HIV surveillance in Northern Ireland 2018

An analysis of data for the calendar year 2017

HSC Public Health Agency

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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 2017.

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.

There is some variance between data published in this report and that published in PHE national data tables. This reflects data validation performed by PHE and PHA since publication of the national tables.

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 2017 (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 2017

During 2017:

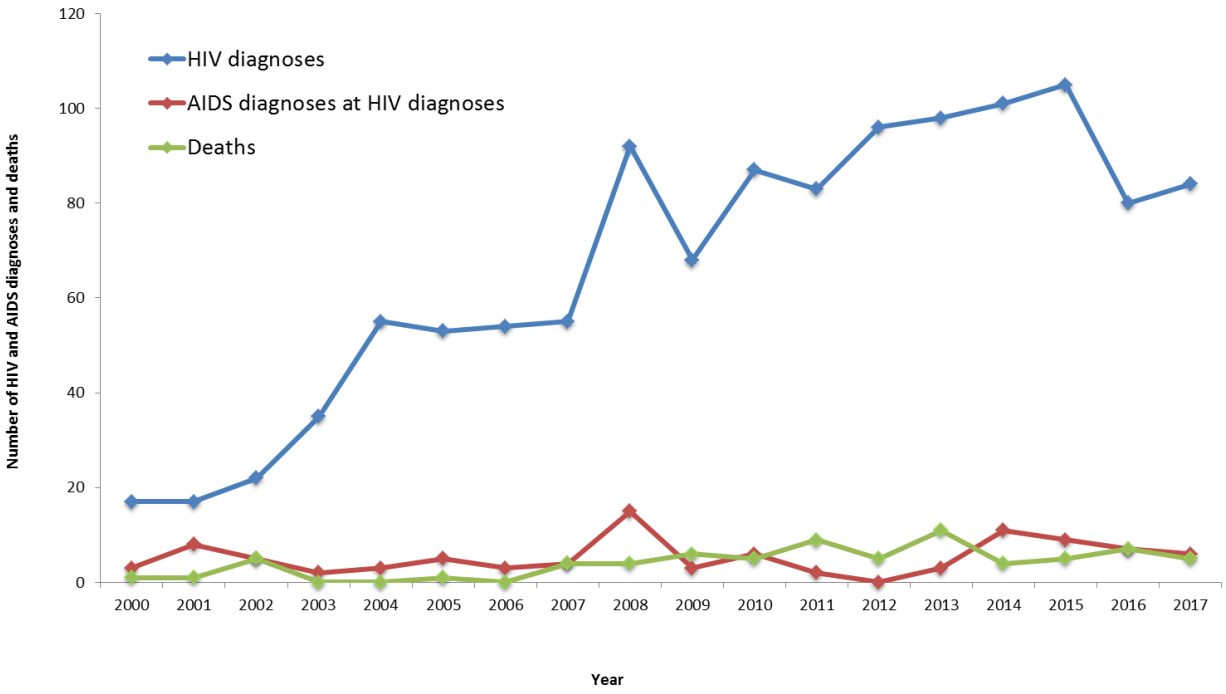
- 84 new first-UK cases of HIV were diagnosed in Northern Ireland
- 45 (54%, 45/84) new HIV diagnoses occurred through MSM transmission
- 26 (31%, 26/84) new HIV diagnoses occurred through heterosexual transmission
- 13 (15%, 13/84) new HIV diagnoses occurred through other or unknown transmission routes
- 28% (7/25) of new diagnoses in MSM tested under RITA were as a result of recently acquired infection, compared with 19% (3/16) in heterosexuals
- 31 (41%, 31/75) 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/mm^3)
- 1073 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2017) received care
- 98% (1018/1041) of those receiving care, and where route of transmission was known, acquired their infection through sexual contact. Of these, 60% (627/1041) acquired their infection through sexual contact involving MSM and 38% (391/1041) through heterosexual contact. Two percent (23/1041) acquired their infection through non-sexual contact
- 66,055 HIV tests were carried out in Northern Ireland, of which 24,021 were performed as part of the antenatal screening programme

3: New diagnoses

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

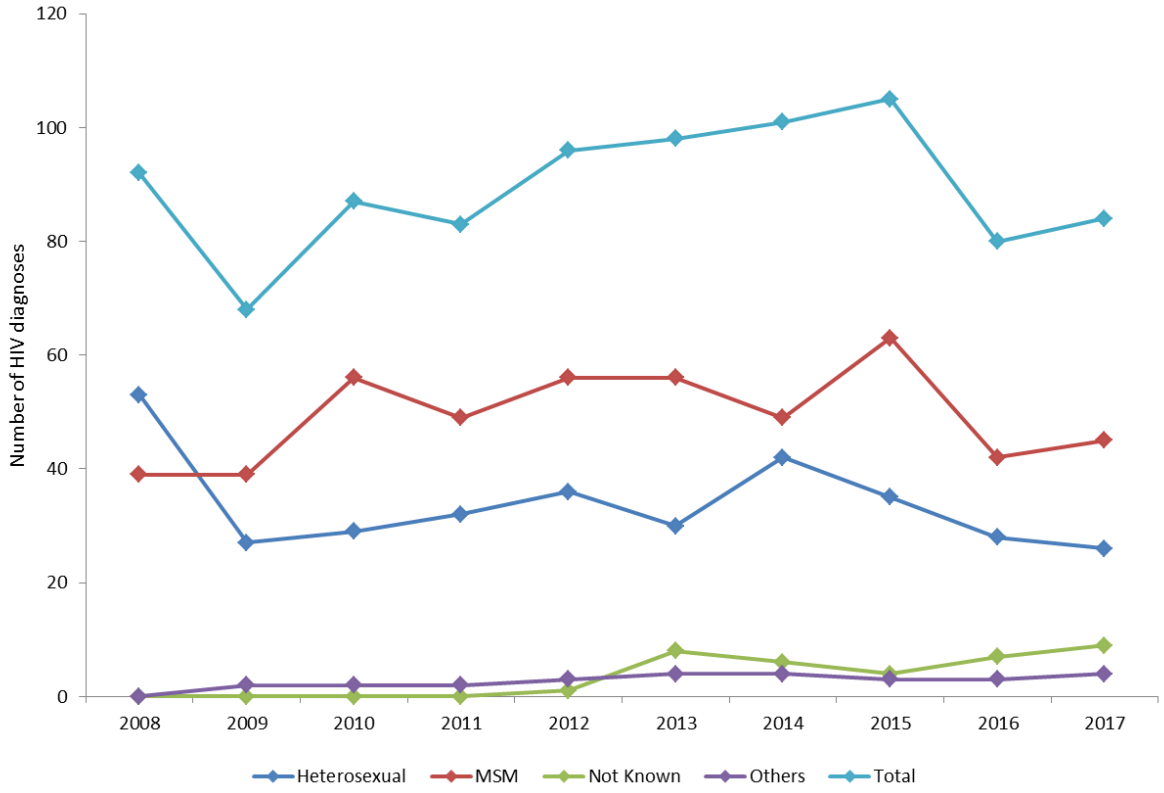
There has been a general upward trend in the annual number of first UK diagnoses of HIV made in Northern Ireland since 2000 with the highest number to date (105) recorded in 2015. Numbers fell from this peak to 80 in 2016 and rose again slightly to 84 in 2017. (Figure 1).

Figure 1: New HIV and AIDS diagnoses and deaths among HIV-infected persons, by year of diagnosis or death, 2000 – 2017, Northern Ireland



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 2017 there were 6 people who were diagnosed with AIDS at their HIV diagnosis (reported AIDS defining illness within 3 months of HIV diagnosis). There were 5 deaths reported in 2017.

Figure 2: Annual new diagnoses of HIV by route of exposure, 2008 – 2017, Northern Ireland



Risk groups

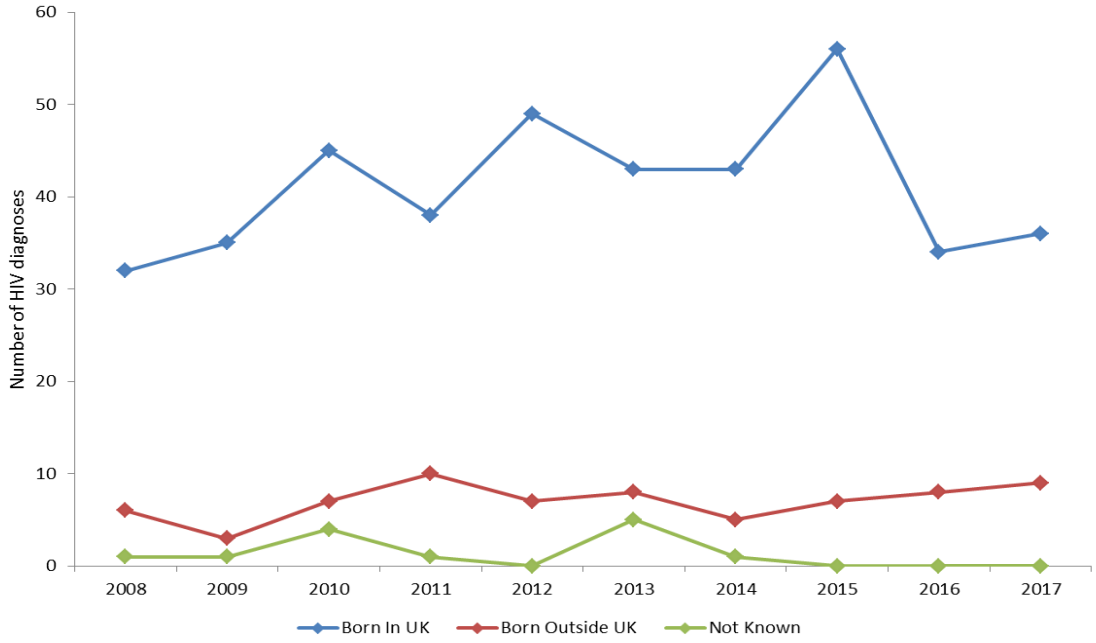
In new diagnoses of HIV made in Northern Ireland each year, infection has been acquired mostly through sexual transmission, with men who have sex with men accounting for the majority of these consistently since 2008 (Figure 2). The annual number of diagnoses where infection has been acquired through other exposures remains very low.

Men who have sex with men

Diagnoses in MSM reached a peak of 63 in 2015. The fall in diagnoses seen since 2015 is due to the decline in diagnoses in MSM born in the UK (Figure 3). The contribution of those born outside the UK has remained relatively stable, at smaller numbers.

Overall, since 2008, 55% (37/65) of cases in MSM born outside the UK are likely to have acquired their infection outside the UK, in cases where country of birth and likely country of infection are recorded.

Figure 3: Annual new HIV diagnoses in MSM exposure, by place of birth, 2008 – 2017, Northern Ireland

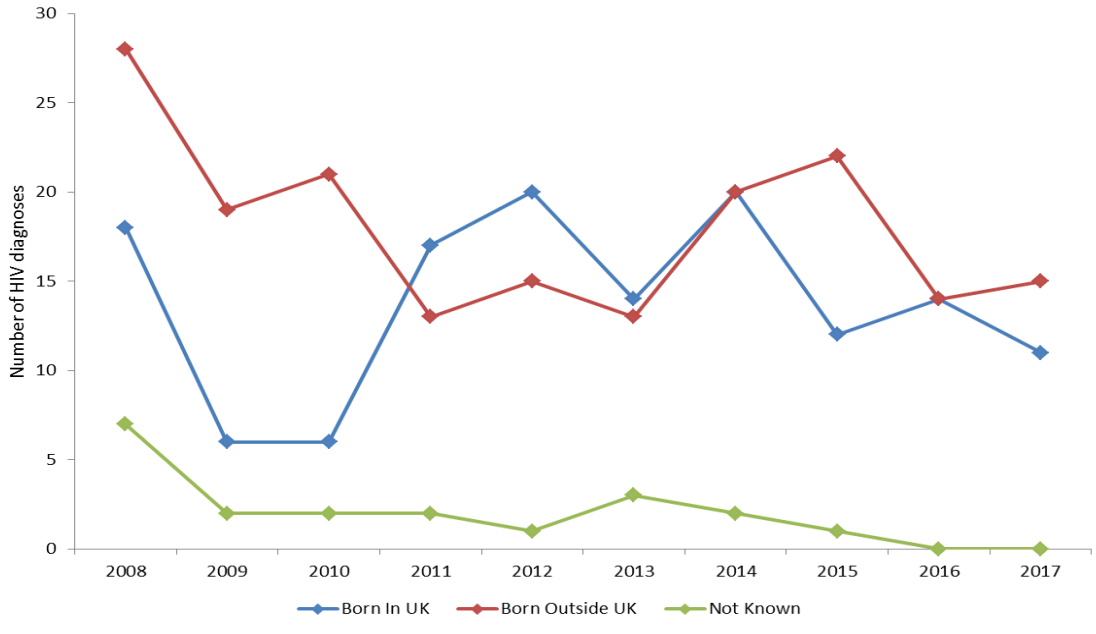


Heterosexual transmission

Overall diagnoses attributed to heterosexual transmission have fallen each year since 2014. Unlike the picture seen in MSM, contributions from those born within the UK and those outside the UK have been relatively similar in recent years (Figure 4).

Since 2008, 88% (141/160) of cases acquired heterosexually and born outside the UK are likely to have acquired their infection outside the UK, in cases where country of birth and likely country of infection are recorded.

Figure 4: Annual new HIV diagnoses, in Heterosexual exposure, by place of birth, 2008 – 2017, Northern Ireland



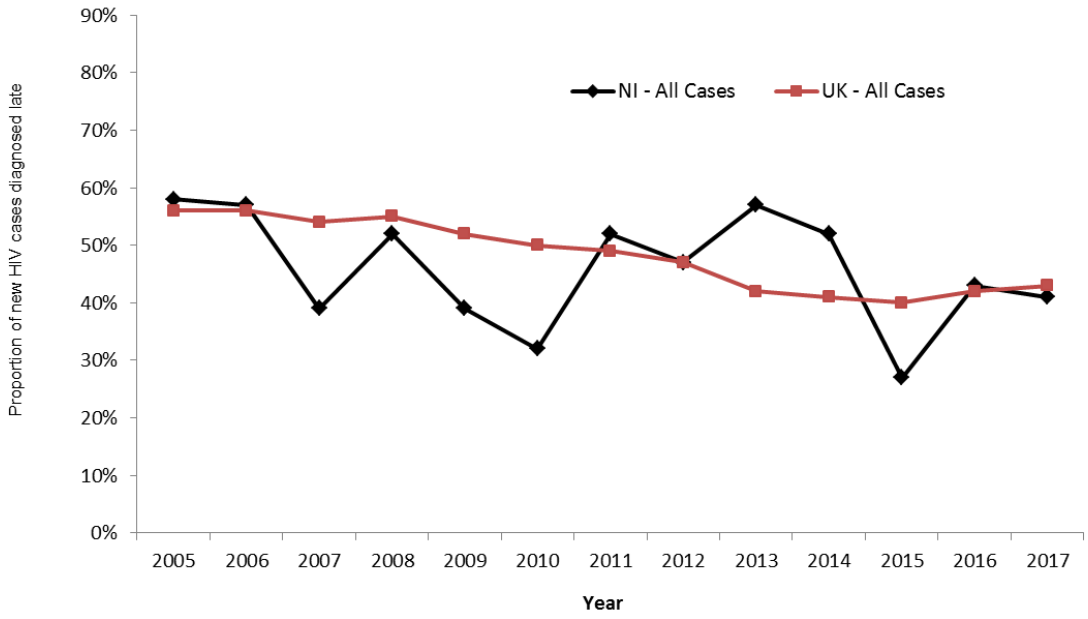
Late diagnoses

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 2017 are:

- CD4 counts within 91 days of diagnosis were available for 89% (75/84) of diagnoses
- 41% (31/75) of individuals were diagnosed at a late stage
- 38% (25/65) of sexually transmitted cases with a CD4 cell count within 91 days, were diagnosed at a late stage
- 59% (13/22) of individuals with heterosexually acquired HIV were diagnosed at a late stage
- 29% (12/41) of individuals with MSM acquired HIV were diagnosed at a late stage

Figure 5: Proportion of new HIV diagnoses in adults diagnosed with a CD4 count <350 cells/mm^3 within 91 days of diagnosis, 2005 – 2017, Northern Ireland and UK

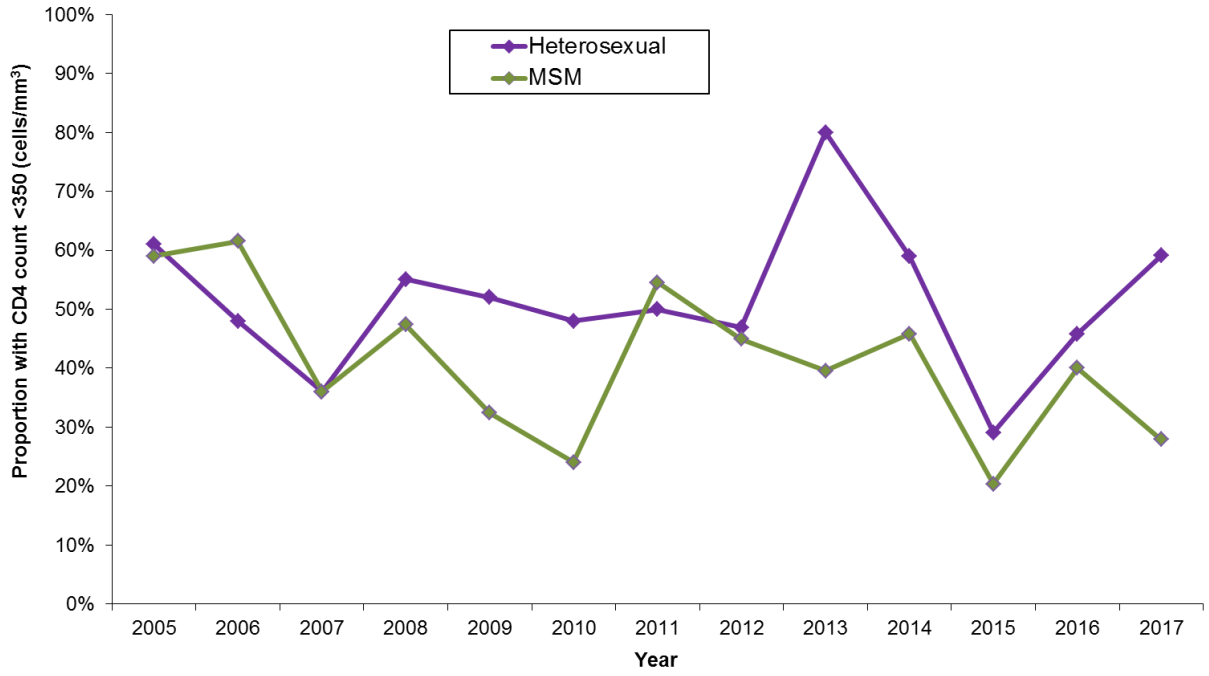


Interpretation of these data for Northern Ireland is complicated by year to year small number variation. However, unlike the overall UK trend of reducing proportions of late stage diagnoses, there has been no discernible trend in Northern Ireland (Figure 5).

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

MSM (Figure 6). In Northern Ireland in 2017 the proportion of MSM and heterosexually acquired cases diagnosed late were 29% and 59% respectively.

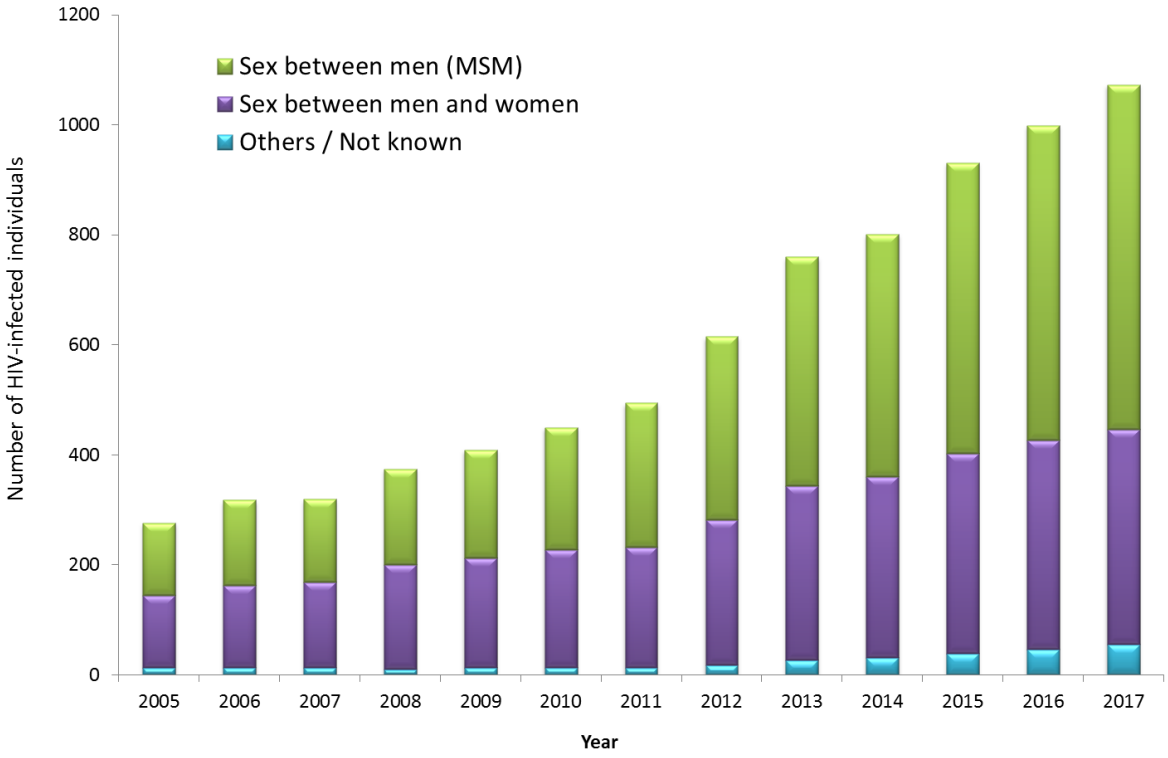
Figure 6: Proportion of new HIV diagnoses in adults with a CD4 count <350 cells/mm^3 within 91 days of diagnosis, by probable route of infection, 2005 – 2017, Northern Ireland



4: Prevalent infection

Age, gender identity and risk group information

Figure 7: Annual number of HIV infected individuals resident in Northern Ireland accessing HIV-related care, by probable route of infection, 2005 – 2017



1073 residents in Northern Ireland with diagnosed HIV infection (849 men and 224 women) accessed care in 2017 (Figure 7). This represents a 7.4% increase on 2016 (999).
These figures reflect both the continued increase in new diagnoses and the role of HAART in increasing survival rates.

The greatest number of people who received HIV-related care in 2017 were in the 35-54 year age group (58%: 622/1073). Of those that received HIV-related care during 2017, 86.7% were white ethnicity, 10.8% were black-African and 2.5% were classified in other ethnic groups or not reported.

In 2017 sexual exposure accounted for 98% (1018/1041) of people living with HIV where an exposure category was known. Of this total, MSM accounted for 60% (627/1041) and heterosexual exposure 38% (391/1041).

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 area has the highest rate in Northern Ireland but remains below the 2/1000 threshold at which opt out testing for hospital admissions and new primary care registrants is recommended (Table 1).[1]

The overall prevalence for the Northern Ireland population is 0.87/1000 population aged 15-59 years.

Table 1: Diagnosed HIV prevalence per 1,000 population aged 15-59 years, by Local Government District, 2017, Northern Ireland

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

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 MSM 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 2017 equates to 85% of MSM living with HIV in Northern Ireland being aware of their infection (95% CI: 76%-91%).

Antiretroviral therapy and viral load

In 2017, over 99% of those in care received ART, and 96% 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, including primary care, settings and in some face to face community settings. Self-testing kits can be purchased online.

During 2017, 42,034 HIV tests were performed outside the antenatal screening programme in a health service setting in Northern Ireland. This represents an increase of 15% (5,496) over 2016 (36,538) (Table 2).

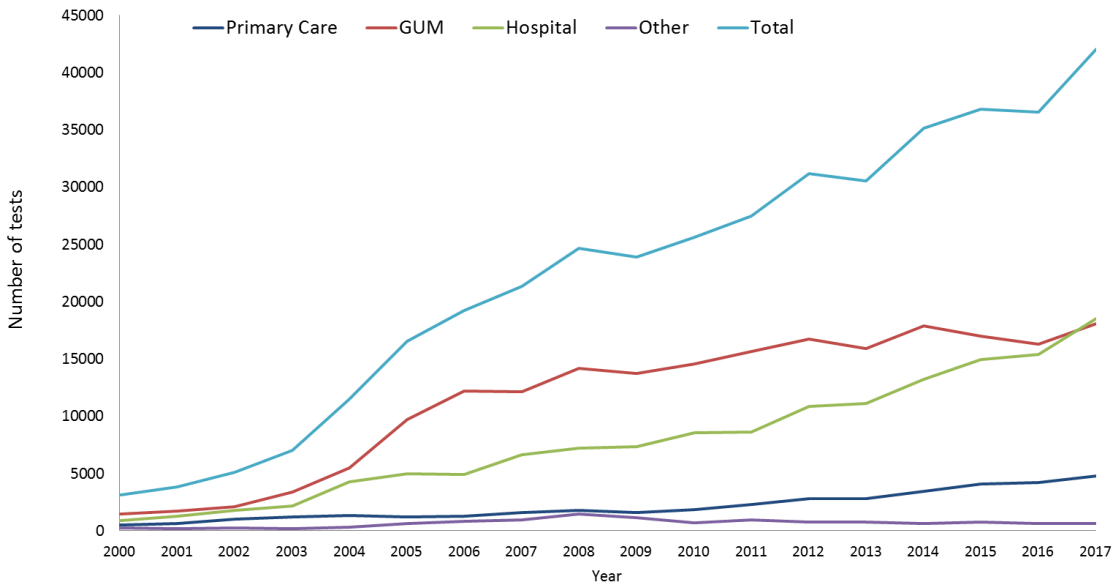
Table 2: Number of HIV tests performed by healthcare setting, 2010 – 2017, Northern Ireland (excludes antenatal screening programme)

	2010	2011	2012	2013	2014	2015	2016	2017	Change from 2016-2017	
GUM	14,583	15,639	16,725	15,912	17,887	17,022	16,277	18,100	1,823	11%
Hospital	8,542	8,628	10,882	11,114	13,253	14,942	15,374	18,517	3,143	20%
Primary Care	1,832	2,272	2,786	2,783	3,433	4,093	4,244	4,803	559	13%
Other	701	927	783	741	611	738	643	614	-29	-5%
Total	25,658	27,466	31,176	30,550	35,184	36,795	36,538	42,034	5,496	15%

Source: Regional Virology Lab

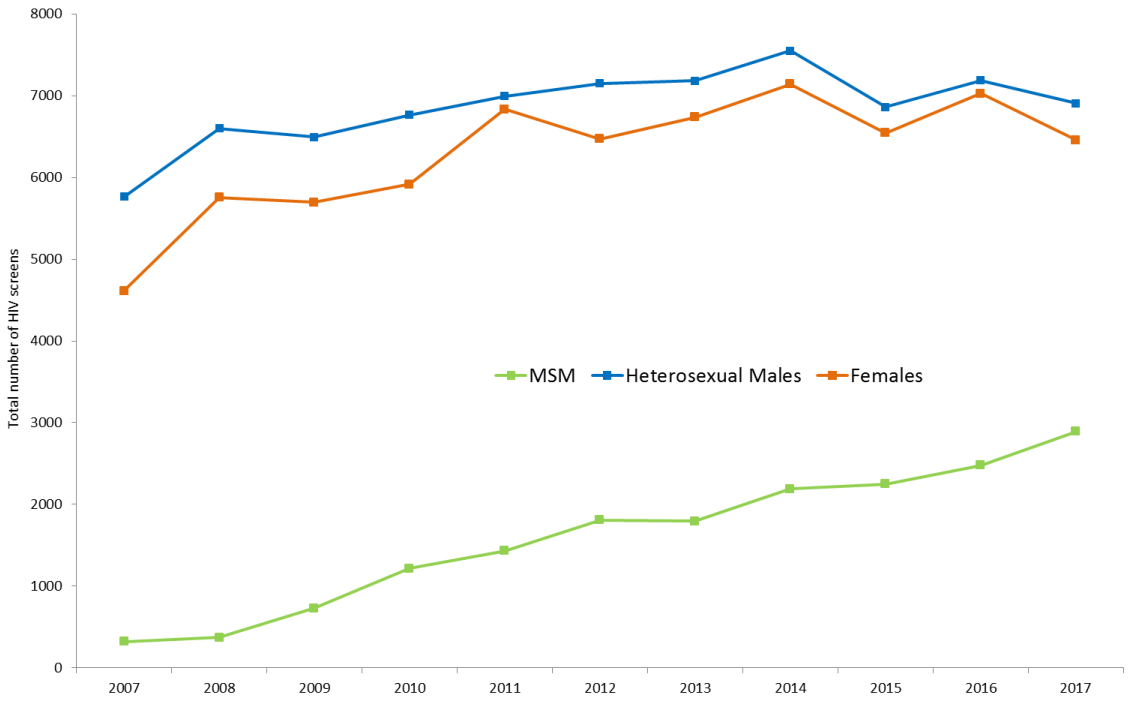
Testing in all settings has increased from 3,138 tests carried out in 2000 to 42,034 in 2017 (Figure 8). Most testing is carried out in the GUM or hospital setting, accounting for over 87% of all tests during 2017. The largest year on year increase has been in the hospital setting which during 2017 for the first time saw more tests performed than GUM clinics. There has been a smaller but extremely important increase in testing in primary care.

Figure 8: Annual number of HIV tests performed, by healthcare setting, Northern Ireland, 2000–2017 **(excludes antenatal screening programme)**



Further analysis of GUM clinic activity (Figure 9) shows that between 2007 and 2017, the annual number of first episode HIV screens in MSM has increased by 798% (322 to 2893). This compares with 20% (5765 to 6907) in heterosexual males and 40% in females (4613 to 6458).

Figure 9: Annual number of HIV screens carried out in GUM clinics, 2007 – 2017, Northern Ireland



Source: GUMCAD Screening codes - P1A,T4, T7

7: Summary and conclusions

The number of new diagnoses in 2017 remains substantially lower than the peak level in 2015, although there has not yet been the sustained two year decline seen in other UK countries.

While MSM remain the group most at risk, the decline in diagnoses seen since 2015 is largely due to reductions among MSM who were born in the UK. Diagnoses have remained relatively stable, and at lower levels, in MSM born outside the UK.

While the overall proportion of annual new diagnoses made at a late stage remains relatively unchanged, there is now some suggestion of a reducing trend in the proportion of MSM each year diagnosed at a late stage.

The number of people living with HIV in Northern Ireland continues to increase as a consequence of new diagnoses and improved survival rates due to the success of antiretroviral treatment. Overall prevalence remains lower than in other UK countries.

HIV testing activity has increased in 2017 to its highest level yet. Testing in hospital and primary care settings continues to increase. Despite GUM activity stabilising, reflecting finite clinic capacity, there has been a further increase in testing in MSM in this setting.

Overall, there has been important progress towards meeting the UNAIDS 90: 90: 90 strategy, with targets for 1) the proportion of diagnosed people receiving treatment and 2) the proportion of those in treatment being virally suppressed now surpassed.

8: Recommendations

Safer sex messages including the benefits of HIV testing should continue to be promoted to the general population, young people and MSM

Frequent repeat HIV testing should be advised to those most at risk

HIV testing guidelines should continue to be promoted to health professionals in all settings

Service commissioners should explore expanding access to HIV testing outside health service settings, including use of online services

9: 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.

Note: If links do not work paste the link in to your browser

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