Public Health Scotland

HIV in Scotland: update to 31 December 2024

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Contents

1. Introduction

This report presents data for Scotland on i) uptake of HIV pre-exposure prophylaxis (PrEP), ii) HIV testing, iii) HIV diagnoses, iv) uptake of HIV specialist treatment and care for 1 January to 31 December 2024, and v) outcomes of HIV infection. For the purposes of comparison, this report presents data for the period 2015 to 2024; this includes the two years from early 2020 to the end of 2021 when significant COVID-19 pandemic measures were in place which impacted access to health care.

Laboratory-confirmed HIV diagnoses data are provided by the diagnostic and specialist Blood Borne Virus testing laboratories in Scotland. In this report, the diagnoses data are recorded as either first ever diagnoses or those previously diagnosed elsewhere but now reported (for the first time) in Scotland. Data on HIV viral load and immunology markers are provided by the HIV specialist testing laboratories and immunology laboratories, respectively, in Scotland. This surveillance system is enhanced with supplementary information provided by HIV clinicians and health care staff providing specialist treatment and care. The national HIV database is maintained by Public Health Scotland (PHS) and is continually being updated. Therefore, the data reported here may differ from previous reports.

Data on the uptake of HIV PrEP, drugs taken to prevent HIV infection, are presented for the period 1 July 2017 (when the NHS-funded HIV PrEP programme commenced in Scotland) to 31 December 2024. These data are extracted from the National Sexual Health IT System (NaSH), hosted by ATOS on behalf of NHS National Services Scotland. Separate reports from Year One and Year Two of the programme are available via the **HIV page** of the Public Health Scotland (PHS) website. Data on HIV screening (antibody/antigen) tests undertaken in sexual health services across Scotland are also extracted from NaSH.

PHS collect race and ethnicity data to ensure that everyone is treated fairly and equally. We know that there are inequalities in health and having good quality data can help us to understand which groups experience disadvantage. It can also help us examine and address the underlying causes of these inequalities. Race and ethnicity are social constructs with no inherent biological basis. Any differences observed between groups will be a result of multiple factors including the effects of racism on

health and on the social determinants of health. It is acknowledged that data PHS collects on race and ethnicity is incomplete and no data are 100% accurate; however, despite the known data quality issues, the data can be used to highlight racialised health inequalities. Ethnicity data are available for approximately 93% of people diagnosed and living with HIV in Scotland as recorded on the national HIV database. These data are sourced from HIV specialist services and NaSH. Data on ethnicity are presented in this report to aid the monitoring of equity of access to HIV prevention, treatment and care in Scotland.

To maintain patient confidentiality and prevent deductive disclosure, values have been suppressed where appropriate and are indicated with an asterisk (*). To prevent back-calculation of suppressed values from totals, secondary suppression may also have been required.

HIV and sexual health services were extensively redesigned during and after the COVID-19 pandemic and some elements of service provision are now delivered remotely online, impacting both the way in which people access HIV testing and those living with HIV access treatment and care. As data on HIV diagnoses, treatment and care are presented for the period 2015 to 2024, caution should be taken when interpreting 2020 and 2021 data, in particular, given the COVID-19 pandemic measures in place during those years and the effect on the provision of, and access to, HIV testing, treatment and care, as well as changes to sexual and healthcare seeking behaviours and reduced resources to undertake surveillance activities.

2. Main points

- HIV transmission elimination targets: Public health surveillance data indicate that progress continues to be made on a number of HIV elimination targets in Scotland.

- At the end of December 2024, 94% (6,079) of the estimated cohort of 6,467 people living with HIV in Scotland had been diagnosed and, of these diagnosed individuals, 91% (5,520/6,079) were recorded as receiving treatment between 1 July 2023 and 31 December 2024 and, of those on treatment, 95% (5,260/5,520) had a suppressed viral load.

- A methodological review of the way in which Scotland's cohort of people diagnosed and living with HIV is defined has allowed refinement of Scotland's progress against the above targets while also facilitating re-engagement with those no longer accessing HIV specialist services.

- HIV pre-exposure prophylaxis (PrEP): 2,472 individuals accessed PrEP for the first time between 1 January and 31 December 2024 – an average of 206 per month. This is the second highest monthly average in any 12-month period since implementation of the programme in July 2017 and is only exceeded by the period from 1 January to 31 December 2023, when a monthly average of 216 individuals was reported.

- HIV testing: The COVID-19 pandemic had a major impact on the delivery of HIV prevention, testing/diagnosis and treatment services, but there are now clear signs of recovery. Compared to 2019, the number of people screened for HIV was 6% higher in 2024. In 2024, increases were observed in the numbers of people tested in hospital and drug service settings while similar numbers were tested in SRH clinics. Testing in general practice and prisons is yet to recover to pre-pandemic levels.

- HIV diagnosis: during 2024, a total of 375 new reports of people living with HIV were recorded in Scotland. This was the second highest number of

reports recorded in 10 years of data (2015 to 2024) and represents a 2% decrease compared to 2023 (383 reports).

- For the third successive year, the majority of new reports (67%, 250/375) were diagnoses previously recorded outside Scotland. This trend is driven by a continued higher number and proportion of diagnoses attributed to heterosexual sexual intercourse previously recorded outwith Scotland.

- The proportion of all new HIV reports accounted for by first ever diagnoses has decreased year on year from 62% in 2017 to 33% in 2024. Since 2017, the annual number of first ever diagnoses recorded has nearly halved (decreasing from 225 first ever diagnoses in 2017 to 125 in 2024).

- In 2024, heterosexually acquired first ever diagnoses exceeded in number and proportion, for the third year in succession, those among gay, bisexual and other men who have sex with men in Scotland (47%, 59/125 versus 38%, 47/125).

- Of 125 first ever HIV diagnoses recorded in 2024, 24 (19%) were thought to have been acquired within Scotland; this represents a decrease compared to 2023 (37/126). Of the 24 HIV transmissions thought to have occurred in Scotland, 15 were reported among gay, bisexual and other men who have sex with men with small numbers recorded among heterosexual men and women and people who inject drugs.

- In 2024, 21% (22/107) of first ever HIV diagnoses which underwent antibody avidity testing had been recently acquired (i.e. within three to four months of diagnosis). While recognising the relatively small numbers involved, this was a 62% increase in proportion compared to 2023 (13%, 14/106) and is the highest proportion reported since 2017 (27%, 52/196). Half of the recent HIV acquisitions were among gay, bisexual and other men who have sex with men, five were thought to have been acquired via heterosexual sexual intercourse and six were acquired via other routes.

- While the majority (59%, 13/22) of recent HIV acquisitions recorded in 2024 were likely acquired outwith Scotland, an increase was observed in the

number thought to have occurred in Scotland, from 36% (5/14) in 2023 to 41% (9/22) in 2024.

- In 2024, the same proportion of first ever diagnoses at a late stage of HIV infection (i.e. when the individual may have progressed to advanced HIV disease) was recorded as observed in 2023 – the lowest proportion since 2015. However, 21% (26/125) of first ever diagnoses in 2024 were still identified as late or very late stage of infection.

3. Results and commentary

3.1. HIV Pre-exposure Prophylaxis (PrEP)

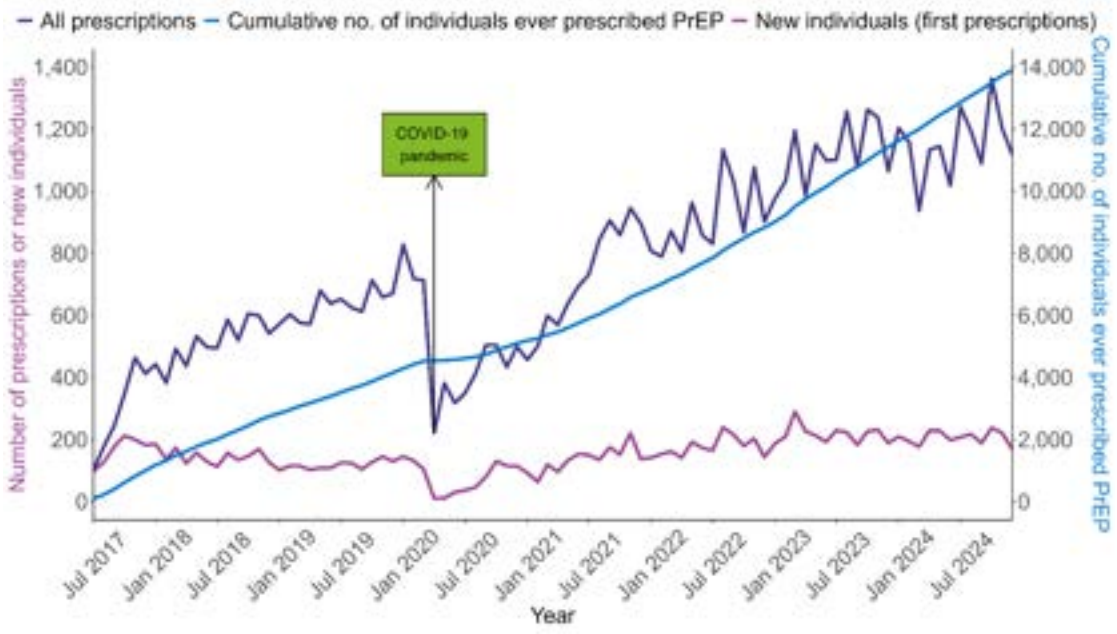
NHS-prescribed HIV pre-exposure prophylaxis (PrEP) has been available in Scotland since 1 July 2017. Details of the HIV PrEP service and uptake of HIV PrEP during the first two years of service[1,2] have been published previously on the **PHS and HPS websites**. HIV PrEP prescription data are collated using the National Sexual Health IT system (NaSH) and presented for the first time in this report by calendar year (as opposed to PrEP year in previous iterations of this report).

3.1.1 Cumulative and new prescriptions

At 31 December 2024, a total of 68,124 HIV PrEP prescriptions were recorded in NaSH: this corresponds to 13,886 individuals who have ever been prescribed HIV PrEP in Scotland since July 2017.

A total of 2,472 individuals attended sexual health services to access HIV PrEP for the first time between 1 January and 31 December 2024: an average of 206 new individuals each month (Figure 1). This is the second highest monthly average in any 12-month period since implementation of the programme in July 2017 and is only exceeded by the period from 1 January to 31 December 2023, when a monthly average of 216 new individuals was reported (Figure 1).

Figure 1: Number of i) all prescriptions, ii) new individuals prescribed HIV PrEP for the first time (first prescriptions), and iii) individuals ever prescribed HIV PrEP per month (cumulative), Scotland, 1 July 2017 to 31 December 2024



3.1.2 Gender of individuals and sexual partners

Since the HIV PrEP programme began, 89% (12,396/13,886) of those ever prescribed HIV PrEP, were gay, bisexual, and other men who have sex with men, reflecting the initial eligibility criteria[3] (Table 1).

Since 1 July 2017, small annual numbers of men with only women partners (40 or fewer per year) have accessed HIV PrEP for the first time. During this period, the number of women prescribed HIV PrEP for the first time has increased from 25 in 2018, the first complete year of implementation, to 54 in 2023 and 88 in 2024. This follows a gradual change since late 2022 from an eligibility criteria-based approach for the prescribing of HIV PrEP in Scotland to one involving a wider range of population-level and individual-level indicators to ensure that HIV PrEP reaches all those who could benefit from a reduction in HIV risk (and where benefit outweighs any clinical risk of HIV PrEP), regardless of gender or sexual orientation.[4]

It should also be noted that 333 individuals with self-reported trans status accessed HIV PrEP for the first time between 1 July 2017 and 31 December 2024 (Table 1).

Table 1: Number of individuals prescribed HIV PrEP for the first time by gender and gender of sexual partners, Scotland, 1 July 2017 to 31 December 2024

Gender	Gender of Sexual Partners[1]	2017[2]	2018	2019	2020	2021	2022	2023	2024
Female	**Men and Women**	*	*	*	*	8	17	30	29
	Men only	9	16	8	*	11	13	15	35
	Women only	0	2	0	0	*	0	0	*
	Unknown	0	*	*	*	*	7	9	*
Male	**Men and Women**	179	359	287	179	347	420	500	551
	Men only	795	1,334	1,053	712	1,154	1,481	1,621	1,424
	Women only	*	8	7	6	8	9	18	40
	Unknown	*	12	31	42	77	143	363	342
Unknown/ other		5	7	9	5	15	13	38	27
Self-reported trans status		7	21	19	9	41	52	86	98
Total		**994**	**1,745**	**1,403**	**952**	**1,623**	**2,103**	**2,594**	**2,472**

1. Note that the gender of sexual partners relates to an individual's reported sexual history over their lifetime.
2. The PrEP programme began in July 2017, and this column represents the first six months of the programme.

3.1.3 Ethnicity[i]

In 2024, the number of individuals in receipt of HIV PrEP increased among most 2022 Scottish Census Ethnic Groups[5] compared to the programme start, 2017, and the first complete year, 2018 (Table 2). Individuals of White Scottish and other White British ethnicity backgrounds accounted for the largest proportions of those accessing HIV PrEP (44% and 11%, respectively). Between 2018 and 2024, increases have been observed in the number of individuals accessing HIV PrEP of African and Chinese backgrounds; however, the numbers of individuals of Indian or Pakistani backgrounds have decreased from 16 to 12 and 20 to 15, respectively (Table 2). Information on ethnicity was unavailable for 5% (692) of HIV PrEP recipients.

Table 2: Number of individuals in receipt of HIV PrEP by 2022 Scottish Census Ethnic Groups and year

2022 Scottish Census Ethnic Groups	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	2021 n (%)	2022 n (%)	2023 n (%)	2024 n (%)
African, Scottish African or British African	* (NA%)	5 (0.3%)	9 (0.6%)	* (NA%)	9 (0.6%)	11 (0.5%)	10 (0.4%)	16 (0.6%)
Asian: Chinese, Scottish Chinese or British Chinese	10 (1.0%)	16 (0.9%)	17 (1.2%)	11 (1.2%)	24 (1.5%)	41 (2.0%)	34 (1.3%)	36 (1.5%)
Asian: Indian, Scottish Indian or British Indian	5 (0.5%)	16 (0.9%)	* (NA%)	11 (1.2%)	6 (0.4%)	20 (1.0%)	22 (0.8%)	12 (0.5%)

[i] Ethnic groups are ordered alphabetically to avoid perpetuating the notion that White Scottish or British populations are the norm. Due to the small numbers involved, this analysis does not show all individual ethnic groups, obscuring these groups' distinct experiences. In future, more detailed analyses will be made available where possible.

2022 Scottish Census Ethnic Groups	2017 n (%)	2018 n (%)	2019 n (%)	2020 n (%)	2021 n (%)	2022 n (%)	2023 n (%)	2024 n (%)
Asian: Pakistani, Scottish Pakistani or British Pakistani	8 (0.8%)	20 (1.1%)	6 (0.4%)	* (NA%)	10 (0.6%)	* (NA%)	17 (0.7%)	15 (0.6%)
Asian: Other Asian, Scottish Asian or British Asian	5 (0.5%)	14 (0.8%)	11 (0.8%)	10 (1.1%)	13 (0.8%)	26 (1.2%)	52 (2.0%)	40 (1.6%)
Caribbean or Black	7 (0.7%)	10 (0.6%)	8 (0.6%)	8 (0.8%)	7 (0.4%)	8 (0.4%)	11 (0.4%)	* (NA%)
Any mixed or multiple ethnic groups	15 (1.5%)	20 (1.1%)	26 (1.9%)	14 (1.5%)	21 (1.3%)	31 (1.5%)	36 (1.4%)	24 (1.0%)
White: Irish	15 (1.5%)	21 (1.2%)	18 (1.3%)	15 (1.6%)	24 (1.5%)	20 (1.0%)	30 (1.2%)	42 (1.7%)
White: Other British	159 (16.0%)	233 (13.4%)	169 (12.1%)	112 (11.8%)	203 (12.5%)	281 (13.4%)	297 (11.5%)	271 (11.0%)
White: Polish	20 (2.0%)	30 (1.7%)	24 (1.7%)	10 (1.1%)	26 (1.6%)	30 (1.4%)	37 (1.4%)	34 (1.4%)
White: Scottish	601 (60.5%)	1,025 (58.8%)	811 (58.0%)	483 (50.8%)	813 (50.1%)	1,002 (47.7%)	1,131 (43.6%)	1,077 (43.6%)
White: Any other white ethnic group	75 (7.6%)	141 (8.1%)	115 (8.2%)	88 (9.3%)	135 (8.3%)	191 (9.1%)	200 (7.7%)	174 (7.0%)
Other: Arab, Scottish Arab or British Arab	0 (0%)	8 (0.5%)	* (NA%)	8 (0.8%)	6 (0.4%)	* (NA%)	10 (0.4%)	* (NA%)
Other: Other ethnic group	7 (0.7%)	16 (0.9%)	25 (1.8%)	12 (1.3%)	28 (1.7%)	36 (1.7%)	38 (1.5%)	22 (0.9%)
Information not known	65 (6.5%)	167 (9.6%)	150 (10.7%)	162 (17.1%)	298 (18.4%)	393 (18.7%)	667 (25.7%)	692 (28.0%)
Total[1]	**993**	**1,742**	**1,399**	**950**	**1,623**	**2,102**	**2,592**	**2,470**

1. Where fewer than five individuals of a 2022 Scottish Census Ethnic Group were reported for each year of the programme, these have not been presented but will be included in future work to understand these individuals' experiences.

3.1.4 NHS board

Since implementation of Scotland's HIV PrEP programme on 1 July 2017 to 31 December 2024, NHS Greater Glasgow and Clyde reported the highest number and proportion of first-time attendees (32%, 4,403/13,886), followed by NHS Lothian (29%, 4,029/13,886) (Table 3).

Between 1 January and 31 December 2024, the majority of HIV PrEP recipients attended clinics in NHS Lothian (30%, 740/2,472), NHS Greater Glasgow and Clyde (28%, 694/2,472) and NHS Grampian (11%, 280/2,472). HIV PrEP data was received for the first time for NHS Shetland in 2024.

Table 3: Number of individuals prescribed HIV PrEP for the first time by NHS board of clinic, Scotland, 1 July 2017 to 31 December 2024[1]

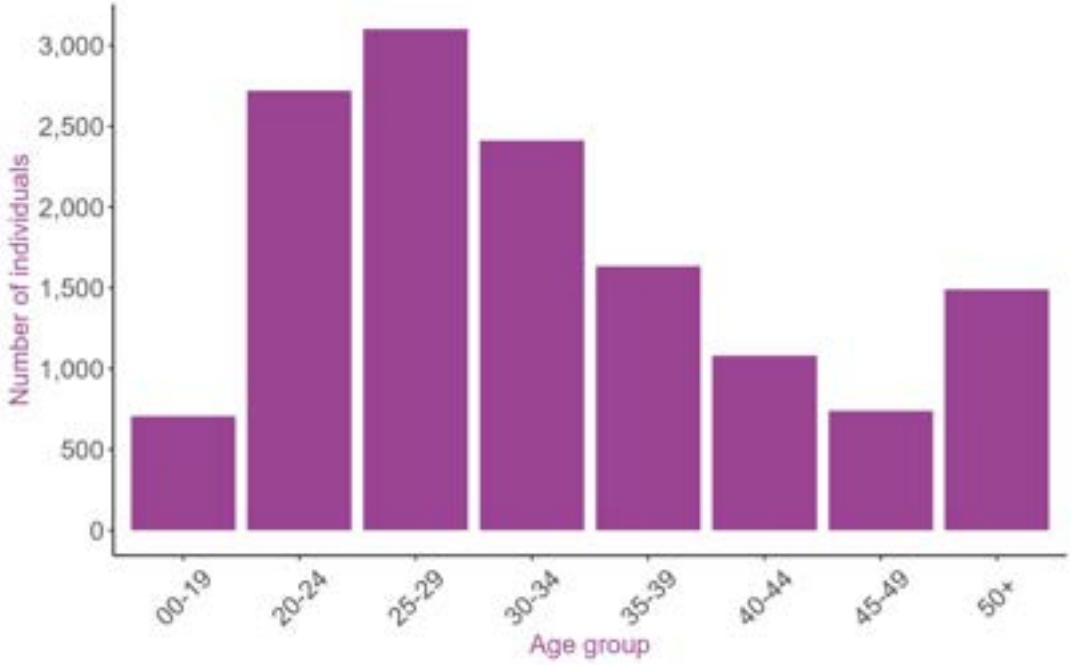
NHS Board	2017[2]	2018	2019	2020	2021	2022	2023	2024
Ayrshire & Arran	25	57	48	46	75	103	114	102
Borders	7	24	19	14	27	36	27	37
Dumfries & Galloway	10	20	31	20	26	49	40	35
Fife	41	61	53	28	57	95	83	78
Forth Valley	27	52	45	27	40	34	86	89
Grampian	79	157	144	109	216	245	279	280
Greater Glasgow & Clyde	454	705	452	295	576	637	590	694
Highland	21	49	42	22	40	44	47	39
Lanarkshire	26	49	65	31	94	147	193	207
Lothian	254	469	385	302	373	583	923	740
Shetland	-	-	-	-	-	-	-	6
Tayside	50	102	119	58	99	130	212	165
Total	**994**	**1,745**	**1,403**	**952**	**1,623**	**2,103**	**2,594**	**2,472**

1. NHS treatment based on the individual's entry to programme (first prescription given).
2. The PrEP programme began in July 2017, and this column represents the first six months of the programme.
3. Residents of NHS Orkney are included in NHS Grampian data and residents of NHS Western Isles are included in NHS Highland data where relevant.

3.1.5 Age

Over the course of the HIV PrEP programme in Scotland, three quarters (76%, 10,574/13,886) of those ever prescribed HIV PrEP were aged less than 40 years. Specifically, 22% (3,100/13,886) of ever HIV PrEP recipients were aged 25-29 years, 20% (2,721/13,886) were aged 20-24 years, 17% (2,412/13,886) were aged 30-34 years and 12% (1,635/13,886) were aged 35-39 years (Figure 2).

Figure 2: Number of individuals prescribed HIV PrEP by age group (at time of first prescription), Scotland, 1 July 2017 to 31 December 2024



3.1.6 Seroconversions

A seroconversion illness occurs shortly after HIV infection and is a sign that an individual's immune system is reacting to the presence of HIV in the body.[6] Since the HIV PrEP programme commenced in Scotland, 15 HIV seroconversions have been recorded among individuals ever prescribed NHS-funded HIV PrEP although it is not known if all 15 individuals were taking HIV PrEP at the time of infection. For a proportion of these individuals, sub-optimal adherence around the point of infection was reported.

3.1.7 Impact

During the first two years of the HIV PrEP programme (2017 to 2019), a decrease in HIV incidence among gay, bisexual and other men who have sex with men who had been prescribed HIV PrEP was observed (with a beneficial effect also seen, although to a lesser extent, among those men not prescribed HIV PrEP).[7] Further work is ongoing to interpret the ongoing impact of HIV PrEP on HIV transmission among gay, bisexual and other men who have sex with men.

3.2. HIV testing

3.2.1 HIV testing in all settings

As part of the HIV surveillance developments associated with the Scottish Government **HIV Transmission Elimination Delivery Plan**[8], work is underway to capture laboratory data on HIV screening (antibody/antigen) tests in all settings across Scotland via the Electronic Communication of Surveillance Scotland (ECOSS) to better understand HIV incidence and prevalence. A phased approach is being adopted for this work given the resource implications for NHS laboratories.

HIV screening (antibody/antigen) test data from the West of Scotland Specialist Virology Centre and the Royal Infirmary of Edinburgh Specialist Virology Centre are presented here.

Data from the West of Scotland Specialist Virology Centre capture:

- All confirmed positive tests for NHS Ayrshire & Arran, NHS Dumfries & Galloway, NHS Forth Valley, NHS Grampian, NHS Greater Glasgow & Clyde, NHS Highland, NHS Lanarkshire, NHS Orkney, NHS Shetland and NHS Western Isles.
- All negative tests for NHS Greater Glasgow & Clyde.

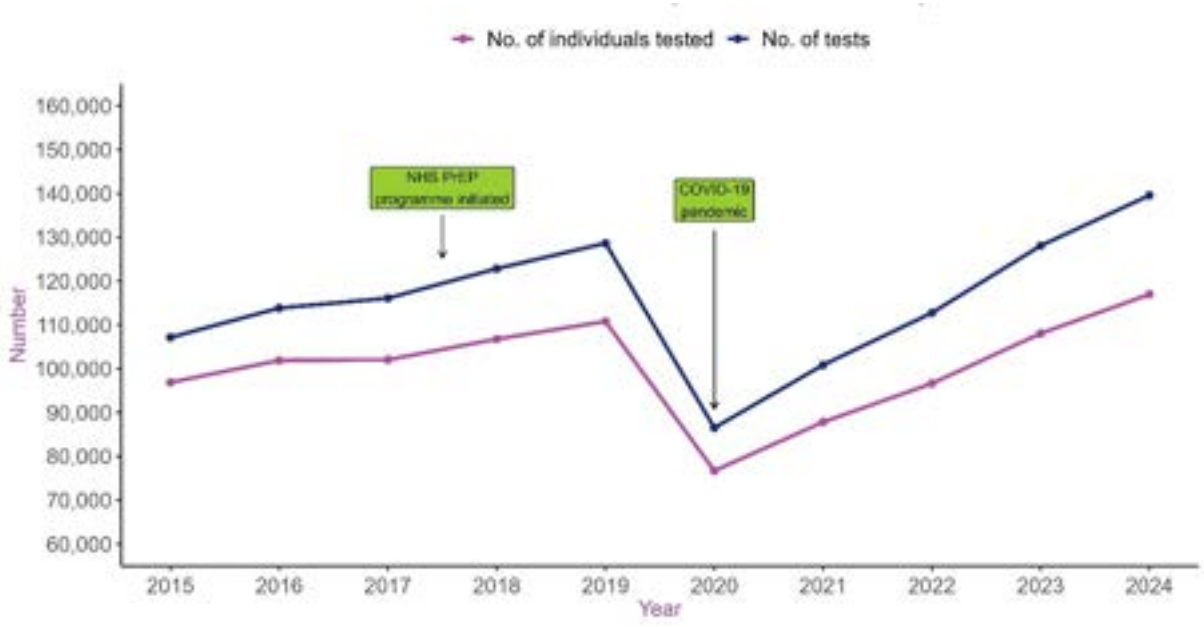
Data from the Royal Infirmary of Edinburgh Specialist Virology Centre capture:

- All confirmed positive tests for NHS Borders, NHS Fife and NHS Lothian.
- All negative tests for NHS Lothian.

ECOSS developmental work continues to capture the outstanding positive and negative tests for the remaining NHS boards.

In 2024, HIV screening (antibody/antigen) tests were performed on 116,981 individuals (Figure 3). This represents a recovery of testing following the COVID-19 pandemic and compares to 110,809 individuals tested in 2019.

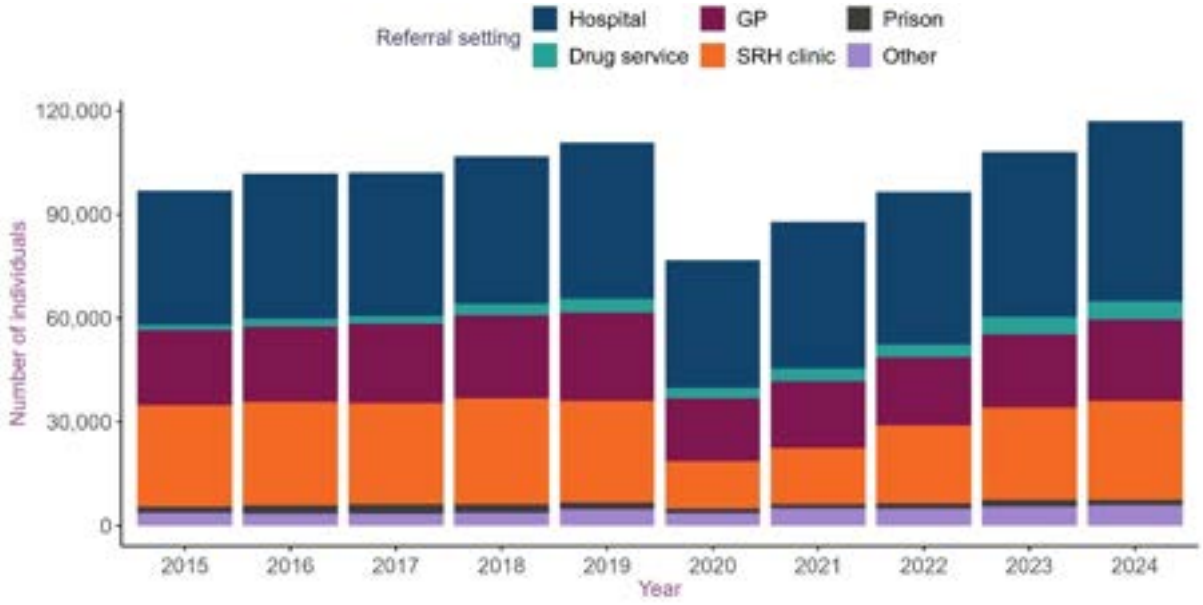
Figure 3: Annual number of i) HIV screening (antibody/antigen) tests and ii) individuals tested in all settings, 2015-2024[1]



1.Only HIV screening (antibody/antigen) tests performed by West of Scotland Specialist Virology Centre and Royal Infirmary of Edinburgh Specialist Virology Centre included in analysis (see 3.2.1 HIV testing in all settings for details).

In 2024, 44% (51,976) of individuals were tested in the hospital setting, 24% (28,644) in sexual and reproductive health (SRH) clinics, 20% (23,464) were tested in general practice (GP), 5% (5,442) in drug services, 1% (1,579) in prisons and 5% (5,876) in other/not known settings (Figure 4). Testing in hospitals had recovered to pre-pandemic levels by the end of 2024, with the number of people tested in 2024 exceeding those tested in 2019 (51,976 and 45,246, respectively) while the annual number of people tested in SRH clinics, general practice and prison remained 3%, 8% and 23% lower in 2024 compared to 2019, respectively. Notably, the number of people tested in 2024 in drug services exceeded that recorded in 2019 (5,442 versus 4,031).

Figure 4: Number of individuals undergoing a HIV screening (antibody/antigen) test by referral setting, 2015-2024[1,2]



1. GP = General Practice, SRH clinic = Sexual and Reproductive Health clinic.
2. As an individual can have multiple tests per year, the data represent unique individuals tested by referral setting of first test in a given year.

3.2.2 HIV testing in key settings

Support to increase testing for blood borne viruses (BBV), including HIV, is provided through i) the Scottish Government BBV testing targets for prisons and drug services (Scottish Government letter to Health Board Chief Executives and Alcohol and Drugs Partnership Leads), ii) the Medication Assisted Treatment Standards[9], iii) the Target Operating Model for prison healthcare[10], iv) NHS Scotland Opt-Out Testing Guidance for Prisons[11] and v) the HIV Transmission Elimination Delivery Plan[8] actions for Emergency Department testing, Indicator Condition testing in primary care and wider secondary care service and BBV test coverage among people who inject drugs. Within sexual health services, HIV testing is also recommended every three to six months for those in receipt of HIV PrEP.[4]

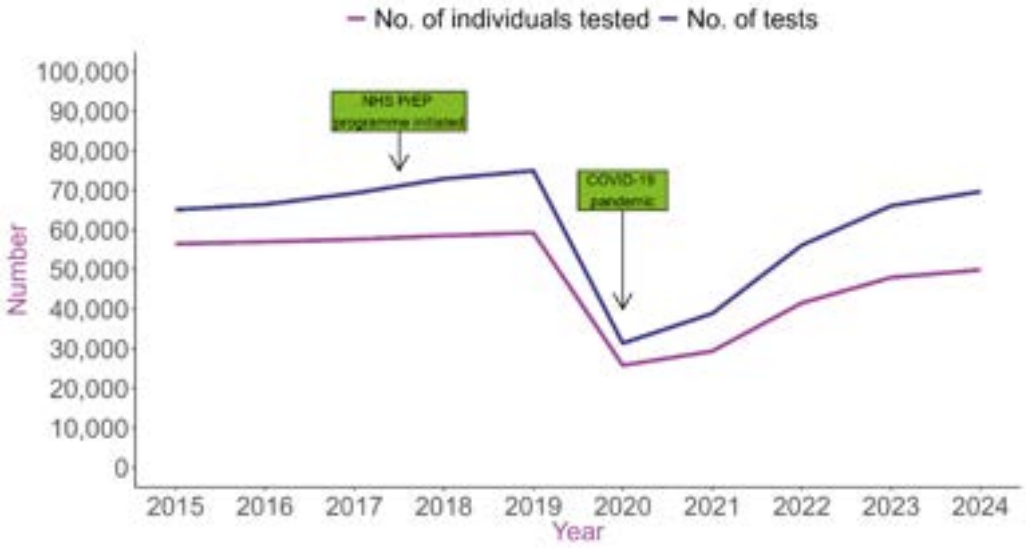
3.2.2.1 Sexual health services

Data on HIV screening (antibody/antigen) tests conducted in sexual health services across Scotland are available via NaSH. In this setting, testing appears to be recovering to near pre-pandemic levels.

- In 2019, prior to the COVID-19 pandemic, 74,974 tests (on 59,295 individuals) were recorded before falling sharply to 31,377 tests (on 25,803 individuals) in 2020 (Figure 5).
- There has since been evidence of testing recovery, rising to 56,134 tests (on 41,545 individuals) in 2022, 66,125 tests (on 48,005 individuals) in 2023 and 69,704 tests (on 49,926 individuals) in 2024.

It is important to recognise that a proportion of HIV screening (antibody/antigen) tests undertaken in sexual health services since 1 July 2017 onwards are associated with HIV PrEP prescribing and, thus, individuals tested in this setting will potentially undergo testing on two or more occasions in any given year.

Figure 5: Number of i) HIV screening (antibody/antigen) tests and ii) individuals tested in sexual health services in Scotland, 2015-2024[1]



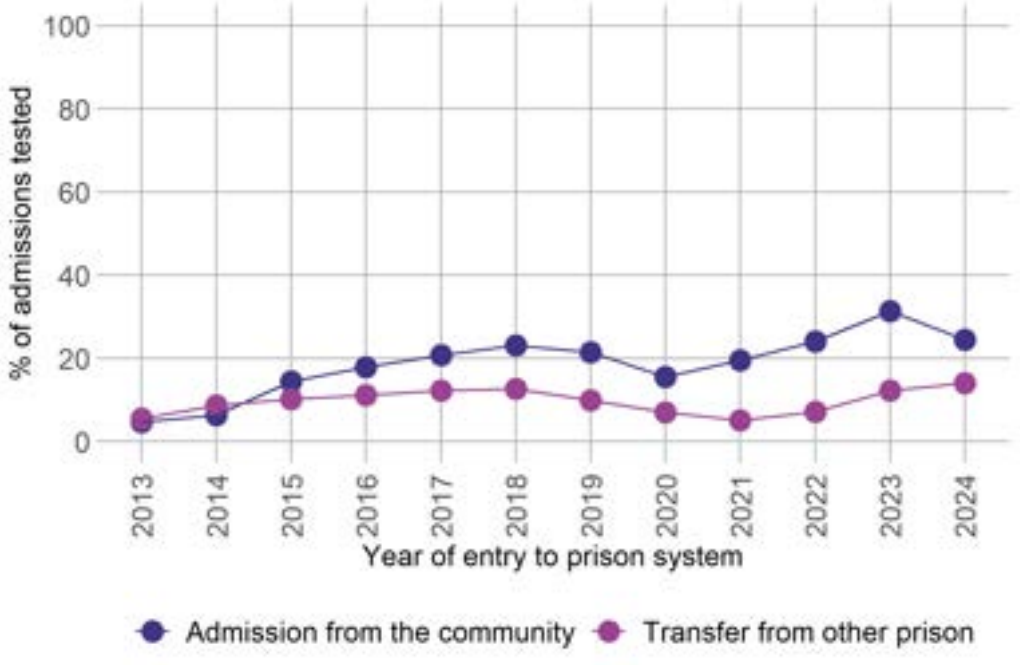
1. This includes all HIV screening (antibody/antigen) tests undertaken regardless of result (e.g. positive, negative, indeterminate, insufficient).
2. Data source: NaSH

3.2.2.2 Prisons

In 2024, 24% of 6,135 admissions to the Scottish prison estate from the community were tested for a BBV (hepatitis B surface antigen, hepatitis C antibody or HIV antigen/antibody) within six weeks of admission, ranging from 9% to 46% across establishments (Figure 6).[ii] Prison admissions as a result of transfers from other establishments had a lower level of BBV test uptake; of the 3,155 admissions in 2024, 14% were tested.

BBV testing rates in prison had recovered and exceeded pre-pandemic levels by 2023 but then dropped in 2024; this was primarily due to a shortage of staff to undertake testing. Given the variable and limited progress in the roll out of BBV opt-out testing across the prison estate, there is a need for enhanced national coordination to ensure consistency in the opportunities for testing for all people in prison.

Figure 6: Percentage of individuals entering a Scottish prison who received a BBV test within six weeks of arrival to prison by admission type, 2013-2024

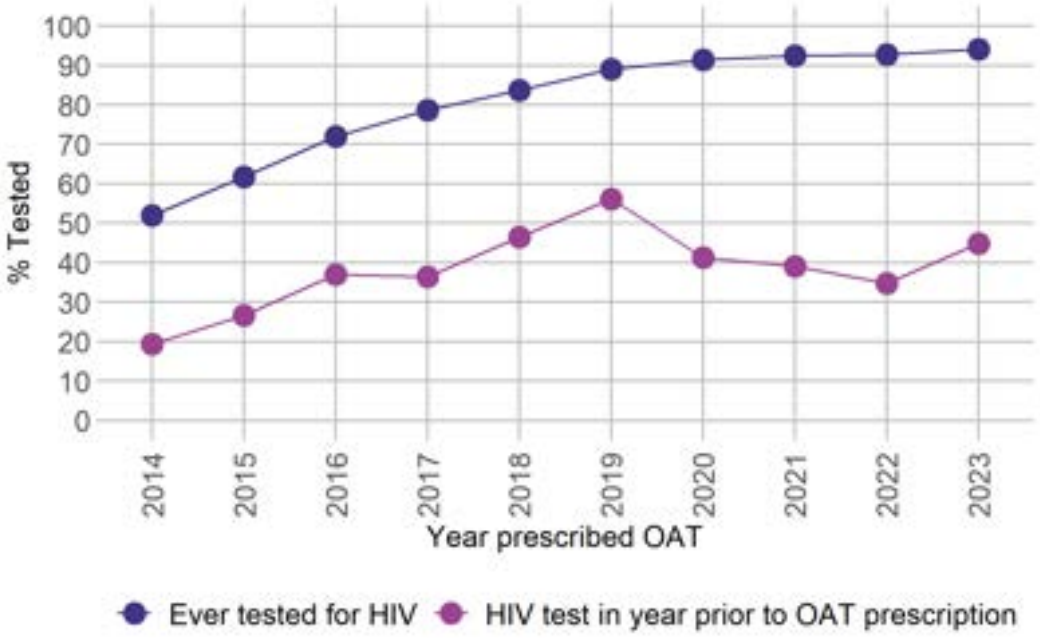


[ii] Relates to prison establishments with at least 50 admissions in the calendar year.

3.2.2.3 Drug services

In NHS Greater Glasgow & Clyde in 2023, 94% of 8,599 people prescribed opioid agonist therapy (OAT) had ever been tested for HIV which is the highest level ever recorded (2014 was the earliest data considered in this analysis) (Figure 7). However, when looking at testing in the year prior to the most recent prescription, only 45% had received an HIV test which remains below pre-pandemic levels despite some evidence of service recovery in 2023.

Figure 7: Percentage of people prescribed OAT who received a HIV test (ever[1] and in the last year) in NHS Greater Glasgow & Clyde, 2014-2023



1. Ever tested relates to data going back to 2000

3.3. HIV diagnoses

3.3.1 New reports

In 2024, there were 375 reports of HIV diagnoses recorded in Scotland (which includes first ever diagnoses and those previously known outwith Scotland but reported for the first time). This was the second highest number of reports recorded in 10 years of data (2015 to 2024), and a 2% decrease compared to 2023 (383 reports) (Table 4).

Of the 375 diagnoses reported in 2024, one third (125 reports) were first ever diagnoses and two thirds (250 reports) were previously recorded outwith Scotland (Table 4, Figure 8). Since 2019, a smaller proportion of all HIV reports have been accounted for by first ever diagnoses compared to those previously known but recorded for the first time in Scotland.

In 2024, 206 (55%) of the 375 diagnoses reported were acquired via heterosexual sexual intercourse, followed by 108 (29%) among gay, bisexual and other men who have sex with men and fewer than five in people who inject drugs (Table 4, Figure 8).

Table 4: Total number of reports of first ever and previously known HIV diagnoses by year of report, mode of acquisition and likely area of exposure, Scotland, 2015-2024[1]

Mode of Acquisition: Gay, bisexual and other men who have sex with men

Area of exposure[2]	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Within Scotland	109	70	89	59	38	41	27	29	14	15
Rest of UK	10	6	6	9	6	8	6	*	12	8
Outwith UK	13	9	21	23	16	6	16	*	10	24
Total first ever[3]	132	85	116	91	60	55	49	41	36	47
Total newly reported in Scotland, but previously known elsewhere[3]	55	73	77	79	87	80	66	93	77	61
Total[3]	**187**	**158**	**193**	**170**	**147**	**135**	**115**	**134**	**113**	**108**

Mode of Acquisition: Sexual intercourse between men and women

Area of exposure[2]	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Within Scotland	*	38	22	31	17	*	*	25	*	*
Rest of UK	*	*	5	5	8	*	*	0	*	*
Outwith UK	39	*	45	39	35	19	17	33	52	51
Total first ever[3]	64	75	72	75	60	34	24	58	68	59
Total newly reported in Scotland, but previously known elsewhere[3]	50	41	48	38	59	55	57	98	151	147
Total[3]	**114**	**116**	**120**	**113**	**119**	**89**	**81**	**156**	**219**	**206**

Mode of Acquisition: People who inject drugs

Area of exposure[2]	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total first ever[3]	*	32	34	15	*	*	*	*	5	*
Total newly reported in Scotland, but previously known elsewhere[3]	*	7	9	0	*	*	*	*	6	0
Total[3]	**56**	**39**	**43**	**15**	**28**	**23**	**6**	**5**	**11**	*****

Mode of Acquisition: All exposure categories[3]

Area of exposure[2]	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Within Scotland	182	144	145	110	85	78	38	68	37	24
Rest of UK	13	10	12	15	16	11	8	*	16	10
Outwith UK	58	44	68	67	58	26	41	*	73	91
Total first ever[3,4]	253	198	225	192	159	115	87	115	126	125
Total newly reported in Scotland, but previously known elsewhere[3,4]	113	122	140	127	167	155	137	214	257	250
Total[3,4]	**366**	**320**	**365**	**319**	**326**	**270**	**224**	**329**	**383**	**375**

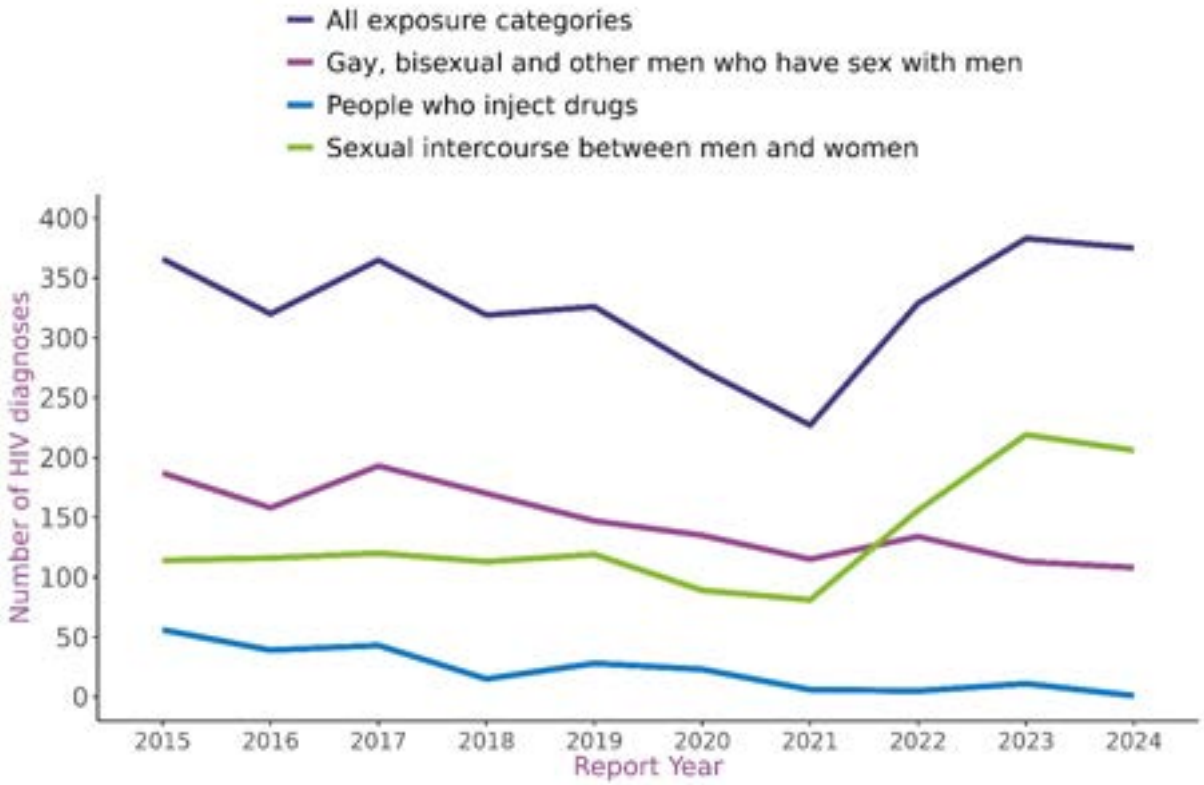
1. Due to active follow-up, data on Scotland's national HIV database are constantly changing. Figures presented in this table may differ slightly from those previously published.

2. 'Area of Exposure' is based on information provided by the patient at the time of test or during subsequent follow-up. Prior to 2018, an individual was presumed to have been infected in Scotland if, after investigation, no evidence existed to the contrary. Diagnoses under investigation are excluded from all categories except the total. Area of exposure data only apply to first ever diagnoses.

3. Total includes diagnoses currently under investigation.

4. Total includes diagnoses outwith the three main groups at risk.

Figure 8: Number of HIV diagnoses (first ever and previously known outwith Scotland) by mode of acquisition, Scotland, 2015-2024



1. All modes of acquisition include diagnoses currently under investigation.
2. All modes of acquisition include those whose mode of acquisition is recorded as other or not known.

3.3.2 First ever diagnoses

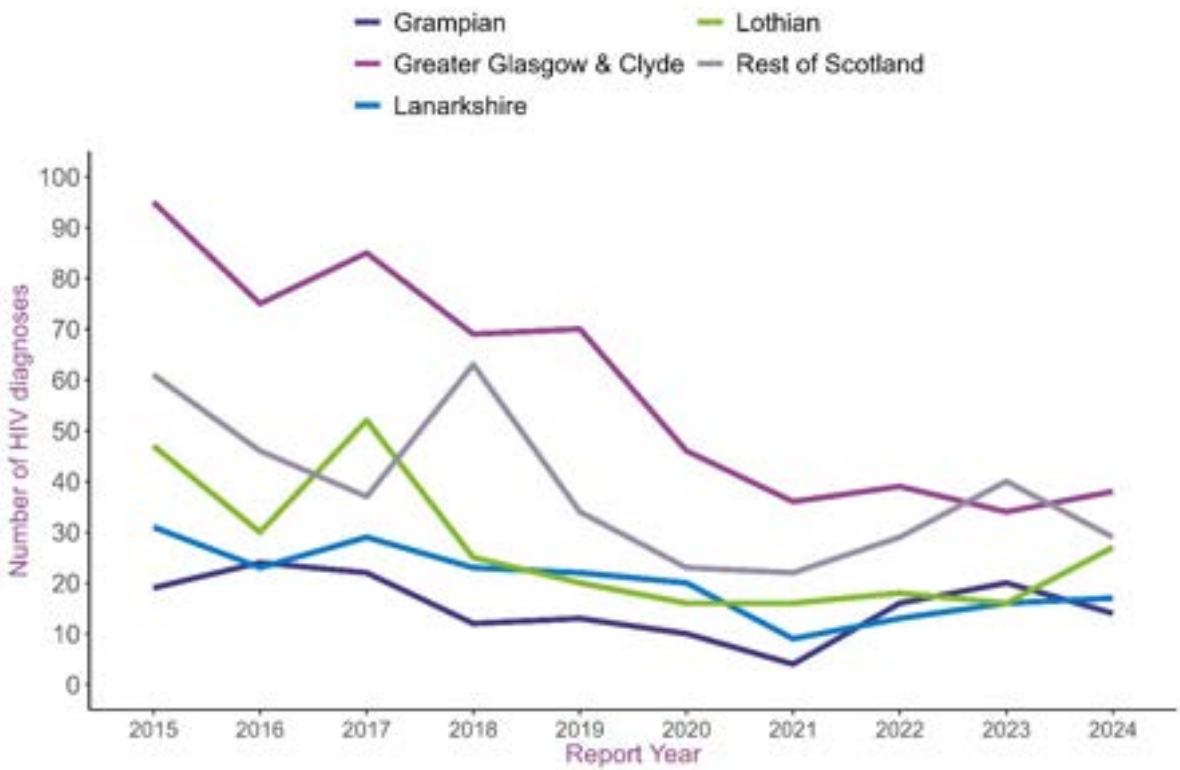
The proportion of all HIV reports accounted for by first ever diagnoses has decreased year on year from 62% in 2017 to 33% in 2024. Since 2017, the annual number of first ever diagnoses recorded has nearly halved (decreasing from 225 first ever diagnoses in 2017 to 125 in 2024) (Table 4). Although the number of first ever diagnoses recorded in 2021 (87) was lower than in 2022 (115) and 2023 (126), this is likely an artefact of recovering HIV testing rates impacted by service provision and access modifications in response to the COVID-19 pandemic.

NHS board

Between 2015 and 2024, NHS Greater Glasgow & Clyde and NHS Lothian reported over half of all first ever diagnoses (37% (587/1,595) and 17% (267/1,595), respectively) (Figure 9, Table 5).

In 2024, NHS Greater Glasgow & Clyde reported the largest number of first ever HIV diagnoses (30%, 38/125), followed by NHS Lothian with 27 (22%, 27/125) and NHS Lanarkshire with 17 (14%, 17/125). In 2024, NHS Grampian saw a return to the board's 10-year average, with 14 first ever diagnoses (compared to the annual average of 15 over the last 10 years) after an increase in first ever diagnoses reported in 2023. This increase in 2023 was driven by local transmission among the gay, bisexual and other men who have sex with men population, as well as heterosexual HIV infections acquired abroad.

Figure 9: First ever HIV diagnoses by year of report and NHS board[1], Scotland, 2015-2024



1. 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, the NHS board of treatment/care.

Table 5: First ever HIV diagnoses by year of report and NHS board[1], Scotland, 2015-2024

NHS Board[1]	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Ayrshire & Arran	12	5	6	7	8	*	*	8	9	*
Borders	*	*	*	*	*	0	0	0	*	*
Dumfries & Galloway	*	*	*	*	*	*	0	*	*	*
Fife	12	9	9	8	8	9	5	6	7	6
Forth Valley	7	12	*	6	*	*	5	*	5	10
Grampian	19	24	22	12	13	10	*	16	20	14
Greater Glasgow & Clyde	95	75	85	69	70	46	36	39	34	38
Highland	9	5	5	9	6	*	*	6	8	*
Lanarkshire	31	23	29	23	22	20	9	13	16	17
Lothian	47	30	52	25	20	16	16	18	16	27
Tayside	13	10	10	17	6	*	*	*	*	*
Orkney/Shetland/ Western Isles	*	0	0	6	*	0	*	*	0	0
Scotland	**253**	**198**	**225**	**192**	**159**	**115**	**87**	**115**	**126**	**125**

1. 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, the NHS board of treatment/care.

2. Due to active follow-up, data on Scotland's national HIV database are constantly changing and, therefore, may differ slightly from those previously published. Data for 2019, in particular, have changed as further information has become available to indicate that some diagnoses were, in fact, previously known.

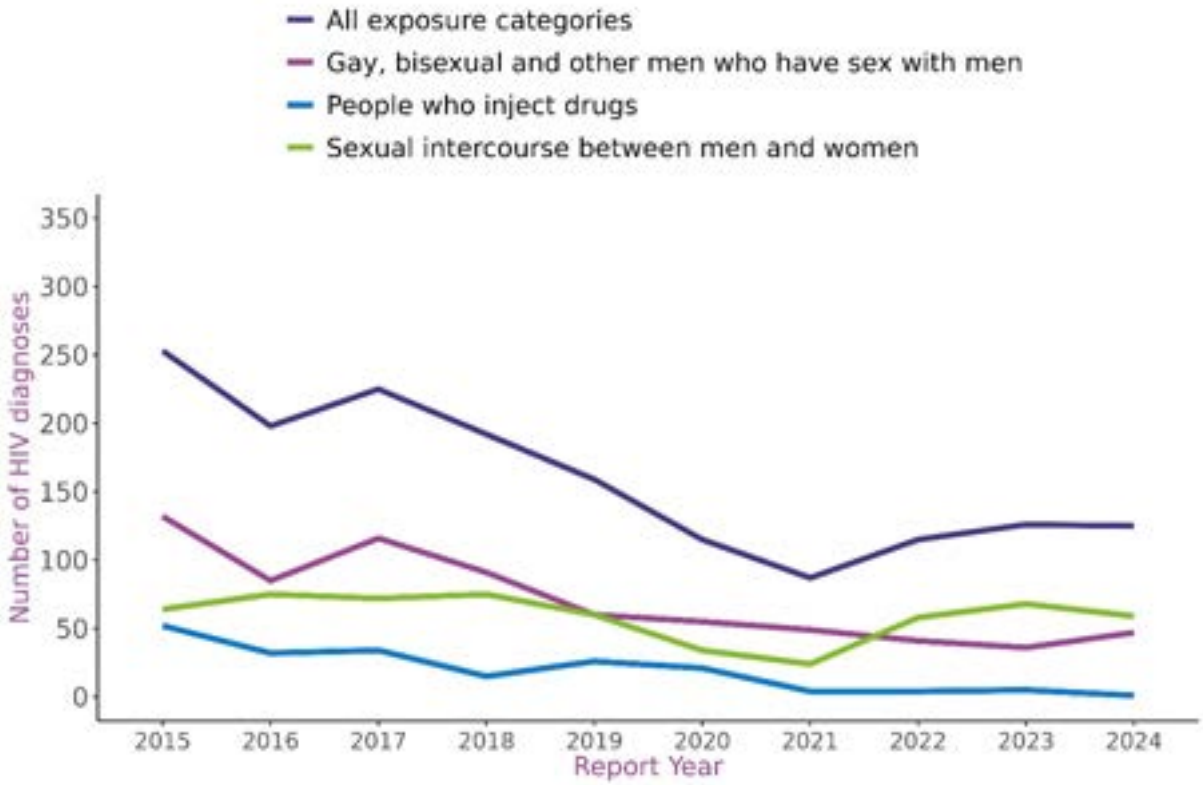
Mode of HIV acquisition

Of 125 first ever HIV diagnoses recorded in Scotland in 2024, 59 (47%) were acquired via heterosexual sexual intercourse (31 males and 28 females), 47 (38%) were among gay, bisexual and other men who have sex with men, and fewer than five were among people who inject drugs. Information on the mode of acquisition was not available for 14% (18/125) of individuals diagnosed for the first time in 2024 (Table 4, Figure 10). These data compare with 54% (68/126) of first ever HIV diagnoses in 2023 being recorded as heterosexually acquired, 29% (36/126) among gay, bisexual and other men who have sex with men, and 4% (5/126) among people who inject drugs, with no information available for 13% (17/126) of individuals (Table 4, Figure 10).

The 2022 report[12] marked the first time since 2007 that heterosexually acquired first ever diagnoses exceeded both the number and proportion of those among gay, bisexual and other men who have sex with men. This trend has continued into 2023 and 2024; however, future ascertainment of missing mode of acquisition information may result in the re-categorisation of diagnoses which may impact this trend.

Of 125 first ever HIV diagnoses recorded in 2024, 24 (19%) were thought to have been acquired within Scotland; this represents a decrease compared to 2023 (37/126). Of the 24 HIV transmissions thought to have occurred in Scotland, 15 were reported among gay, bisexual and other men who have sex with men with small numbers recorded among heterosexual men and women and people who inject drugs. (Table 4).

Figure 10: Number of first ever HIV diagnoses by mode of acquisition, Scotland, 2015-2024



1. All modes of acquisition include diagnoses currently under investigation.

2. All modes of acquisition include those whose mode of acquisition is recorded as other or not known.

Country of Exposure

In 2024, 19% (24/125) of first ever HIV diagnoses were thought to have been exposed to HIV in Scotland, 8% (10/125) were exposed in the rest of the UK, 6% were exposed in Nigeria (8/125) and 6% were exposed in Zimbabwe (8/125). Information on country of exposure was not available for 38% (47/125) of first ever HIV diagnoses. Approximately, one fifth (28/125) of first ever HIV diagnoses were not presented due to small numbers (fewer than five) reported for 2024.

3.3.3 Previously known diagnoses

In contrast to the first ever diagnoses, the proportion of previously known diagnoses has increased from 40% (127/319) in 2018 to 67% (250/375) in 2024, now making up two thirds of all new HIV reports (Table 4, Figure 11) although the actual number of previously known diagnoses recorded decreased by 3% between 2023 and 2024 (257 to 250).

NHS board

Between 2015 and 2024, NHS Greater Glasgow & Clyde and NHS Lothian accounted for 60% of all previously known diagnoses (with 32% (533/1,682) and 27% (460/1,682), respectively). Smaller proportions were recorded in NHS Grampian (10%, 167/1,682), NHS Lanarkshire (8%, 127/1,682), NHS Tayside (7%, 115/1,682) and other NHS boards.

In 2024, of the 250 previously known HIV diagnoses recorded, NHS Lothian and NHS Greater Glasgow & Clyde reported the highest numbers and proportions with 28% (70/250) and 21% (52/250), respectively. In 2024, NHS Greater Glasgow & Clyde reported fewer previously known diagnoses than NHS Lothian for the first time since 2017.

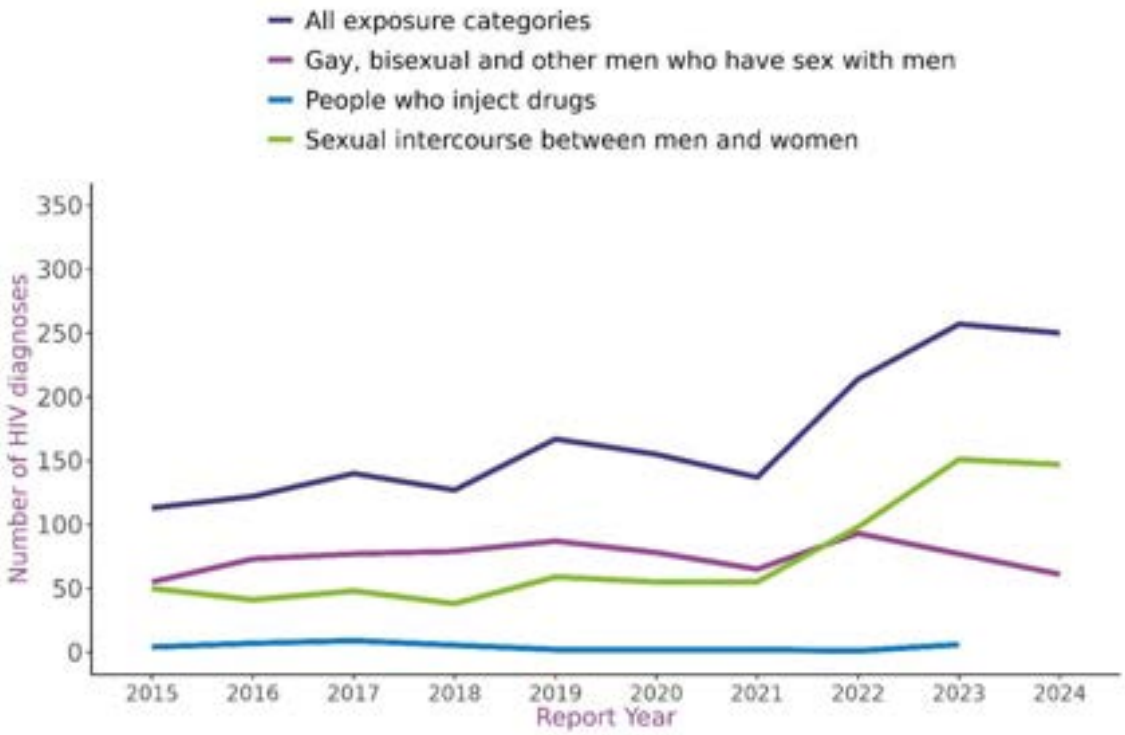
Mode of HIV acquisition

In 2024, 59% (147/250) of previously known diagnoses recorded for the first time in Scotland were acquired through heterosexual sexual intercourse and 24% (61/250) were attributable to gay, bisexual and other men who have sex with men. Similar proportions were recorded in 2023 (56% (144/259) of previously known diagnoses were acquired through heterosexual sexual intercourse and 27% (69/259) were attributable to gay, bisexual and other men who have sex with men).

The increase in the proportion of individuals previously diagnosed outwith Scotland but recorded for the first time in Scotland is reflected among both gay, bisexual and other men who have sex with men and heterosexual men and women.

All gay, bisexual and other men who have sex with men and the majority of heterosexual men and women previously diagnosed had likely acquired HIV outwith the UK (Figure 11).

Figure 11: Number of diagnoses previously known outwith Scotland but reported for first time by mode of acquisition, Scotland, 2015-2024



1. All modes of acquisition categories include diagnoses currently under investigation
2. All modes of acquisition include those whose mode of acquisition is recorded as other or not known.

Country of Exposure

In 2024, 13% (32/250) of previously known HIV diagnoses recorded for the first time in Scotland were thought to have been exposed to HIV in Zimbabwe, 9% (22/250) were exposed in Nigeria, 6% (14/250) were exposed in South Africa, 3% (7/250) were exposed in England, 2% (5/250) were exposed China, and 2% (5/250) were exposed in the rest of the UK. Information on country of exposure was not available

for 41% (102/250) of previously known HIV diagnoses. Approximately, one quarter (63/250) of previously known HIV diagnoses recorded for the first time in Scotland were not presented due to small numbers (fewer than five) reported for 2024.

3.3.4 HIV in gay, bisexual and other men who have sex with men

In 2024, an increase in the number and proportion of first ever diagnoses recorded among gay, bisexual and other men who have sex with men was reported, with 47 first ever diagnoses (38%, 47/125). This increase in 2024 followed record lows reported in over a decade for 2023, where 29% (36/126) of first ever diagnoses were recorded among gay, bisexual and other men who have sex with men. This increase was not reflected in the overall number of first ever HIV diagnoses recorded in Scotland for 2024 (125 in 2024 vs 126 in 2023) (Table 4, Figure 10).

In 2024, two thirds (68%, 32/47) of gay, bisexual and other men who have sex with men diagnosed for the first time were thought to have acquired their infection outwith Scotland (Table 4); this is similar to 2023 (61%, 22/36), and in contrast to observations over the last decade where the majority were thought to have acquired HIV in Scotland (63% (38/60) in 2019, 75% (41/55) in 2020, 55% (27/49) in 2021 and 71% (29/41) in 2022).

Among those 47 men diagnosed for the first time in 2024, 15 were aged 15-29 years, 24 were aged 30-49 years and eight were aged 50+ with a median age of 34 years (range 22-70 years).

3.3.5 HIV in the heterosexual population

In 2024, first ever diagnoses acquired via heterosexual sexual intercourse decreased to 47% (59/125) from 54% (68/126) in 2023 but remained higher than the pre-pandemic proportion of 38% (60/159) in 2019 (Table 4, Figure 10). Despite this slight decrease between 2023 and 2024, the trend reflects a continuation of 2022's observation where first ever diagnoses acquired through heterosexual sexual intercourse exceeded those among gay, bisexual and other men who have sex with men for the first time since 2007.

Over two thirds (71%, 147/206) of all heterosexually acquired HIV diagnoses recorded in 2024 were previously known but recorded for the first time in Scotland (Table 4). This compares to 69% (151/219) in 2023, 63% (98/156) in 2022, 70% (57/81) in 2021 and 62% (55/89) in 2020.

In 2024, 90% (53/59) of first ever diagnoses acquired via heterosexual sexual intercourse were likely acquired outwith Scotland, the majority of which were countries of higher HIV prevalence. This is the highest proportion reported in 10 years and compares to 83% (56/68) in 2023.

In 2024, of the 59 heterosexual men and women diagnosed for the first time, eight were aged 15-29 years, 35 were aged 30-49 years and 16 were aged 50+. There was a median age of 41 years (range 24 to 68 years).

3.3.6 HIV in the population of people who inject drugs

In 2015, an ongoing outbreak of HIV among people who inject drugs was declared in the NHS Greater Glasgow & Clyde area.[13,14] From that time until December 2020, 188 new diagnoses were reported among this group, constituting the largest outbreak of HIV among PWID in the UK since the 1980s. The outbreak was officially declared over in late 2024.

Following the initial peak in 2015, reports of diagnoses declined annually with just two first ever diagnoses recorded between 2021 and 2024; however, testing among this group likely declined during the COVID-19 pandemic and, while recovering, the number diagnosed may not reflect ongoing transmission.[15] In Glasgow City Centre, where the outbreak was initially identified and concentrated, HIV prevalence declined to 4.8% in 2022-23, down from 11.3% in 2019-20, suggesting that people who had been living with HIV may have died or migrated to other areas.[16] Most (91%) individuals acquired sub-type C HIV infection, which is not commonly found in the UK. These findings also suggest that there was limited HIV transmission during the COVID-19 pandemic. Further detailed analyses are available in recent publications and in the previous annual report.[12–16]

3.3.7 Recently acquired HIV infection

In 2024, data on recently acquired HIV infection were available for 107 (86%) of 125 first ever HIV diagnoses; of these, 22 (21%) were recorded as having acquired HIV recently (i.e. within the previous three to four months). Although there were relatively small numbers involved, this was a 62% increase in proportion compared to 2023 (13%, 14/106) and is the highest proportion reported since 2017 (27%, 52/196).

When interpreting these data, it is important to recognise the impact of the COVID-19 pandemic on testing rates and the identification of recently acquired infection between 2020 and 2022. While testing rates are recovering, testing among some specific population groups attending sexual health services (e.g. heterosexual men) are still to return to pre-pandemic levels. Nonetheless, the number of recently acquired infections have remained low in recent years, despite the increase in 2024 (Table 6).

Between 2021 and 2023, recently acquired infections were recorded in small numbers (10 or fewer) among gay, bisexual and other men who have sex with men, among heterosexual men and women and among people who inject drugs. By comparison, in 2019, prior to the COVID-19 pandemic, of 36 individuals who had recently acquired HIV, 18 were gay, bisexual and other men who have sex with men, 11 were people who inject drugs and fewer than 10 were heterosexuals or the information was not known (Table 6).

Among gay, bisexual and other men who have sex with men, for whom mode of acquisition information was available, the proportion of recent HIV acquisitions has decreased annually from 31% (30/97) in 2017 to 16% (6/38) in 2022 but has since increased to 27% (8/30) in 2023 (partly attributable to a higher than expected number of recently acquired infections among gay, bisexual and other men who have sex with men in NHS Grampian) and to 29% (11/38) in 2024 (Table 6). The median age among gay, bisexual and other men who have sex with men with recently acquired HIV infection was 36 years (range 22 to 54 years).

Since 2018, between 7% and 17% of first ever HIV diagnoses recorded annually had been recently acquired through sexual intercourse between men and women (Table

6) with an increase observed between 2023 (7%) and 2024 (10%). In 2024, the median age of men and women who recently acquired HIV through heterosexual sexual intercourse was 43 years (range 28 to 68 years).

Among people who inject drugs, the number of first ever HIV diagnoses remains relatively small compared to other groups at risk; however, there is evidence of transmission linked to the outbreak in NHS Greater Glasgow & Clyde from June 2014 to December 2020.[13,14] Both sexual transmission and unsafe injecting practices likely contributed to the spread of HIV infection among this group during this outbreak. Between 2021 and 2024, only a small number of recent infections were recorded annually among those in this group undergoing antibody avidity testing.

In 2024, the majority (59% (13/22)) of recorded recent HIV acquisitions were reported as likely acquired outwith Scotland; however, between 2023 and 2024, an increase was observed in the number and proportion of recent HIV acquisitions which were thought to have occurred in Scotland, from 36% (5/14) in 2023 to 41% (9/22) in 2024. Of those nine recent acquisitions likely to have occurred in Scotland in 2024, six were among gay, bisexual and other men who have sex with men.

Table 6: Number and proportion of recent HIV acquisitions by year of report and mode of acquisition, Scotland, 2018-2024[1]

Year	Diagnoses	Gay, bisexual and other men who have sex with men	Sexual intercourse between men and women	People who inject drugs	Other/Not known	Scotland
2018	**Diagnoses tested for antibody avidity[2]**	78	*	*	7	166
	Recently acquired	19	*	*	0	32
	Proportion recent	**24%**	**17%**	**13%**	**0%**	**19%**
2019	**Diagnoses tested for antibody avidity[2]**	53	*	24	*	137
	Recently acquired	18	*	11	*	36

Year	Diagnoses	Gay, bisexual and other men who have sex with men	Sexual intercourse between men and women	People who inject drugs	Other/Not known	Scotland
	Proportion recent	**34%**	**10%**	**46%**	**18%**	**26%**
2020	**Diagnoses tested for antibody avidity**[2]	52	*	*	*	102
	Recently acquired	9	*	*	0	18
	Proportion recent	**17%**	**13%**	**36%**	**0%**	**18%**
2021	**Diagnoses tested for antibody avidity**[2]	45	*	*	8	77
	Recently acquired	6	*	*	0	9
	Proportion recent	**13%**	**9%**	**50%**	**0%**	**12%**
2022	**Diagnoses tested for antibody avidity**[2]	38	47	*	*	97
	Recently acquired	6	6	0	0	12
	Proportion recent	**16%**	**13%**	**0%**	**0%**	**12%**
2023	**Diagnoses tested for antibody avidity**[2]	30	*	*	12	106
	Recently acquired	8	*	*	0	14
	Proportion recent	**27%**	**7%**	**40%**	**0%**	**13%**
2024	**Diagnoses tested for antibody avidity**[2]	38	52	*	*	107
	Recently acquired	11	5	0	*	22
	Proportion recent	**29%**	**10%**	**0%**	**38%**	**21%**

1. Note that first ever diagnoses are tested for recency using the antibody avidity test; this is performed on new diagnoses when a sample is available. This test was rolled out across all NHS boards from April 2014.

2. The antibody avidity test is used on specimens from those who are not previously known to be HIV positive (i.e. first ever diagnoses). The data presented includes only those infections considered to be new after active follow-up by PHS.

3.3.8 Late diagnoses

Among individuals living with HIV in Scotland, there is evidence that some are being diagnosed at a late stage of HIV infection. For some, this can be many years after acquiring HIV and when they may have progressed to advanced HIV disease. Those diagnosed late have an increased risk of dying within one year of diagnosis.[17] Please see the definitions of late and very late diagnoses in the **Glossary** and the footnotes to **Table 7.**

In 2024, 26 of 125 (21%) first ever diagnoses were made at a late stage of infection, nearly two thirds of which were at a very late stage (62%, 16/26), that is with advanced HIV disease. The same proportion of diagnoses made at a late stage of infection was reported for 2023 (21%, 27/126); this was the lowest proportion of first ever diagnoses recorded as late since 2018 (Table 7, Figure 12). Comparisons prior to 2015 are limited given that antibody avidity testing had yet to be rolled out to identify recently acquired infections.

Furthermore, the data recorded for 2020 and 2021 during the COVID-19 pandemic should be interpreted with caution as these may be an under-estimate due to i) capacity and resourcing issues resulting in some NHS boards being unable to return attendance data for 2020 and 2021 and/or ii) changes to the way in which care was delivered during the height of the COVID-19 pandemic resulting in some recording omissions.

Mode of acquisition

While acknowledging the small numbers involved, since 2018, higher proportions of late (and very late) HIV diagnoses were evident among those who acquired HIV through heterosexual sexual intercourse compared to gay, bisexual and other men who have sex with men and people who inject drugs (Table 7). In 2024, however,

similar proportions of late/very late diagnoses were reported among those thought to have acquired HIV via heterosexual sexual intercourse and among gay, bisexual and other men who have sex with men (22% and 23%, respectively).

Country of Exposure

In 2024, fewer than five late/very late diagnoses were thought to have been exposed to HIV in Scotland or the UK, and 11 diagnoses were thought to have been exposed to HIV outwith the UK. A further 10 were recorded without information on country of exposure.

Table 7: Number and proportion of first ever HIV diagnoses made at a late and a very late stage of infection by mode of acquisition and year of report, Scotland, 2018-2024[1,2]

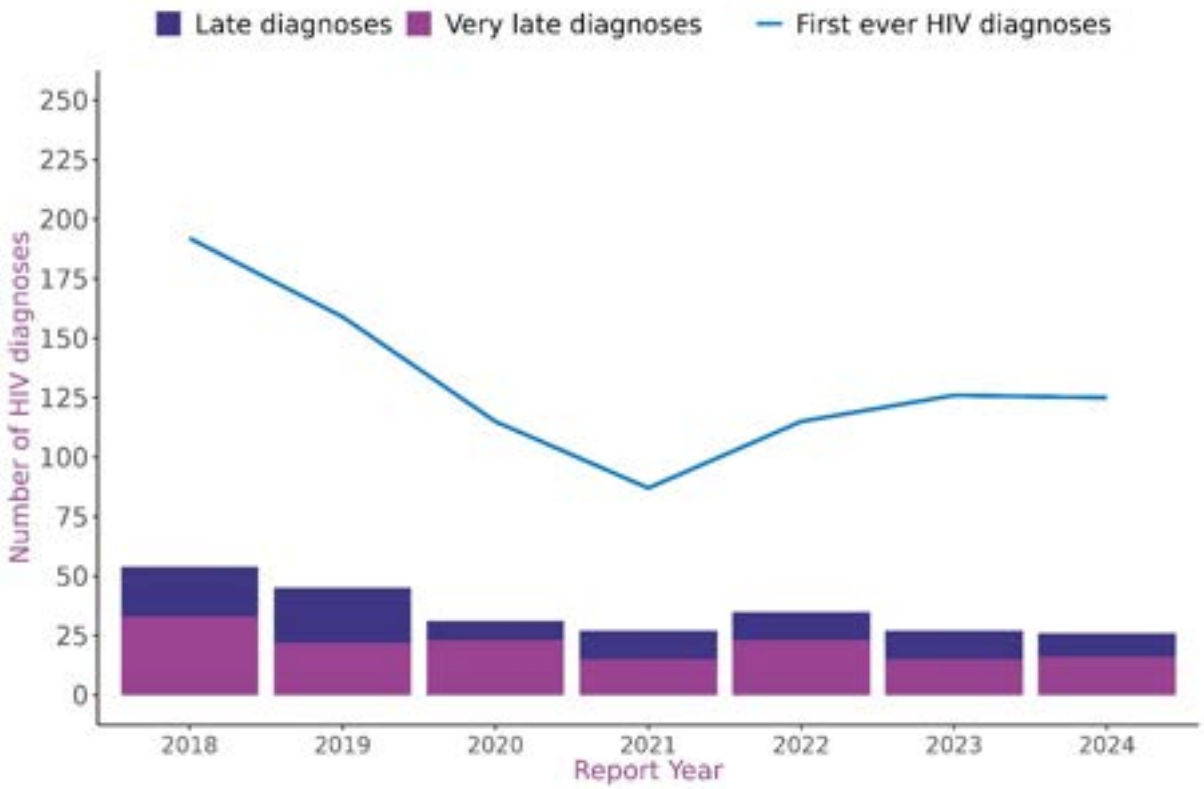
Year	Diagnoses	Gay, bisexual and other men who have sex with men	Sexual intercourse between men and women	People who inject drugs	Other/Not Known	Scotland
2018	**No. of first ever**	91	75	15	11	192
	No. of late	11	7	*	*	21
	No. of very late	12	18	*	*	33
	% of late/very late	**25%**	**33%**	**27%**	**18%**	**28%**
2019	**No. of first ever**	60	60	26	13	159
	No. of late	*	6	*	*	23
	No. of very late	*	16	*	*	22
	% of late/very late	**20%**	**37%**	**19%**	**46%**	**28%**
2020	**No. of first ever**	55	34	21	5	115
	No. of late	5	*	*	0	8
	No. of very late	12	*	*	0	23
	% of late/very late	**31%**	**38%**	**5%**	**0%**	**27%**
2021	**No. of first ever**	49	24	*	*	87
	No. of late	9	*	0	*	12

Year	Diagnoses	Gay, bisexual and other men who have sex with men	Sexual intercourse between men and women	People who inject drugs	Other/Not Known	Scotland
	No. of very late	7	*	0	*	15
	% of late/very late	**33%**	**38%**	**0%**	**20%**	**31%**
2022	**No. of first ever**	41	58	*	*	115
	No. of late	*	8	0	*	12
	No. of very late	*	13	0	*	23
	% of late/very late	**27%**	**36%**	**0%**	**25%**	**30%**
2023	**No. of first ever**	36	68	*	*	126
	No. of late	*	8	0	*	12
	No. of very late	*	10	*	0	15
	% of late/very late	**17%**	**26%**	**40%**	**6%**	**21%**
2024	**No. of first ever**	47	59	*	*	125
	No. of late	*	*	*	*	10
	No. of very late	*	*	0	0	16
	% of late/very late	**23%**	**22%**	*	**6%**	**21%**

1. Late HIV diagnosis is defined by a CD4 count of <350 cells per cubic millimetre recorded within 90 days of HIV diagnosis, excluding specimens recorded as "recent" infections on antibody avidity testing and those previously diagnosed HIV positive outwith Scotland.

2. Very late diagnosis is defined by a CD4 count of <200 cells per cubic millimetre recorded within 90 days of HIV diagnosis, excluding specimens recorded as "recent" infections on antibody avidity testing and those previously diagnosed HIV positive outwith Scotland.

Figure 12: Number of i) first ever HIV diagnoses, ii) late diagnoses, and iii) very late diagnoses, Scotland, 2018-2024



1. Late HIV diagnosis is defined by a CD4 count of <350 cells per cubic millimetre recorded within 90 days of HIV diagnosis, excluding specimens recorded as "recent" infections on antibody avidity testing and those previously diagnosed HIV positive outwith Scotland.
2. Very late diagnosis is defined by <200 cells per cubic millimetre recorded within 90 days of HIV diagnosis, excluding specimens recorded as "recent" infections on antibody avidity testing and those previously diagnosed HIV positive outwith Scotland. These are a subset of the late diagnoses.

3.4. Diagnosed HIV prevalence

3.4.1 Methodological review

In 2025, an extensive review of the methodology used to estimate the number of people diagnosed and living with HIV in Scotland was undertaken. This methodological review aimed to:

- align more closely the definition applied to Scotland's cohort with those used in other parts of the UK and beyond, and
- do so by utilising other datasets to which PHS has access to supplement the understanding of the sub-group of diagnosed people living with HIV who are not attending HIV specialist services, but for whom there is evidence of other (non-HIV) NHS activity.

PHS has access to a number of datasets which offer an indication of recent (non-HIV) NHS service activity/interaction (e.g. data on general hospital admissions, Emergency Department admissions, prescriptions, vaccinations) (see **12.2 Appendix 2 – Publication metadata)**. Through a data linkage exercise with the national HIV database, it has been possible to use these supplementary data (to 31 December 2024) to inform the process of refining the diagnosed and living cohort. A similar approach has been employed for the purposes of re-engaging with individuals diagnosed with hepatitis C in Scotland who could benefit from antiviral therapy, but who have been lost to follow-up.[18]

To the end of 2023, the methodology, routinely applied to all national HIV surveillance reports, publications and outputs, defined Scotland's diagnosed and living HIV cohort as:

> All individuals who:
>
> i. had been diagnosed with HIV, and;
>
> ii. were not known to have died or to have left Scotland, and;

iii. had accessed HIV treatment and care within the last nine years.

Review of other definitions (e.g. that applied to England's cohort of people diagnosed and living with HIV by the UK Health Security Agency (UKHSA) which excludes individuals who have HIV specialist services for treatment and care for more than 15 months), collaboration with members of the Scottish Health Protection Network (SHPN) Sexual Health and Blood Borne Virus (SHBBV) HIV Clinical Leads Group, and analysis of the data available resulted in the following revised definition which has been applied to data for 2024 (Figure 13):

All individuals aged 15 and over who:

i. had been diagnosed with HIV, and;

ii. were not known to have died or to have left Scotland, and;

iii. had attended HIV specialist services within 36 months of the analysis end date (e.g. for the purposes of this report 31 December 2024), or;

iv. had **not** attended HIV specialist services within 36 months of the analysis end date but who had evidence of non-HIV related NHS activity within 36 months of the analysis end date (excluding individuals with no Community Health Index number - see below for further detail).

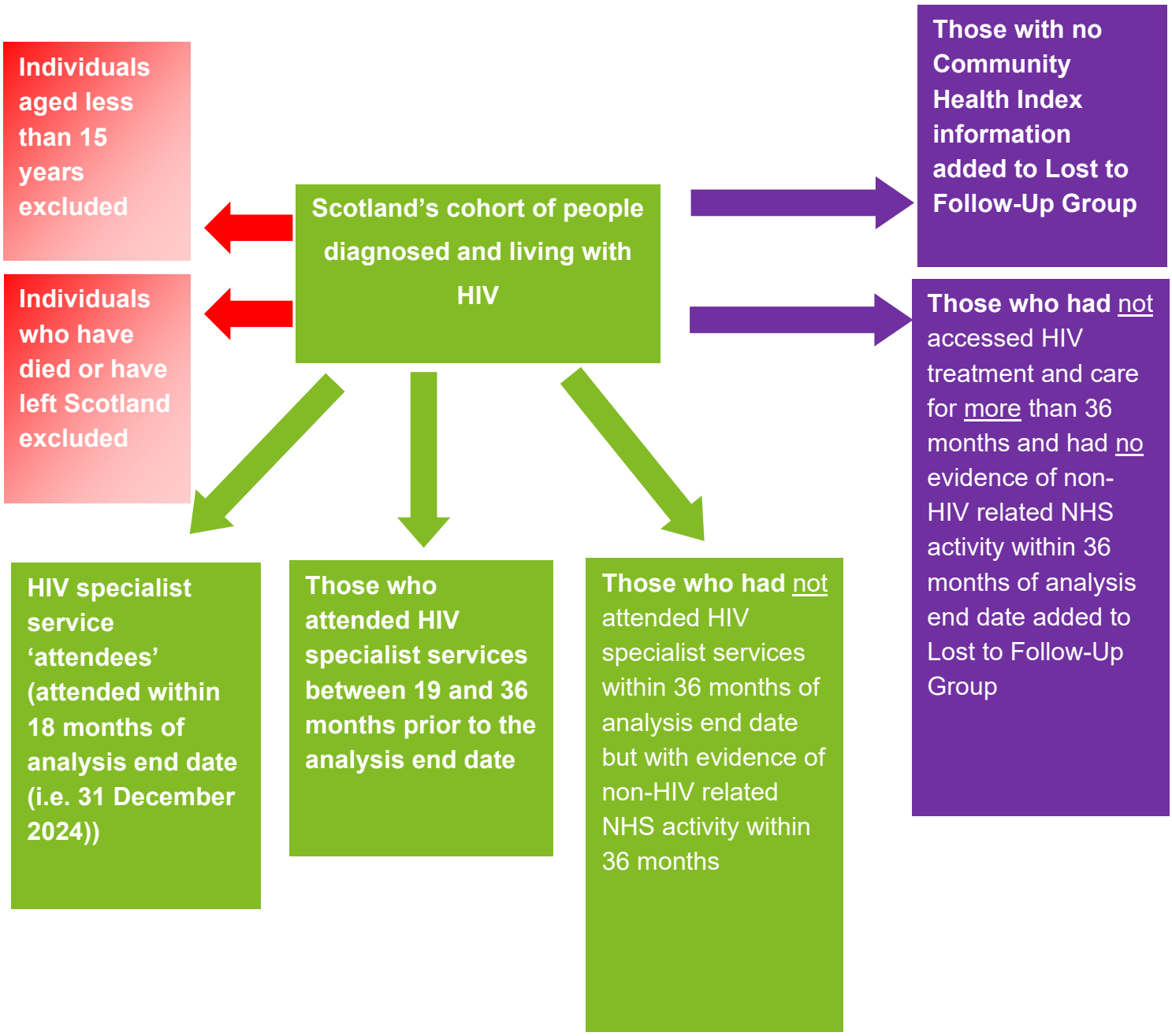
Please note a HIV treatment and care 'attendee' is defined as an individual who has attended HIV specialist services in the 18 months prior to the analysis end date (31 December 2024 for the purposes of this report).

To facilitate the data linkage process, a Community Health Index number was required. Thus, any people diagnosed and living with HIV who had not attended HIV specialist services for more than 36 months and for whom CHI was unavailable were removed from the cohort calculation (although these records have been retained on the national HIV database). A separate piece of exploratory work, in collaboration with HIV clinical services, is planned to understand more fully those people diagnosed and living with HIV for whom CHI data are missing and the factors

influencing the decision by some individuals to withhold consent to share this information.

Furthermore, any people diagnosed and living with HIV excluded from the diagnosed cohort denominator on the basis of not meeting the above definition (i.e. had not attended HIV specialist services in Scotland for more than 36 months and who had no evidence of non-HIV related NHS activity within 36 months of the analysis end date) would be allocated to the Lost to Follow-Up (LTFU) group. There is, likewise, opportunity for potential re-engagement with this group through further investigation with clinical service providers.

Figure 13: Breakdown of Scotland's cohort of people diagnosed and living with HIV



3.4.2 The diagnosed and living cohort

At the end of December 2024, a cumulative total of 6,079 (130.5 per 100,000 population) people were recorded on the national HIV database as being diagnosed and living with HIV in Scotland according to the definition outlined in **3.4.1 Methodological review**; the majority (58%, 3,509) were resident in NHS Greater Glasgow and Clyde and NHS Lothian (Table 8). Estimates for the diagnosed and living HIV cohort are for the adult population of Scotland and exclude children currently aged less than 15 years old.

3.4.3 By mode of acquisition

Gay, bisexual and other men who have sex with men accounted for the largest proportion of this cohort (46%, 2,777). By comparison, 43% (2,611) were thought to have acquired HIV through heterosexual sexual intercourse, 6% (312) via injecting drug use and 5% (222) through other routes (Table 8).

3.4.4 By sex and age

In 2024, the total number of females in the diagnosed and living cohort was estimated at 73.1 per 100,000 (1,765 individuals, 29% of the cohort), with the total number of males estimated at 192.5 per 100,000 (4,314 individuals, 71% of the cohort).

By age, the greatest population prevalence was reported among the 45-54 years age group with 247.8 diagnoses per 100,000 (1,726 individuals, 28% of the cohort) followed by the 55-64 years age group (205.4 per 100,000 population, 1,618 individuals, 27% of the cohort) and the 35-44 years age group (196.2 per 100,000 population, 1,382 individuals, 23% of the cohort).

3.4.5 By allocated NHS board

Unless otherwise specified, individuals were allocated to a specific NHS board at the time of diagnosis based on individuals' NHS board of residence or, where not known, their NHS board of treatment/care. Understanding the number of HIV diagnoses allocated to an NHS board allows for sufficient allocation of HIV treatment and services.

NHS Lothian reported the greatest population prevalence with 206.3 per 100,000 population (1,610 individuals) followed by NHS Greater Glasgow & Clyde with 187.5 per 100,000 (1,899 individuals). This compares with an overall population prevalence of 130.5 per 100,000 for all of Scotland.

Table 8: Number of individuals diagnosed and living with HIV by allocated NHS board and mode of acquisition, Scotland, to 31 December 2024[1-4]

NHS board of allocation	Gay, bisexual and other men who have sex with men	Sexual intercourse between men and women	People who inject drugs	Other/Not known	Total
Ayrshire & Arran	96	58	*	27	184
Borders	23	21	5	8	57
Dumfries & Galloway	49	33	9	7	98
Fife	118	136	12	35	301
Forth Valley	99	96	*	*	206
Grampian	229	269	14	17	529
Greater Glasgow & Clyde	830	840	143	86	1,899
Highland	79	79	*	*	173
Lanarkshire	267	253	41	25	586
Lothian	824	628	108	50	1,610

NHS board of allocation	Gay, bisexual and other men who have sex with men	Sexual intercourse between men and women	People who inject drugs	Other/Not known	Total
Tayside	154	186	40	28	408
Orkney/Shetland/Western Isles[4]	9	12	*	*	28
Scotland	**2,777**	**2,611**	**379**	**312**	**6,079**

1. Only individuals meeting the definition of the diagnosed and living cohort were included in this analysis (see 3.4.1 Methodological review for further detail).
2. Unless otherwise specified, individuals were allocated to a specific NHS board at the time of diagnosis based on individuals' NHS board of residence or, where not known, their NHS board of treatment/care.
3. These estimates do not include children aged less than 15 years old.
4. NHS boards with fewer than five diagnoses by mode of acquisition have been grouped together.

3.4.6 By NHS board of residence

Through a Community Health Index (CHI) number linkage exercise, the NHS board of residence for each diagnosed individual was refined to reflect the most recent known location linked to a person's CHI number, only using the recorded NHS board of residence at time of diagnosis where the linkage did not return a result.

Population diagnosed HIV prevalence rates are presented per 500 and per 100,000 population. The 'per 500' rate refers to the 1 in 500 threshold outlined in the Testing Interventions (1.5) section of the **HIV transmission elimination proposal**[19], published in December 2022 for the implementation of HIV opt-out testing in Emergency Departments.

NHS Lothian reported the greatest population diagnosed HIV prevalence by NHS board of residence, with 204.8 diagnoses per 100,000 (1,598 individuals), followed

by NHS Greater Glasgow & Clyde with 187.8 diagnoses per 100,000 population (1,902 individuals) (Table 9). These figures are similar to those reported by allocated NHS board in Table 8.

Table 9: Population diagnosed HIV prevalence estimates by NHS board of residence (CHI linkage) to 31 December 2024[1]

NHS board of residence	No. of new diagnoses	Population estimate[2]	Prevalence per 100,000 population	Prevalence per 500 population
Ayrshire and Arran	223	312,105	71.5	0.4
Borders	74	100,048	74.0	0.4
Dumfries and Galloway	100	125,468	79.7	0.4
Fife	312	316,347	98.6	0.5
Forth Valley	221	257,644	85.8	0.4
Grampian	512	492,794	103.9	0.5
Greater Glasgow and Clyde	1,902	1,012,611	187.8	0.9
Highland	186	278,378	66.8	0.3
Lanarkshire	507	564,448	89.8	0.4
Lothian	1,598	780,350	204.8	1.0
Orkney	8	18,782	42.6	0.2
Shetland	8	19,213	41.6	0.2
Tayside	403	356,435	113.1	0.6
Western Isles	16	22,446	71.3	0.4
Unknown or not in Scotland	9	-	-	-
Total	**6,079**	**4,657,069**	**130.5**	**0.7**

1. These estimates do not include children aged less than 15 years old.

2. Populations estimates as recorded by the National Records of Scotland in the 2023 mid-year estimates.

3.5. HIV treatment and care

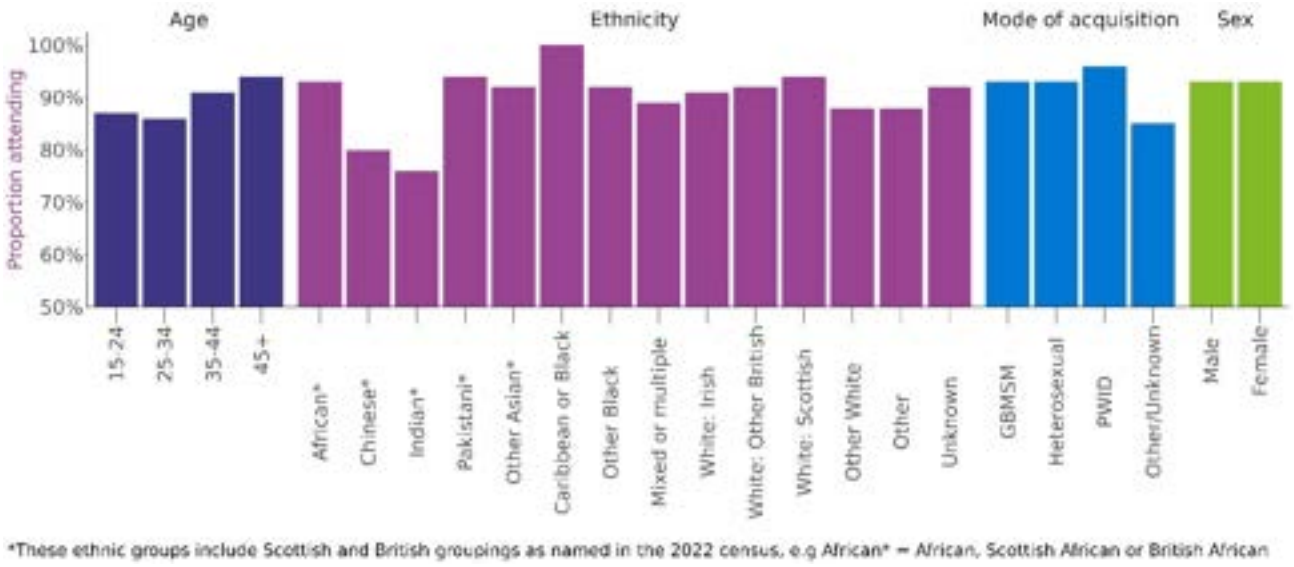
HIV and sexual health services were extensively redesigned during and after the COVID-19 pandemic and some elements of service provision are now delivered remotely online, impacting both the way in which people access HIV testing and those living with HIV access treatment and care. In addition, the post-pandemic increase in gonorrhoea diagnoses in Scotland and the 2022 outbreak of mpox (Clade II) and continuing sporadic cases in Scotland and other parts of the UK has put increased pressure on sexual health services.[20]

3.5.1 Attendance for HIV treatment and care

As of 31 December 2024, 5,640 (93%) of the 6,079 individuals diagnosed and living with HIV in Scotland had attended HIV specialist services in the previous 18 months (i.e between 1 July 2023 and 31 December 2024). An 'attendee' is defined as an individual who attended HIV specialist services in the 18 months prior to the analysis end date (31 December 2024 for the purposes of this report).

Epidemiological data for selected characteristics of the 5,640 HIV specialist service attendees provide an indication of key groups who currently attend services (Figure 14). As of 31 December 2024, there were relatively small differences in service attendance based on characteristics such as sex, age, mode of acquisition, and ethnicity. Males and females attended services at the same rate of 93%. Attendance increased with age from 87% in 15-24 year olds to 94% in those aged 45 and over. Attendance was similar among gay, bisexual and other men who have sex with men compared to heterosexual men and women (93%) and slightly higher among people who inject drugs (96%) which may be, in part, a reflection of the targeted outreach provision implemented by NHS Greater Glasgow & Clyde in response to the HIV outbreak among this group.[11,21,22] Attendance was lower in the 'other' or unknown mode of acquisition group (85%) which represents 5% of the living cohort (312/6,079). It was evident that the proportion of individuals diagnosed and living with HIV of Chinese or Indian background attended HIV specialist services at a lower rate than individuals from other ethnic groups (Figure 14).

Figure 14: Proportion of adults diagnosed and living with HIV attending HIV specialist services for care by selected characteristics: Scotland, to 31 December 2024

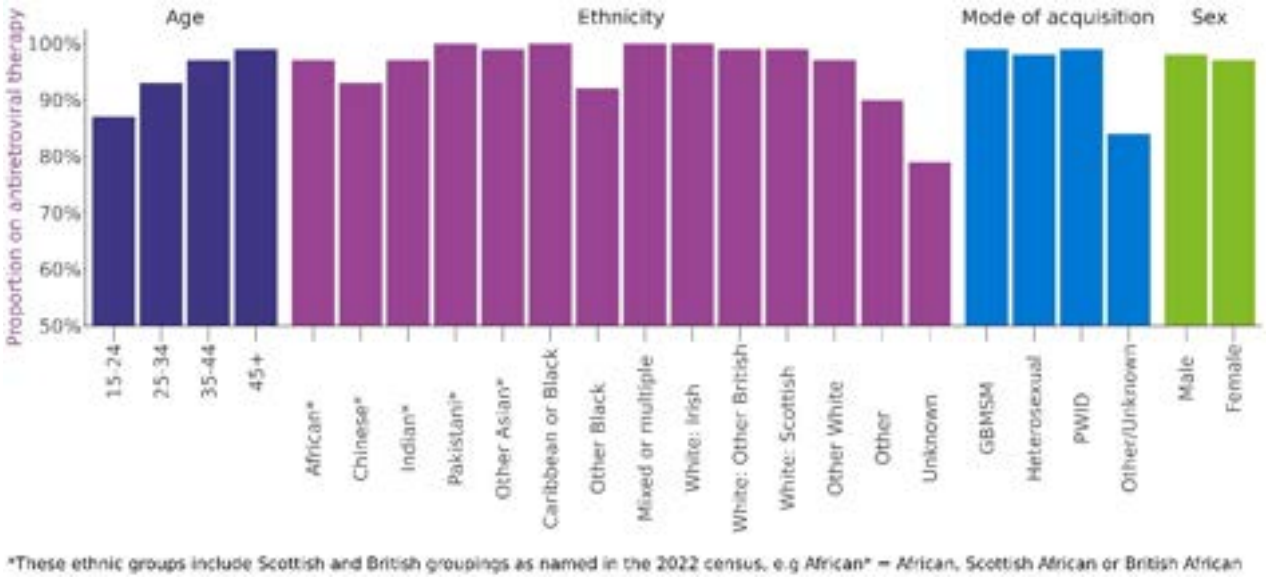


1. Please note y-axis does not begin at 0%
2. Ethnic groups are ordered alphabetically to avoid perpetuating the notion that White Scottish or British populations are the norm. Due to the small numbers involved, this analysis does not show all individual ethnic groups, obscuring these groups' distinct experiences. In future, more detailed analyses will be made available where possible.

As of 31 December 2024, 98% (5,520/5,640) of individuals who attended HIV specialist services in Scotland were on antiretroviral therapy (ART). Among those on ART, 95% (5,260/5,520) had a suppressed viral load (less than 200 copies/ml). Epidemiological data show little difference in ART receipt by sex (98% among males versus 97% among females) or mode of acquisition (99% among gay, bisexual and other men who have sex with men and 99% among people who inject drugs versus 98% among heterosexuals and 84% in those who acquired HIV via other/unknown routes) (Figure 15). ART receipt was above 92% for most ethnic backgrounds, with the exception of slightly lower proportions among individuals from other (non-African or Caribbean) Black backgrounds (92%) or for whom information on ethnicity was

unknown (78%). Notable differences in ART receipt were apparent by age. Larger proportions of older individuals were receiving ART (99% among those aged 45 and over and 97% among those aged 35-44 years) compared to the younger age groups (93% among 25-34 year olds and 87% among those aged 15-24 years) (Figure 15).

Figure 15: Proportion of adults diagnosed and living with HIV receiving antiretroviral treatment (ART) by selected characteristics: Scotland, to 31 December 2024



1. Please note y-axis does not begin at 0%.
2. Ethnic groups are ordered alphabetically to avoid perpetuating the notion that White Scottish or British populations are the norm. Due to the small numbers involved, this analysis does not show all individual ethnic groups, obscuring these groups' distinct experiences. In future, more detailed analyses will be made available where possible.

Due to the methodological review of the definition applied to Scotland's diagnosed and living cohort (described in **3.4.1 Methodological review**), it is not possible to compare these observations with previous published figures. Furthermore, given changes to the way in which individuals access care during and following the pandemic (e.g. fewer in-person attendances and more telephone reviews without

blood being taken for viral load testing which may result in some recording omissions), the reported proportion of individuals attending HIV specialist services care may be an under-estimate.

3.5.2 Non-attendance for HIV treatment and care

As of 31 December 2024, a total of 439 people (7% of 6,079 people in the diagnosed and living cohort) did not meet the definition of an 'attendee' (i.e. had not attended HIV specialist services in the 18 months prior to the analysis end date); however, they were included in the cohort of people diagnosed and living with HIV as they met the following criteria:

- 359 people (6% of the diagnosed and living cohort) had attended HIV specialist services between 19 and 36 months prior to 31 December 2024;
- a further 80 individuals (1.3% of the diagnosed and living cohort) had not attended HIV specialist services for 37 months or more but had evidence of non-HIV NHS activity in the 36 months prior to 31 December 2024.

These 439 people were spread across 12 of the 14 NHS board areas.

Of the 359 people who had last attended HIV specialist services between 19 and 36 months prior to the analysis end date, almost three quarters (72%, 260) were male. The largest proportion of these men were aged 35-49 years (38%, 100/260) followed by those aged 50-64 years (33%, 87), 20-34 years (20%, 53) and 65 years and over (8%, 20). By comparison, of the 99 women in this group, almost half (46%, 46/99) were aged 35-49 years, 30% (30) were aged 50-64 years, 19% (19) were aged 20-34 years and fewer than five were aged 65 or over.

Information relating to mode of acquisition and likely place of acquisition was available for 322 of 359 people in this group. These data indicate that 53% (171/322) were gay, bisexual and other men who have sex with men, of whom 43% (73/171) had likely acquired HIV in Scotland, 25% (43/171) in other parts of the UK and Ireland and 32% (55/171) outwith the UK. This compares with 42% (134/322) who had likely acquired HIV via heterosexual sexual intercourse. Of these 134 individuals, the majority (73%, 98/134) had likely acquired HIV outwith the UK, 22% (29/134) in Scotland and 5% (7/134) in other parts of the UK and Ireland.

Of the group of 80 people diagnosed and living with HIV who had not attended HIV specialist services for 37 months or more but who had evidence of other non-HIV

NHS activity within 36 months, two thirds (69%, 55/80) were male and one third female (31% (25/80). Mode of acquisition and likely place of acquisition data were available for 75 of the individuals in this group. Similar proportions were observed of gay, bisexual and other men who have sex with men and those who were likely to have acquired HIV via heterosexual sexual intercourse (44% (33/75) and 48% (36/75), respectively). Small numbers (fewer than 10) were also reported among those who had acquired HIV through other routes.

3.5.3 Lost to Follow-Up

People diagnosed and living with HIV excluded from the diagnosed cohort denominator on the basis of not meeting the above definition (i.e. had not attended HIV specialist services in Scotland for more than 36 months and who had no evidence of non-HIV related NHS activity within 36 months of the analysis end date) were allocated to the Lost to Follow-Up (LTFU) group.

Of 926 people allocated to the LTFU group, 663 (492 males and 171 females) who had not attended HIV specialist services for 37 months or more and for whom there was no evidence of non-HIV NHS activity within the previous 36 months did not meet the criteria for inclusion in the diagnosed and living cohort and were, therefore, excluded. A further 263 people (207 males and 56 females) for whom CHI information was unavailable and who had not attended for HIV treatment and care for 37 months or more were also excluded (this methodology is outlined in **12.2 Appendix 2 – Publication metadata**).

On comparing the cohort of those no longer engaged with care (926) and the overall diagnosed and living cohort (6,079), there are few differences by sex, age and mode of acquisition.

Of note are:

- The slightly greater proportion of males in the non-attending cohort (75% versus 71%);
- The smaller proportion of individuals who acquired HIV via heterosexual sexual intercourse in the non-attending group (34% versus 43%);

- The greater proportion of people who inject drugs in the non-attending group (13% versus 6%); and
- The slightly smaller proportion of individuals aged 35-44 years in the non-attending group (20% versus 23%).

There is opportunity for potential re-engagement with this group through further investigation with clinical service providers.

3.6. Outcomes of infection

All-cause mortality

Data held on Scotland's national HIV database can be linked with data on deaths held by the National Records of Scotland to identify any individuals diagnosed with HIV who have died.

Between 2015 and 2017, the annual average number of deaths among those diagnosed with HIV (from any cause and not necessarily associated with HIV infection) was 56. This number increased between 2018 and 2020, reaching 77 deaths in 2020, coinciding with the COVID-19 pandemic. In 2021 and 2022, deaths decreased to 65 and remained at that level before increasing to 87 deaths in 2023. In 2024, the number of deaths decreased by 12% (77 deaths) compared to the previous year, representing 3% (77/2,665) of the total number of deaths ever recorded in Scotland among those with a HIV diagnosis.

In 2024, of the 77 deaths reported, four (5%) were aged 20-39 years, 39 (51%) were aged 40-59 years and 34 (44%) were aged 60 years and over. The number of deaths among those diagnosed with HIV and due to all causes in 2024 was greater among individuals who acquired HIV via sexual intercourse between men and women (40%, 31/77), followed by gay, bisexual and other men who have sex with men (29%, 22/77) and people who inject drugs (25%, 19/77).

In 2024, of the 77 all-cause deaths recorded among people diagnosed with HIV, HIV was the suspected underlying cause in 12% (9/77) of these and a contributory factor in 26% (20/77). Compared to 2023, this represents a small increase in the proportion of deaths where HIV was the suspected underlying cause, and a similar proportion to the one recorded for deaths where HIV was a contributory factor (9%, 8/87 and 26%, 23/87, respectively). An underlying/primary cause of death is the main disease or injury that led to death, while a contributory factor is a condition that may have contributed to the death but was not the primary cause.

HIV-related deaths

Among the nine HIV-related deaths (i.e. those where the underlying/primary cause was recorded as HIV):

- The median age at death was 49 years (ranging from 30 to 65 years), compared to 63 years (ranging from 41 to 87 years) for those where HIV was listed as a contributory factor on the death certificate and compared to 57 years (ranging from 33 to 85 years) for those whose deaths were not linked to HIV.
- Five individuals were recorded as not receiving treatment in the 18 months prior to the date of death.

4. Progress towards HIV transmission elimination

Key to achieving HIV transmission elimination in Scotland are the actions outlined in the **Scottish Government Sexual Health and Blood Borne Virus Action Plan 2023-2026**, **Scottish Government HIV Transmission Elimination Delivery Plan 2023-2026**, and subsequent **Progress Report**. These include the **UNAIDS Fast Track** 95:95:95 targets set for 2030 which state:

- 95% of those living with HIV are diagnosed;
- 95% of those diagnosed are receiving anti-retroviral therapy;
- 95% of those on treatment have a suppressed viral load (defined as <200 copies per millilitre of blood).[8,23–25]

Target: 95% of those living with HIV are diagnosed

Modelling data to 2022 indicate that approximately 6% of individuals living with HIV in Scotland remain undiagnosed (thereby indicating that 94% of individuals living with HIV have been diagnosed) (Figure 16). Applying this estimate to Scotland's data, in addition to the 6,079 diagnosed individuals, an estimated 400 more individuals may be living with HIV but are unaware of their HIV status, bringing the total estimated number of people living with HIV in Scotland to about 6,500.[26]

Target: 95% of those diagnosed are anti-retroviral therapy

According to surveillance data to the end of December 2024, 91% (5,520/6,079) of the diagnosed cohort were recorded as receiving treatment in the previous 18 months (i.e. between 1 July 2023 and 31 December 2024).

Target: 95% of those on treatment have a suppressed viral load

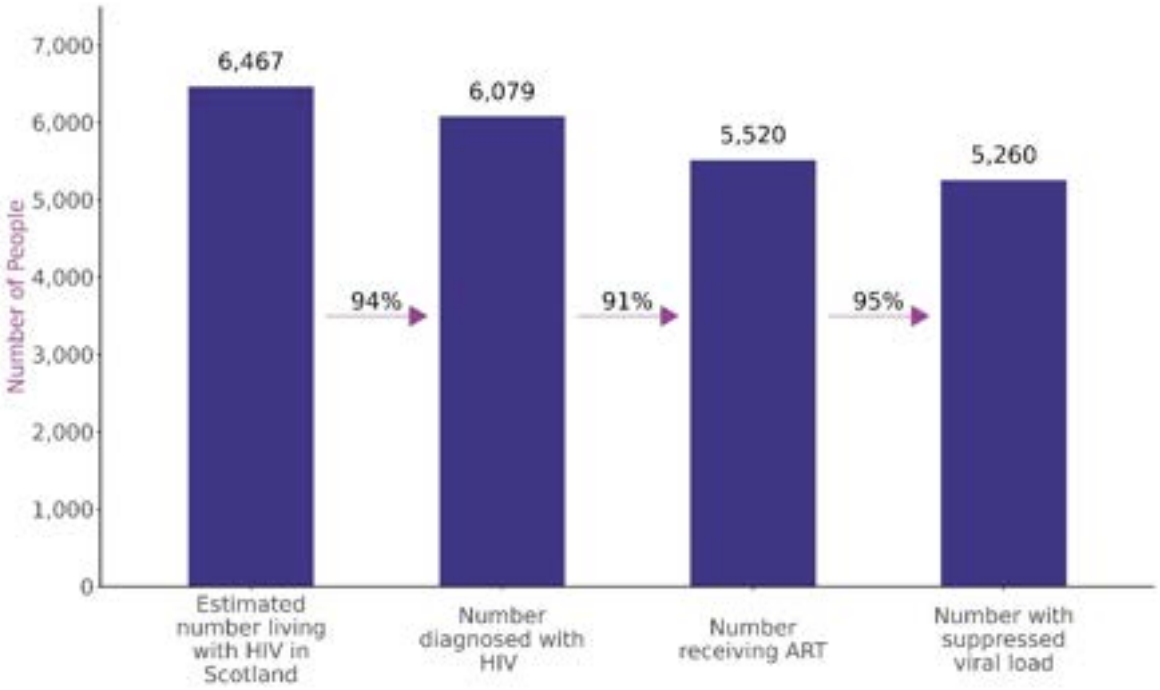
Of 5,520 people living with HIV who were on treatment, 95% (5,260) had a suppressed viral load (Figure 16).

95:95:95 Targets

In summary, by 31 December 2024, Scotland had reached 94%:91%:95% with respect to the UNAIDS targets set for 2030.

Please note that following refinement of the way in which Scotland's diagnosed and living cohort is calculated, estimates for 2024 are not directly comparable to those published for previous years (this methodology is outlined in **12.2 Appendix 2 – Publication metadata**).

Figure 16: Number of individuals (i) estimated to be living with HIV;[1,2] (ii) diagnosed and living with HIV; (iii) receiving antiretroviral therapy (ART), and (iv) with a suppressed viral load to 31 December 2024[3]



1. 6% undiagnosed based on modelling data used to estimate the number of undiagnosed people living with HIV in Scotland to 2022.[26]
2. This estimate is calculated by subtracting the individuals known to have died or left Scotland or have not attended for HIV treatment and care for 37 months or more and who have no evidence of non-HIV NHS activity for 37

months or more from the cumulative number of diagnosed reports ever recorded.

3. Individuals with a viral load of less than 200 copies per millilitre of blood.

As outlined in the HIV Transmission Elimination Delivery Plan 2023-26: Progress Report to March 2025:

- Good progress has been made towards Scotland's goal of zero HIV transmissions within Scotland by 2030; this was demonstrated by the sustained decrease in first ever diagnoses recorded in 2024 and a decline in the number of these diagnoses thought to have occurred within Scotland.
- Refining the approach to ending HIV transmission in Scotland, using the available data and evidence, is even more pressing, particularly given the observed changes in HIV epidemiology in Scotland, the United Kingdom and globally.
- Changes in access to HIV prevention medication and antiretroviral therapy, as a result of shifts in global geopolitics, could have major implications for the progress made to date. Thus, consideration must be given to the impact of these changes through close monitoring and surveillance.

5. Conclusions

As Scotland strives for HIV transmission elimination, the progress made against a suite of indicators outlined in the Sexual Health and Blood Borne Virus Action Plan (2023-2026) Data Monitoring Plan[23] is highlighted in this report through use of a wide range of surveillance sources. The plan for translating these data into action, in combination with other research and projects associated with HIV transmission elimination, and how best to address the key priorities and gaps for Scotland is described in the recently published HIV Transmission Elimination Delivery Plan 2023-26: Progress Report to March 2025.[25]

Importantly, HIV PrEP, as an effective primary prevention intervention, continued to be in demand in Scotland in 2024, primarily among gay, bisexual and other men who have sex with men. The second highest monthly average number of individuals accessing the service for their first prescription was recorded between 1 January and 31 December 2024, only exceeded marginally by the 12 months of 2023. There is also evidence that HIV PrEP uptake among women and trans people has increased, aided by the move around 2022 from an eligibility criteria-based approach to the implementation of HIV PrEP suitability guidance to ensure all who can benefit from PrEP can access it. Work continues to address barriers to HIV PrEP access.

To this end, the development and implementation of HIV PrEP diverse care models is evidenced within the aforementioned HIV Transmission Elimination Delivery Plan 2023-26: Progress Report to March 2025.[25] As outlined under Actions 7-12 of the Plan which seek to improve equity of access, and uptake by, key groups, local NHS boards are scoping and piloting a range of care models, in collaboration with third sector organisations, to optimise the uptake and delivery of HIV PrEP, for example via i) an online ePrEP service for established users, ii) community pharmacy and general practice delivery models, iii) an outreach service for people who inject drugs, and iv) care delivery models for African communities and for trans and non-binary people.

Evidence would suggest that HIV PrEP has been instrumental in reducing HIV incidence among gay, bisexual and other men who have sex with men who were prescribed PrEP in the first two years of the programme, and to a lesser extent those

who were not.[1,2] The decreasing trend in the number of HIV diagnoses first made in Scotland continued in 2024, nearly halving since 2017 and coinciding with the introduction of Scotland's NHS funded HIV PrEP programme. Also of significance is the continued decreasing trend in the number of first ever diagnoses thought to have been acquired in Scotland. Thus, Scotland is not only meeting a key Scottish Government HIV transmission elimination target to achieve an annual reduction in the number of people acquiring HIV within Scotland, but it is also making good progress towards achieving zero HIV transmissions in Scotland by 2030.[19]

It should be recognised, however, that in recent years, as a result of geopolitical shifts and changes in migration patterns, HIV epidemiology in Scotland has changed with a notable increase being observed in the number of people previously diagnosed outwith Scotland, transferring their treatment and care to Scotland from elsewhere in the UK or from abroad. In 2024, previously known diagnoses accounted for two thirds of all new reports, up from 40% in 2018. Among these, over half were heterosexual men and women and a quarter were gay, bisexual and other men who have sex with men. These changes present new challenges for the way in which services are tailored and delivered to those in need.

While efforts are focused on reducing HIV transmissions occurring within Scotland, acknowledgement is also needed of the HIV acquisitions occurring elsewhere in the UK or abroad and the responsibilities for the treatment and care of the individuals affected on returning to Scotland. The following statement made in the HIV Transmission Elimination Delivery Plan therefore remains true: “even after we reach the target of eliminating new transmissions within Scotland, there will remain a transmission risk from those entering from countries where HIV rates are high…Consideration will need to be given to how we monitor imported infections and ensure that we remain transmission free once we have achieved transmission elimination”.[19]

While the trend continued in 2024 of first ever HIV diagnoses acquired through heterosexual sexual intercourse exceeding those acquired among gay, bisexual and other men who have sex with men, thus reinforcing the need for awareness raising efforts among the heterosexual population, it is noteworthy that over 60% of the HIV transmissions which were thought to have occurred in Scotland in 2024 were among

gay, bisexual and other men who have sex with men. Furthermore, half of the recent HIV acquisitions (i.e. three to four months prior to diagnosis) recorded in 2024 were among gay, bisexual and other men who have sex with men. These observations serve as a reminder of the need for enhanced engagement with this population and, specifically, groups of individuals who either may be experiencing 'HIV PrEP fatigue' despite their ongoing risk or who may have had limited access to sexual health services and, thus, HIV prevention and testing.

As alluded to in the HIV Transmission Elimination Delivery Plan 2023-26: Progress Report to March 2025, "there is evidence of differential awareness of, and access to, PrEP amongst GBMSM from different social groups, and anecdotal evidence suggests that 'PrEP fatigue', plus a (factually accurate) perception of a reduced risk among GBMSM may be leading to reduced or non-use of PrEP among those who have previously accessed it…These groups may represent a critically important population in our efforts to eliminate transmission".

People who inject drugs are particularly vulnerable to blood borne virus infections; however, there is evidence of the effectiveness of interventions implemented in response to the HIV outbreak in NHS Greater Glasgow & Clyde in 2015 which promote HIV testing, delivery of treatment and care and provision of harm reduction measures among this group.[21,22,27] The subsequent downward trend in first ever diagnoses among this group continued in 2024 with very small numbers recorded. The impact of outreach treatment services seems also to be reflected in the >95% uptake rate of ART among those individuals who are diagnosed and who inject drugs.

While recognising that HIV testing, overall, has shown signs of recovery to pre-COVID-19 levels, work continues in some settings to improve the offer and uptake of testing given it is a key public health measure for all groups at increased risk of HIV acquisition to i) reduce the number of undiagnosed infections, ii) identify individuals early in HIV infection when they can benefit from antiretroviral therapy, and iii) reduce the potential for onward transmission. Its importance is reflected in the approach to testing outlined in the Scottish Government HIV Transmission Elimination Delivery Plan which aims "to maximise the accessibility of testing, to make testing acceptable and equitable, and to ensure that when someone is diagnosed with HIV, their sexual

partners and other contacts at risk are reliably and consistently identified and offered testing".[19]

To this end, a variety of local and national testing interventions are being developed and implemented; these include i) implementation of an HIV indicator condition testing action plan, ii) expansion of opt-out BBV testing in key settings such as prisons, drug and alcohol services and specialist sexual health services in a bid to meet Scottish Government testing targets, iii) roll-out of opt-out BBV testing in Emergency Departments, initially in NHS Greater Glasgow & Clyde, NHS Lothian and NHS Grampian, iv) an unlinked anonymous seroprevalence testing programme for BBVs to understand undiagnosed HIV prevalence in the community across Scotland, and v) enhanced/new pathways for partner notification. Implementation of these initiatives is being underpinned by a tiered approach to workforce education including addressing HIV stigma and raising awareness of, and the opportunities for, HIV testing, supported by public-facing information.

Through improved access to testing and diagnosis, including tackling HIV stigma, those affected can benefit from highly effective ARTs available. There is evidence, however, that in Scotland a proportion of individuals are being diagnosed at a late, or very late, stage of infection, thus, increasing their risk of poorer health outcomes.[17] Since 2018, fewer people overall have been diagnosed at a late stage and this continued in 2024; however, over 60% of the late diagnoses recorded were at a very late stage of infection. The aforementioned interventions to improve access to testing will be key to tackling this ongoing problem. In addition, several actions, as outlined in the HIV Transmission Delivery Plan, aim to identify opportunities for learning from late diagnoses reported, including the implementation of a local HIV late diagnosis protocol and the collation and reporting of "key findings from local reviews of late HIV diagnosis to understand missed opportunities for diagnosis, with the aim of improving HIV testing services".[19]

Looking to the UNAIDS HIV Fast Track 95:95:95 targets set for 2030 (95% of those living with HIV are diagnosed, 95% of those diagnosed are receiving treatment, and 95% of those on treatment have a suppressed viral load), Scotland is making good progress towards these but areas where further improvement is needed have been highlighted in the HIV Transmission Elimination Delivery Plan 2023-26: Progress

Report to March 2026 and refinement of the actions outlined.[25] As described above, a plethora of interventions are being rolled out across Scotland to improve diagnosis among those people living with HIV but who are unaware of their status with the aim of further reducing the 6% undiagnosed estimate.

Work to refine the definition of Scotland's cohort of people diagnosed and living with HIV in collaboration with specialist clinical service providers has indicated a more accurate estimate of 91% of people diagnosed and living with HIV and receiving ART. With this refinement comes opportunity to utilise surveillance data and local clinical service knowledge to enhance re-engagement efforts with those who have been lost to follow-up and is key to optimising treatment as prevention. Encouragingly, there is evidence that Scotland is continuing to meet the third target of 95% of diagnosed individuals who are receiving anti-retroviral therapy have a suppressed viral load (<200 copies per millilitre of blood).

As work continues towards eliminating HIV transmission in Scotland through implementation of the Delivery Plan, Public Health Scotland will support these efforts through the monitoring of progress against the suite of HIV indicators outlined in the Sexual Health and Blood Borne Virus Action Plan Data Monitoring Plan.[8,23] Working in partnership with Scottish Government, specialist clinical service providers, third sector organisations and other key partners, Public Heath Scotland is implementing a range of surveillance developments to meet the priorities and address the gaps outlined in the HIV Transmission Elimination Deliver Plan 2023-26: Progress Report to March 2025. The accuracy and robustness of these data is paramount as key partners work together to end HIV transmission in Scotland.

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8. Glossary

Antibody avidity testing

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

Antiretroviral therapy (ART)

Antiretroviral therapy is a combination of drugs used in the treatment of HIV. Abbreviated to ART, the regimen usually consists of three or more drugs, in a single pill, which acts to reduce the amount of virus in the body and stop the progression of HIV disease. Abbreviated to ART.

Gay, bisexual and other men who have sex with men

Men reporting having male sexual partners.

Human Immunodeficiency Virus (HIV)

Human immunodeficiency virus (HIV) is a virus which attacks the immune system. HIV is found in the body fluids of an untreated person living with HIV. This includes semen, vaginal and anal fluids, blood and breast milk. HIV can be transmitted through condomless vaginal and anal sex, sharing needles, syringes or other injecting equipment and vertical transmission during pregnancy, birth or breastfeeding. Untreated HIV infection progresses to advanced HIV disease or acquired immune deficiency syndrome (AIDS) which is defined by a number of clinical conditions. HIV is a chronic, lifelong infection and when managed successfully by antiretroviral therapy (ART) individuals can live a near normal life and cannot transmit the virus. Abbreviated to HIV.

HIV pre-exposure prophylaxis (PrEP)

HIV pre-exposure prophylaxis is a novel prophylactic biomedical intervention which comprises of two HIV antiretroviral drugs which has been shown to reduce significantly the risk of sexual HIV acquisition among those at highest risk. Abbreviated to HIV PrEP.

Mode of acquisition

Individuals are assigned to a mode of acquisition category based on a clinical assessment of the most likely route through which they were exposed to the virus and subsequently became infected.

NHS board (allocated)

Unless otherwise specified, individuals were allocated to a specific NHS board **at the time of diagnosis** based on individuals' NHS board of residence or, where not known, their NHS board of treatment/care.

People who inject drugs

People with a history of injecting drug use.

Trans status

Trans status relates to all those who identify with a different gender to that assigned at birth. This includes trans men, trans women, and gender diverse (including genderqueer, non-binary and other gender).

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10. Further information

Further information and data for this publication are available from the **publication page** on our website.

The next release of this publication will be Autumn 2026.

11. Rate this publication

Let us know what you think about this publication via. the link at the bottom of this **publication page** on the PHS website.

12. Appendices

12.1. Appendix 1 – Background information

Human immunodeficiency virus (HIV) is a virus which attacks the immune system. HIV is a chronic, lifelong infection which can be managed successfully by antiretroviral therapy (ART). HIV is found in the body fluids of an untreated infected person. This includes semen, vaginal and anal fluids, blood and breast milk. HIV can be transmitted through condomless vaginal and anal sex, sharing needles, syringes or other injecting equipment and transmission from mother to baby during pregnancy, birth or breastfeeding. Untreated HIV infection progresses to advanced HIV disease or acquired immune deficiency syndrome (AIDS) which is defined by a number of clinical conditions. There is no vaccine or cure for HIV but the current treatment stops the virus from replicating and damaging the body's immune system. Progression to advanced HIV disease or acquired immune deficiency syndrome (AIDS), which is defined by a number of clinical conditions, can be controlled by good adherence to ART. People diagnosed with HIV and on ART are able to live long and healthy lives.

12.2. Appendix 2 – Publication metadata

Publication title

HIV in Scotland: update to 31 December 2024

Description

This release provides data relating to confirmed laboratory diagnoses of HIV reported to PHS from diagnostic and specialist testing laboratories. Information on clinical follow-up (i.e. attendance at HIV specialist clinics, uptake and response to antiretroviral therapy) is obtained from the HIV Clinical Leads for NHS boards across Scotland. This is combined with additional laboratory data to enhance the surveillance of HIV infection. This is a summary of the diagnosed HIV cohort in Scotland at 31 December 2024. In addition, data are presented on the uptake of HIV pre-exposure prophylaxis (a novel prophylactic biomedical intervention which comprises of two HIV antiretroviral drugs which has been shown to reduce significantly the risk of sexual HIV acquisition among those at highest risk) from July 2017 to December 2024.

Theme

Infections in Scotland

Topic

HIV diagnosis, treatment and care and HIV PrEP uptake

Format

PDF and Excel workbook

Data source(s)

HIV diagnostic and reference laboratories, HIV clinicians, NaSH

Date that data are acquired

28 August 2025

Release date

30 September 2025

Frequency

Annual

Timeframe of data and timeliness

Data from 01 January 2015 to 31 December 2024 (six months in arrears is considered timely publication of annual data given data validation required). Additional months required for quality control checks to be completed.

Continuity of data

HIV surveillance has been in place since 1985 when the first diagnostic antibody tests became available.

Revisions statement

These data are not subject to planned major revisions.

Revisions relevant to this publication

No planned revisions.

Concepts and definitions

Human immunodeficiency virus (HIV) is a virus which attacks the immune system. HIV is a chronic, lifelong infection which can be managed successfully by antiretroviral therapy (ART). HIV can be transmitted through condomless vaginal and anal sex, sharing needles, syringes or other injecting equipment and transmission from mother to baby during pregnancy, birth or breastfeeding. Untreated HIV infection progresses to advanced HIV disease or acquired immune deficiency syndrome (AIDS) which is defined by a number of clinical conditions. Treatment is effective and good adherence to therapy means individuals can live long, healthy lives.

More information is available at: **https://publichealthscotland.scot/our-areas-of-work/health-protection/infectious-diseases/hiv/overview/what-is-hiv/**

Definition of Scotland's cohort of people diagnosed and living with HIV

In 2025, a review of the methodology applied to estimate the diagnosed and living with HIV cohort in Scotland was undertaken. A data linkage exercise was undertaken using the national HIV database and a number of other NHS datasets to offer an

indication of recent (non-HIV) NHS service activity/interaction and to help understand the group of people diagnosed and living with HIV in Scotland who are not engaged with treatment and care. These datasets included: Prescribing data from January 2009 to 31 December 2024; vaccination data to 31 December 2024; Mental Health Inpatient and Day Case data (SMR04) to 31 December 2024; Scottish Cancer Registry data (SMR06) to 31 December 2024; Accident & Emergency data to 31 December 2024.

The following revised definition has been applied to data for 2024:

All individuals aged 15 and over who:

i. had been diagnosed with HIV, and;

ii. were not known to have died or to have left Scotland, and;

iii. had attended HIV specialist services within 36 months of the analysis end date (e.g. for the purposes of this report 31 December 2024), or;

iv. had **not** attended HIV specialist services within 36 months of the analysis end date but who had evidence of non-HIV related NHS activity within 36 months of the analysis end date (excluding individuals with no Community Health Index number - see below for further detail).

Please note an 'attendee' is defined as an individual who attended HIV specialist services in the 18 months prior to the analysis end date (31 December 2024 for the purposes of this report).

To facilitate the data linkage process, a Community Health Index number was required. Thus, any people diagnosed and living with HIV who had not attended HIV specialist services for more than 36 months and for whom CHI was unavailable were removed from the cohort calculation (although these records have been retained on the national HIV database). Furthermore, any people diagnosed and living with HIV excluded from the diagnosed cohort denominator on the basis of not meeting the above definition (i.e. had not attended HIV specialist services in Scotland for more

than 36 months and who had no evidence of non-HIV related NHS activity within 36 months of the analysis end date) would be allocated to the Lost to Follow-Up (LTFU) group.

Modelling of undiagnosed HIV

In collaboration with the UKHSA, work is currently ongoing to review and update the UK undiagnosed estimates, drawing on data from each of the four home countries. A Bayesian multi-parameter evidence synthesis (MPES) model developed by the University of Cambridge and the UK Heath Security Agency (UKHSA) drawing on multiple surveillance, demographic and survey datasets provides estimates of undiagnosed HIV infection.[26]

Relevance and key uses of the statistics

HIV diagnoses, treatment and care data are essential for the monitoring of key outcome indicators outlined in the Scottish Government Sexual Health and Blood Borne Virus Framework (2015-2020). In August 2021, Scottish Government published an interim document, **Reset and Rebuild - sexual health and blood 60 borne virus services: recovery plan**. A review of the Framework is underway and will be published in due course. Associated epidemiological data help to inform policy and service development.

Accuracy

The PHS national HIV database is under continual review and modification as additional information becomes available. As a result, published data - primarily within the last year – are subject to change. Data are presented to clinicians at regular internal meetings and missing data are sought from the HIV Clinical Leads on a quarterly basis from their local clinical datasets.

Completeness

The PHS national HIV database is under continual review and modification as additional information becomes available. As a result, published data - primarily within the last year – are subject to change. Some data items will be incomplete, primarily exposure category, for individuals diagnosed towards the end of the reporting quarter; these data will be updated when information becomes available.

Comparability

Public Health England data can be found at:

https://www.gov.uk/government/publications/hiv-in-the-united-kingdom

Accessibility

It is the policy of Public Health Scotland to make its websites and products accessible according to published guidelines. More information on accessibility can be found on the **PHS website**.

Coherence and clarity

Tables and figures are available via the **PHS website**.

Value type and unit of measurement

Number of diagnoses of HIV infection reported by NHS laboratories across Scotland. Enhanced surveillance of clinical outcomes of infection and treatment. Uptake of HIV PrEP.

Disclosure

The PHS protocol on Statistical Disclosure is followed.

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12.3. Appendix 3 – Early access details

Pre-release access

Under terms of the 'Pre-release Access to Official Statistics (Scotland) Order 2008', PHS is 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.

Standard pre-release access:

Scottish Government Department of Health and Social Care (DHSC)

NHS board chief executives

NHS board communication leads

Early access for management information

These statistics will also have been made available to those who needed access to ‘management information’, i.e. as part of the delivery of health and care:

Early access for quality assurance

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

12.4. Appendix 4 – PHS and official statistics

About Public Health Scotland (PHS)

PHS is a knowledge-based and intelligence driven organisation with a critical reliance on data and information to enable it to be an independent voice for the public's health, leading collaboratively and effectively across the Scottish public health system, accountable at local and national levels, and providing leadership and focus for achieving better health and wellbeing outcomes for the population. Our statistics comply with the **Code of Practice for Statistics** in terms of trustworthiness, high quality and public value. This also means that we keep data secure at all stages, through collection, processing, analysis and output production, and adhere to the Office for National Statistics '**Five Safes**' of data privacy.