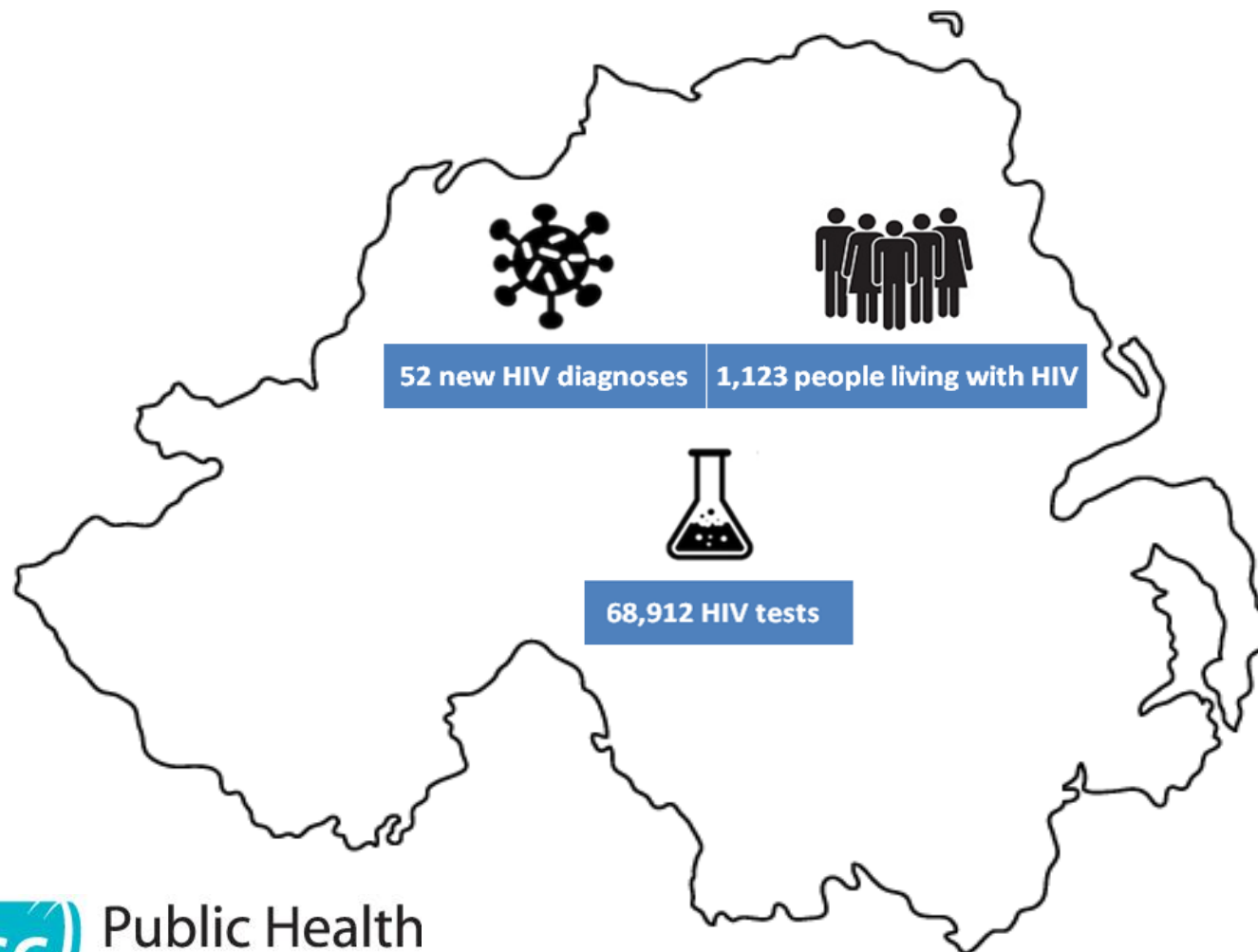


HIV surveillance in Northern Ireland 2020

An analysis of data for the calendar year 2019



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 2019.

New HIV diagnoses Definition

New HIV diagnoses are defined by area of residence. Please note, this is a change from previous years, where reporting of a new diagnosis was based on the clinic of diagnosis. This change ensures that we are reporting in the same way as the rest of the UK. For historical comparison a table with new HIV diagnoses by clinic of diagnosis has been presented at the end of the slide set in appendix 1.

Caveat

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.

Other outputs

PHE National and Country HIV surveillance data tables are available at:
<https://www.gov.uk/government/statistics/hiv-annual-data-tables>

HIV surveillance in Northern Ireland

Summary Points 2019:

- 52 new HIV diagnoses were made in Northern Ireland (37 men and 15 women); a 35% decline from 80 in 2018 and a decline of 49% from a peak of 102 new HIV diagnoses reported in 2015.
- 21 (40%, 21/52) new HIV diagnoses occurred through gay and bisexual men (GBM) transmission; a 42% decrease from 36 in 2018.
- 27 (52%, 27/52) new HIV diagnoses occurred through heterosexual transmission. This is the first time that heterosexual transmission has been higher than gay and bisexual men transmission in the past ten years.
- Less than 5 (8%) new HIV diagnoses occurred through other or unknown transmission routes.
- The majority (62%, 32/52) of persons newly diagnosed in 2019 were aged between 25 and 49 years. The number and proportion of people diagnosed aged 50 years or over increased from 9% in 2010 to 29% in 2019. However, diagnoses in those aged 65+ have remained low with only 16 new diagnoses reported over the past ten years.
- 19 (39%, 19/49) new HIV diagnoses were made at a late stage (cases which had a CD4 count within 91 days of diagnosis, and in whom the CD4 count <350 cells/mm³).

Summary Points 2019:

- 17% (2/12) of new diagnoses in gay and bisexual men tested under RITA were as a result of recently acquired infection, compared with 7% in heterosexuals.
- In 2019 there were nine people who were diagnosed with AIDS at their HIV diagnosis (reported AIDS defining illness within 3 months of HIV diagnosis). There were 9 deaths reported.
- 1,123 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2019) received care (882 men and 241 women).
- 99% (961/974) of those receiving care, and where route of transmission was known, acquired their infection through sexual contact. Of these, 61% (596/974) acquired their infection through sexual contact involving gay and bisexual men and 37% (365/974) through heterosexual contact. One percent (13/974) acquired their infection through non-sexual contact.
- The greatest number of people who received HIV-related care in 2019 were in the 35-64 year age group (76%: 857/1,123). Of those that received HIV-related care during 2019, 82% were white ethnicity, 10% were black-African and 8% were classified in other ethnic groups or not reported.
- 100% of those in care received antiretroviral therapy, and 97% of those on treatment had viral suppression as defined by ≤ 200 copies/ml (where a viral load was reported).
- 68,912 HIV tests were carried out in Northern Ireland, of which 22,695 were performed as part of the antenatal screening programme.

HIV service developments

There have been a number of service developments that may have some impact on HIV testing and surveillance results during 2019, and going forward

- HIV PrEP clinic opened in July 2018, with requirements for 3 monthly HIV testing in those prescribed PrEP.
- SH:24 is a free online sexual health testing service that provides confidential home-testing for chlamydia, gonorrhoea, syphilis and HIV. The service became available to residents in Northern Ireland in late 2019. The data from SH:24 is not included in this slide set.

New HIV diagnoses

Table: 1 New HIV diagnoses in Northern Ireland: all persons by demographics and probable route of exposure, all years to 2019

Data to end of December 2019

New diagnoses and deaths		<2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
HIV diagnoses	Male	488	68	60	69	87	71	81	60	67	60	37
	Female	166	13	13	16	13	22	21	14	16	20	15
	Subtotal	654	81	73	85	100	93	102	74	83	80	52
AIDS at HIV diagnoses	Male	82	<5	<5	0	<5	<20	<10	6	<10	<5	<10
	Female	21	<5	0	0	<5	<5	<5	0	<5	<5	<5
	Subtotal	103	6	<5	0	<5	11	8	6	7	5	9
Deaths	Male	75	<5	9	5	<20	<5	6	<10	5	<5	<10
	Female	12	<5	0	0	<5	<5	0	<5	0	<5	<5
	Subtotal	87	5	9	5	11	<5	6	7	5	<5	9

Age at diagnosis	<2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<15	7	<5	0	0	0	0	0	0	<5	0	0
15 - 24	94	9	<10	11	<10	<20	9	13	10	<10	<10
25 - 34	244	27	24	34	29	25	37	22	25	23	12
35 - 49	252	37	26	22	38	41	43	25	29	31	20
50 - 64	49	<10	13	18	23	14	13	<10	16	15	14
65 and over	7	0	<5	0	<5	<5	0	<5	<5	<5	<5

Probable exposure category and gender	<2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sex between men*	315	53	42	53	52	44	60	42	39	36	21
Heterosexual contact	Male	137	15	18	13	24	22	16	13	18	14
	Female	153	12	12	16	12	19	20	12	11	16
	Subtotal	290	27	30	29	36	41	36	25	29	28
Injecting drug use	Male	12	0	0	<5	<5	<5	<5	<5	0	<5
	Female	5	0	0	0	0	0	<5	<5	0	<5
	Subtotal	17	0	0	<5	<5	<5	<5	<5	<5	0
Mother to child	Male	<5	0	0	0	0	0	0	<5	0	0
	Female	<10	<5	0	0	0	0	0	0	0	<5
	Subtotal	7	<5	0	0	0	0	0	0	<5	0
Other	Male	<30	0	0	<5	<5	0	0	0	0	0
	Female	<5	0	<5	0	0	0	0	0	0	0
	Subtotal	23	0	<5	<5	<5	0	0	0	0	0

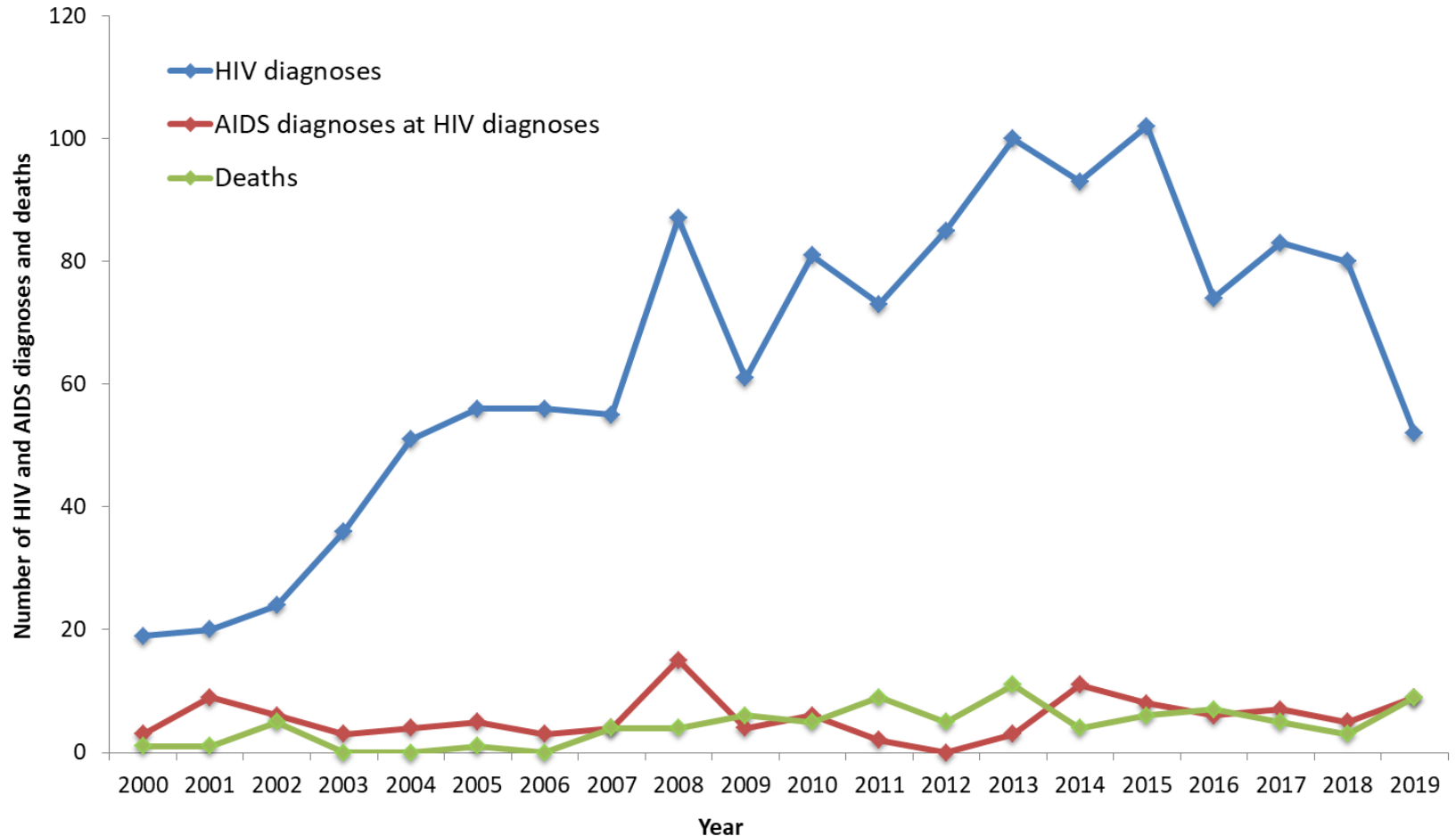
Notes: New HIV diagnoses are based on residence area.

Total includes individuals with incomplete/not reported demographic data.

*Sex between men includes men who also reported injecting drug use.

Trends in new diagnoses HIV, AIDS and deaths in HIV infected persons

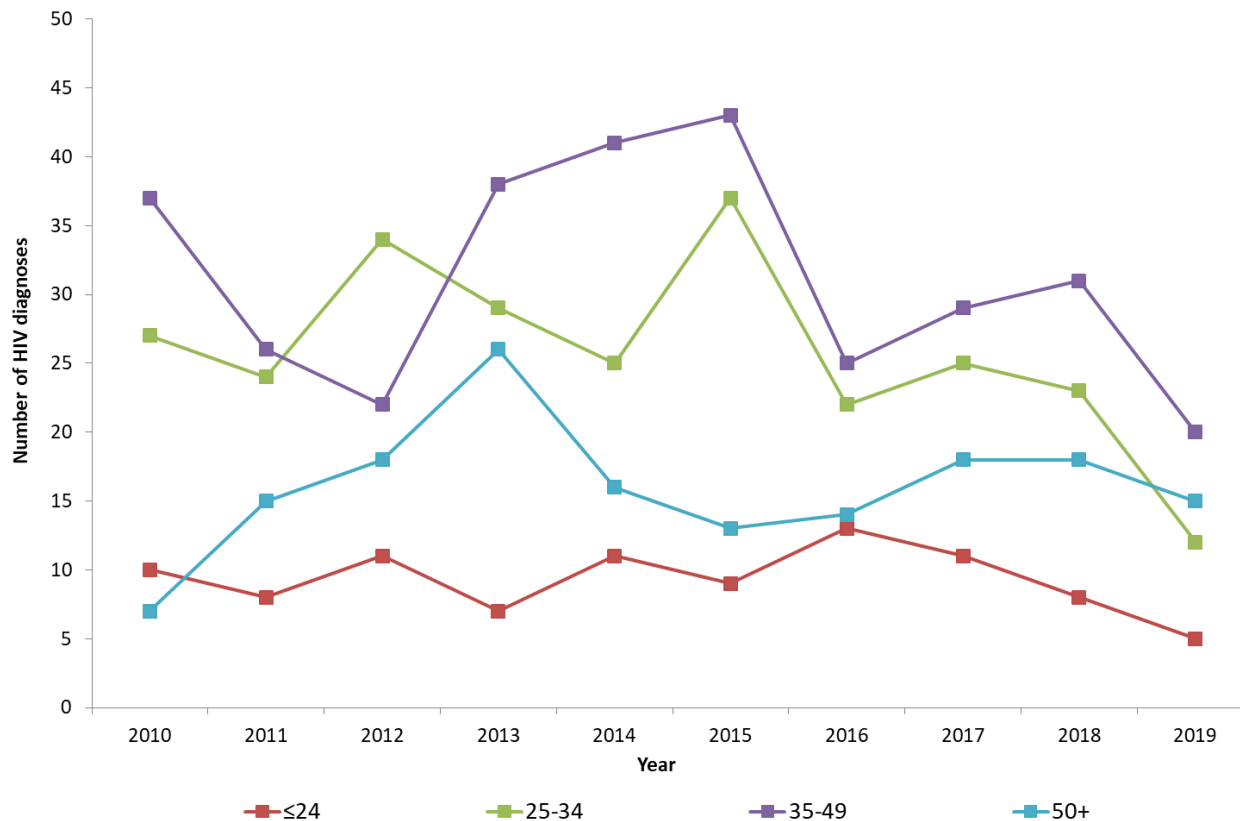
Figure 1: Number of new HIV diagnoses, AIDS* at HIV diagnosis and deaths in people with HIV, Northern Ireland, 2000 to 2019



Note: *AIDS defining illness within 3 months of an HIV diagnosis

Age group

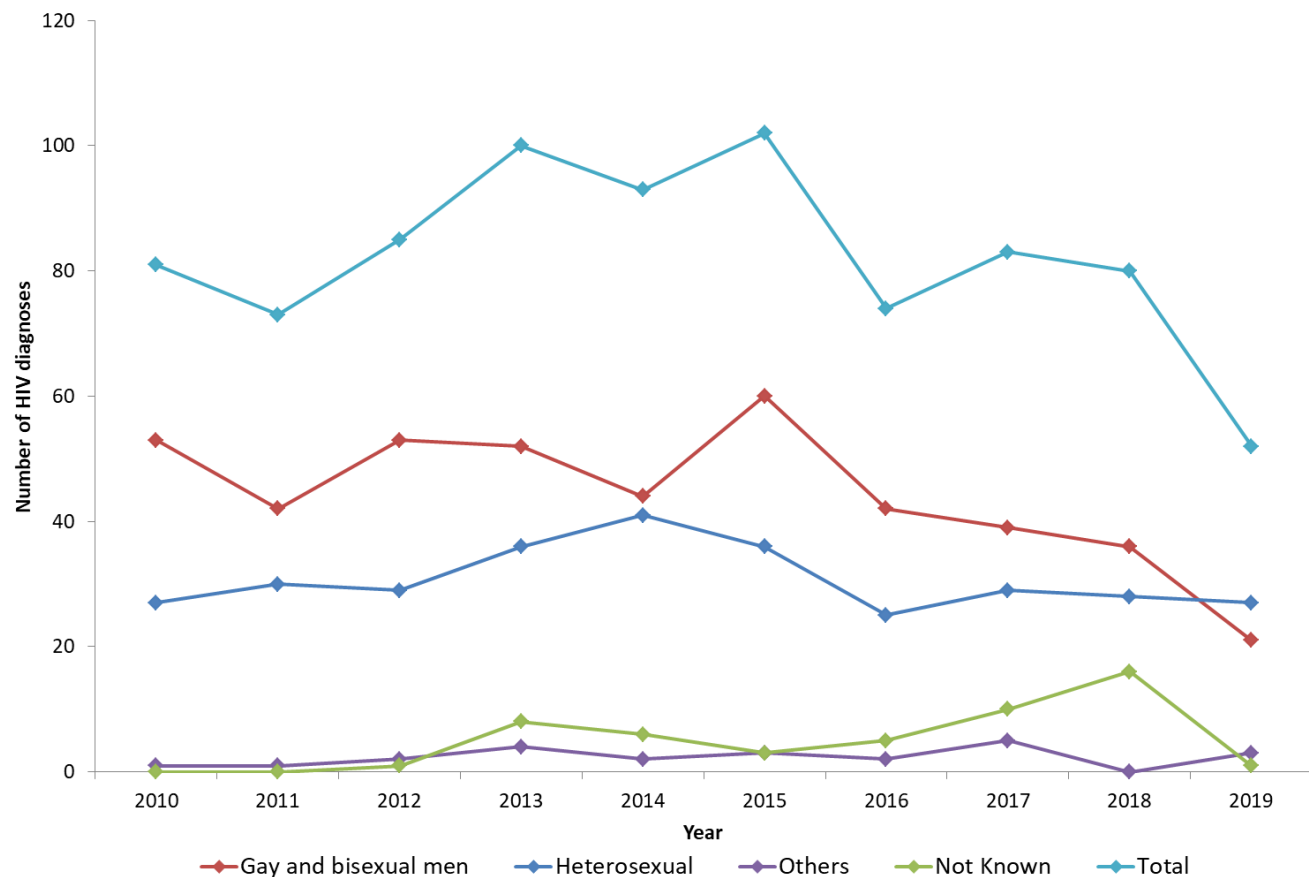
Figure 2: Number of new HIV diagnoses by age group, 2010 – 2019, Northern Ireland



New HIV diagnoses in Northern Ireland have been highest in the 35-49 age group. The largest proportional increase has been seen in the 50+ age group; however, diagnoses in those aged 65+ have remained low with only 16 new diagnoses reported over the past ten years.

Risk groups

Figure 3: Annual new diagnoses of HIV by probable route of exposure, 2010 – 2019, Northern Ireland



New HIV diagnoses in Northern Ireland have been acquired mostly through sexual transmission over the years, with gay and bisexual men accounting for the majority of these from 2010. However, for the first time in the past decade gay and bisexual transmission has been lower in 2019 than heterosexual transmission. The annual number of diagnoses where infection has been acquired through other exposures remains very low.

Risk groups

Gay and bisexual men

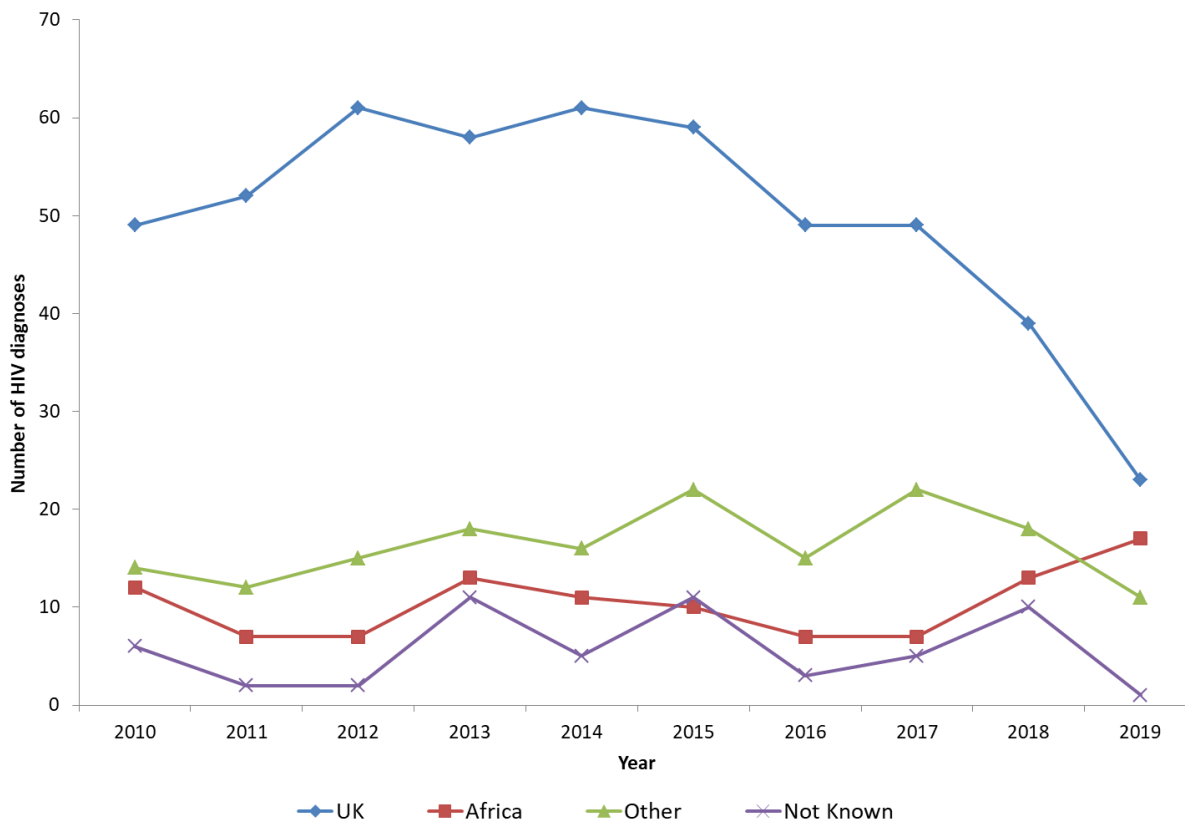
In 2019, 40% (21/52) of all new HIV diagnoses were in gay and bisexual men (compared to 45% (36/80) in 2018 and 65% (53/81) in 2010). Of the gay and bisexual men (GBM) newly diagnosed with HIV in 2019, 90% were white ethnicity (in cases where ethnicity was recorded) and 71% were UK-born. There has been a declining trend in GBM diagnoses since 2016 with a steep decline in 2019.

Heterosexual transmission

Heterosexual contact accounted for 52% (27/52) of all new HIV diagnoses made in 2019 (compared to 35% (28/80) in 2018 and 33% (27/81) in 2010). Black Africans accounted for 46% of new diagnoses in 2019 (in cases where ethnicity was recorded) compared with 25% in 2018 and 50% in 2010. There has been a small declining trend in new heterosexual diagnoses since 2014.

Region of birth

Figure 4: Number of new HIV diagnoses by region of birth, 2010 – 2019, Northern Ireland



The majority (65%; 500/767) of new HIV diagnoses reported since 2010 were born in the UK, in cases where country of birth was recorded. Of the new HIV diagnoses born outside the UK, 39% (104/267) were born in Africa. There has been a general declining trend in diagnoses in people born in the UK since 2015.

Table: 1A New HIV diagnoses in Northern Ireland: all persons by ethnicity, region of birth and CD4 count, all years to 2019

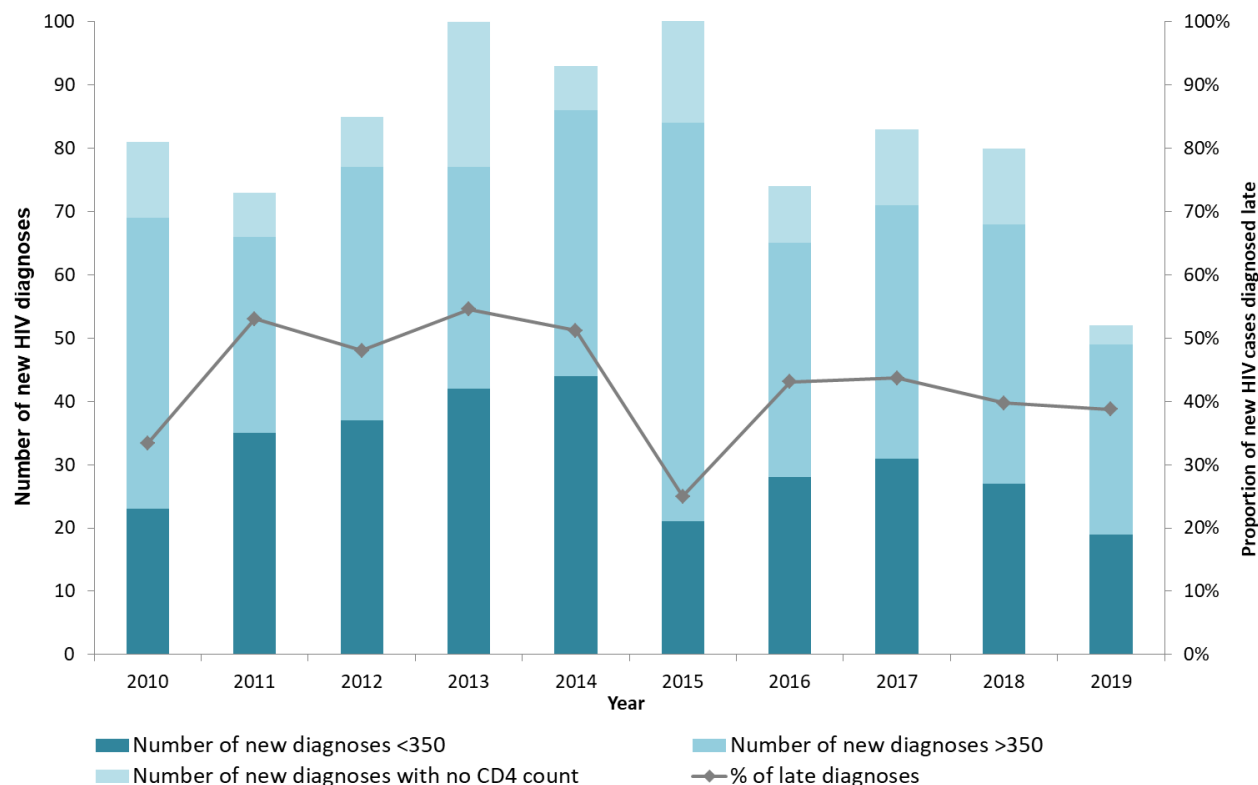
Data to end of December 2019

Ethnicity and gender		<2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	Male	423	<60	56	65	75	67	76	55	57	43	29
	Female	82	<5	5	9	6	11	12	8	11	11	7
	Subtotal	505	60	61	74	81	78	88	63	68	54	36
Black African	Male	46	6	<5	<5	6	<5	<5	<5	<5	<5	5
	Female	61	8	<5	<10	7	<10	<10	<10	<5	<10	8
	Subtotal	107	14	6	9	13	12	6	9	<5	8	13
Black Caribbean		<5	0	0	0	0	0	0	0	0	0	0
Other/mixed		27	<5	<5	<5	5	<5	7	<5	6	6	<5
Region of birth												
Region of birth		<2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
UK		268	49	52	61	58	61	59	49	49	39	23
Europe		67	12	11	13	8	15	16	12	16	11	8
Africa		95	12	7	7	13	11	10	7	7	13	17
Asia		16	<5	0	0	5	<5	5	<5	<5	6	<5
Other		6	<5	<5	<5	5	0	<5	<5	<5	<5	0
CD4 at diagnosis**												
CD4 at diagnosis**		<2010	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Number with a CD4 count		428	69	66	77	77	86	84	65	71	68	49
Number with CD4 <350		216	23	35	37	42	44	21	28	31	27	19
% of CD4 <350		50%	33%	53%	48%	55%	51%	25%	43%	44%	40%	39%
Median CD4		330	440	330	350	320	340	550	390	410	435	500

** CD4 count data are presented for those with a CD4 count available within 91 days of diagnosis.

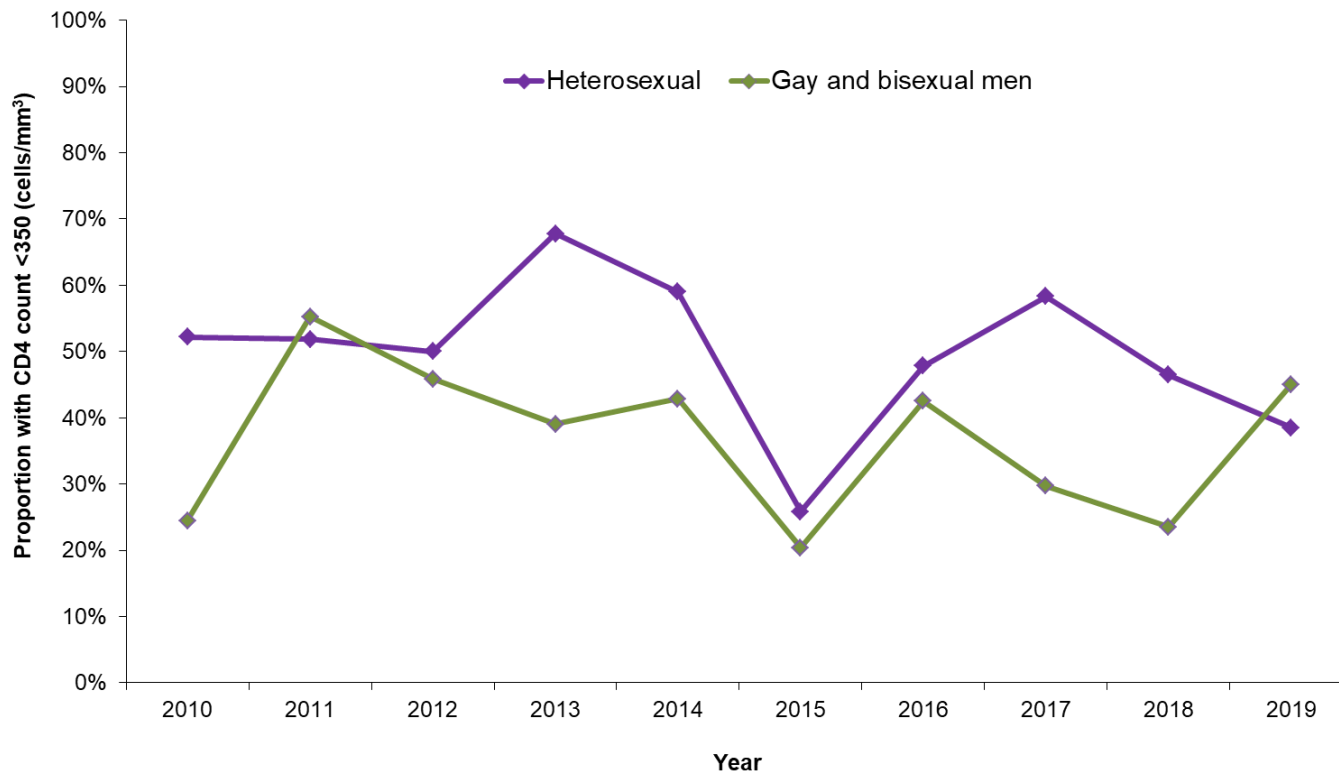
Late diagnoses

Figure 5: Number and proportion of new HIV diagnoses in adults diagnosed with a CD4 count <350 cells/mm³ within 91 days of diagnosis, 2010 – 2019, Northern Ireland



CD4 counts within 91 days of diagnosis were available for 94% (49/52) of new HIV diagnoses. Thirty-nine percent (19/49) of new HIV diagnoses were diagnosed at a late stage (cases which had a CD4 count within 91 days of diagnosis, and in whom the CD4 count <350 cells/mm³).

Figure 6: Proportion of new HIV diagnoses in adults with a CD4 count <350 cells/mm³ within 91 days of diagnosis, by probable route of infection, 2010 – 2019, Northern Ireland

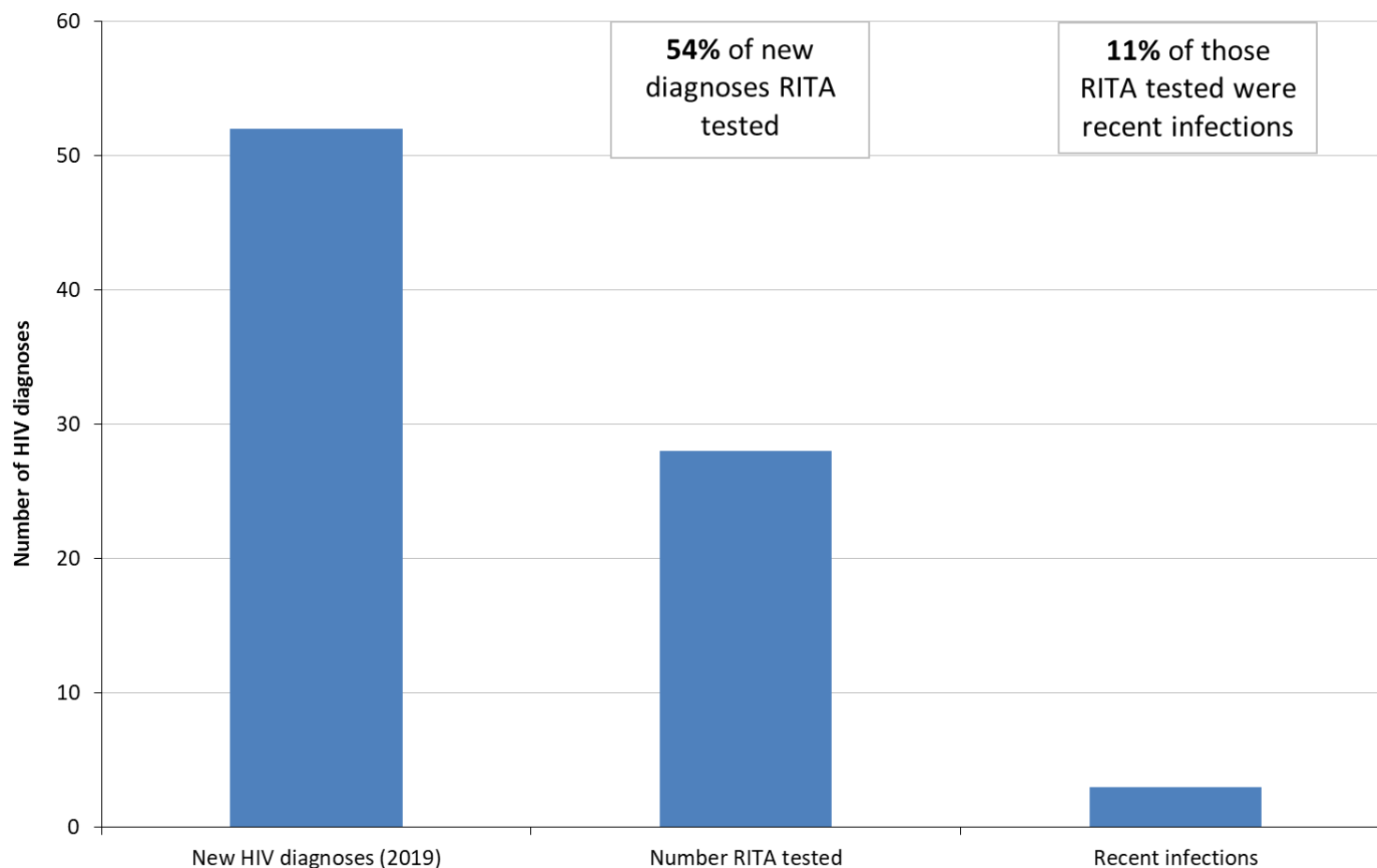


Thirty-eight percent (10/26) of individuals with heterosexually acquired HIV were diagnosed at a late stage in 2019 compared with 45% (9/20) of diagnoses in gay and bisexual men being made at a late stage.

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, 2019 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 People seen for HIV care in the UK resident in Northern Ireland by demographics and probable exposure route: 2010 to 2019

Data to end of December 2019

Gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Male	363	442	508	589	634	734	788	859	893	882
Female	134	136	161	179	183	211	220	223	238	241
Total	497	578	669	768	817	945	1,008	1,082	1,131	1,123

Age and gender	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
<15	Male	<5	0	0	0	0	0	<5	<5	<5
	Female	0	0	0	0	<5	0	0	0	0
	Subtotal	<5	0	0	0	<5	0	0	<5	<5
15 - 24	Male	14	19	21	16	<20	18	24	<40	<30
	Female	11	6	8	7	<5	5	6	<10	<10
	Subtotal	25	25	29	23	<30	23	30	<40	<30
25 - 34	Male	90	107	118	124	125	152	158	162	138
	Female	49	53	53	53	53	56	46	45	33
	Subtotal	139	160	171	177	178	208	204	207	171
35 - 49	Male	185	220	246	280	286	324	336	366	360
	Female	63	61	73	81	85	98	114	112	123
	Subtotal	248	281	319	361	371	422	450	478	483
50 - 64	Male	64	83	109	149	179	210	239	264	310
	Female	11	16	27	38	39	47	50	53	64
	Subtotal	75	99	136	187	218	257	289	317	374
65 and over	Male	<10	13	14	20	<30	30	<40	36	53
	Female	0	0	0	0	<5	5	<5	7	15
	Subtotal	<10	13	14	20	26	35	35	43	68

Probable exposure category	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sex between men*	249	306	364	418	454	535	585	633	622	596
Heterosexual contact	231	256	284	321	331	373	381	398	379	365
Injecting drug use	<5	<10	<10	<10	<10	<10	<10	<20	12	<10
Mother to child	<5	<5	<5	<5	<5	<5	<5	<5	5	<5
Other/undetermined	9	10	14	21	22	28	31	36	113	149

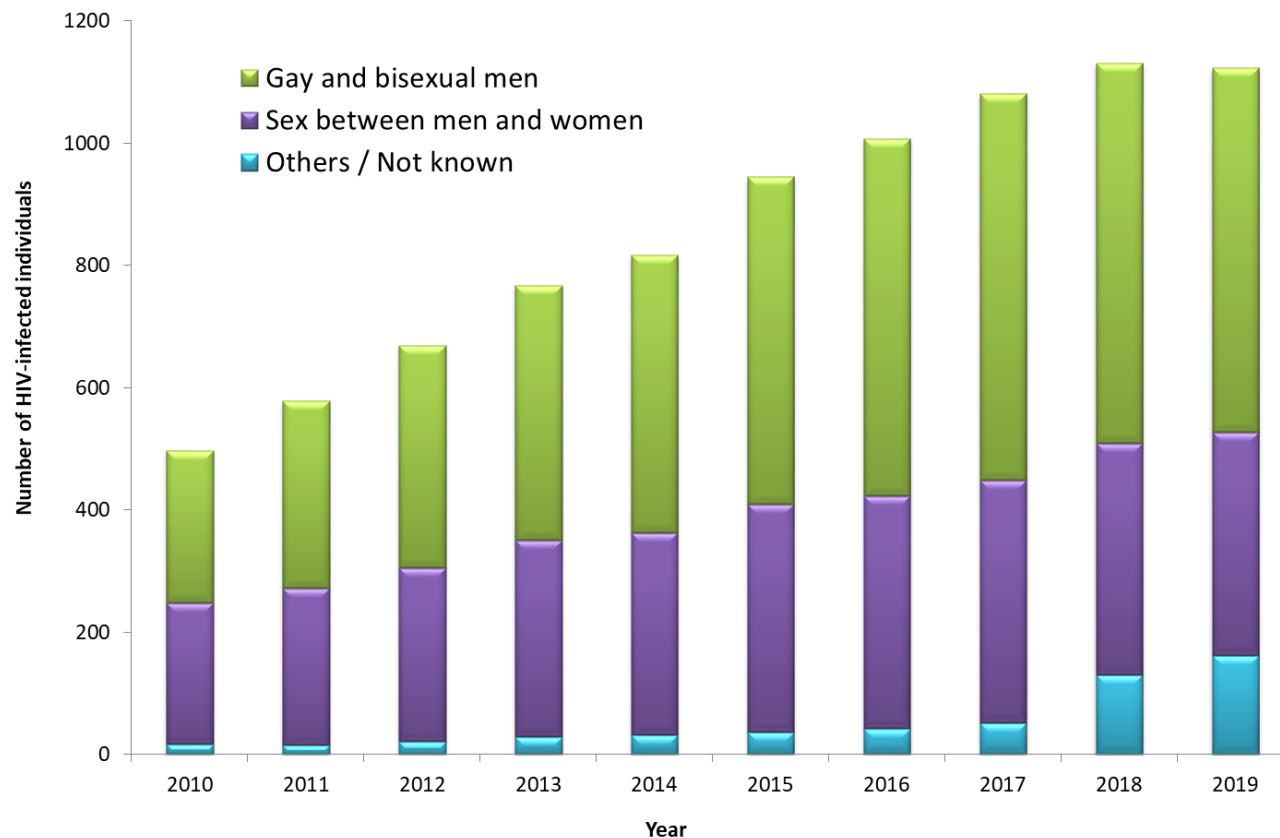
Ethnic group	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
White	389	467	562	636	692	807	863	937	966	924
Black African	86	90	90	107	102	108	114	113	116	108
Black Caribbean	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Black other	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Asian	10	9	10	14	14	18	18	18	22	21
Other/mixed	7	8	<5	7	5	8	9	9	9	9

Notes: Total includes individuals with incomplete/not reported demographic data.

*Sex between men includes men who also reported injecting drug use.

Prevalent infection

Figure 8: Annual number of HIV infected individuals resident in Northern Ireland accessing HIV-related care, by probable route of infection, 2010 – 2019



1,123 residents in Northern Ireland with diagnosed HIV infection (882 men and 241 women) accessed care in 2019 compared with 1,131 in 2018. These figures reflect continuing new diagnoses, transfers of care into and out of Northern Ireland and the role of HAART in increasing survival rates.

Prevalence by Local Government District of residence

Table 3: Diagnosed HIV prevalence per 1,000 population aged 15-59 years, by Local Government District, 2019, Northern Ireland*

Rate per 1,000 population	Local Government District
0.00 – 0.49	Causeway Coast and Glens Derry City and Strabane Fermanagh and Omagh
0.50 – 0.99	Antrim and Newtownabbey Ards and North Down Armagh City, Banbridge and Craigavon Lisburn and Castlereagh Mid and East Antrim Mid Ulster Newry, Mourne and Down
1.00 – 1.49	
1.50 – 1.99	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 2019. 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 1.80/1000 population aged 15-59 years (compared with 1.95/1000 population aged 15-59 years in 2018).

All areas remain below the 2/1000 threshold at which expanded testing is recommended. The overall prevalence for the Northern Ireland population is 0.89/1000 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 will know their HIV status, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy, and 90% of all people receiving antiretroviral therapy will have viral suppression. This target has been updated to 95% for each of the above areas by 2030. 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 complex statistical model (multi-parameter evidence synthesis (MPES)) fitted to census, surveillance and survey-type prevalence data. The estimate for 2019 equates to 93% of people living with HIV in Northern Ireland being aware of their infection.

Antiretroviral therapy and viral load

In 2019, 100% of those in care received ART, and 97% of those on treatment had viral suppression as defined by ≤ 200 copies/ml (where a viral load was reported).

HIV testing

Table 4: Number of HIV tests performed by healthcare setting, 2010 – 2019, Northern Ireland
(excludes antenatal screening programme)

Service setting	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change from 2018-2019	
GUM	14,583	15,639	16,725	15,912	17,887	17,022	16,277	18,100	18,847	17,795	- 1,052	-6%
Hospital	8,542	8,628	10,882	11,114	13,253	14,942	15,374	18,517	20,658	23,558	2,900	14%
Primary Care	1,832	2,272	2,786	2,783	3,433	4,093	4,244	4,803	4,095	4,239	144	4%
Other	701	927	783	741	611	738	643	614	642	625	- 17	-3%
Total	25,658	27,466	31,176	30,550	35,184	36,795	36,538	42,034	44,242	46,217	1,975	4%

Source: Regional Virology Laboratory

- During 2019, 46,217 HIV tests were performed outside the antenatal screening programme in a health service setting in Northern Ireland. This represents an increase of 4% (1,975) compared with 2018 (44,242).
- Testing in all settings has increased from 3,138 tests carried out in 2000 to 46,217 in 2019 (Figure 9). The majority of testing is carried out in the GUM or hospital setting, accounting for 89% of all tests during 2019.

Figure 9: Annual number of HIV tests performed, by healthcare setting, 2000-2019, Northern Ireland (excludes antenatal screening programme)

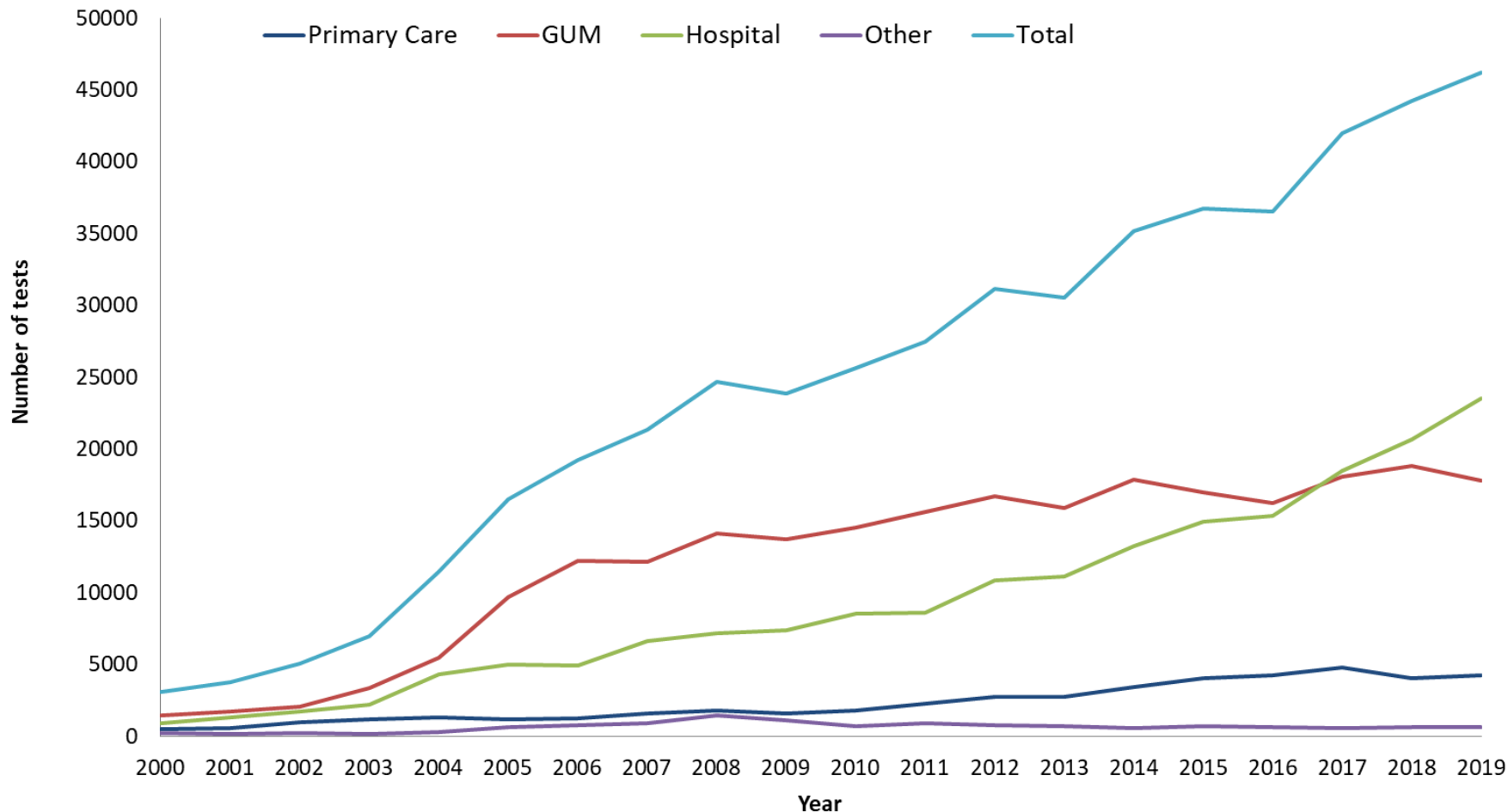
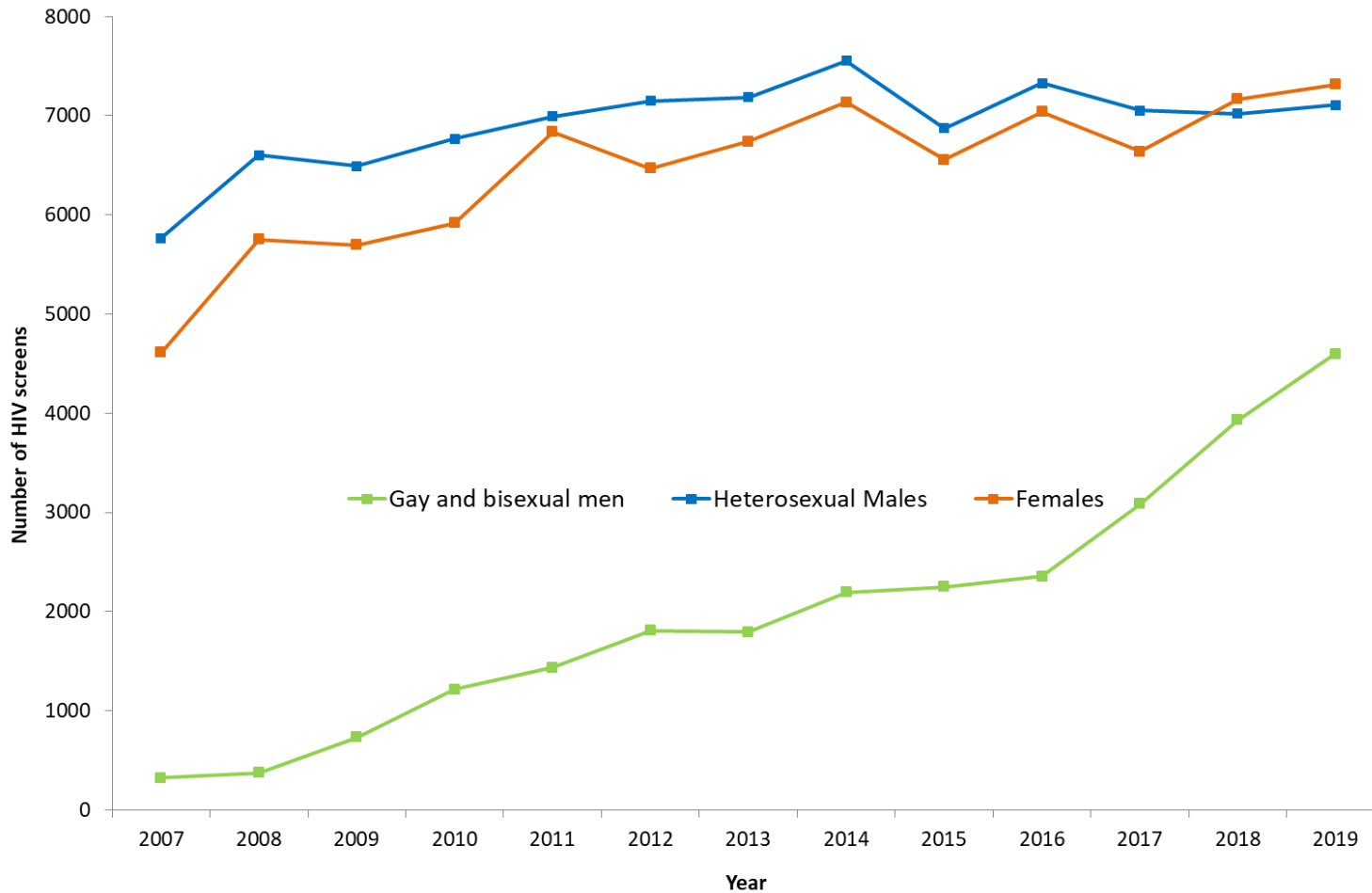


Figure 10: Annual number of HIV screens carried out in GUM clinics, 2007 – 2019, Northern Ireland

Source: GUMCAD - HIV tests KC60/SHHAPT codes S2, P1A, T4 & T7



Between 2007 and 2019, the annual number of first episode HIV screens in gay and bisexual men has increased by 1328% (322 to 4597). This compares with an increase of 23% (5765 to 7109) in heterosexual males and 59% in females (4613 to 7312). There have been large increases in testing activity in gay and bisexual men since 2017 (Figure 10).

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. Both methods have been shown to be very effective at preventing HIV acquisition, with studies in men who have sex with men estimating a reduction in the risk of HIV acquisition by as much as 86%, with between 13 and 18 needing to be treated in a year to prevent one infection.

PrEP was introduced in Northern Ireland through a Risk Reduction Clinic (RRC) service in July 2018. The RRC service offers interventions aimed at reducing unsafe sexual behaviour, along with PrEP, to patients meeting risk-based criteria. Piloted in the Belfast trust for two years, uptake of the service went on to exceed initial expectations three fold. A second PrEP centre was then established in the Western trust in October 2019. Coinciding with the onset of the pandemic, the Belfast service ceased at the end of March 2020, but the Western trust service has continued to accept patients from across Northern Ireland and has maintained safe delivery of PrEP through an increasingly high reliance on online STI patient self testing. This innovative service model is currently being rolled out to all Health and Social Care trusts to improve access for patients and is continuing to be funded by the Department of Health.

Summary and conclusions

- The number of new diagnoses in 2019 has reduced significantly with a steep decline seen in gay and bisexual men diagnoses. This may reflect the impact of PrEP, which was introduced in Northern Ireland in July 2018. Improvements in testing, earlier diagnosis, and entry into treatment may also be reflected.
- There is a declining trend in the annual number of diagnoses in people born in the UK.
- There has been a gradual small reduction in the proportion of annual new diagnoses made at a late stage.
- 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.
- HIV testing activity has increased in 2019 to its highest level yet. Testing in the hospital setting has shown a year on year increase and 2019 has also seen an increase in tests done in primary care settings.
- The UNAIDS 90: 90: 90 HIV elimination strategy by 2020, targets for 1) the proportion of all people living with HIV being aware of their diagnosis, 2) the proportion of diagnosed individuals receiving treatment and 3) the proportion of those in treatment being virally suppressed 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. However, modelling suggests that the target for the proportion of individuals living with HIV being aware of their diagnosis has fallen short of the 95% target.

Recommendations

- Safer sex messages including the benefits of HIV testing should continue to be promoted to the general population, young people and gay and bisexual men.
- Frequent repeat HIV testing should be advised to those most at risk.
- 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.

New HIV diagnoses by clinic of diagnosis

Appendix 1: New HIV diagnoses in Northern Ireland by clinic of diagnosis, 2010 to 2019

Data to end of December 2019

New diagnoses		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
HIV diagnoses	Male	72	68	75	89	75	87	66	72	62	39
	Female	15	13	20	14	22	24	14	18	22	15
	Subtotal	87	81	95	103	97	111	80	90	84	54

The above table has been provided for historical comparisons as new HIV diagnoses were based on clinic of diagnosis in previous surveillance reports.

Acknowledgements

The data produced in this slide set has been provided by GUM clinics, Public Health England, Regional Virology Laboratory and the Antenatal Screening Programme. We would like to thank them for the time and effort involved in producing this data.

Produced by

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