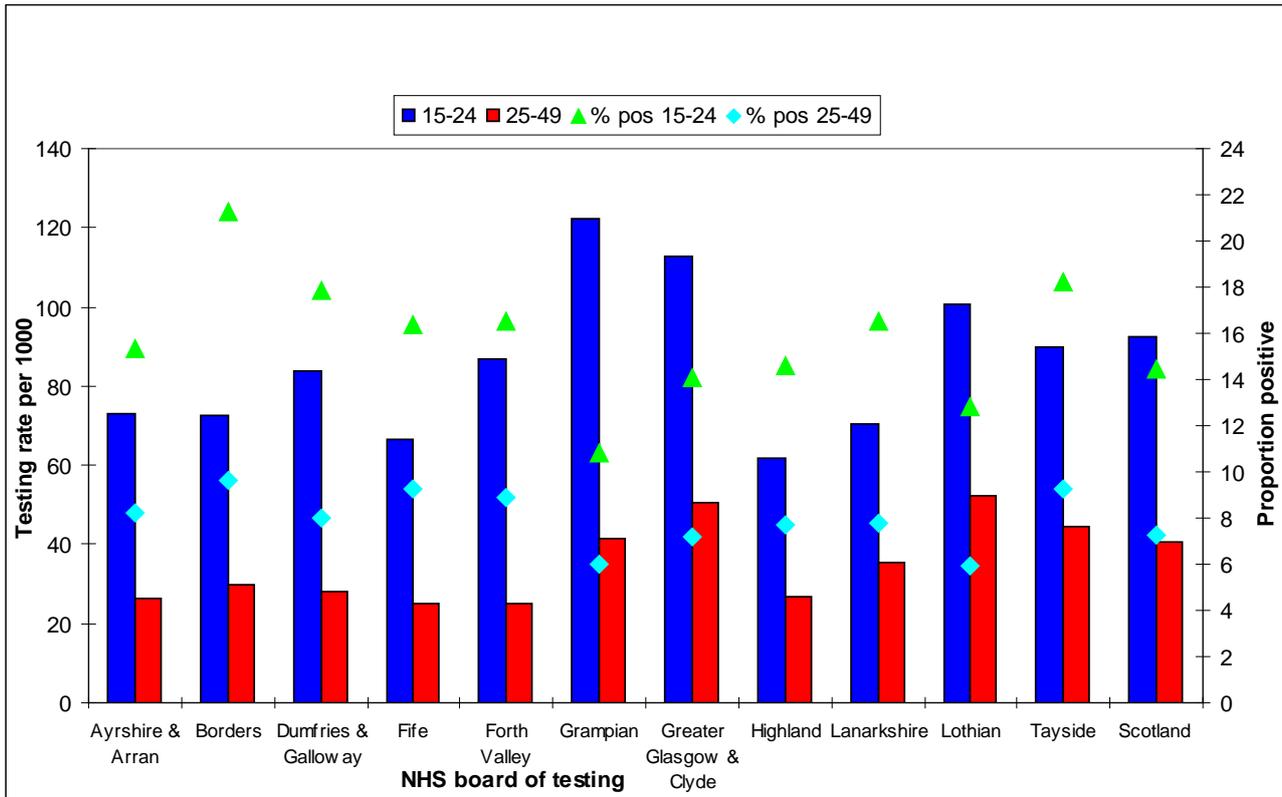
**Figure 1.2: Rates of chlamydia tests performed per 1000 women and proportion of positive tests by age group and NHS board of testing, Scotland, 2010.**



Note: Rates based on General Register Office for Scotland mid-year population data for 2010 using ages 15-24 and 25-49 as denominators

Source: Health Protection Scotland

**Figure 1.3: Rates of chlamydia tests performed per 1000 men and proportion of positive tests by age group and NHS board of testing, Scotland, 2010.**



Note: Rates based on General Register Office for Scotland mid-year population data for 2010 using ages 15-24 and 25-49 as denominators  
 Source: Health Protection Scotland

Among men aged 15-24, between 6% (62 per 1000 in NHS Highland) and 12% (122 per 1000 in NHS Grampian) of the population in each NHS board had a test performed (Figure 1.3 and Table 1.3). Three NHS board areas met the standard for the sexual health services essential criterion, for chlamydia testing in men aged 15-24, of 100 per 1000; NHS Grampian (122 per 1000), NHS Greater Glasgow & Clyde (113 per 1000), and NHS Lothian (101 per 1000).

Data on the source of specimens for chlamydia testing were available from eleven of the twelve NHS board areas where testing is performed. Whilst there was some regional variation, the majority of testing in men (65%) was performed in the genitourinary medicine (GUM) clinic setting and 26% in the primary care setting. In women, 51% tests were received from the primary care setting, 15% and 6% from the hospital and family planning settings respectively, and 27% from the GUM clinic setting. These are similar proportions to those observed in 2009. Note that the source of specimen data may also depend on how sexual health services are delivered, and thus recorded. For example, in some areas where sexual and reproductive health services are integrated, these may still be referred to as GUM clinics.

## Sexual Health Services Standards

The following tables present the data in a format to address the NHS Quality Improvement Scotland (now NHS Healthcare Improvement Scotland) Sexual Health Services Standards.

Whilst this section provides data to support the Sexual Health Service Standards on chlamydia it is worth noting that NHS health boards focus more on the revised Scottish Intercollegiate Guideline Network (SIGN) guideline on the 'Management of genital Chlamydia trachomatis infection (SIGN 109, published March 2009) which differs from the standards set out below.

### Standard 3: Services for young people

*3.1: 60% of chlamydia tests per year are taken from males and females aged under 25 years.*

The proportion of chlamydia tests in men and women aged less than 25 is shown in Table 1.2 with the corresponding data for 2009 for comparison. There has been little change in the proportion of chlamydia tests performed on men and women between 2009 and 2010; however, increases were noted in NHS Borders and NHS Grampian. The 60% target has not been achieved in any area of testing for either men or women aged less than 25.

**Table 1.2: Proportion of all chlamydia tests in men and women aged less than 25, by NHS board of testing, 2009 and 2010.**

NHS board of testing	Men 2010	Men 2009	Women 2010	Women 2009
Ayrshire & Arran	51.5	51.5	49.5	45.9
Borders	44.3	39.5	54.2	48.7
Dumfries & Galloway	51.4	54.7	53.5	51.9
Fife	50.9	52.6	53.2	47.6
Forth Valley	57.6	57.5	52.1	53.8
Grampian	49.6	44.5	48.9	47.2
Greater Glasgow & Clyde	44.6	45.2	48.0	49.3
Highland	43.5	41.4	47.5	45.3
Lanarkshire	41.0	39.7	41.7	39.9
Lothian	39.0	41.1	49.9	50.2
Tayside	44.9	44.2	46.5	44.7

Source: Health Protection Scotland

*3.2: The annual rate of chlamydia tests performed in the NHS board area is greater than 100 per 1000 males aged 15-24 years.*

The rate of chlamydia testing in men is shown in Table 1.3. The criterion for this standard was met in three NHS boards; NHS Grampian, NHS Greater Glasgow & Clyde and NHS Lothian. Between 2009 and 2010, testing rates have remained the same in six of the eleven NHS boards for which data are available. Increases in testing rates were observed in the remaining NHS boards, most notably in Grampian, Ayrshire & Arran and Lanarkshire.

**Table 1.3: Rate of chlamydia testing per 1000 men aged 15-24 by NHS board of testing, 2009 and 2010.**

<b>NHS board of testing</b>	<b>Testing rate per 1000 in men aged 15-24, 2010</b>	<b>Testing rate per 1000 in men aged 15-24, 2009</b>
Ayrshire & Arran	73	56
Borders	72	63
Dumfries & Galloway	84	82
Fife	66	66
Forth Valley	87	84
Grampian	122	89
Greater Glasgow & Clyde	113	105
Highland	62	57
Lanarkshire	71	58
Lothian	101	102
Tayside	90	88

Note: Rates based on General Register Office for Scotland mid-year population data for 2010 using ages 15-24 as denominator

Source: Health Protection Scotland

*3.2: The annual rate of chlamydia tests performed in the NHS board area is greater than 300 per 1000 females aged 15-24 years.*

The rate of chlamydia testing in women is shown in Table 1.4. The criterion for this standard was met in four NHS boards during 2010; Borders, Dumfries & Galloway, Grampian, and Greater Glasgow & Clyde. Between 2009 and 2010, increases in testing rates were observed in six of the eleven NHS boards for which data are available, most notably in Ayrshire & Arran, Borders, and Lanarkshire. Conversely, testing rate decreases were noted in the remaining five NHS boards, the largest of which were seen in NHS Fife and NHS Forth Valley.

**Table 1.4: Rate of chlamydia testing per 1000 women aged 15-24 by NHS board of testing, 2009 and 2010.**

<b>NHS board of testing</b>	<b>Testing rate per 1000 in women aged 15-24, 2010</b>	<b>Testing rate per 1000 in women aged 15-24, 2009</b>
Ayrshire & Arran	270	229
Borders	305	275
Dumfries & Galloway	390	384
Fife	208	231
Forth Valley	252	276
Grampian	340	328
Greater Glasgow & Clyde	324	333
Highland	220	227
Lanarkshire	242	216
Lothian	298	310
Tayside	259	249

Note: Rates based on General Register Office for Scotland mid-year population data for 2010 using ages 15-24 as denominator

Source: Health Protection Scotland

## Summary

In Scotland, there has been little change in the level of chlamydia testing between 2009 and 2010. In a similar observation to those observed during the past five years, the majority of testing (73%) was performed on women.

Although sexually active individuals aged less than 25 are at greatest risk of chlamydia infection and the majority (73%) of positive tests were noted in this age group, less than half (48%) of all chlamydia testing in Scotland during 2010 was performed on those aged less than 25. This has not changed during the past six years. Consequently, there remains a need to encourage testing among those aged less than 25 who are at risk of infection. In addition, the higher proportion of positive tests among men undergoing testing (in all age groups) suggests that more testing is required in this group. These observations are in line with the revised Scottish Intercollegiate Guideline Network (SIGN) guideline on the 'Management of genital Chlamydia trachomatis infection' (SIGN 109, published March 2009) which recommends a focus on testing of all symptomatic men and women, as well as the asymptomatic population, particularly young people.

## Glossary

CMO  
GUM

Chief Medical Officer  
Genitourinary Medicine

## Contact

### Zareena Rafiq

Project Manager for Data Augmentation for Sexual Health (DASH)

[zareena.rafiq@nhs.net](mailto:zareena.rafiq@nhs.net)

0131 275 7164

### Lesley Wallace

Epidemiologist (BBV/STI)

[lesley.wallace@nhs.net](mailto:lesley.wallace@nhs.net)

0141 300 1919

## Further Information

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

## Appendix

### A1 – Publication Metadata (including revisions details)

Metadata Indicator	Description
Publication title	Chlamydia Key Clinical Indicator (KCI)
Description	Annual update on the proportion of the population within each NHS board having a chlamydia test and the proportion of those tests which are positive.
Theme	Health and Social Care
Topic	Sexual Health services
Format	Word document
Data source(s)	Proforma sent to each of the NHS laboratories that perform chlamydia testing in Scotland.
Date that data are acquired	Proforma sent and data requested from <i>Chlamydia trachomatis</i> testing laboratories in Scotland in June/July 2011.
Release date	27/09/2011
Frequency	Annual
Timeframe of data and timeliness	Calendar year, generally no delays
Continuity of data	Baseline data first established in 2005 for this particular indicator
Revisions statement	There are no revision statements applicable to these data.
Revisions relevant to this publication	Not applicable
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 and monitoring progress against QIS (now Healthcare Improvement Scotland) sexual health standards
Accuracy	Data are based on aggregated data – therefore only minimum cleaning is possible and supplementary questions are asked on the proforma to aid interpretation.
Completeness	Considered complete – these data include aggregate measure of all tests performed in Scotland.
Comparability	Data are captured and presented by NHS board of testing and diagnosis and are used to monitor part of the NHS QIS Standard 3.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to <a href="#">published guidelines</a> .
Coherence and clarity	PDF document which is accessed via the ISD website: <a href="http://www.isdscotland.org/Health%2DTopics/Sexual%2DHealth/Publications/">http://www.isdscotland.org/Health%2DTopics/Sexual%2DHealth/Publications/</a>
Value type and unit of	Number, rates and percentages

measurement	
Disclosure	The <a href="#">ISD protocol on Statistical Disclosure Protocol</a> is followed.
Official Statistics designation	Official Statistics
UK Statistics Authority Assessment	Awaiting assessment by UK Statistics Authority
Last published	28 <sup>th</sup> September 2010
Next published	25 <sup>th</sup> September 2012
Date of first publication	February 2007 (which reports on data taken from 2005)
Help email	<a href="mailto:NSS.isddash@nhs.net">NSS.isddash@nhs.net</a>
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:

Clinical leads 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:

Clinical leads for Sexual Health in Scotland