HSC Public Health Agency

HIV surveillance in Northern Ireland 2019

An analysis of data for the calendar year 2018

Contents

This report aims 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 2018.

This publication follows ONS guidance on data disclosure. Where the number of any category of episodes in any one year is between one and four, this is reported either within a cumulative figure, or as an asterix. In addition, where the anonymised figure can be deduced from the totals, the next smallest figure will also be anonymised. Where percentage figures are given they may not necessarily add to 100% due to rounding.

Gay and bisexual men is an inclusive term for gay, bisexual and other men who have sex with men; in previous reports, this group was referred to as men who have sex with men (MSM).

There is some variance between data published in this report and that published in PHE national data tables. This reflects data validation performed by PHA since publication of the national tables and that cases are defined by site of diagnosis rather than area of residence. It is important to note that numbers may rise as further reports and more information is obtained. This will most likely affect more recent years, particularly 2018. This may impact on interpretation of trends in more recent years.

1: Surveillance arrangements

Surveillance arrangements for diagnosed HIV/AIDS infection in England, Wales and Northern Ireland are based largely on the confidential reporting of HIV-infected individuals by clinicians to Public Health England, Colindale in London. The main surveillance categories are:

- New HIV diagnoses: data relating to individuals whose first UK diagnosis was made in Northern Ireland

- 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, anti-retroviral 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 2018 (Survey of Prevalent HIV Infections Diagnosed – SOPHID)

- HIV 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.

2: Summary statistics 2018

During 2018:

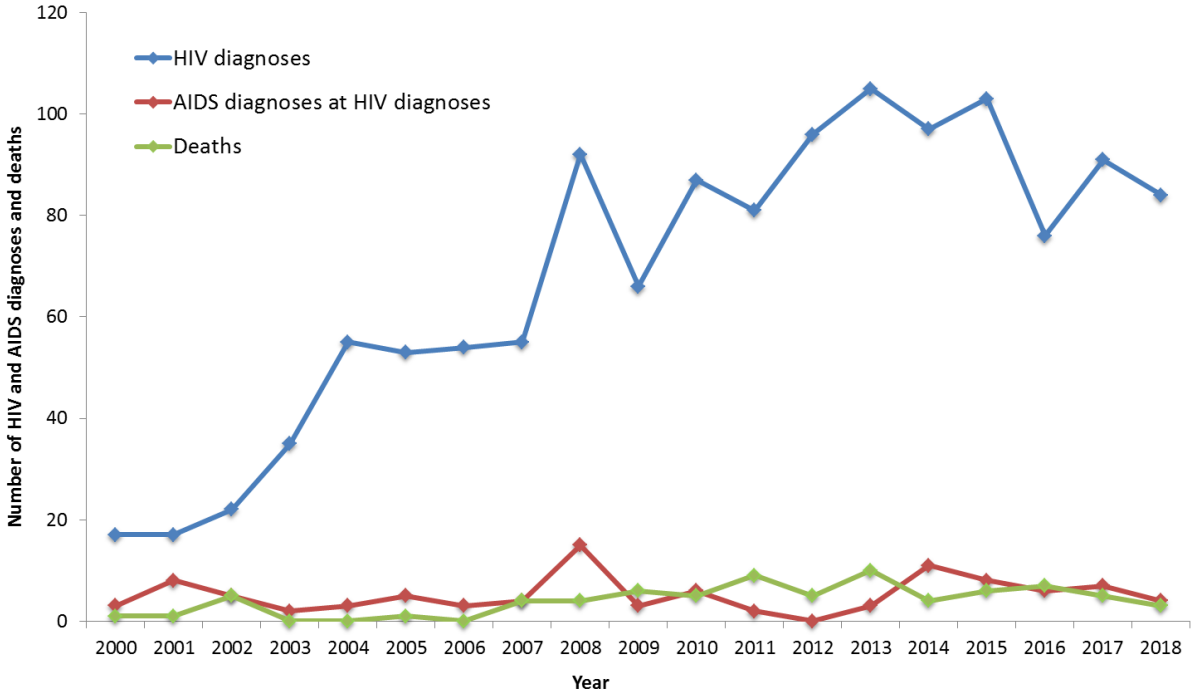
- 84 new first-UK cases of HIV were diagnosed in Northern Ireland
- 43 (51%, 43/84) new HIV diagnoses occurred through gay and bisexual men transmission
- 31 (37%, 31/84) new HIV diagnoses occurred through heterosexual transmission
- 10 (12%,10/84) new HIV diagnoses occurred through other or unknown transmission routes
- 30 (42%, 30/72) 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)
- 39% (11/28) of new diagnoses in gay and bisexual men tested under RITA were as a result of recently acquired infection, compared with less than 10% in heterosexuals
- 1130 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2018) received care
- 98% (1078/1102) of those receiving care, and where route of transmission was known, acquired their infection through sexual contact. Of these, 61% (668/1102) acquired their infection through sexual contact involving gay and bisexual men and 37% (410/1102) through heterosexual contact. Two percent (24/1102) acquired their infection through non-sexual contact
- 67,634 HIV tests were carried out in Northern Ireland, of which 23,392 were performed as part of the antenatal screening programme

3: New diagnoses

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

There has been a general upward trend in the annual number of first UK diagnoses of HIV made in Northern Ireland since 2000 with the highest number to date (105) recorded in 2013. Numbers fell from this peak to 76 in 2016, rising again to 91 in 2017. There has been a decline in 2018 to 84 (62 men and 22 women) (Figure 1).

Figure 1: New HIV and AIDS diagnoses* and deaths among HIV-infected persons, by year of diagnosis or death, 2000 – 2018, Northern Ireland



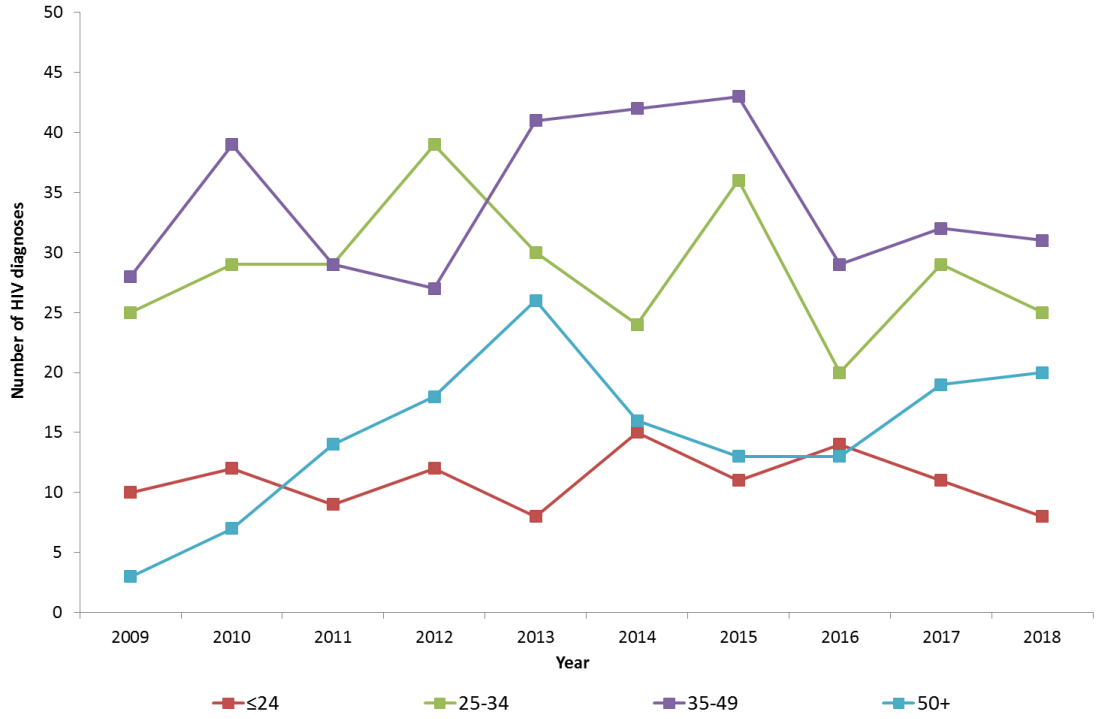
Note: *Numbers of new diagnoses may rise as further reports are received and more information is obtained. This is more likely to affect recent years, particularly 2018. This will impact on interpretation of trends in more recent years.

The numbers of AIDS diagnoses and of deaths reported in individuals with HIV have remained relatively low since 2000 largely to the effectiveness of HAART. In 2018 there were less than five people who were diagnosed with AIDS at their HIV diagnosis (reported AIDS defining illness within 3 months of HIV diagnosis). There were less than 5 deaths reported in 2018.

Age

New HIV diagnoses in Northern Ireland have been consistently highest in the 25-49 age groups (Figure 2). The largest proportional increase has been seen in the 50+ age group; however, diagnoses in those aged 65+ have remained low with only 15 new diagnoses reported over the past ten years.

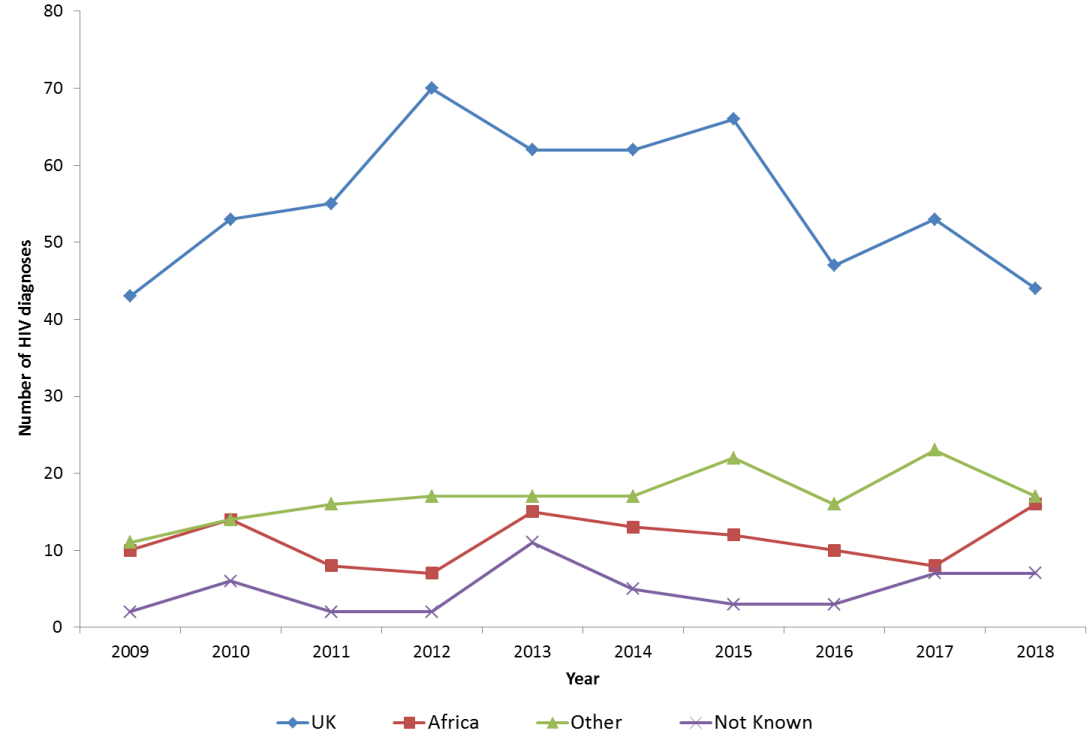
Figure 2: Number of new HIV diagnoses by age group, 2009 – 2018, Northern Ireland



Region of birth

The majority (66%; 555/838) of new HIV diagnoses reported since 2009 were born in the UK, in cases were country of birth was recorded. Of the new HIV diagnoses born outside the UK, 40% (113/283) were born in Africa (Figure 3). There has been a general declining trend in diagnoses in people born in the UK since 2015.

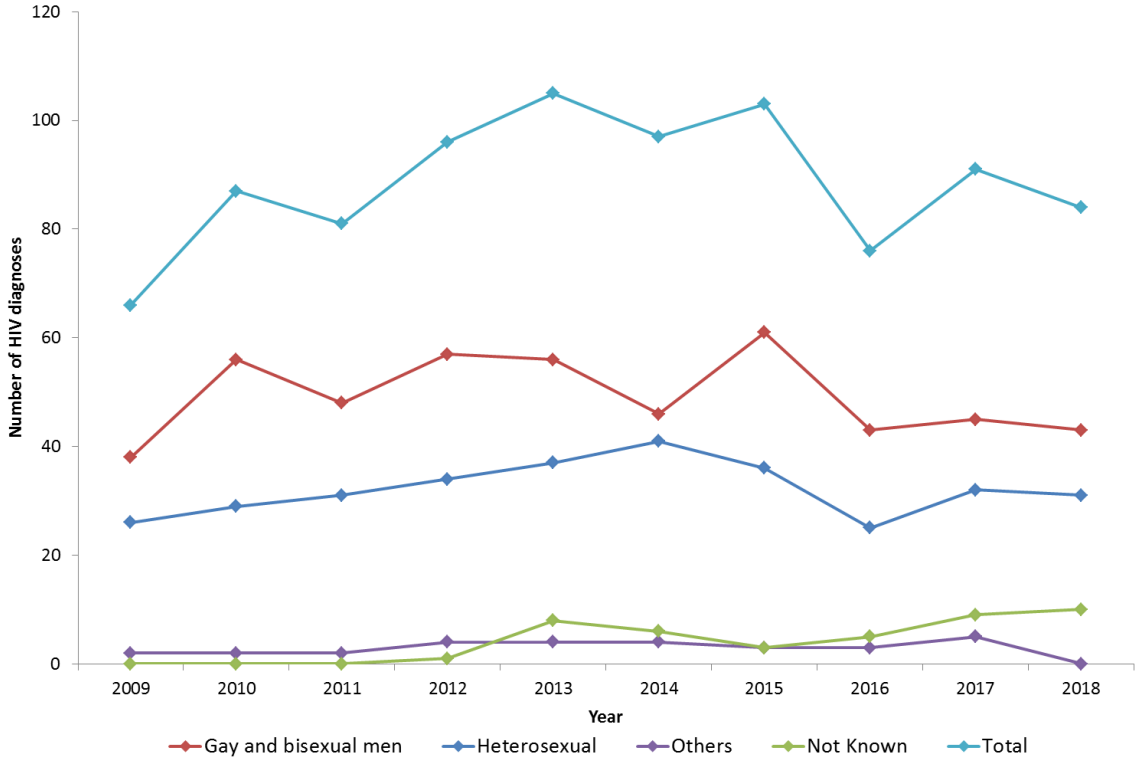
Figure 3: Number of new HIV diagnoses by region of birth, 2009 – 2018, Northern Ireland



Risk groups

In new diagnoses of HIV made in Northern Ireland each year, infection has been acquired mostly through sexual transmission, with gay and bisexual men accounting for the majority of these consistently since 2009 (Figure 4). The annual number of diagnoses where infection has been acquired through other exposures remains very low.

Figure 4: Annual new diagnoses of HIV by route of exposure, 2009 – 2018, Northern Ireland



Gay and bisexual men

In 2018, 51% (43/84) of all new HIV diagnoses were in gay and bisexual men (compared to 49% (45/91) in 2017 and 58% (38/66) in 2009). Of the gay and bisexual men newly diagnosed with HIV in 2018, 84% were white ethnicity (in cases were ethnicity was recorded) and 74% were UK-born.

Heterosexual transmission

Heterosexual contact accounted for 37% (31/84) of all new HIV diagnoses made in 2018 (compared to 35% (32/91) in 2017 and 39% (26/66) in 2009). Black Africans accounted for 35% of new diagnoses in 2018 compared with 16% in 2017 and 42% in 2009. There has been a small declining trend in new heterosexual diagnoses since 2014.

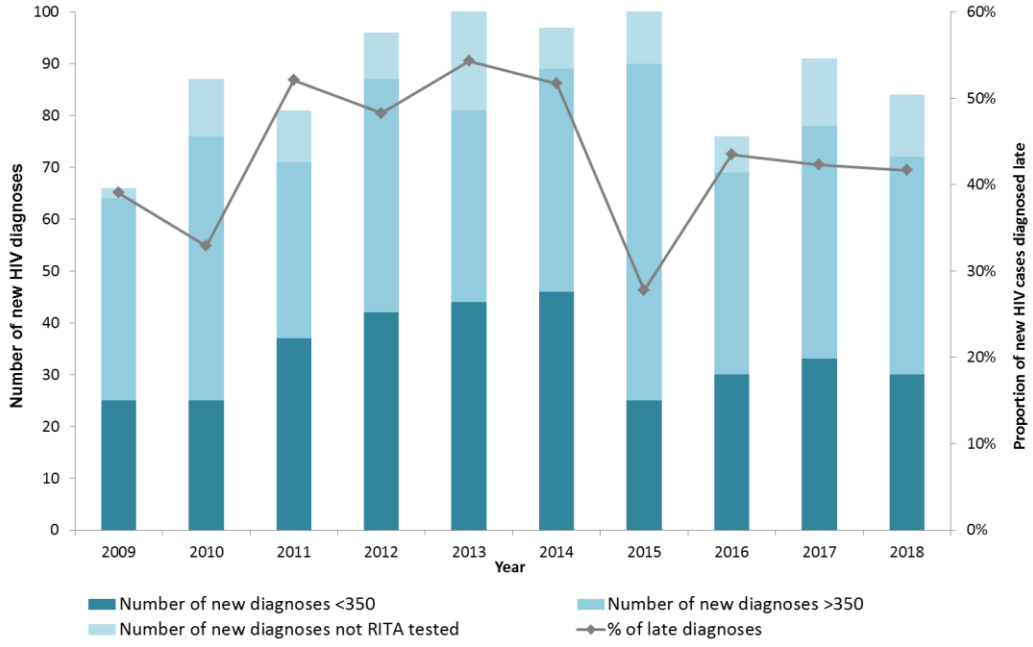
Late diagnoses

Analysis of CD4 cell counts, combined with other HIV surveillance data, can provide an indication of an individual's stage of disease at diagnosis. A cell count of less than 350 cells/mm^3 within 91 days of diagnosis is a proxy indicator of a late diagnosis. People diagnosed at a late stage have an increased risk of death in the year after diagnosis compared to those diagnosed at an early stage.

Key points for new diagnoses made in Northern Ireland during 2018 are:

- CD4 counts within 91 days of diagnosis were available for 86% (72/84) of diagnoses
- 42% (30/72) of individuals were diagnosed at a late stage
- 38% (26/68) of sexually transmitted cases with a CD4 cell count within 91 days, were diagnosed at a late stage
- 48% (15/31) of individuals with heterosexually acquired HIV were diagnosed at a late stage
- 30% (11/37) of diagnoses in gay and bisexual men were made at a late stage

Figure 5: Number and proportion of new HIV diagnoses in adults diagnosed with a CD4 count <350 cells/mm^3 within 91 days of diagnosis, 2009 – 2018, Northern Ireland

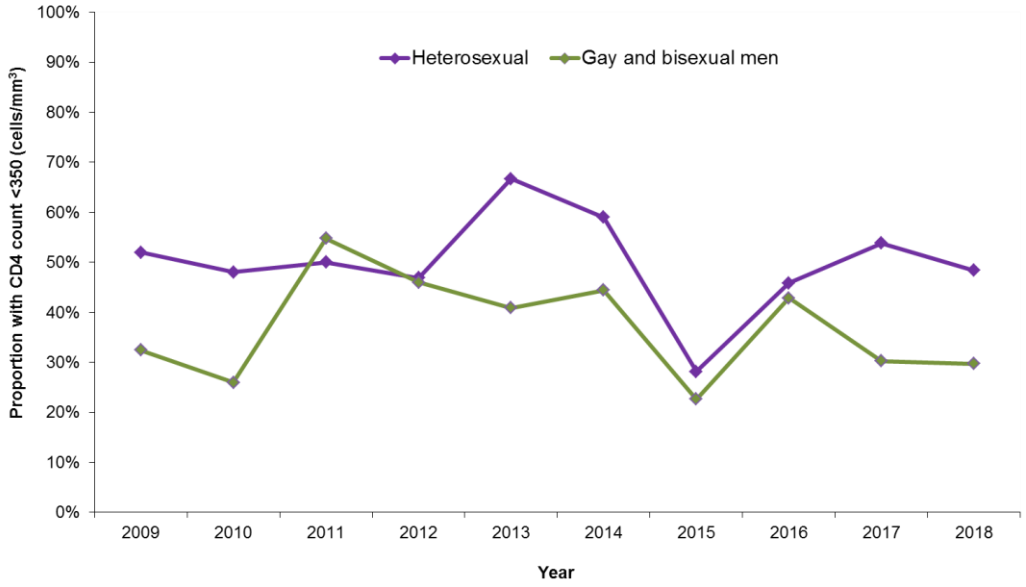


Interpretation of these data for Northern Ireland is complicated by year to year small number variation. Since 2013, there has been a general reduction in the proportion of cases whose diagnosis has been made at a late stage (Figure 5).

As elsewhere in the UK, the proportion of gay and bisexual men acquired cases diagnosed at a late stage tends to be lower than in heterosexually acquired cases, reflecting perhaps better awareness of testing among gay and bisexual men. There is now some suggestion of

a reducing trend in gay and bisexual men (Figure 6). In Northern Ireland in 2018 the proportion of cases diagnosed late in gay and bisexual men and in heterosexuals were 30% and 48% respectively.

Figure 6: Proportion of new HIV diagnoses in adults with a CD4 count <350 cells/mm^3 within 91 days of diagnosis, by probable route of infection, 2009 – 2018, Northern Ireland

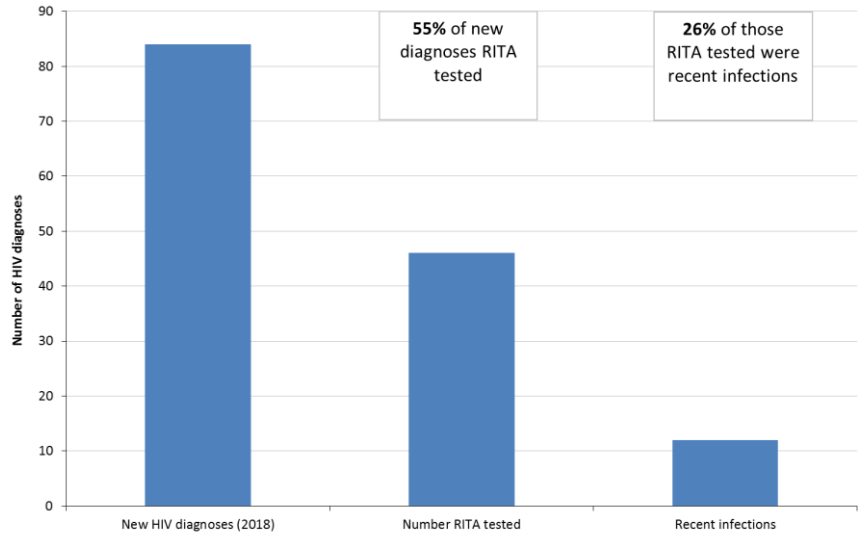


Recent diagnoses

The Recent Infection Testing Algorithm (RITA) was extended to Northern Ireland in 2010. This distinguishes recently acquired infection (infection most likely acquired in the four or five months preceding HIV diagnosis) from long-standing infection and can be used to assess disease incidence.

During 2018, the Northern Ireland coverage rate for RITA surveillance was 55% (46/84). Results showed that 26% (12/46) of the newly diagnosed HIV infections tested were recent infections (Figure 7). This compares with 18% in 2017 (10/55). Thirty-nine percent (11/28) of new diagnoses in gay and bisexual men tested under RITA were as a result of recently acquired infection, the highest proportion reported since 2010 (34%; 15/44). This compares with less than 10% in heterosexuals in 2018.

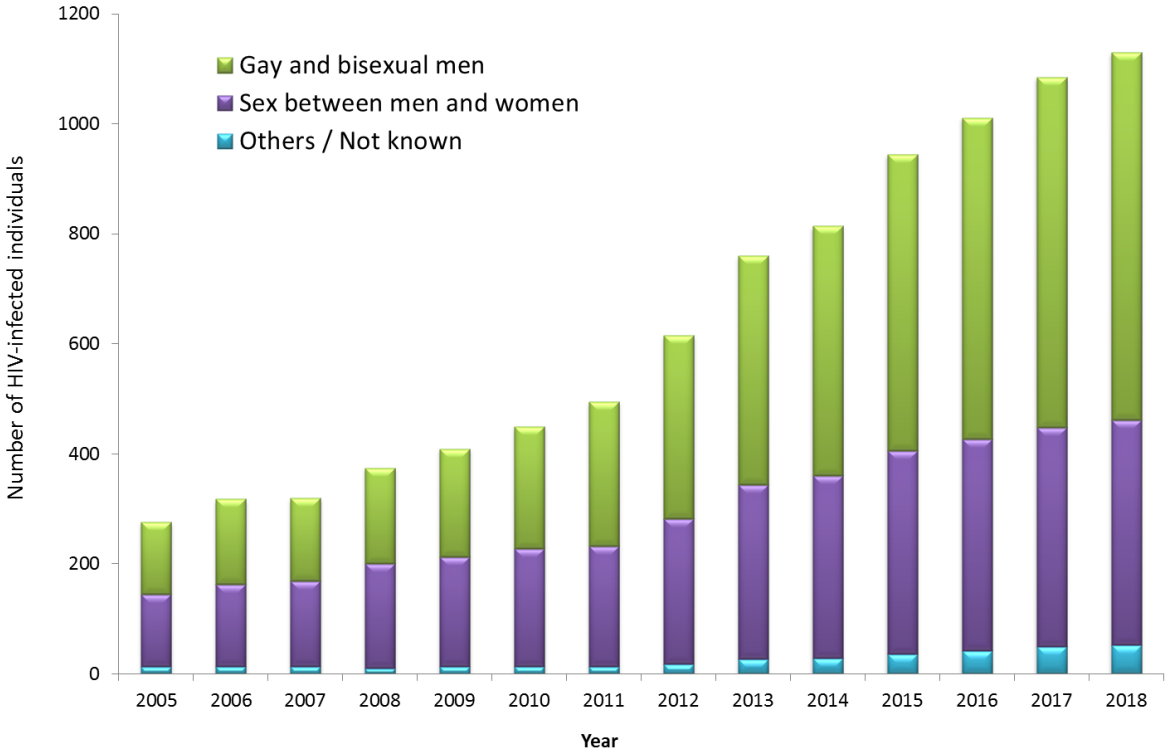
Figure 7: Number of new HIV diagnoses, RITA tested and recent infections, 2018 Northern Ireland



4: Prevalent infection

Age, gender identity and risk group information

Figure 8: Annual number of HIV infected individuals resident in Northern Ireland accessing HIV-related care, by probable route of infection, 2005 – 2018



1130 residents in Northern Ireland with diagnosed HIV infection (894 men and 236 women) accessed care in 2018 (Figure 8). This represents a 4% increase on 2017 (1085). These figures reflect continuing new diagnoses, transfers of care into and out of Northern Ireland and the role of HAART in increasing survival rates.

While overall prevalence still remains lower than other UK countries, Northern Ireland has seen the highest proportional increase in numbers receiving care, since 2009, by any UK country.

The greatest number of people who received HIV-related care in 2018 were in the 35-54 year age group (58%: 653/1130). Of those that received HIV-related care during 2018, 86% were white ethnicity, 10% were black-African and 4% were classified in other ethnic groups or not reported.

In 2018 sexual exposure accounted for 98% (1078/1102) of people living with HIV where an exposure category was known. Of this total, gay and bisexual men accounted for 61% (668/1102) and heterosexual exposure 37% (410/1102).

Prevalence by Local Government District of residence

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 1.94/1000 population aged 15-59 years (compared with 1.87/1000 population aged 15-59 years in 2017).

All areas remain below the 2/1000 threshold at which expanded testing is recommended (Table 1).[1] The overall prevalence for the Northern Ireland population is 0.91/1000 population aged 15-59 years.

Table 1: Diagnosed HIV prevalence per 1,000 population aged 15-59 years, by Local Government District, 2018, Northern Ireland*

Rate per 1,000 population	Local District Council
0.00 – 0.49	Causeway Coast and Glens Fermanagh and Omagh
0.50 – 0.99	Antrim and Newtownabbey Ards and North Down Armagh City, Banbridge and Craigavon Derry City and Strabane 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 2018. This will impact on interpretation of trends in more recent years.

5: 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.[2] Modelling suggests that achieving these targets globally by 2020 will enable the world to end the AIDS epidemic by 2030.

Undiagnosed infection

An estimate of undiagnosed infection is currently available in Northern Ireland for the gay and bisexual men population. This is derived from a CD4 back-calculation model.[3] Given the relatively small number of cases diagnosed each year in Northern Ireland, the estimate comes with wide 95% credible intervals. The point estimate for 2018 equates to 85% of gay and bisexual men living with HIV in Northern Ireland being aware of their infection (95% CI: 75%-93%).

Antiretroviral therapy and viral load

In 2018, 95% of those in care received ART, and 100% of those on treatment had viral suppression as defined by <= 200 copies/ml.

6: HIV testing

National guidelines emphasise the importance of HIV testing in key healthcare settings.[1] Early diagnosis has important individual and population benefits and is a key part of the UNAIDS strategy. Individuals with HIV have a near-normal life expectancy if diagnosed early and treated promptly. It is estimated that the majority of onward transmission is from those with undiagnosed HIV. Once diagnosed, individuals are less likely to pass on their infection due to treatment and behaviour change. The expansion of HIV testing is now accepted as critical to reducing late HIV diagnoses and the numbers of people with undiagnosed infection. Testing is available free of charge in Northern Ireland from a variety of health service settings including primary care and in some face to face community settings. Self-testing kits can be purchased online.

During 2018, 44,242 HIV tests were performed outside the antenatal screening programme in a health service setting in Northern Ireland. This represents an increase of 5% (2,208) compared with 2017 (42,034) (Table 2).

Table 2: Number of HIV tests performed by healthcare setting, 2010 – 2018, Northern Ireland (excludes antenatal screening programme)

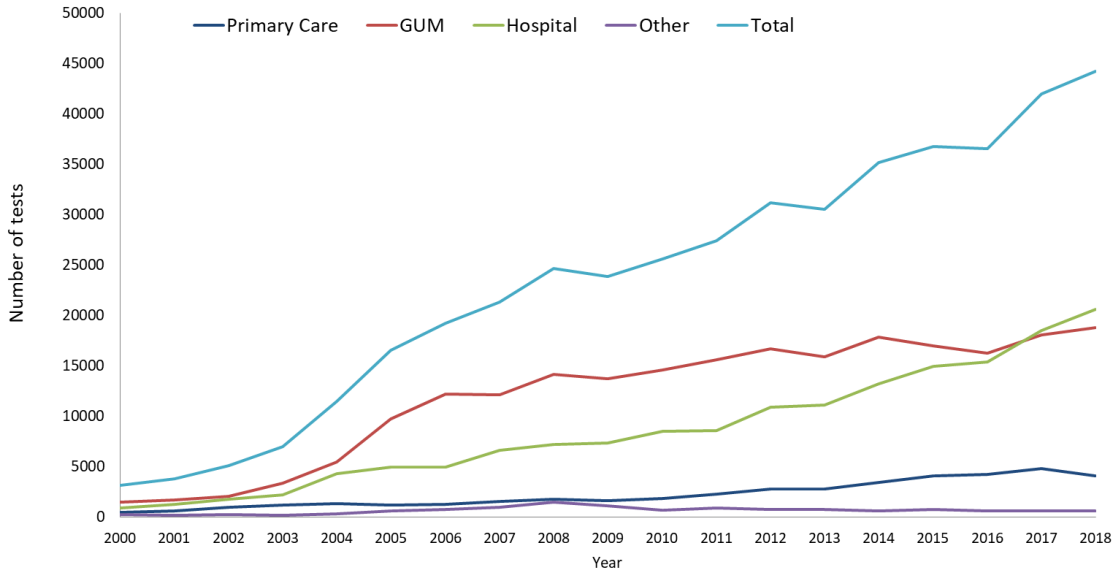
	2010	2011	2012	2013	2014	2015	2016	2017	2018	Change from 2017-2018	
GUM	14,583	15,639	16,725	15,912	17,887	17,022	16,277	18,100	18,847	747	4%
Hospital	8,542	8,628	10,882	11,114	13,253	14,942	15,374	18,517	20,658	2,141	12%
Primary Care	1,832	2,272	2,786	2,783	3,433	4,093	4,244	4,803	4,095	-708	-15%
Other	701	927	783	741	611	738	643	614	642	28	5%
Total	25,658	27,466	31,176	30,550	35,184	36,795	36,538	42,034	44,242	2,208	5%

Source: Regional Virology Lab

Testing in all settings has increased from 3,138 tests carried out in 2000 to 44,242 in 2018 (Figure 9). The majority of testing is carried out in the GUM or hospital setting, accounting for over 89% of all tests during 2018. The largest year on year increase has been in the hospital setting which for the second consecutive year has performed more tests than GUM clinics. Of the tests carried out in the hospital setting during 2018, 47% were performed in Belfast hospitals.

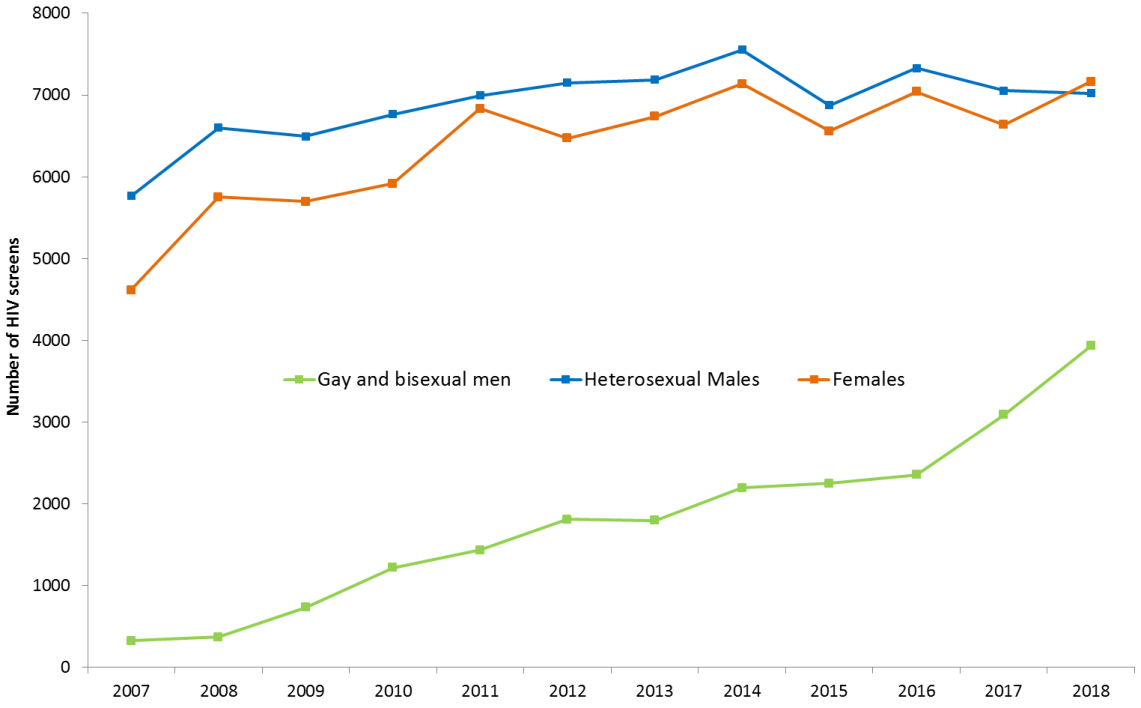
While there has been a smaller but extremely important increase in testing in primary care over the years, 2018 saw a significant reversal in this trend with a 15% decrease in testing compared with 2017. During 2018, 319 GP practices in Northern Ireland carried out HIV testing. The median number of tests carried out per practice was seven.

Figure 9: Annual number of HIV tests performed, by healthcare setting, 2000-2018, Northern Ireland (excludes antenatal screening programme)



Further analysis of GUM clinic activity (Figure 10) shows that between 2007 and 2018, the annual number of first episode HIV screens in gay and bisexual men has increased by 1121% (322 to 3933). This compares with 22% (5765 to 7021) in heterosexual males and 55% in females (4613 to 7165). There have been large increases in testing activity in gay and bisexual men in 2017 and 2018.

Figure 10: Annual number of HIV screens carried out in GUM clinics, 2007 – 2018, Northern Ireland



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

7: 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.[4,5]

PrEP has been available in Northern Ireland through a Risk Reduction Clinic (RRC) service since July 2018, with funding initially secured until April 2020. The service is delivered by the GUM team in Belfast Health and Social Care Trust (HSCT) and designed to accept referrals from all GUM clinics in Northern Ireland. It offers interventions aimed at reducing unsafe sexual behaviour, along with PrEP, to patients meeting risk-based criteria. This important service component is provided by a Health Advisor at patients' initial RRC visit as a minimum. During the project's six months of operation in 2018, 275 individuals were seen at the RRC. An evaluation of the pilot's first year will be done.

8: Summary and conclusions

The number of new diagnoses in 2018 remains lower than the peak levels in 2013 and 2015, and should be seen in the context of increasing HIV testing activity.

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. This is particularly evident in gay and bisexual men.

The number of people living with HIV in Northern Ireland continues to increase as a consequence of new diagnoses, transfers of care into Northern Ireland, and improved survival rates due to the success of antiretroviral treatment. Prevalence is increasing at a greater rate than other UK countries, but overall remains lower.

HIV testing activity has increased in 2018 to its highest level yet. While testing in the hospital setting has shown a year on year increase, 2018 has seen a fall in tests done in primary care settings. There has been a particular increase in GUM testing activity in gay and bisexual men coinciding with implementation of the Risk Reduction Clinic service.

The introduction in July 2018 of pre-exposure prophylaxis (PrEP) targeting people at higher risk of acquiring HIV has been an important addition to HIV prevention in Northern Ireland.

The UNAIDS 90: 90: 90 HIV elimination strategy, targets for 1) the proportion of diagnosed individuals receiving treatment and 2) the proportion of those in treatment being virally suppressed have now been surpassed. However, modelling suggests that the target for the proportion of individuals infected with HIV being aware of their diagnosis has not yet been reached.

9: 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 expand access to HIV testing outside health service settings, including use of online services.

10: References

1. NICE Guideline [NG60]: HIV testing: increasing uptake among people who may have undiagnosed HIV. 2016
   https://www.nice.org.uk/guidance/NG60

2. UNAIDS
   http://www.unaids.org/en/resources/documents/2017/90-90-90

3. Birrell PJ, Gill ON, Delpech VC, Brown AE, Desai S, Chadborn TR, et al. HIV incidence in men who have sex with men in England and Wales 2001-10: a nationwide population study. The Lancet Infectious Diseases. 2013;13(4):313-8.
   https://www.ncbi.nlm.nih.gov/pubmed/23375420

4. McCormack S, Dunn DT, Desai M, Dolling DI, Gafos M, Gilson R, et al. (2016) Pre-exposure prophylaxis to prevent the acquisition of HIV-1 infection (PROUD): effectiveness results from the pilot phase of a pragmatic open-label randomised trial. Lancet 387: 53–60. doi: 10.1016/S0140-6736(15)00056-2 PMID: 26364263
   https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4700047/

5. Molina J-M, Capitant C, Charreau I, Meyer L, Spire B, Pialoux G, et al. On demand PrEP with oral TDFFTC in MSM: results of the ANRS Ipergay trial; 2015 Feb 23–26, 2015. 23LB; Seattle, WA, USA.
   https://www.croiconference.org/sessions/demand-prep-oral-tdf-ftc-msm-results-anrs-ipergay-trial

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