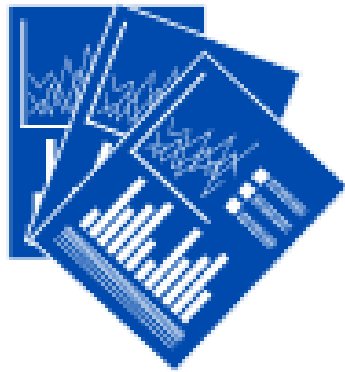


# HIV Surveillance in Northern Ireland 2022

An analysis of data for the calendar year 2021



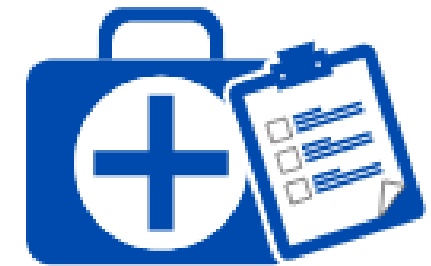
**76**

New HIV diagnoses



**1,325**

People living with HIV



**79,571**

HIV tests

# HIV surveillance in Northern Ireland

## Aim

To provide an overview of HIV epidemiology in Northern Ireland by collating and analysing information from a number of sources. Although it reflects epidemiological trends over time, its main focus will be on data collected in 2021.

## New HIV diagnoses definition

New HIV diagnoses are defined by area of residence.

## Other outputs

PHA HIV data tables are available at:

<https://www.publichealth.hscni.net/directorate-public-health/health-protection/sexually-transmitted-infections>

UKHSA national and country HIV data tables are available at:

<https://www.gov.uk/government/statistics/hiv-annual-data-tables>

# Interpreting trends over time

Trends over time must be interpreted with care, as each data source is subject to reporting delay. This means that numbers, particularly for recent years, may rise as a result of receiving further reports.

Furthermore, the COVID-19 pandemic changed patterns of sexual behaviour, HIV testing and access to sexual health and HIV services in 2020 and in 2021. Differences between 2019 and 2020, and between 2020 and 2021, should be interpreted with caution.

Figures may be different to those published previously due to improvements in the data.

# Surveillance arrangements

Surveillance arrangements for diagnosed HIV/AIDS infection in England, Wales and Northern Ireland are based largely on the confidential reporting of newly identified HIV positive individuals and AIDS cases by clinicians to UK Health Security Agency (UKHSA). The main surveillance categories are:

- **New HIV diagnoses:** data relating to individuals' resident in Northern Ireland newly diagnosed with HIV.
- **RITA:** the Recent Infection Treatment Algorithm (RITA) allows classification of HIV diagnoses as recent or incident infections (acquired within the last six months). The data used in the algorithm includes CD4 count, antiretroviral treatment and the diagnosis of an AIDS defining illness.
- **CD4 T Cell data:** laboratory reporting of CD4 cell counts on new diagnoses to provide a measure of the stage of an individual's disease around the time of diagnosis.
- **Accessing HIV care:** data relating to individuals who accessed statutory HIV services in England, Wales or Northern Ireland and who were resident in Northern Ireland when last seen for care in 2021 (Survey of Prevalent HIV Infections Diagnosed – SOPHID).
- **Testing data:** data relating to tests carried out in a Northern Ireland Health Service setting are provided by the Regional Virology Laboratory and the Antenatal Screening Programme. Data represent all tests performed and may include multiple tests performed during an episode of care, including tests performed to confirm previous results. In addition, first episode HIV screens are reported from GUM clinics. SH:24 online HIV testing became available to residents in Northern Ireland in late 2019 and this data is also presented in the report.

# HIV surveillance in Northern Ireland

## Summary

- There were 76 new HIV diagnoses made in Northern Ireland (54 men and 22 women) in 2021; a 12% increase from 68 in 2020.
- The largest route of transmission for new HIV diagnoses (41%, 31/76) occurred through gay, bisexual and other men who have sex with men (GBMSM); a slight increase from 28 new diagnoses in 2020.
- Twenty-one (28%, 21/76) new HIV diagnoses occurred through heterosexual transmission; the same number reported in 2020.
- Fourteen (18%) new HIV diagnoses occurred through injecting drug use; an increase from 5 in 2020. This is a significant new risk group in Northern Ireland which has contributed to the increase in new HIV diagnoses seen in 2021.
- Transmission route was unknown for 10 of the new diagnoses.

# HIV surveillance in Northern Ireland

## Summary

- The majority (78%, 59/76) of people newly diagnosed in 2021 were aged between 25 and 49 years, with the 25-34 years age group seeing over twice as many new diagnoses (28) compared to 2020 (12). The proportion of people diagnosed aged 50 years or over decreased to 11% in 2021 compared to 26% in 2020. Diagnoses in those aged over 65 have remained low with only 17 new diagnoses reported over the past ten years.
- Recent Infection Testing Algorithm (RITA) was carried out for 57% (43/76) of new HIV diagnoses. Results showed that 14% (6/43) of the newly diagnosed HIV infections were recently acquired.

# HIV surveillance in Northern Ireland

## Summary

- One third (33%, 20/60) of new HIV diagnoses were made at a late stage (i.e. cases had a CD4 count within 91 days of diagnosis, and the CD4 count was  $<350$  cells/mm<sup>3</sup>).
- Of those newly diagnosed, six were also diagnosed with AIDS at their HIV diagnosis (i.e. reported AIDS defining illness within three months of HIV diagnosis).
- Late diagnosis suggests that these individuals had been living with HIV for years prior to diagnosis and it is likely that there were missed opportunities for HIV testing prior to being diagnosed.
- There were less than five deaths reported in 2021.

# HIV surveillance in Northern Ireland

## Summary

- In 2021, 1,325 People living with HIV (PWHIV) resident in Northern Ireland received medical HIV-related care. Of these, there were 1,040 men and 285 women.
- Almost all of those receiving medical HIV-related care (98%, 1,072/1,091) and where route of transmission was known, acquired their infection through sexual contact. Of these, 61% (665/1,091) acquired their infection through sexual contact involving gay, bisexual and other men who have sex with men (GBMSM) and 37% (407/1,091) through heterosexual contact. Only 2% (19/1091) acquired their infection through non-sexual contact i.e via injecting drug use, or vertical transmission.
- Over three quarters of those who received HIV-related medical care were aged 35-64 (76%, 1,013/1,325). Additionally, 84% were white, 11% were black-African and 5% were classified in other ethnic groups or not reported.



# HIV surveillance in Northern Ireland

## Summary

- Everyone in care received antiretroviral therapy, and 97% of those on treatment had viral suppression as defined by  $\leq 200$  copies/ml (where a viral load was reported). This is referred to as an undetectable viral load, and at this level an HIV person has effectively zero risk of sexually transmitting the virus to an HIV-negative partner. Undetectable=Untransmissible (U=U).
- Estimates of prevalence show that Belfast Local Government District (LGD) area has the highest rate in Northern Ireland at 2.01/1,000 population aged 15-59 years. Belfast (LGD) area has now reached the 2.0/1,000 population threshold at which expanded testing is recommended.
- 79,571 HIV tests were carried out in Northern Ireland during 2021 this is a 21% increase from 65,906 tests in 2020.
- Of the 79,571 HIV tests performed in Northern Ireland during 2021, 35,244 were performed by Regional Virology Laboratory, 21,836 were performed as part of the antenatal screening and 22,491 were online SH:24 tests. SH:24 online HIV tests played a significant role during the COVID-19 pandemic when lockdown restrictions were imposed and continues to be a valuable testing service.



# New HIV diagnoses

Table 1: All new HIV diagnoses in Northern Ireland by demographics and probable route of exposure, all years to 2021

Table 1a: New HIV diagnoses in Northern Ireland, AIDS at diagnosis and deaths by gender

New diagnoses and deaths	Gender	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
HIV diagnoses	Men	627	68	87	70	81	59	67	59	46	50	54
	Women	191	16	13	21	20	15	16	20	17	18	22
	<b>Subtotal</b>	<b>818</b>	<b>84</b>	<b>100</b>	<b>91</b>	<b>101</b>	<b>74</b>	<b>83</b>	<b>79</b>	<b>63</b>	<b>68</b>	<b>76</b>
AIDS at HIV diagnoses	Men	87	0	<5	<15	<10	6	<10	<5	<10	<10	6
	Women	23	0	<5	<5	<5	0	<5	<5	<5	<5	0
	<b>Subtotal</b>	<b>110</b>	<b>0</b>	<b>&lt;5</b>	<b>&lt;15</b>	<b>8</b>	<b>6</b>	<b>7</b>	<b>5</b>	<b>10</b>	<b>6</b>	<b>6</b>
Deaths	Men	93	<5	<10	<5	6	<10	<5	<5	<10	<10	0
	Women	16	0	<5	<5	0	<5	0	<5	<5	<5	<5
	<b>Subtotal</b>	<b>109</b>	<b>&lt;5</b>	<b>9</b>	<b>&lt;5</b>	<b>6</b>	<b>6</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>8</b>	<b>7</b>	<b>&lt;5</b>

Table 1b: New HIV diagnoses in Northern Ireland by age at diagnosis

Age at diagnosis	Gender	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Under 15	All	10	0	0	0	0	0	<5	0	0	0	0
15 - 24	All	112	10	<10	<15	9	11	10	<10	<10	<10	9
25 - 34	All	300	34	29	25	37	22	26	24	14	12	28
35 - 49	All	317	22	38	40	42	27	28	31	24	32	31
50 - 64	All	69	18	23	14	13	<15	16	15	16	17	8
65 and over	All	9	0	<5	<5	0	<5	<5	<5	<5	<5	0

Table 1c: New HIV diagnoses in Northern Ireland by probable exposure category and gender

Probable exposure category	Gender	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sex between men	Men	416	52	52	45	61	40	38	40	24	28	31
	Women	172	13	24	<20	<20	<15	19	13	16	11	9
Heterosexual contact	Women	176	16	12	18	20	14	11	16	13	10	12
	<b>Subtotal</b>	<b>348</b>	<b>29</b>	<b>36</b>	<b>&lt;40</b>	<b>&lt;40</b>	<b>&lt;30</b>	<b>30</b>	<b>29</b>	<b>29</b>	<b>21</b>	<b>21</b>
	Men	<15	<5	<5	<5	<5	<5	<5	0	<5	<5	<10
Injecting drug use	Women	<10	0	0	0	0	0	<5	0	<5	<5	<10
	<b>Subtotal</b>	<b>17</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>0</b>	<b>&lt;5</b>	<b>5</b>	<b>14</b>
	Men	<5	0	0	0	0	0	<5	0	0	0	0
Mother to child	Women	<10	0	0	0	0	0	0	0	<5	0	0
	<b>Subtotal</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>&lt;5</b>	<b>0</b>	<b>&lt;5</b>	<b>0</b>	<b>0</b>
	Men	<25	<5	<5	0	0	0	0	0	<5	0	0
Other	Women	<5	0	0	0	0	0	0	0	0	0	0
	<b>Subtotal</b>	<b>25</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>&lt;5</b>	<b>0</b>	<b>0</b>
	Men	<5	0	0	0	0	0	0	0	0	0	0



*Improving Your Health and Wellbeing*

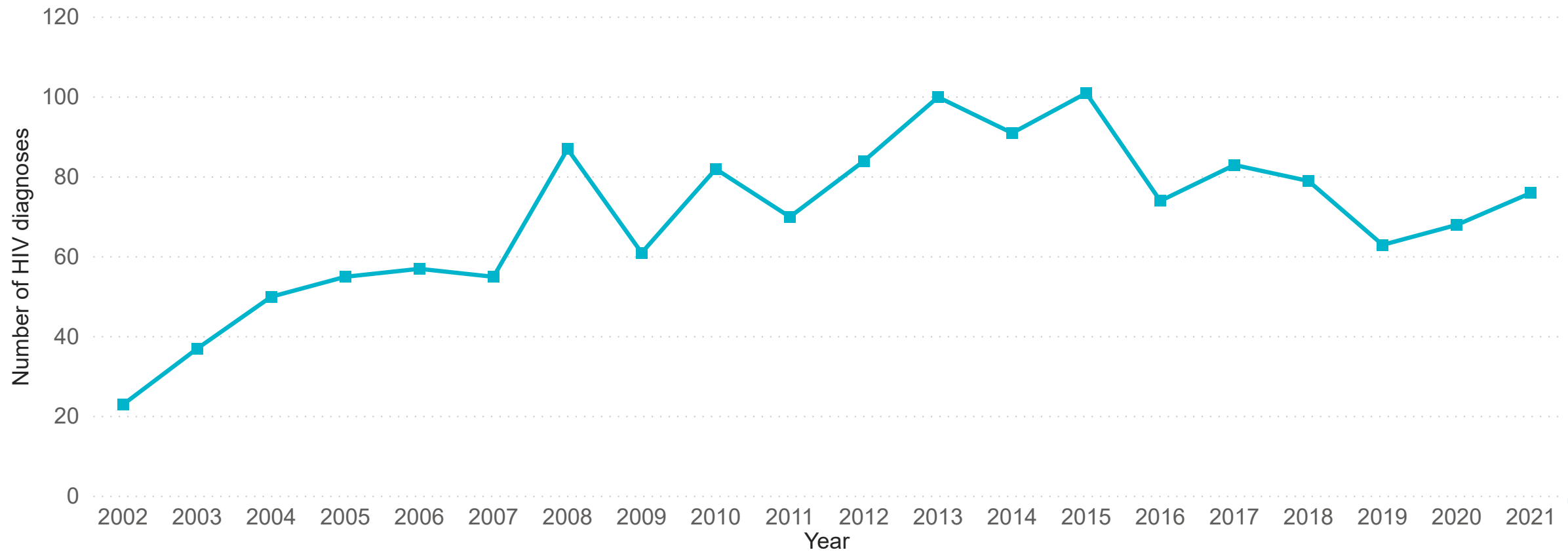
Notes:

Subtotals includes individuals with incomplete or not reported demographic data.

For gender, subtotals from 2015 also include people who identified as gender diverse (genderqueer, non-binary, other gender and prefer not to say).

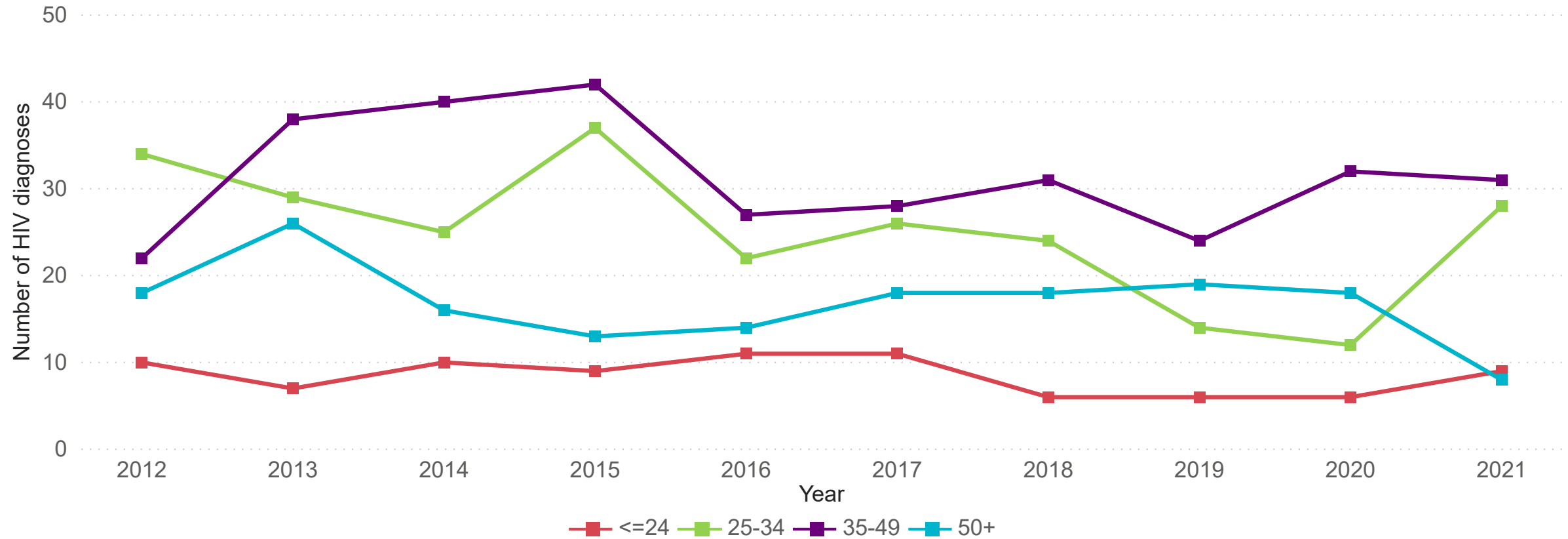
# Trends in new diagnoses

Figure 1: Number of new HIV diagnoses, 2002 – 2021, Northern Ireland



# Age group

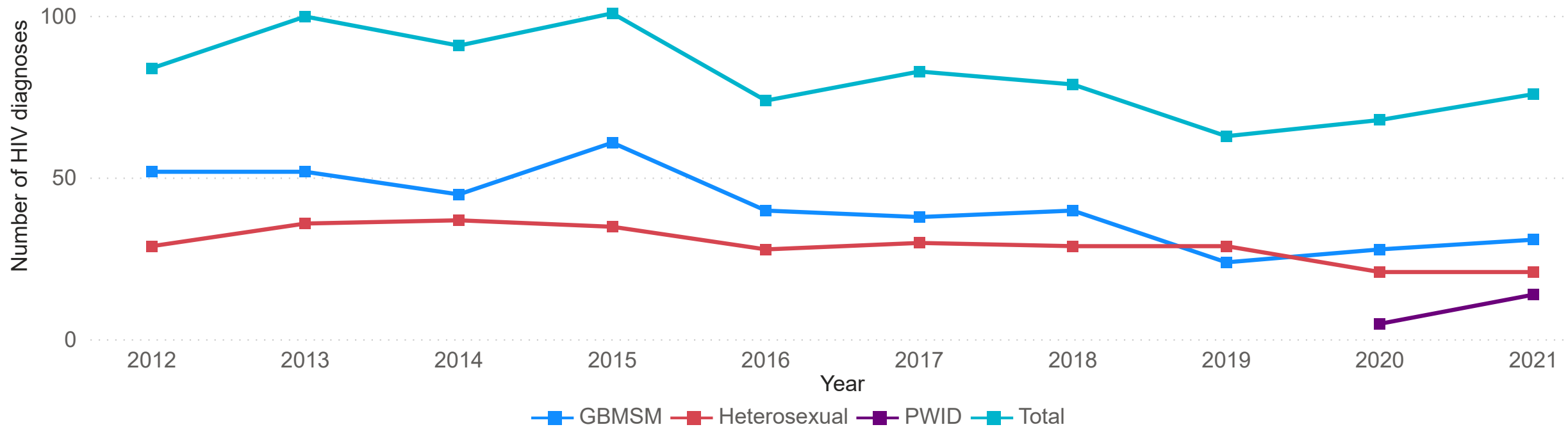
Figure 2: Number of new HIV diagnoses by age group, 2012 – 2021, Northern Ireland



New HIV diagnoses in Northern Ireland are highest in the 35-49 age group. Numbers of those aged 25-34 have more than doubled in 2021 after a period of decline. This increase could be associated with the increase in new HIV diagnoses in people who inject drugs (PWID) with the majority of these diagnoses aged between 25-34. The proportion of people diagnosed aged 50 years decreased to 11% in 2021 compared to 26% in 2020. Diagnoses in those aged 65 and over have remained low with only 17 new diagnoses reported over the past ten years.

# Risk groups

Figure 3: Number of new HIV diagnoses by probable route of exposure, 2012 – 2021, Northern Ireland



New HIV diagnoses in Northern Ireland have been acquired mostly through sexual transmission, with gay, bisexual and other men who have sex with men (GBMSM) accounting for the majority of these from 2012. Heterosexual transmission in 2021 remained the same as 2020 (21 new diagnoses) after a 28% reduction from 2019 and is the lowest it has been over the past decade. The annual number of diagnoses where infection has been acquired through other exposures remains very low. However, injecting drug use has emerged as an important risk factor with 14 new HIV diagnoses reported in 2021 compared to 5 in 2020 and pre 2020 the numbers in PWID were small with less than 5 per year, therefore these are not included in the graph.



# Risk groups

## **Gay, bisexual and other men who have sex with men (GBMSM)**

In 2021, 41% (31/76) of all new HIV diagnoses were in gay, bisexual and other men who have sex with men (GBMSM) (compared to 41% in 2020 and 62% in 2012). Of the GBMSM newly diagnosed with HIV in 2021, 73% were white and where country of birth was recorded, 60% were UK-born. Overall, there has been a decline in GBMSM diagnoses since 2016 with a steep decline seen in 2019.

## **Heterosexual transmission**

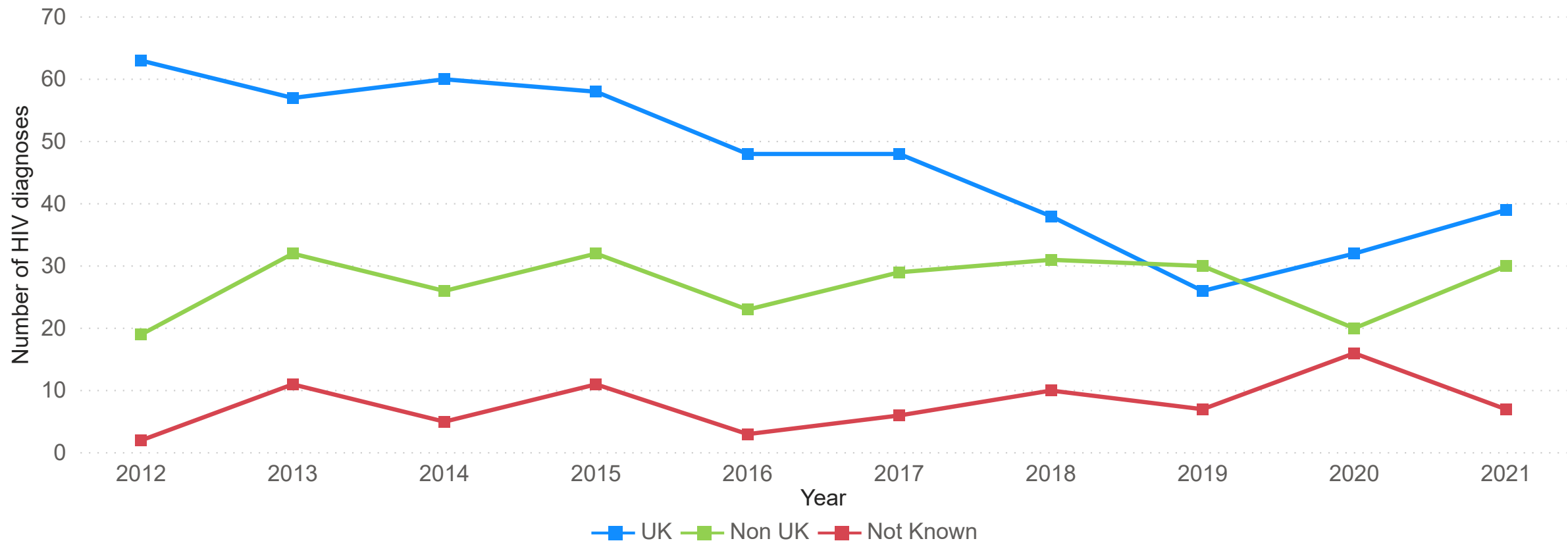
Heterosexual contact accounted for 28% (21/76) of all new HIV diagnoses made in 2021 (compared to 31% in 2020 and 35% in 2012). Black African ethnicity accounted for 55% of new heterosexual diagnoses in 2021 (in cases where ethnicity was recorded) compared with 29% in 2020 and 29% in 2012. There has been a decline in new heterosexual diagnoses since 2014 with the lowest new diagnoses over the past decade reported in 2020 and 2021.

## **People who inject drugs**

An increasing number of cases of HIV were identified where the mode of transmission was injection of drugs (heroin and cocaine). This is a concerning new development.

# Region of birth

Figure 4: Number of new HIV diagnoses by region of birth, 2012– 2021, Northern Ireland



Where region of birth was recorded, almost two thirds (63%; 469/741) of new HIV diagnoses reported since 2012 were born in the UK.

Table 1d: New HIV diagnoses in Northern Ireland by ethnicity and gender												
Ethnicity	Gender	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	Men	545	65	75	66	75	55	57	48	36	45	38
	Women	94	9	6	11	11	8	10	12	9	10	11
	<b>Subtotal</b>	<b>639</b>	<b>74</b>	<b>81</b>	<b>77</b>	<b>86</b>	<b>63</b>	<b>67</b>	<b>60</b>	<b>45</b>	<b>55</b>	<b>49</b>
Black African	Men	55	<5	6	<5	<5	<5	<5	<5	6	<5	<5
	Women	70	<10	7	<10	<10	<10	<5	<5	8	<5	<15
	<b>Subtotal</b>	<b>125</b>	<b>8</b>	<b>13</b>	<b>13</b>	<b>&lt;10</b>	<b>8</b>	<b>&lt;5</b>	<b>6</b>	<b>14</b>	<b>&lt;10</b>	<b>15</b>
Black Caribbean	All	<5	0	0	0	0	0	0	0	0	0	0
Other/mixed	All	34	<5	5	<5	8	<5	7	6	<5	<5	9

Table 1e: New HIV diagnoses in Northern Ireland by region of birth												
Region of birth	Gender	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
UK	All	378	63	57	60	58	48	48	38	26	32	39
Europe	All	92	10	8	15	16	12	16	11	9	7	9
Africa	All	113	7	13	10	10	8	7	13	18	9	14
Asia	All	17	0	5	<5	5	<5	<5	6	<5	<5	<5
Other	All	8	<5	6	0	<5	<5	<5	<5	0	<5	5

Table 1f: Late HIV diagnosis												
CD4 at diagnosis	Gender	Pre 2012	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Number with a CD4 count within 91 days of diagnosis	All	563	77	77	84	83	63	70	65	58	55	60
Late diagnosis (CD4 count <350)	All	264	34	37	40	24	23	31	25	22	24	20
Percentage of late diagnosis	All	<b>47%</b>	<b>44%</b>	<b>48%</b>	<b>48%</b>	<b>29%</b>	<b>37%</b>	<b>44%</b>	<b>38%</b>	<b>38%</b>	<b>44%</b>	<b>33%</b>
<b>Median CD4</b>	All	<b>360</b>	<b>350</b>	<b>320</b>	<b>330</b>	<b>520</b>	<b>390</b>	<b>410</b>	<b>440</b>	<b>495</b>	<b>370</b>	<b>485</b>

Notes:

Subtotals includes individuals with incomplete or not reported demographic data.

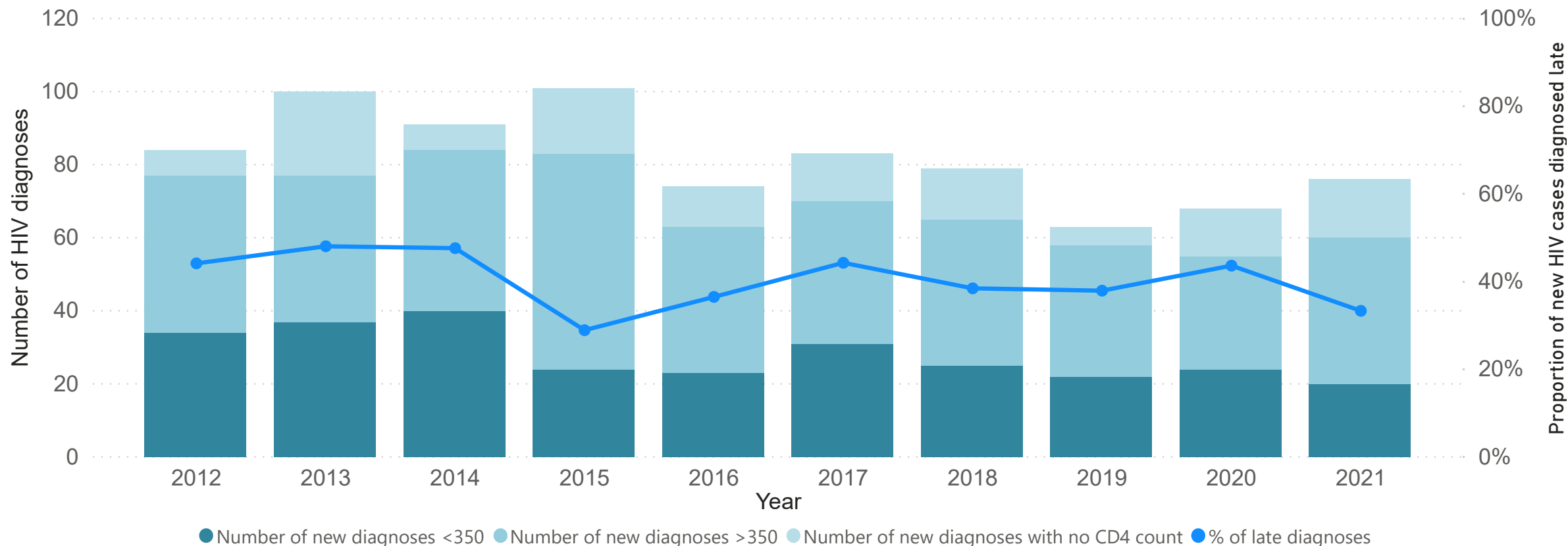
For gender, subtotals from 2015 also include people who identified as gender diverse (genderqueer, non-binary, other gender and prefer not to say).

Region of birth information has been updated for 2021 so figures will be different from those published by UKHSA.



# Late diagnoses

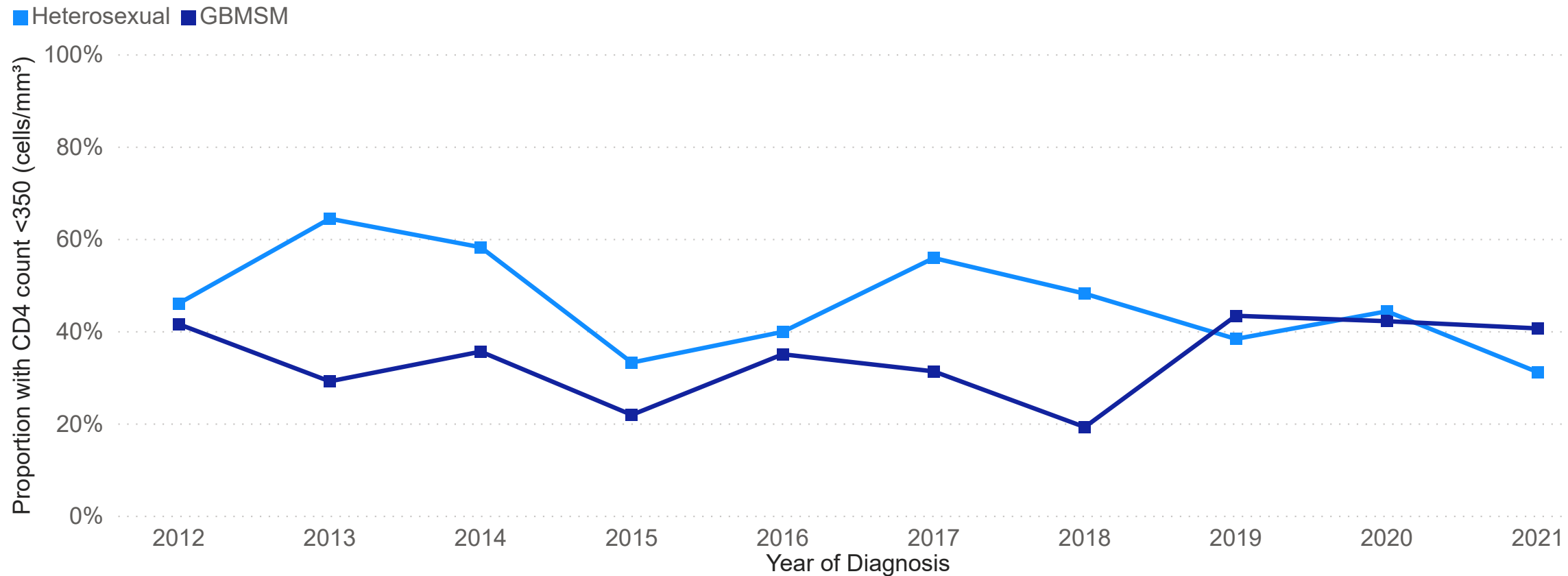
Figure 5: Number and proportion of new HIV diagnoses in adults diagnosed with a CD4 count <350 cells/mm<sup>3</sup> within 91 days of diagnosis, 2012 – 2021, Northern Ireland



CD4 counts within 91 days of diagnosis were available for 79% (60/76) of new HIV diagnoses. One third (33%; 20/60) of new HIV diagnoses were diagnosed at a late stage i.e. cases which had a CD4 count within 91 days of diagnosis, and in whom the CD4 count <350 cells/mm<sup>3</sup>.

# Late diagnoses

**Figure 6: Proportion of new HIV diagnoses in adults with a CD4 count <350 cells/mm<sup>3</sup> within 91 days of diagnosis, by probable route of infection, 2012 – 2021, Northern Ireland**

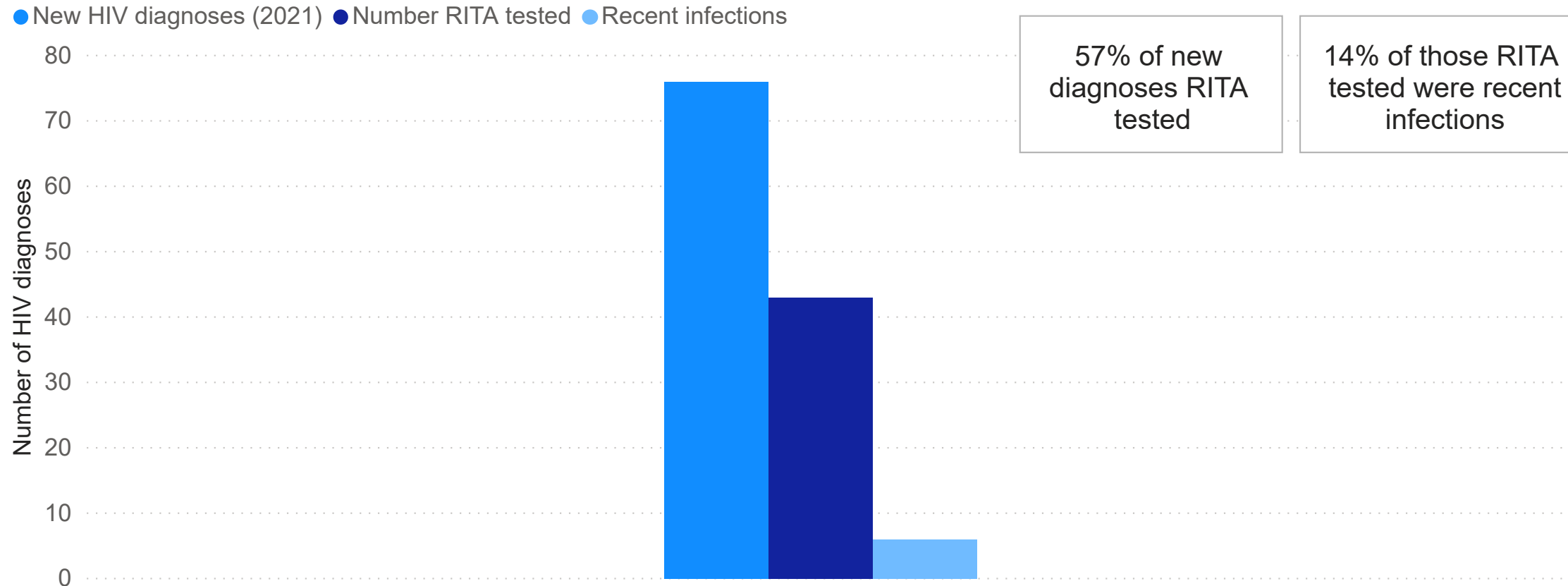


Nearly one third (31%; 5/16) of individuals with heterosexually acquired HIV were diagnosed at a late stage in 2021 compared with 41% (11/27) of diagnoses in gay, bisexual and other men who have sex with men (GBMSM) being made at a late stage.

Interpretation of this data for Northern Ireland is complicated by year to year small number variation.

# Recent diagnoses

Figure 7: Number of new HIV diagnoses, RITA\* tested and recent infections, 2021, Northern Ireland



\*The Recent Infection Treatment Algorithm (RITA) allows classification of HIV diagnoses as recent or incident infections (acquired within the last six months). The data used in the algorithm includes CD4 count, anti-retroviral treatment and the diagnosis of an AIDS defining illness.

# Prevalent infection

Table 2: All people in Northern Ireland seen for HIV care, receiving treatment and viral load suppression, 2012 to 2021

Table 2a: People in Northern Ireland seen for HIV care by age and gender

Age and gender	Gender	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
All	Men	508	590	633	732	786	857	892	912	970	1,040
All	Women	160	180	182	209	221	225	238	246	265	285
<b>Total</b>	<b>Subtotal</b>	<b>668</b>	<b>770</b>	<b>815</b>	<b>941</b>	<b>1,007</b>	<b>1,082</b>	<b>1,130</b>	<b>1,158</b>	<b>1,235</b>	<b>1,325</b>
Under 15	Boys	0	0	0	0	0	<5	<5	<5	<5	0
	Girls	0	0	<5	0	0	0	0	0	0	0
	<b>Subtotal</b>	<b>0</b>	<b>0</b>	<b>&lt;5</b>	<b>0</b>	<b>0</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>&lt;5</b>	<b>0</b>
15 - 24	Men	21	17	<20	18	25	<35	<25	<25	<20	<20
	Women	8	6	<5	5	6	<10	<10	<10	<5	<5
	<b>Subtotal</b>	<b>29</b>	<b>23</b>	<b>22</b>	<b>23</b>	<b>31</b>	<b>&lt;40</b>	<b>&lt;30</b>	<b>&lt;30</b>	<b>&lt;25</b>	<b>&lt;20</b>
25 - 34	Men	118	124	126	153	159	161	156	147	149	<165
	Women	53	53	52	55	45	46	44	33	28	<35
	<b>Subtotal</b>	<b>171</b>	<b>177</b>	<b>178</b>	<b>208</b>	<b>204</b>	<b>207</b>	<b>200</b>	<b>180</b>	<b>177</b>	<b>&lt;195</b>
35 - 49	Men	245	280	285	323	332	365	374	369	383	401
	Women	72	83	84	96	115	113	118	125	139	146
	<b>Subtotal</b>	<b>317</b>	<b>363</b>	<b>369</b>	<b>419</b>	<b>447</b>	<b>478</b>	<b>492</b>	<b>494</b>	<b>522</b>	<b>547</b>
50 - 64	Men	110	149	179	208	239	264	292	317	351	377
	Women	27	38	39	47	50	53	61	67	80	89
	<b>Subtotal</b>	<b>137</b>	<b>187</b>	<b>218</b>	<b>255</b>	<b>289</b>	<b>317</b>	<b>353</b>	<b>384</b>	<b>431</b>	<b>466</b>
65 and over	Men	14	20	<30	30	31	36	45	57	67	85
	Women	0	0	<5	6	5	7	10	15	14	16
	<b>Subtotal</b>	<b>14</b>	<b>20</b>	<b>27</b>	<b>36</b>	<b>36</b>	<b>43</b>	<b>55</b>	<b>72</b>	<b>81</b>	<b>101</b>

Notes:

Subtotals includes individuals with incomplete or not reported demographic data.

For gender, subtotals from 2015 also include people who identified as gender diverse (genderqueer, non-binary, other gender and prefer not to say).





Table 2b. People in Northern Ireland seen for HIV care by probable exposure category											
Probable exposure category	Gender	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Sex between men	All	364	418	453	533	583	635	634	625	635	665
Heterosexual contact	All	282	323	328	369	380	395	378	374	390	407
Injecting drug use	All	6	<10	<15	<10	10	14	13	10	13	15
Vertical transmission	All	<5	<5	<5	<5	<5	<5	<10	<5	<5	<5
Other	All	<5	0	0	0	<5	<5	<5	<5	<5	<5

Table 2c. People in Northern Ireland seen for HIV care by ethnicity											
Ethnic group	Gender	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
White	All	563	638	691	803	860	935	973	994	1,051	1,115
Black African	All	86	105	97	104	113	111	117	119	126	141
Black Caribbean	All	0	0	0	0	0	0	0	<5	<5	<5
Black other	All	<5	<5	<5	<5	<5	5	5	5	<5	<5
Asian	All	9	12	12	16	16	17	21	21	23	25
Other/mixed	All	<10	<15	<15	<15	<20	14	10	<10	27	34

Notes:

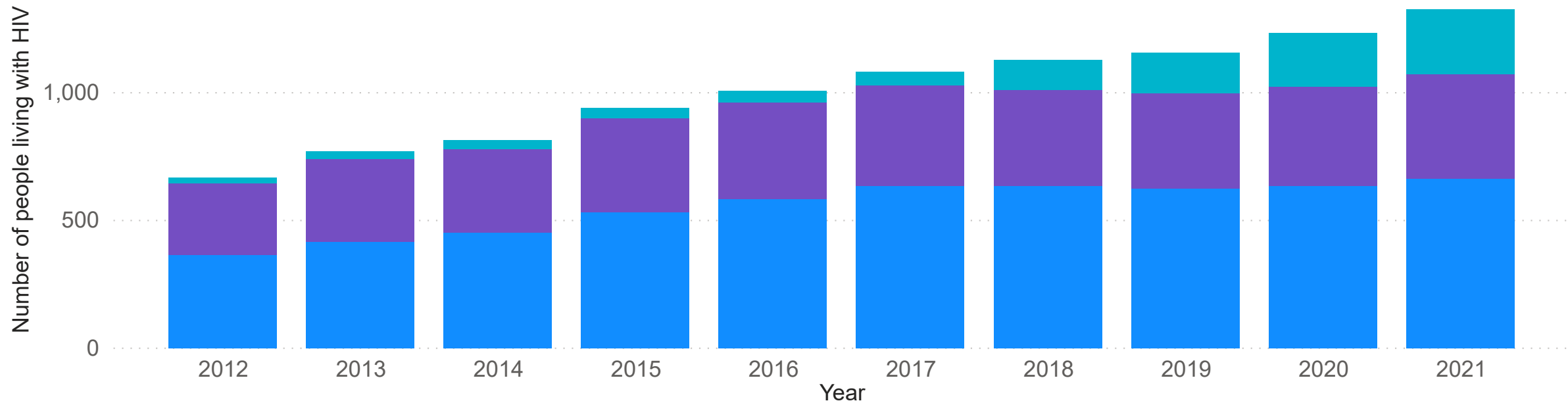
Subtotals includes individuals with incomplete or not reported demographic data.

For gender, subtotals from 2015 also include people who identified as gender diverse (genderqueer, non-binary, other gender and prefer not to say).

# Prevalent infection

**Figure 8: Number of People living with HIV resident in Northern Ireland accessing HIV-related care, by probable route of infection, 2012 – 2021**

● GBMSM ● Sex between men and women ● Others / Not Known



In 2021, 1,325 People living with HIV (PWHIV) resident in Northern Ireland (1,040 men and 285 women) accessed HIV related care compared with 1,235 in 2020. These figures reflect continuing new diagnoses, transfers of care into and out of Northern Ireland and the role of highly active antiretroviral therapy (HAART) in increasing survival rates.

# Prevalence by LGD of residence

**Table 3: Diagnosed HIV prevalence per 1,000 population aged 15-59 years, by LGD, 2021, Northern Ireland\***

Rate per 1,000 population	Local Government District
0.00 – 0.49	Causeway Coast and Glens
0.50 – 0.99	Antrim and Newtownabbey Ards and North Down Armagh City, Banbridge and Craigavon Derry City and Strabane Fermanagh and Omagh Lisburn and Castlereagh Mid and East Antrim Mid Ulster Newry, Mourne and Down
1.00 – 1.49	
1.50 – 1.99	
2.00 – 2.49	Belfast

Note: \*Numbers may rise as further reports are received and more information is obtained on area of residence. This is more likely to affect recent years, particularly 2021. This may impact on interpretation of trends in more recent years.

Estimates of prevalence derived from the Survey of Prevalent Infection Diagnosed (SOPHID) show that Belfast Local Government District (LGD) area has the highest rate in Northern Ireland at 2.01/1,000 population aged 15-59 years. Belfast (LGD) area has now reached the 2.0/1,000 population threshold at which expanded testing is recommended.

The overall prevalence for the Northern Ireland population is 1.02/1,000 population aged 15-59 years.



# Progress towards UNAIDS target

In 2014, UNAIDS set a target that by 2020, 90% of all people living with HIV know their HIV status, 90% of all people with diagnosed HIV infection receive sustained antiretroviral therapy, and 90% of all people receiving antiretroviral therapy have viral suppression (1). This target has been updated to 95% for each objective by 2025 (2). Modelling suggests that achieving these targets globally will enable the world to end the AIDS epidemic by 2030.

## Undiagnosed infection

National estimates of the number of all people living with HIV in the UK, including those undiagnosed, are obtained from a statistical model (multi-parameter evidence synthesis (MPES)) fitted to census, surveillance and survey-type prevalence data. The estimate for 2021 equates to 94% of people living with HIV in Northern Ireland being aware of their infection.

## Antiretroviral therapy and viral load

In 2021, 100% of those in care received ART, and 97% of those on treatment had viral suppression i.e.  $\leq 200$  copies/ml (where a viral load was reported).



# HIV testing

**Table 4: Number of HIV tests performed by healthcare setting, 2010 – 2021, Northern Ireland**

(excludes antenatal screening programme and home self tests)

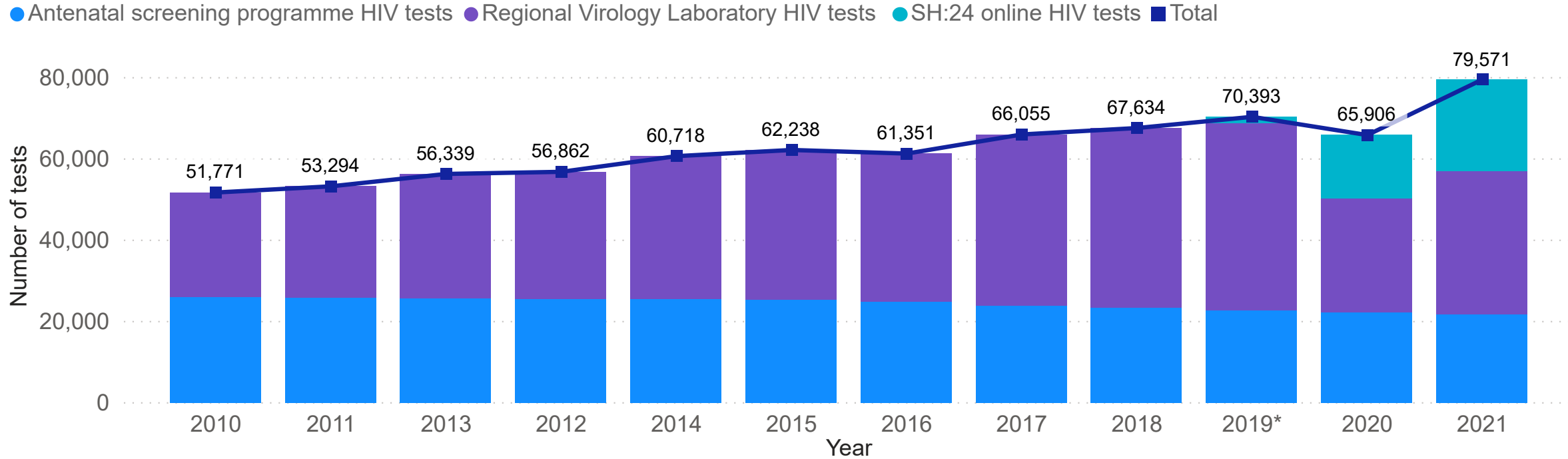
Service setting	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Change from 2020-2021	
GUM	14,583	15,639	16,725	15,912	17,887	17,022	16,277	18,100	18,847	17,795	6,426	7,678	1,252	19%
Hospital	8,542	8,628	10,882	11,114	13,253	14,942	15,374	18,517	20,658	23,558	18,549	23,445	4,896	26%
Primary Care	1,832	2,272	2,786	2,783	3,433	4,093	4,244	4,803	4,095	4,239	2,752	3,672	920	33%
Other	701	927	783	741	611	738	643	614	642	625	327	449	122	37%
<b>Total</b>	<b>25,658</b>	<b>27,466</b>	<b>31,176</b>	<b>30,550</b>	<b>35,184</b>	<b>36,795</b>	<b>36,538</b>	<b>42,034</b>	<b>44,242</b>	<b>46,217</b>	<b>28,054</b>	<b>35,244</b>	<b>7,190</b>	<b>26%</b>

Source: Regional Virology Laboratory

During 2021, 35,244 HIV tests were performed outside the antenatal screening programme in a health service setting in Northern Ireland. This represents an increase of 26% compared with 2020 (28,054). Testing in each service setting increased during 2021 but overall testing remains lower than previous years (pre-Covid-19 pandemic) with GUM testing seeing the largest decrease in testing. This is likely to be due to asymptomatic patients being directed to home self testing, including those on PrEP. Although GUM testing has decreased by over 10,000 tests compared with 2019, the introduction of SH:24 online tests has increased testing overall (Figure 9).

The majority of testing is carried out in hospital or GUM setting, accounting for 88% of all tests during 2021.

**Figure 9: Number of HIV tests performed, 2010 - 2021, Northern Ireland**

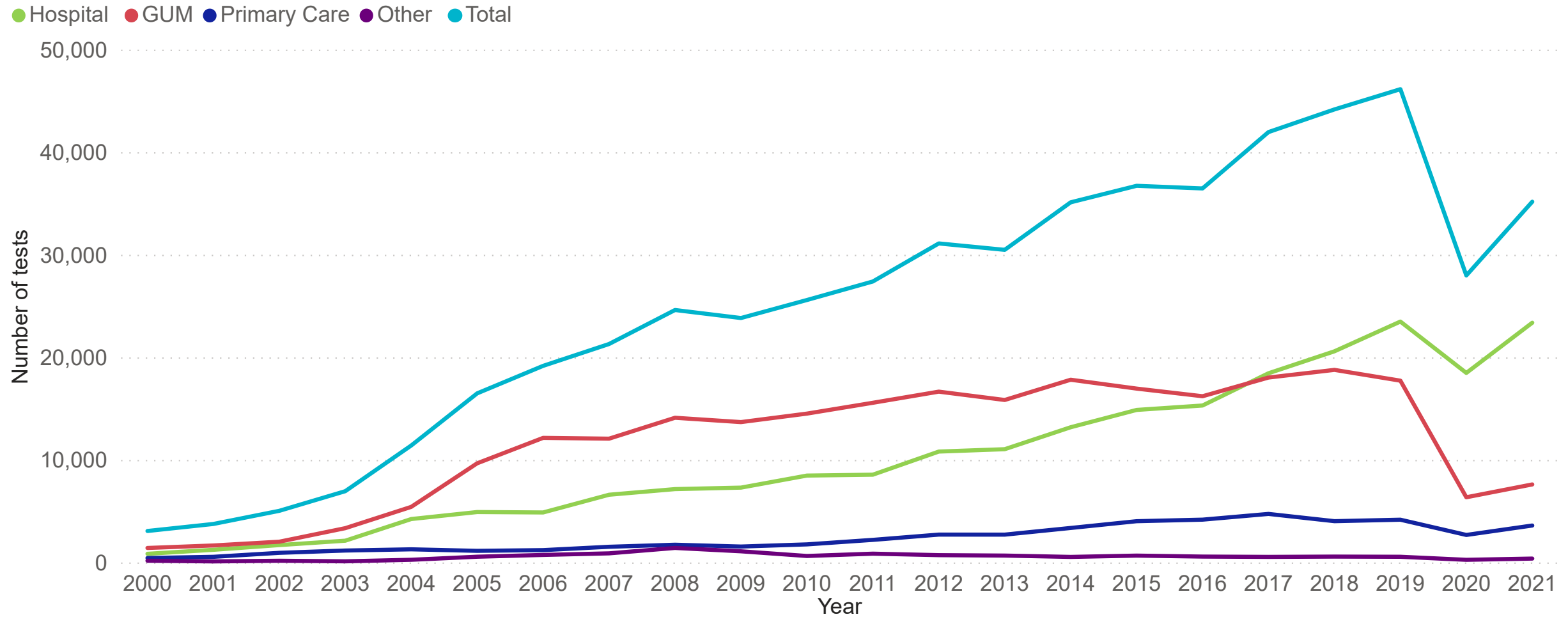


\* SH:24 service started in October 2019

During 2021, 79,571 HIV tests were performed in Northern Ireland. This represents an increase of 21% compared with 2020 (65,906) and is the peak number of tests performed over the past decade.

SH:24 online HIV tests accounted for 28% of overall testing in Northern Ireland during 2021 compared with 24% in 2020. SH:24 online testing service played a significant role during the COVID-19 pandemic and continues to be a valuable testing service.

**Figure 10: Annual number of HIV tests performed, by healthcare setting, 2000-2021, Northern Ireland (excludes antenatal screening programme)**



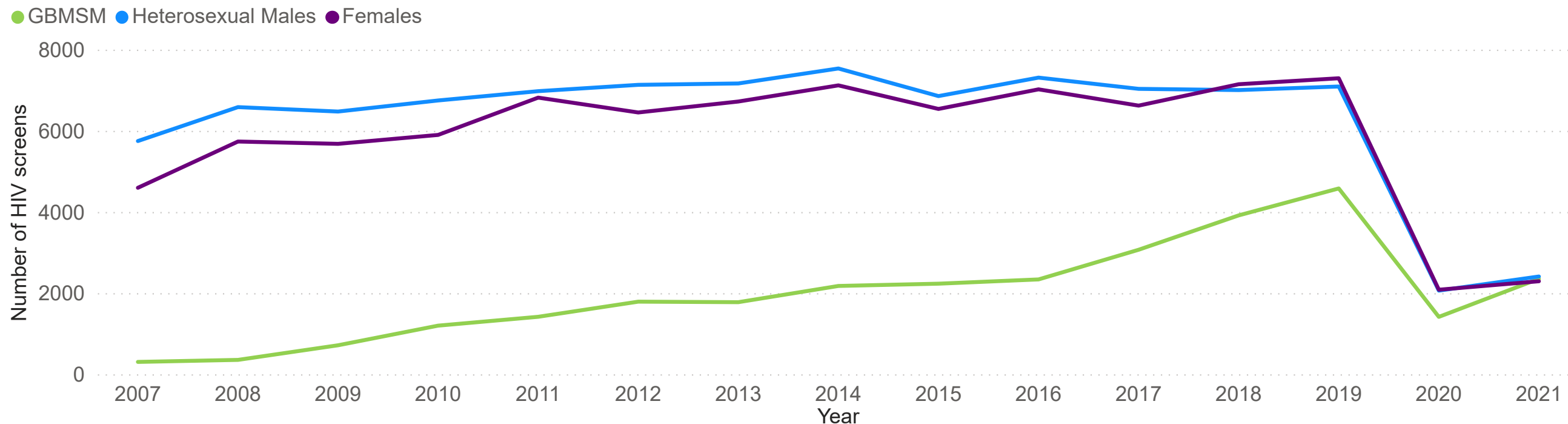
**Table 5: Number of primary care HIV tests performed in prisons, 2014 – 2021, Northern Ireland**

Year	Primary care (total HIV tests)	Primary care tests performed in prisons	Proportion (%) of primary care tests performed in prisons
2014	3,433	176	5%
2015	4,093	273	7%
2016	4,244	418	10%
2017	4,803	411	9%
2018	4,095	435	11%
2019	4,239	401	9%
2020	2,752	478	17%
2021	3,672	1,182	32%

Source: Regional Virology Laboratory

Of the 3,672 HIV tests performed in primary care during 2021, 1,182 were carried out in prisons (Table 5). The proportion of primary care tests performed in prisons has increased from 5% in 2014 to 32% in 2021. This increase coincides with efforts to increase testing in prisons, with a universal offer of testing to all committals.

**Figure 11: Annual number of HIV screens carried out in GUM clinics, 2007 – 2021, Northern Ireland**



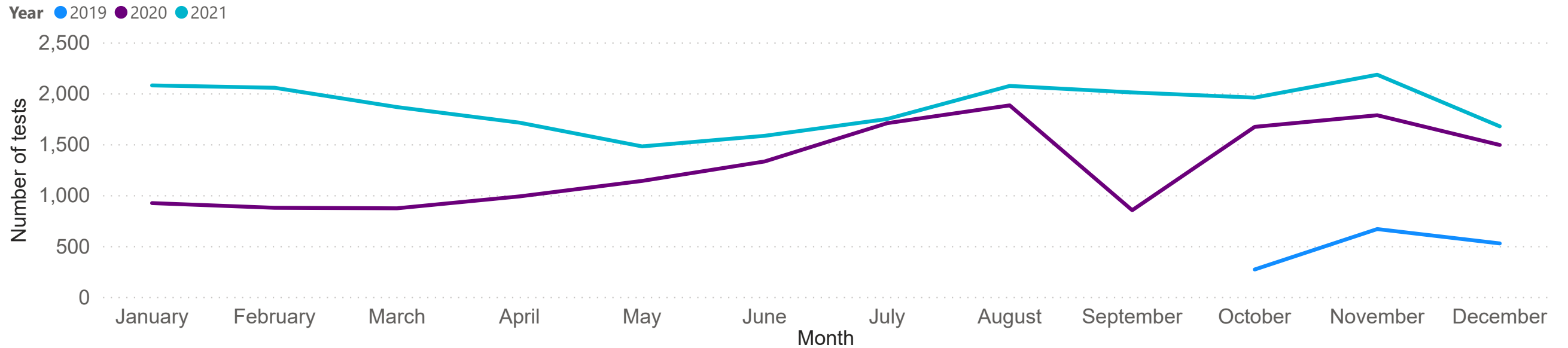
Source: Genitourinary Medicine Clinic Activity Dataset (GUMCAD) - HIV tests KC60/SHHAPT codes S2, P1A, T4 & T7. GUM clinics in Northern Ireland use a reporting software called GUMCAD for recording attendances to GUM. GUMCAD collects anonymised patient-level data on all STI tests and diagnoses in Northern Ireland. GUMCAD data reflect only those tests/ diagnoses made in GUM clinics.

During 2021, the number of first episode HIV screens in gay, bisexual and other men who have sex with men (GBMSM) increased by 66% (1,432 to 2370). This compares with an increase of 17% in heterosexual males and 10% in females. This follows a significant decrease in screens during 2020 when compared with 2019 (Figure 11).

# SH:24 online HIV testing

During 2021, 22,491 SH:24 online HIV tests were performed in Northern Ireland, an increase of 44% compared with 2020 (15,590). People aged between 20-29 years of age accounted for 57% of tests (Figure 13).

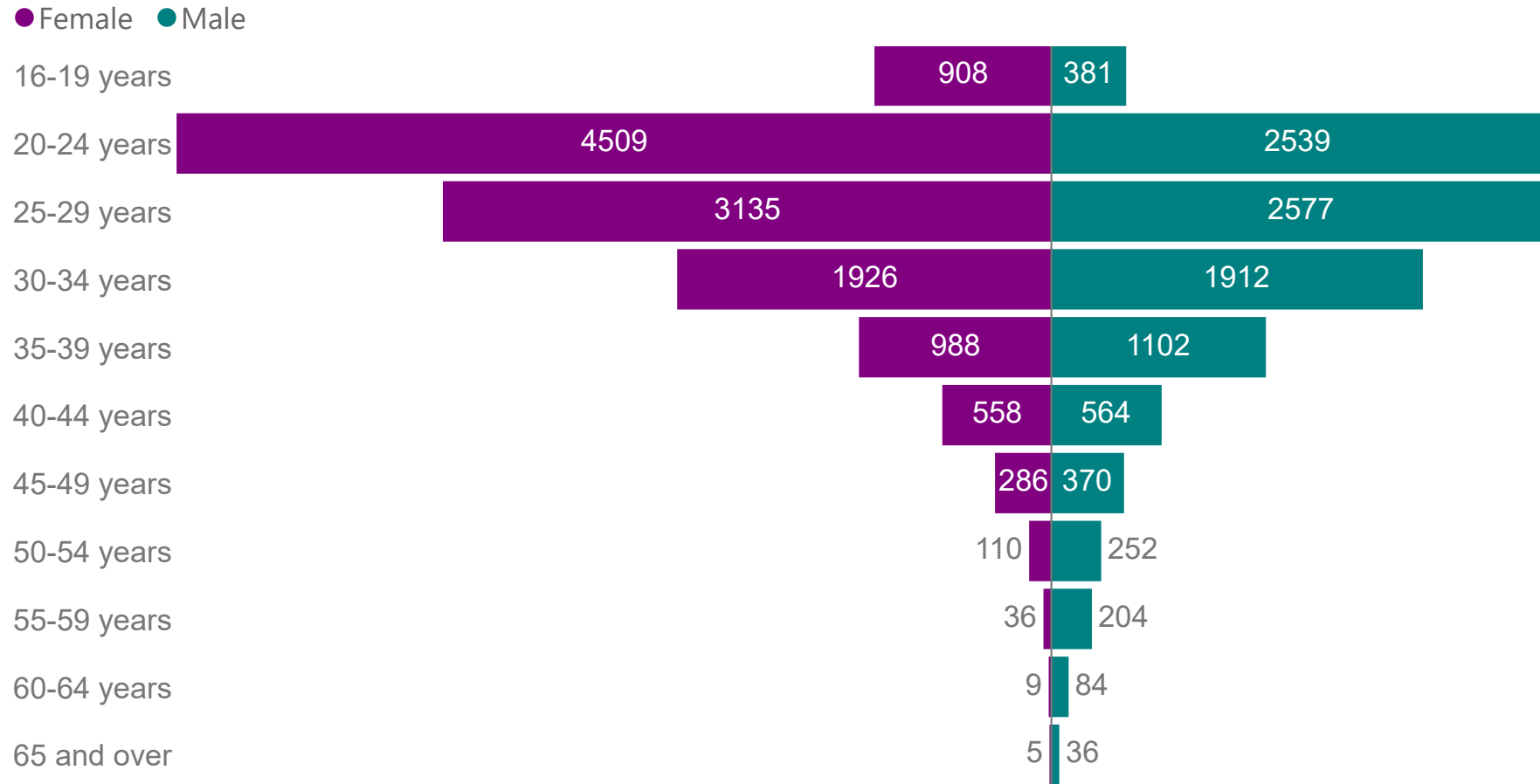
**Figure 12: Number of SH:24 online HIV tests\*, 2019-2021, Northern Ireland**



SH:24 online testing increased after lockdown measures were imposed in Northern Ireland on 23rd March 2020 with the highest number of HIV tests performed in November 2021 (2,189).

Notes: SH:24 service started in October 2019 \*Number of tests is based on the number of tests returned. The decrease in testing during September 2020 was due to a funding issue. For further information on SH:24 testing: <https://sh24.org.uk/about-sh24>

**Figure 13: Number of SH:24 online HIV tests\* by age group and gender, 2021, Northern Ireland**



Females accounted for 55% of online HIV tests returned.

Notes: SH:24 service started in October 2019 \*Number of tests is based on the number of tests returned. Gender is categorised by type of test returned based on genitals.

# PrEP

HIV pre-exposure prophylaxis (PrEP) is the use of antiretroviral drugs to protect individuals at risk of acquiring HIV. It is prescribed as either a daily dosing or event based (on-demand) regime. The effectiveness of PrEP in GBMSM has been established in randomised clinical trials. Efficacy is strongly dependent on adherence and if used correctly, a daily oral regimen or taking PrEP consistently (4x times per week) has been shown to reduce the risk of acquiring HIV by 99% (3). Estimates of the effectiveness of on-demand PrEP ranges from 44-97% (4).

- During 2021-22 the provision of PrEP clinics in each Trust area was supported through the use of non-recurrent monies.
- Both PrEP and SH24 online STI testing services have been accepted as innovative and ground breaking schemes, well tested, highly praised, cost effective, patient centred and COVID-19 sensitive. PrEP provision is widely regarded as essential to reduce HIV transmission and in working towards the UN goal of ending the HIV epidemic by 2030.
- As of 2022/23, PrEP clinics are now recurrently funded across Northern Ireland. Demand for the service remains high.



# Cluster of HIV in people who inject drugs

During 2020, a cluster of hepatitis C infection was identified in PWID in Belfast. Further testing identified a new cluster of HIV infection in the same group. Key risk factors are injection of heroin and cocaine. The injection of cocaine is a new trend.

A lookback exercise identified 17 confirmed cases linked to the cluster, between 1st January 2017 and 31st December 2021. Young adult males and females are affected, mostly 20-29 years of age.

Of the 17 confirmed cases 65% were diagnosed within a year of their last negative test, indicating recent infection.

All of the cases had a hepatitis C co-infection (15 active infections and 2 previous infection).

This is a new risk group in Northern Ireland, which previously had a very low incidence of HIV. The cluster is being managed by a multi-agency outbreak control team, and there is an overarching PHA and SPPG joint action plan to tackle the cluster.

# Summary and conclusions

- The number of people living with HIV in Northern Ireland has increased in recent years as a consequence of new diagnoses, transfers of care into Northern Ireland, and improved survival rates due to the success of antiretroviral treatment.
- Overall there has been a decline in the annual number of diagnoses in people born in the UK, this reflects increasing access to early treatment for people living with HIV as well as improved prevention of HIV through testing and PrEP.
- There has been a 21% increase in HIV testing during 2021.
- The number of new diagnoses in 2021 increased compared to 2020. New diagnoses in both heterosexual and GBMSM remained relatively stable in 2021 but an increase in diagnoses was seen in people who inject drugs (PWID).
- There was a shift to online testing, with SH:24 accounting for 28% of all tests performed in 2021.
- The Belfast LGD area is now considered high prevalence (2.01 per 1,000), with 1 in 500 people living with HIV.

# Summary and conclusions

- Since 2014 there has been an overall decline in new HIV diagnoses in both heterosexual and gay, bisexual and other men who have sex with men (GBMSM). This may reflect the impact of PrEP, improvements in testing, earlier diagnosis, and entry into treatment may also be reflected.
- During 2020-2022 there was an increase in new HIV diagnoses in people who inject drugs (PWID), and a cluster identified on next generation sequencing. This is the first time that a cluster of HIV has been identified in PWID in Northern Ireland.
- The UNAIDS 90: 90: 90 HIV elimination targets have now been surpassed. In relation to the UNAIDS 95:95:95 HIV elimination strategy by 2030, the targets for treatment and viral suppression have been met, but there is work to do to meet the target of 95% of people living with HIV being aware of their diagnosis.
- The proportion of new diagnoses made at a late stage remains high, with 33% of cases being diagnosed at a late stage.

# Recommendations

- Safer sex messages including the benefits of HIV testing should continue to be promoted to the general population, young people and gay, bisexual and other men who have sex with men (GBMSM).
- Those at highest risk of HIV should be offered frequent repeat HIV testing, and HIV pre-exposure prophylaxis (PrEP) if appropriate.
- There should be a renewed focus on the promotion of HIV testing guidelines in both primary and secondary care.
- Service commissioners should continue to ensure HIV testing outside health service settings, including use of online services.
- As Belfast has now reached high HIV prevalence, implement expanded HIV testing in hospitals and GP surgeries.
- Concerted efforts are required to prevent HIV infection becoming endemic in people who inject drugs in Northern Ireland.
- The high proportion of late diagnoses needs to be addressed.

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# Acknowledgements

The data produced in this slide deck has been provided by GUM clinics, UKHSA, Regional Virology Laboratory, SH:24 and the Antenatal Screening Programme. We would like to thank them for the time and effort involved in producing this data.

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