

Publication Report



HIV Therapy 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 proportion of HIV positive people in specialist care who have severe HIV disease (an AIDS defining illness) or CD4 count <350 cells per cubic millimetre (mm^3) on more than two occasions in any 12 month period who have been treated and the proportion of those treated who have had a successful response to treatment (defined as viral load <400 copies per millilitre at the most recent count).

Important note:

In previous reports, the KCI was based on using a CD4 cell count of <200 per mm^3 on more than two occasions. The data for 2010 are presented using cell counts <350 per mm^3 as the indicator; hence, the data in this report are not comparable to previous reports. The change in definition reflects current clinical practice and clinical guidance for establishing late disease and commencing HIV drug therapy.

Background

Initiation of anti-retroviral therapy (ART) is recommended for individuals with CD4 cell counts below 350 per cubic millimetre (mm^3) and particularly for those with counts below 200 per mm^3 (*British HIV Association guidelines for the treatment of HIV-1-infected adults with antiretroviral therapy, 2008*). The effectiveness of ART, introduced in 1996-1997, in improving survival and reducing morbidity among people who are HIV positive has been demonstrated in Scotland and worldwide.

The proportion of HIV infected people with CD4 cell counts <350 per mm^3 , who have been treated with ART and who have an undetectable viral load, is a robust indicator of the effectiveness of HIV clinical 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, are achieved.

Data collection

A surveillance system, which involves the collection of immunological, viral load and treatment data on all HIV diagnosed and clinically managed individuals in Scotland, is managed by Health Protection Scotland (HPS) in association with Scottish HIV and Immunology testing laboratories. 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, the current antiretroviral therapy regimen and the number of antiviral agents administered, significant clinical events in the previous three months and CD4 cell count (per cubic millimetre, mm^3) and viral load (HIV 1 RNA copies per millilitre, (copies/ml)) test results. The data are collected by clerical officers within the testing laboratories, collated by HPS and routinely reported via the HPS Weekly Report ANSWER publication, (for example,

<http://www.documents.hps.scot.nhs.uk/ewr/pdf2011/1122.pdf>).

Key points

- A high proportion of those eligible for HIV treatment and care in Scotland are receiving it.
- Therapy continues to be successful: 95% of patients undergoing treatment for at least six months during 2010 had evidence of viral suppression.

Results and Commentary

In 2010, 3339 HIV infected individuals attended for CD4 cell count monitoring across Scotland (Table 1). This represents an 8% increase on that reported in 2009 (3092). Note that there are a greater number of people living with HIV in Scotland, year on year, as a result of both an increase in the numbers of new reports of HIV infection and the downward trend in AIDS diagnoses and deaths due to widespread availability of ART in the fourteen years since its introduction. Data from certain NHS board areas have been omitted due to the small numbers of cases (≤ 10) who are receiving treatment and/or care.

In 2010, the majority of people undergoing CD4 cell count monitoring were resident in NHS Greater Glasgow & Clyde (1073, 32%) and NHS Lothian (1067, 32%) board areas. Between 2009 and 2010, an increase in the number of people undergoing CD4 monitoring was observed in all NHS board areas with the largest increases being recorded in NHS Ayrshire & Arran (117%, 41 to 89) and NHS Highland, (29%, 62 to 80).

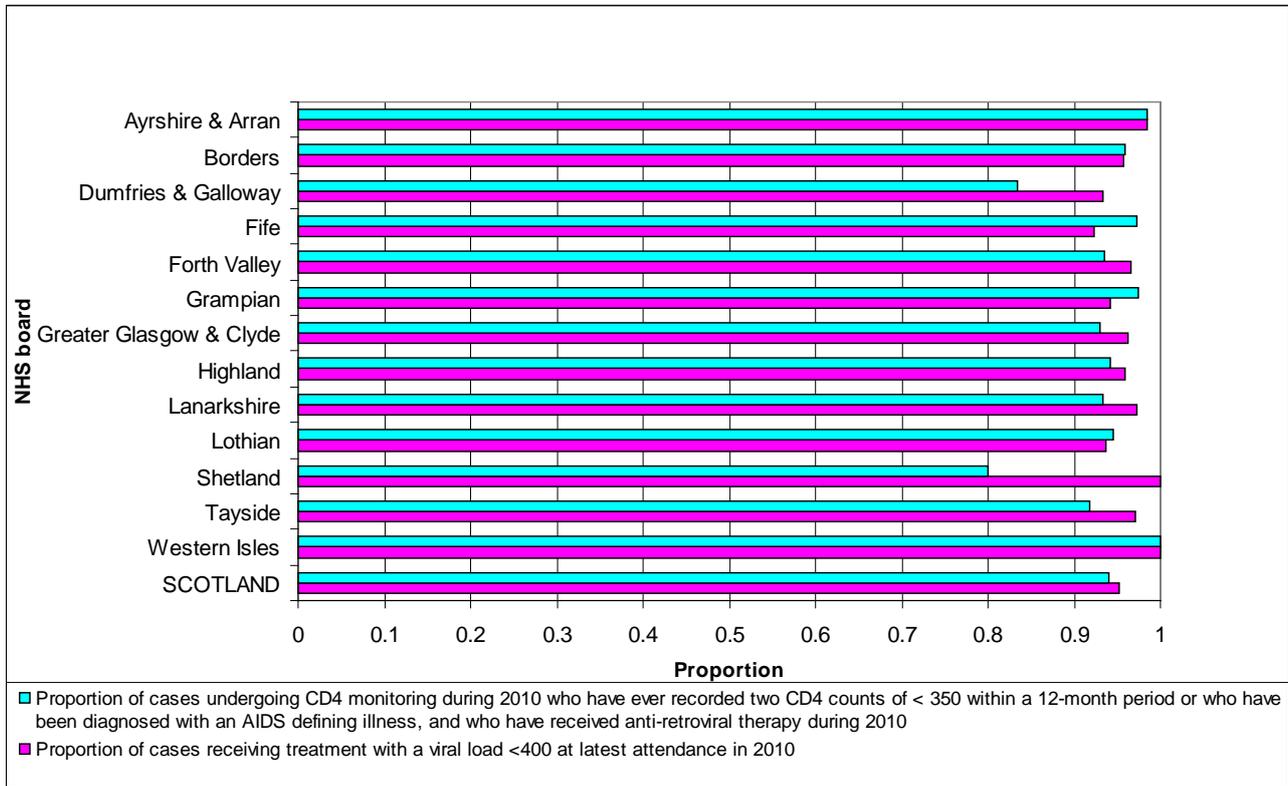
Of those patients undergoing CD4 monitoring in 2010, 2450 (73%) had ever had two CD4 cell counts < 350 per mm^3 recorded within a 12 month period or been diagnosed with an AIDS defining illness and were therefore eligible for ART. The proportion of cases eligible for ART varied by NHS board and (excluding the island NHS boards) ranged from 63% in NHS Grampian to 80% in NHS Lothian.

Of those patients eligible for ART in 2010, 2412 (98%) had attended for CD4 monitoring and treatment for at least six months and 94% (2267/2412) of them had received ART (at any level) during 2010.

Of the 2412 receiving ART in 2010, and who have attended for monitoring for at least six months, 2158 (95%) exhibited viral suppression (as indicated by a viral load of < 400 copies/ml) at their latest attendance. This is a higher proportion than that noted in previous reports which were based on data among patients with advanced HIV infection and/or severe immunodeficiency ($\text{CD4} < 200$ cells per mm^3); thus, this observation may reflect the number of individuals who commenced therapy while immunocompetent. Note that there are a number of reasons why not all patients who are eligible to receive ART are on therapy and why those on therapy are not able to suppress viral replication.

[See table 1.1 for HIV infected persons under CD4 and viral load monitoring, receiving antiretroviral therapy \(ART\), by NHS board in Scotland; 2010](#)

Figure 1.1: The proportion of cases eligible for therapy who received antiretroviral therapy during 2010 and the proportion with viral suppression at latest attendance in 2010, having attended CD4 monitoring for at least six months



Source: Health Protection Scotland

Conclusion

Across Scotland, 94% of cases who satisfied the inclusion criterion for the KCI (a CD4 cell count <350 per mm³ more than once in any 12 month period or diagnosed with an AIDS defining illness) and who had attended for monitoring and treatment for at least six months, received ART during 2010. Encouragingly, 95% of patients on ART for six months or more have evidence of viral suppression. It should be noted that not all patients with a CD4 cell count <350 per mm³ receive ART. This may be because; (i) they have recently presented; (ii) they have drug intolerance or, (iii) the patient has declined therapy. In addition, patients that are receiving ART may not achieve viral suppression; this may be due to poor adherence to therapy, drug intolerance, resistant virus or because the patient has only recently started on treatment. Also, the distribution of how cases acquired their HIV infection varies in each NHS board and this may be a key factor in explaining the differences in uptake of, and response to, antiretroviral treatment. Notwithstanding these clinical and/or treatment scenarios, these data suggest continuing high levels of care and treatment are being provided for the increasing number of people living with HIV in Scotland.

Glossary

AIDS	Acquired immune deficiency syndrome
ART	Antiretroviral Treatment
HIV	Human immunodeficiency virus
KCI	Key Clinical Indicator

List of Tables

Table No.	Name	Time period	File & size
1.1	HIV infected persons under CD4 and viral load monitoring, receiving antiretroviral therapy (ART), by NHS board in Scotland; 2010	2010	Excel [27kb]

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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	HIV Therapy Key Clinical Indicator (KCI)
Description	Annual update of The proportion of HIV positive people in specialist care who have severe HIV disease (an AIDS defining illness) or CD4 count <350 cells per cubic millimetre (mm ³) on more than two occasions in any 12 month period who have been treated and the proportion of those treated who have had a successful response to treatment (defined as viral load <400 copies per millilitre at the most recent count).
Theme	Health and Social Care
Topic	Sexual Health services
Format	Word document supported by Excel workbook
Data source(s)	A surveillance system, which involves the collection of immunological, viral load and treatment data on all HIV diagnosed and clinically managed individuals in Scotland.
Date that data are acquired	Data are extracted from a surveillance database held at HPS (date of extraction – July 2011)
Release date	27/09/2011
Frequency	Annual
Timeframe of data and timeliness	Calendar year
Continuity of data	Baseline produced in 2005. This has been altered twice since that time.
Revisions statement	There are no revision statements for this publication.
Revisions relevant to this publication	The definition of the KCI has been revised to reflect current clinical practice and clinical guidelines for commencing HIV drug therapy.
Concepts and definitions	The data are now based on a cut off CD4 count of <350 cells/mm ³ In the previous year's report, the data were based on a cut off CD4 of <200 cells/mm ³
Relevance and key uses of the statistics	Making information publicly available for planning, epidemiology, provision of services, assessing impact of policies/initiatives.
Accuracy	The data reflect the information available at time of data extraction and are as accurate as the information received from clinicians who return the data.
Completeness	All patients who access HIV care and therapy are recorded on the database, thus, the data are complete for patients accessing care in Scotland.
Comparability	The data are based on NHS board of residence. It is known that patients can cross NHS board boundaries to access HIV care.
Accessibility	It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines .
Coherence and	PDF document which is accessed via the ISD website:

clarity	http://www.isdscotland.org/Health%2DTopics/Sexual%2DHealth/Publications/
Value type and unit of measurement	Numbers and percentages
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
Next published	25 th September 2012
Date of first publication	
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:

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