



Surveillance report.

HIV infection in Scotland: Quarterly report to 30 September 2018

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Diagnosed HIV-infected persons living in Scotland	Number of HIV-infected persons attending for care and treatment	Proportion of attenders on treatment
5265	4734	98%

From January to September 2018, NHS Scotland laboratories reported positive HIV-antibody test results for 213 individuals not previously recorded on the HPS HIV database. The cumulative total of known HIV-positive individuals ever reported in Scotland is now 9270, of whom 6818 (74%) are male and 2452 (26%) are female. Allowing for the migration of an estimated 1570 infected people, those who have not attended for more than ten years (251), and for the 2184 (24%) known to have died, it is estimated that there are currently 5265 individuals living in Scotland who have been diagnosed HIV-positive.

Of the 213 HIV-positive individuals reported to the end of September 2018, 164 (77%) are male. Over half (58%, 123/213) are aged between 25 and 44 years. NHS Greater Glasgow & Clyde reported 75 diagnoses, 43 were reported from NHS Lothian, 18 from NHS Grampian and 17 from NHS Lanarkshire. The probable route of transmission was men who have sex with men (MSM) in 71 individuals, heterosexual intercourse in 51, and injecting drug use in 10. Transmission category remains unresolved for 81 individuals. A total of 97 infections (46%) are presently presumed to have been acquired outwith Scotland; this figure includes individuals where risk is currently unknown (Tables 1-3).

At the end of September 2018, there were 141 new HIV diagnoses among individuals who are diagnosed for the first time in Scotland (Tables 6 and 7). The new HIV diagnoses make up 65% of the total number of reports received; this is a similar proportion to previous years. Of these new diagnoses, 28 had evidence of being recently acquired (i.e. having been acquired within the previous three to four months). Notwithstanding the outbreak among people who inject drugs (PWID) which has been ongoing since 2015, the number of recently acquired infections has been highest among MSM over the past three years.

At the end of June 2018, 4734 HIV infected individuals were attending specialist services for monitoring and treatment. Including recently reported persons (183 – Table 5) who may not as yet have recorded an attendance, this represents 93% of the estimated number of diagnosed individuals currently living in Scotland. Across Scotland, 98% of those attending for monitoring are receiving anti-retroviral therapy.

More detailed information is included in the following tables. The HIV diagnosis database is under continual review and modification as additional information becomes available; as a result, published data, primarily within the last year, have been amended accordingly.

The team at HPS team welcomes comment and suggestions from stakeholders regarding content. Please direct any correspondence to nss.hpsbbvsti@nhs.net.

TABLE 1: HIV-1 infected persons, Scotland, by NHS board and date reported; January to September 2018.

NHS board	Male	Female	Total
Ayrshire & Arran	*	*	11
Borders	*	*	*
Dumfries & Galloway	*	0	*
Fife	*	*	7
Forth Valley	*	*	*
Grampian	*	*	18
Greater Glasgow & Clyde	51	24	75
Highland	*	*	9
Lanarkshire	*	*	17
Lothian	37	6	43
Orkney	*	*	*
Shetland	*	0	*
Tayside	*	*	15
Western Isles	0	0	0
Total	164	49	213

TABLE 2: HIV reports, Scotland¹ by year of report, exposure category and presumed area of exposure²; to 30 September 2018.

Year of report	Total HIV Reports ³	All exposure categories ⁴			Men who have sex with men (MSM)				Sexual intercourse between men and women				PWID
		within Scotland	outwith Scotland	outwith UK	Total ³	within Scotland	outwith Scotland	outwith UK	Total ³	within Scotland	outwith Scotland	outwith UK	
2004	360	142	218	189	141	98	43	21	196	31	165	159	15
2005	404	149	255	207	172	106	66	35	197	27	170	160	27
2006	340	123	217	175	149	87	62	29	162	22	140	134	22
2007	440	156	284	224	203	115	88	40	219	37	182	172	10
2008	405	154	251	202	162	98	64	28	206	38	168	161	21
2009	417	144	273	221	175	98	77	41	208	35	173	159	18
2010	359	150	209	172	162	108	54	29	167	24	143	134	21
2011	364	163	201	143	174	112	62	28	161	39	122	101	19
2012	347	127	220	163	172	94	78	39	144	21	123	107	16
2013	354	147	207	150	179	99	80	38	143	29	114	101	21
2014	370	157	213	142	185	99	86	33	149	36	113	98	22
2015	366	191	175	122	185	112	73	30	112	21	91	81	56
2016	321	152	169	117	157	74	83	44	114	37	77	67	39
2017	369	168	201	146	189	100	89	49	117	23	94	84	44
2018	213	116	97	70	71	30	41	23	51	16	35	32	10

1. Due to active follow-up, data on the Scottish HIV Register are constantly changing. Figures presented in this table may differ slightly from those previously published.
2. 'Presumed Area of Exposure' is based on information provided by the patient at the time of test or during subsequent follow-up. An individual is presumed to have been infected in Scotland if, after investigation, no evidence exists to the contrary. 'Outwith UK' is a subset of 'outwith Scotland'. Reports under investigation are excluded from all categories except the total.
3. Includes reports currently under investigation.
4. Includes individuals outwith three main risk groups.

TABLE 3: HIV reports, Scotland, by year of report and NHS board¹; to 30 September 2018.

Year of report	AA	BR	DG	FF	FV	GR	GGC	HG	LN	LO	TY	SH, OR, WI
2004	8	*	9	21	6	25	116	7	26	112	26	0
2005	12	*	13	19	15	33	123	9	33	129	15	0
2006	10	*	12	10	15	24	107	6	31	94	25	*
2007	9	*	9	20	16	46	134	17	45	111	30	*
2008	8	*	*	11	17	44	137	9	29	110	30	*
2009	10	5	5	18	17	34	185	12	33	74	23	*
2010	16	*	5	9	11	38	113	14	29	92	27	*
2011	14	*	*	18	15	32	110	14	28	97	30	*
2012	10	*	5	16	10	42	115	13	27	87	20	0
2013	18	*	5	11	15	45	102	*	29	90	29	*
2014	15	*	6	13	9	32	125	16	36	94	21	0
2015	13	7	6	19	10	31	133	14	40	68	24	*
2016	5	*	*	13	14	39	109	11	35	71	17	*
2017	10	*	5	15	*	37	127	11	38	98	22	0
2018	11	*	*	7	*	18	75	9	17	43	15	*

1. See terms and definitions.

TABLE 4: Monitoring and deaths among individuals diagnosed with HIV, Scotland; to 30 September 2018.

Year of attendance/death	Individuals attending for CD4/VL monitoring ¹	Deaths among HIV infected individuals ²
2004	1923	29
2005	2204	52
2006	2402	47
2007	2661	48
2008	2869	49
2009	3094	50
2010	3345	49
2011	3580	43
2012	3772	44
2013	3930	49
2014	4145	49
2015	4297	46
2016	4436	59
2017	4659	58
2018 ³	4218	42

1. Total individuals attending for monitoring within given year. Subject to 3-month reporting delay.
2. In some cases the actual cause of death may have been unrelated to the person's infection status. Death data are subject to reporting delay.
3. Data to 30 June 2018.

TABLE 5: HIV reports and current status of living diagnosed persons; to 30 September 2018.

NHS board	Reported during year to date as at 30 Sept 2018					Current status of living diagnosed persons						
	Total	MSM	Heterosexual	PWID	Other/NK	Estimated ¹ diagnosed individuals alive as at 30 September 2018	Number attending ² for monitoring	Recent report ³	Proportion of those diagnosed attending or recently reported	Proportion of attenders on treatment at any level	Not attending (number last attended prior to 1 Jul 2008)	
AA	11	*	*	*	*	162	139	10	92%	98%	18	(6)
BR	*	0	*	0	*	49	35	6	84%	86%	*	*
DG	5	*	0	0	*	79	65	*	87%	94%	15	(5)
FF	7	*	0	0	*	243	212	8	91%	99%	38	(15)
FV	*	*	0	0	*	165	152	*	93%	97%	25	(16)
GR	18	6	*	0	*	435	386	17	93%	99%	33	*
GGC	75	25	29	7	14	1647	1483	51	93%	98%	179	(71)
HG	9	*	*	0	*	147	128	7	92%	98%	19	(7)
LN	17	*	*	*	10	453	401	17	92%	97%	45	(13)
LO	43	25	7	0	11	1491	1378	38	95%	99%	161	(88)
TY	15	*	0	0	*	374	342	18	96%	98%	38	(25)
OR, SH, WI	5	*	*	0	*	20	13	*	90%	100%	*	*
Total	213	71	51	10	81	5265	4734	183	93%	98%	584	(251)

1. This estimate is calculated by subtracting the individuals known to have died, those who are known to have left Scotland, and those who have not attended within the past 10 years from the cumulative number of diagnosed reports ever recorded.
2. Individuals alive, not known to have left Scotland, and recording at least one attendance within the previous 18 months as at 30 June 2018.
3. Individuals reported within the past 18 months who have not yet attended for monitoring at a specialist clinic.

TABLE 6: Newly diagnosed HIV infections in Scotland by year of report, exposure category and number recently infected*; to 30 September 2018.

Exposure category	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Men who have sex with men (MSM)	132	129	138	128	124	118	131 (45)	86 (17)	115 (30)	40 (14)
Sexual intercourse between men and women	139	117	113	91	102	87	62 (*)	73 (12)	68 (11)	37 (7)
People who inject drugs (PWID)	12	17	14	12	17	18	52 (14)	32 (*)	35 (*)	10 (*)
Other	*	*	*	*	*	*	*	*	*	*
Not Known	*	*	*	*	*	*	* (*)	7 (0)	6 (0)	52 (*)
Scotland	291	267	270	238	250	230	253 (66)	199 (35)	228 (52)	141 (28)

* The number of recent infections are given in parentheses. The data to the end of September 2018 are provisional. Note that new diagnoses are tested for recency using the avidity antibody test; this is performed on new diagnoses when a sample is available.

TABLE 7: Newly diagnosed HIV infections in Scotland by year of report and NHS Board; to 30 September 2018.

NHS board	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018*
Ayrshire & Arran	7	12	12	9	16	13	12	*	6	8
Borders	*	*	*	*	*	*	*	*	*	*
Dumfries & Galloway	*	*	*	*	*	*	*	*	*	*
Fife	15	8	17	9	*	8	13	7	9	6
Forth Valley	12	10	12	6	12	8	7	12	*	*
Grampian	21	22	20	21	35	18	17	24	22	8
Greater Glasgow & Clyde	126	96	91	88	81	76	97	77	88	53
Highland	8	9	7	10	*	9	9	5	5	7
Lanarkshire	24	21	26	19	28	21	28	25	27	14
Lothian	52	61	61	55	45	59	46	32	50	22
Tayside	19	23	20	14	21	12	16	9	14	10
Orkney/Shetland/ Western Isles	*	0	0	0	*	0	*	0	0	*
Scotland	291	267	270	238	250	230	253	199	228	141

*The data to the end of September 2018 are provisional.

Acknowledgements

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Terms and definitions

HIV Reports: Individuals recorded as being HIV-positive in Scotland for the first time including both newly diagnosed individuals and those known (or presumed) to have been previously diagnosed outwith Scotland.

Data suppression: To maintain patient confidentiality, cells with a value less than five (and those derived from them) are suppressed. These cells are indicated with an asterisk (*). To prevent back-calculation of suppressed cells from totals, it may sometimes also be necessary to suppress some cells with a value greater than five (secondary suppression).

NHS board: Unless otherwise specified, individuals are assigned to a specific NHS board based on the patient's postcode of residence or, where this is not known, their NHS board of referral.

Transmission category: Individuals are assigned to a transmission category based on a clinical assessment of their most likely method of exposure and subsequent infection.

Estimated number of diagnosed persons living in Scotland – REVISED CALCULATION

Method : This estimate is calculated by subtracting the individuals known to have died, those who are known to have left Scotland, and those who have not attended for 10 years or more from the cumulative number of diagnoses ever recorded.

Attending/Attendees: Individuals are considered to be 'Attending' if they have recorded at least one visit to a specialist HIV clinic for monitoring and/or care within the most recent 18-month period.

Not Attending: The category refers specifically to an individual's non-attendance for specialist HIV care and treatment. Individuals are considered to be 'Not Attending' if:

- a) they have not recorded an attendance at a specialist HIV clinic within the previous 18 months; and
- b) no evidence exists that the patient is deceased or has left Scotland.

Although not presented in this report, patients in the 'Not Attending' category can be further subdivided into those who are currently known to be alive and living in Scotland or known to have attended a non-HIV related NHS facility within the past 18 months, those who have been assigned a Community Health Index (CHI) number indicative of registration with a GP, and those who have not been assigned a CHI number.

HIV avidity testing: This is an adapted antibody test which measures the avidity or strength of antibody binding. A low HIV avidity result indicates lower strength of HIV-specific antibody suggesting an infection acquired within the past three to four months. The avidity test is used on specimens from those who are not previously known to be HIV positive (i.e. new infections). Avidity testing was rolled out nationally in 2014, with the first full year of data available in 2015.

NHS board abbreviations

AA Ayrshire & Arran	BR Borders	DG Dumfries & Galloway	GGC Greater Glasgow & Clyde
FF Fife	FV Forth Valley	GR Grampian	HG Highland
LO Lothian	LN Lanarkshire	OR Orkney	SH Shetland
TY Tayside	WI Western Isles		

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