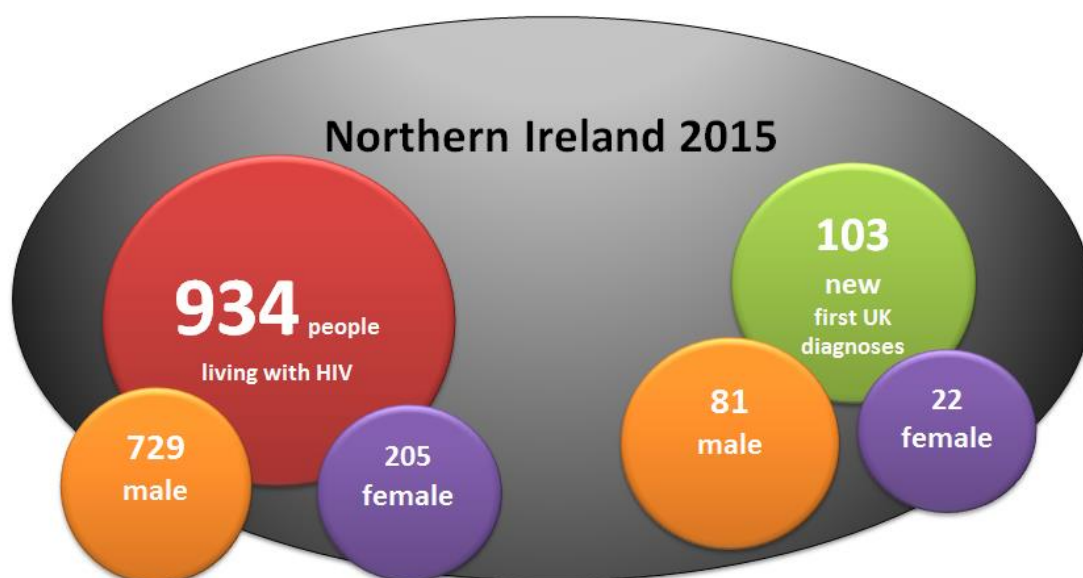


HIV surveillance in Northern Ireland 2016



An analysis of data for the calendar year 2015

Contents	Page
1 Surveillance arrangements	3
2 Introduction and key points	4
3 Trend information	5
- New diagnoses	5
• Age and gender	
• Route of transmission	
• CD4 surveillance	
• RITA surveillance	
- Prevalent infection	10
- HIV testing	12
4 Summary and conclusions	14
5 Recommendations	14
6 References	15

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 2015.

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 asterisk. 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.

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
- 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
- HIV incidence: Recent Infection Testing Algorithm (RITA) applied to new diagnoses to provide an indication of recently acquired infection
- 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 2015 (Survey of Prevalent HIV Infections Diagnosed – SOPHID)
- HIV Testing data: data relating to the number of tests carried out in Northern Ireland is provided by the Regional Virology Laboratory and the Antenatal Screening Programme

2: Introduction and key points

HIV/AIDS is a viral infection caused by type 1 and type 2 HIV retroviruses. Modes of transmission include sexual contact, the sharing of HIV-contaminated needles and syringes, and transmission from mother to child before, during or shortly after birth. Although the risk of HIV transmission through sexual contact is lower than for most other sexually transmitted agents, this risk is increased in the presence of another sexually transmitted illness, particularly where ulcerative. Early treatment of the disease with highly active antiretroviral therapy (HAART) has produced major advances in survival rates.

During 2015, 6,095 new HIV diagnoses were made in the UK, an decrease of 1% from 6,172 new diagnoses the previous year.¹ Although prevalence in Northern Ireland remains lower than in the other UK countries, the percentage increase in annual new diagnoses in Northern Ireland between 2005 and 2015 is highest of the UK countries. The key routes of transmission remain sexual contact involving men who have sex with men (MSM) and sexual contact between men and women.

During 2015:

- 103 new first-UK cases of HIV were diagnosed in Northern Ireland
- 58 (56%) new HIV diagnoses occurred through MSM transmission
- 35 (34%) new HIV diagnoses occurred through heterosexual transmission
- 28 (29%) new HIV diagnoses were made at a late stage (cases which had a CD4 count and the CD4 count <350 cells/mm³ within 91 days of diagnosis)
- 934 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2015) received care
- of those receiving care, 96% (896/934) acquired their infection through sexual contact and of these 60% (541/896) acquired their infection through sexual contact involving MSM and 40% (355/896) acquired their infection through heterosexual contact
- 62,238 HIV tests were carried out in Northern Ireland, of which 25,443 were performed as part of the antenatal screening programme

3: Trend information

New diagnoses

There has been a general upward trend in new HIV diagnoses in Northern Ireland since 2000. In 2015 there were 103 new first UK diagnosed cases in Northern Ireland which is the highest number recorded in any year (Figure 1).

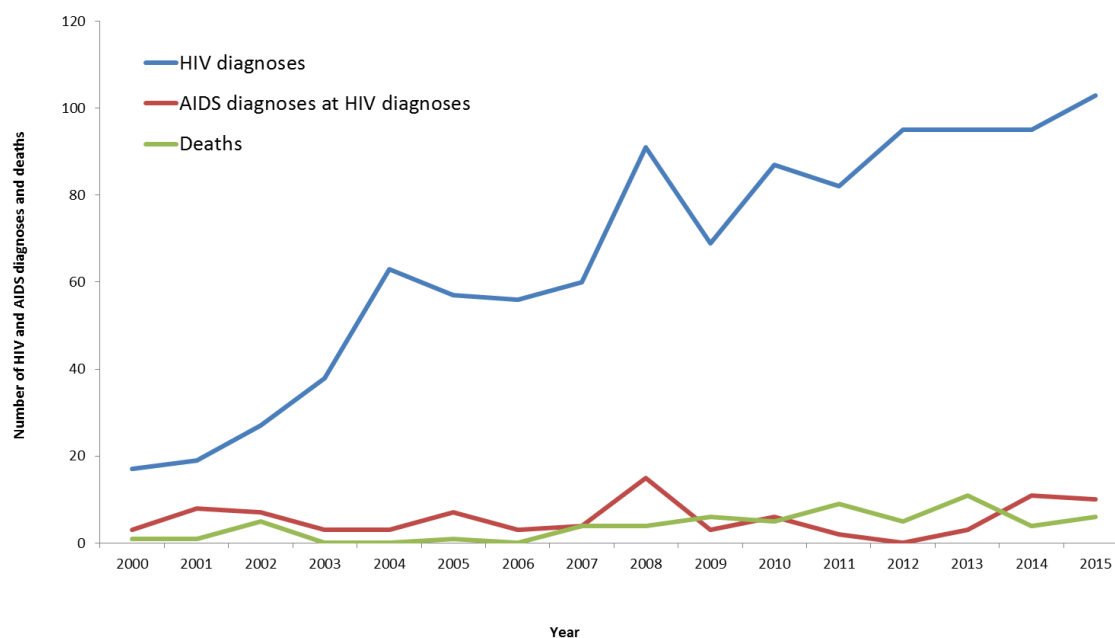
In the ten years since 2005 Northern Ireland has seen an 81% increase in new cases in contrast to the UK overall where there has been a fall of 23% (Table 1).

Table 1: New HIV diagnoses, by UK country, 2005-2015

Country	2005	2010	2013	2014	2015	1 year change	10 year change	5 year change
						% +/- 2014-2015	% +/- 2005-2015	% +/- 2010-2015
England	7,361	5,812	5,529	5,567	5,512	-1%	-25%	-5%
Wales	114	153	132	186	168	-10%	47%	10%
Scotland	347	312	280	304	300	-1%	-14%	-4%
Northern Ireland	57	87	95	95	103	8%	81%	18%
United Kingdom*	7,879	6,364	6,036	6,152	6,083	-1%	-23%	-4%

*UK total excludes cases from the Channel Islands, Isle of Man and cases where region is not known

Figure 1: New HIV and AIDS diagnoses and deaths among HIV-infected persons, by year of diagnosis or death, Northern Ireland, 2000–2015



* AIDS diagnosis indicates report of an AIDS defining illness within 3 months of HIV diagnosis

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 2015 there were 10 people who were diagnosed with AIDS at their HIV diagnosis (reported AIDS defining illness within 3 months of HIV diagnosis).

Age and gender

Between 2005 and 2015 females accounted for 23% of the total new cases diagnosed (204/890). Males accounted for 77% (686/890) of which 69% (472/686) were MSM. Diagnostic rates have been consistently highest in males and have shown an increased trend over this period. Rates have remained relatively stable in females over this time (Figure 2).

Diagnostic rates are generally higher in males across all age groups, with peak rates in the 25-34 and 35-44 year age groups. Rates are lower in females and more evenly distributed across the 20-24, 25-34 and 35-44 age groups (Table 2, 3).

Figure 2: Diagnostic rates of HIV by gender per 100,000 population aged 20+ years, Northern Ireland, 2005–2015

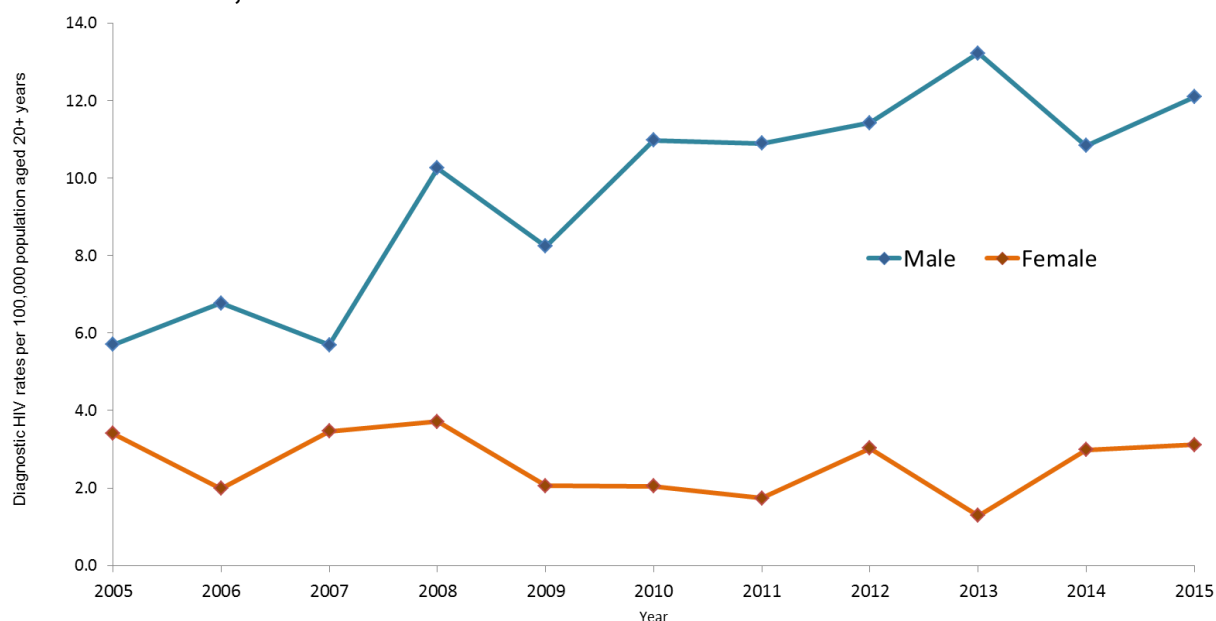


Table 2: Diagnostic rates of HIV in males per 100,000 population aged 20+ years by year of diagnosis, Northern Ireland, 2005-2015

Age Group	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
20-24	13.2	4.8	3.2	7.9	4.7	11.0	11.1	12.7	8.1	16.2	6.5
25-34	7.0	14.8	10.3	14.4	20.2	20.8	19.1	24.0	19.8	14.0	23.7
35-44	10.9	10.9	10.0	13.9	11.7	15.9	15.3	15.6	21.0	20.5	20.5
45+	1.4	2.3	2.6	7.7	3.1	5.5	6.3	5.3	9.2	5.6	6.4
20+ years	5.7	6.8	5.7	10.3	8.2	11.0	10.9	11.4	13.2	10.8	12.1

Table 3: Diagnostic rates of HIV in females per 100,000 population aged 20+ years, by year of diagnosis, Northern Ireland, 2005-2015

Age Group	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
20-24	5.1	1.6	4.8	4.8	4.8	0.0	1.6	8.2	0.0	3.3	1.7
25-34	6.8	5.9	9.9	10.6	3.2	3.2	5.6	6.3	3.2	5.6	5.6
35-44	5.3	1.5	3.7	3.7	4.5	3.1	1.6	2.4	1.6	5.7	6.5
45+	1.2	0.9	0.9	1.1	0.3	1.6	0.5	1.3	0.8	1.3	1.5
20+ years	3.4	2.0	3.5	3.7	2.1	2.0	1.7	3.0	1.3	3.0	3.1

Route of transmission

Sex between men and sex between men and women remain the most significant categories of probable route of infection, accounting for 93% (1168/1253) of all new diagnoses to date (Table 4). Heterosexual transmission has assumed increasing importance since 2003 and has now accounted for 40% (502/1253) of all new diagnoses made to date. MSM exposure accounted for 56% of new diagnoses in 2015 (58/103) and has accounted for 53% (666/1253) of all new diagnoses made to date. Since 2009 MSM exposure has consistently accounted for more diagnoses than heterosexual exposure. Twenty four new diagnoses have been acquired through injecting drug to date.

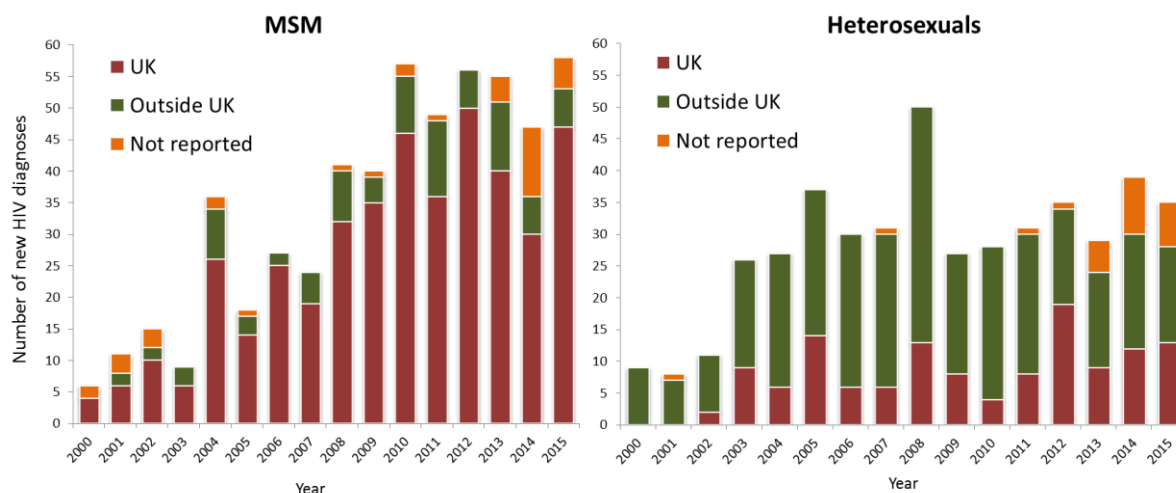
Table 4: New diagnoses of HIV by year of diagnosis and probable route of infection, MSM and Heterosexual exposure, Northern Ireland, 1999-2015

Year	Sex between men (MSM)	Sex between men and women
1999 or earlier	118	49
2000	6	9
2001	11	7
2002	15	11
2003	9	28
2004	35	27
2005	18	37
2006	27	29
2007	24	31
2008	41	50
2009	40	27
2010	57	28
2011	49	31
2012	56	36
2013	55	29
2014	47	38
2015	58	35
Total**	666	502

**Excludes other categories of route of infection

Cumulative data from 2000–2015 show that for cases acquired through MSM exposure and where probable country of infection was known, the majority were infected within the UK (83%:426/513). In contrast for cases acquired through heterosexual exposure the majority were infected outside the UK (70%:299/428). There has been little change to this annual pattern since 2000 (Figure 3).

Figure 3: New HIV diagnoses by year of diagnosis, by country where infection was acquired, Northern Ireland, 2000–2015



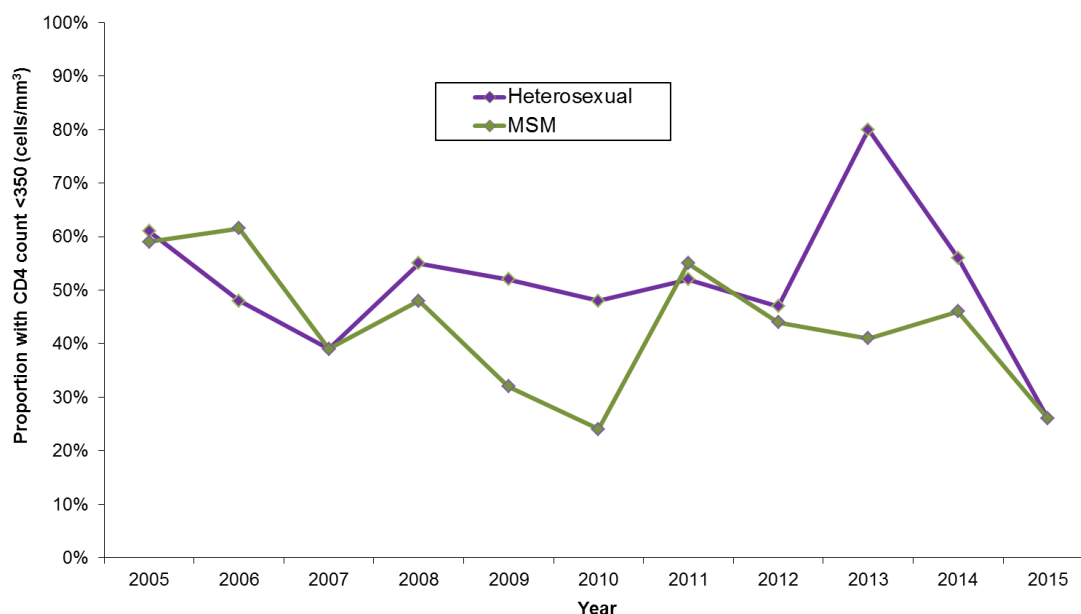
CD4 surveillance

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/mm³ 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 2015 are:

- CD4 counts within 91 days were available for 94% (97/103) of diagnoses
- 29% (28/97) of individuals were diagnosed at a late stage. This compares favourably with the overall UK proportion of 39%
- Of the sexually transmitted cases 26% (24/93) were diagnosed late
- 26% (9/35) of individuals with heterosexually acquired HIV were diagnosed at a late stage and represents a reduction from 2014 (56%)
- 26% (15/58) of individuals with MSM acquired HIV were diagnosed at a late stage. This represents a decrease from 47% in 2014

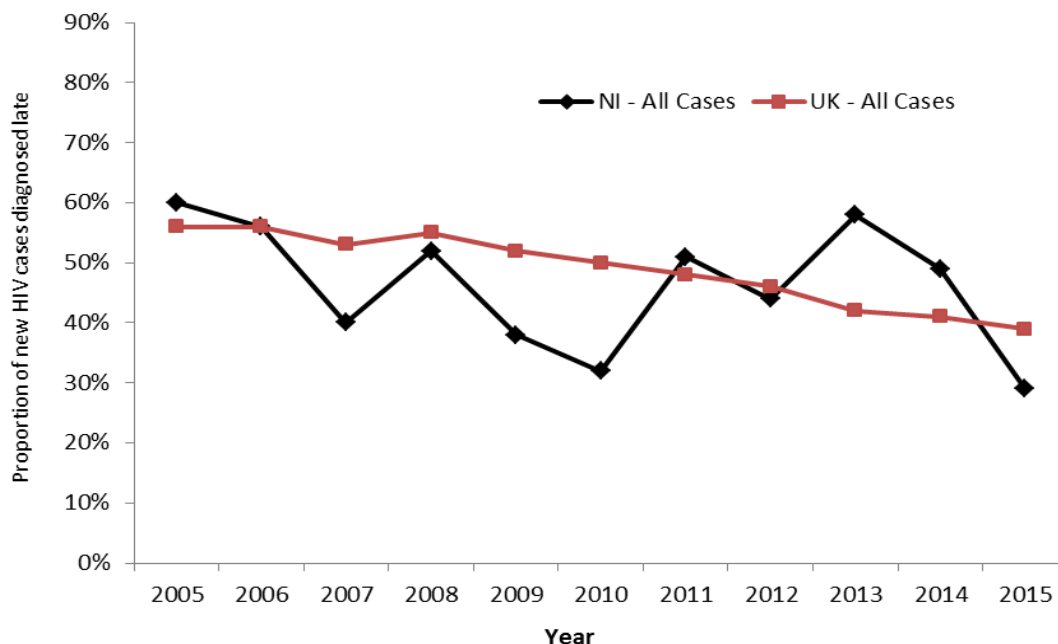
Figure 4: Proportion of new HIV diagnoses in adults in Northern Ireland with a CD4 count <350 cells/mm³ within 91 days of diagnosis, by probable route of infection, Northern Ireland, 2005–2015



Interpretation of these data for Northern Ireland is difficult due to inherent “small number variation”. However, the trend in proportions of individuals diagnosed at a late stage has fallen over the past two years from a peak in 2013. The UK overall proportion has been steadily falling since 2005 (Figure 5). 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 (Figure 4). In Northern Ireland in 2015 the proportion of MSM and heterosexually acquired diagnosed late were both 26%.

Figure 5: Proportion of new HIV diagnoses in adults diagnosed with a CD4 count <350 cells/mm³ within 91 days of diagnosis, Northern Ireland and UK, 2005-2015



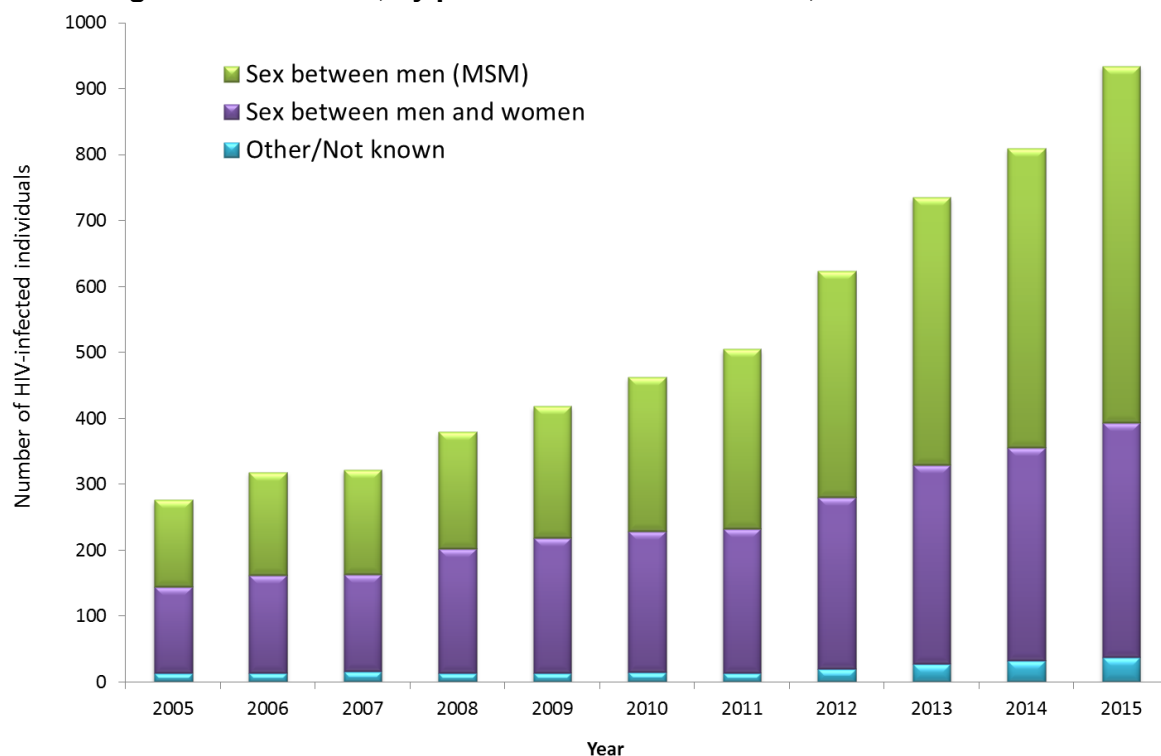
RITA surveillance

The Recent Infection Testing Algorithm (RITA) was extended to Northern Ireland in 2010.² 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 2015, the Northern Ireland coverage rate for RITA surveillance was 67% (69/103). Results showed that 14% (10/69) of the newly diagnosed HIV infections tested were recent infections. This compares with 13% in 2014 (10/76).

Prevalent infection

Figure 6: Annual number of HIV infected individuals resident in Northern Ireland accessing HIV-related care, by probable route of infection, 2005–2015

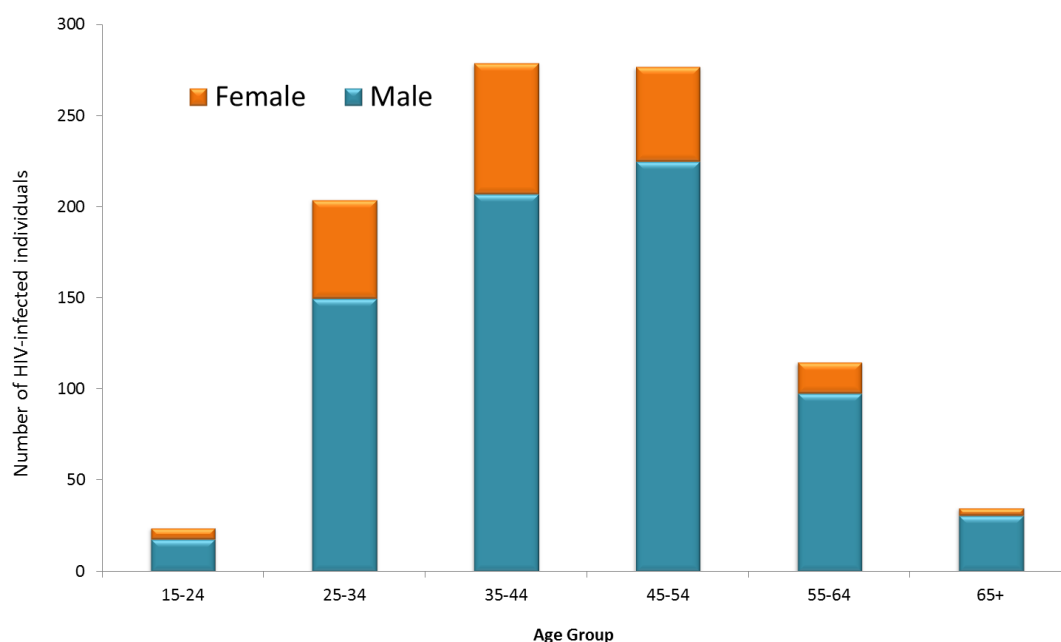


934 residents of Northern Ireland with diagnosed HIV infection (729 men and 205 women) accessed care in 2015. This represents a 15.5% increase on 2014 (809) and a more than two fold increase since 2005 (276) (Figure 6). These figures reflect both the continued increase in new diagnoses and the role of HAART in increasing survival rates.

The greatest number of people who received HIV-related care in 2015 were in the 35-54 year age group (60%:556/934) (Figure 7). Eighty-three percent of people who received HIV-related care during 2014 were white ethnicity, 12% were black-African and 5% were classified in other ethnic groups.

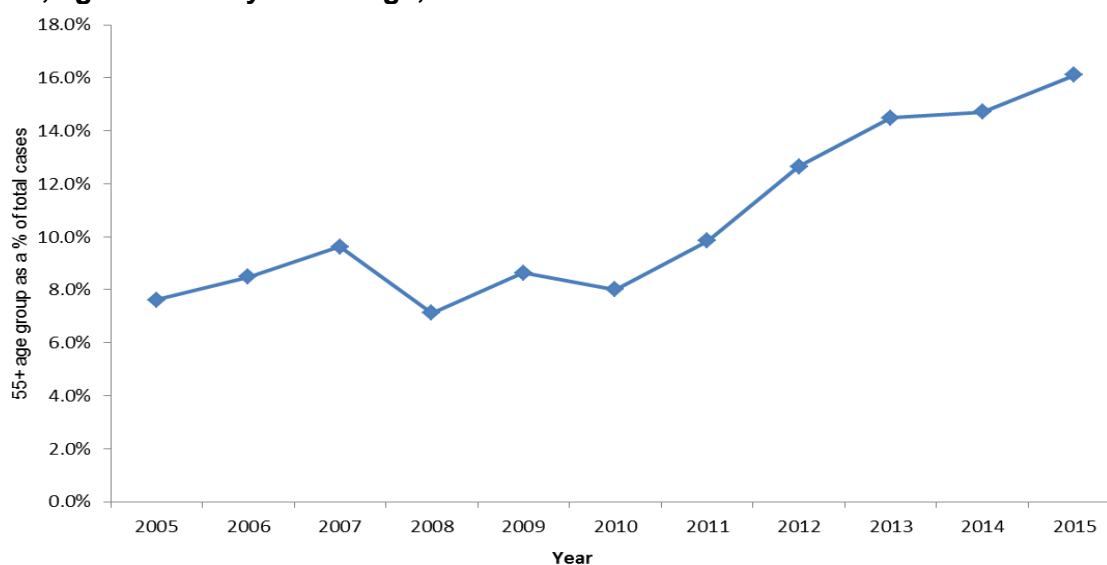
In 2015 sexual exposure accounted for 96% (896/934) of people living with HIV. In 2005 MSM exposure accounted for 50% (132/263) of cases compared to 2015 where it now accounts for 60% (541/896).

Figure 7: Number of HIV infected individuals resident in Northern Ireland accessing HIV-related care, by age and gender, 2015



In Northern Ireland, an increasing proportion of those receiving HIV care are aged over 55 years. In 2005 the 55 and over age group accounted for 7.5% of the total number of people accessing care. The rate remained relatively stable until 2010 and has been increasing since. In 2015 this age group now accounts for 16% (Figure 8). This reflects an increase in new diagnoses in this age group and the now much improved survival rates of HIV.

Figure 8: Proportion of HIV infected individuals resident in Northern Ireland accessing care, aged over 55 years of age, 2005-2015



HIV testing

National guidelines emphasise the importance of HIV testing in key healthcare settings.³ Early diagnosis has important individual and population benefits.⁴ 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.

During 2015, 36,795 HIV tests were performed outside the antenatal screening programme in Northern Ireland. This represents an increase of 5% (1,611) from 2014 (35,184) to 2015 (36,795) (Table 5).

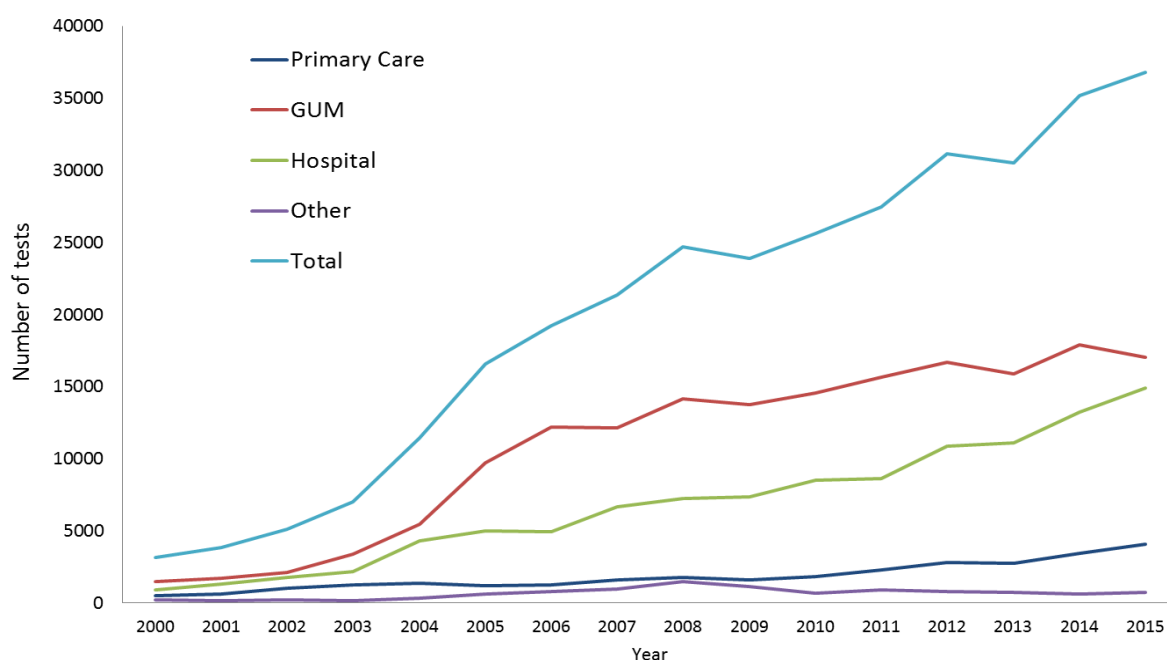
Table 5: Number of HIV tests performed by healthcare setting, Northern Ireland, 2010-2015 (excludes antenatal screening programme)

	2010	2011	2012	2013	2014	2015	Change from 2014-2015	
GUM	14,583	15,639	16,725	15,912	17,887	17,022	-	-5%
Hospital	8,542	8,628	10,882	11,114	13,253	14,942	1,689	13%
Primary Care	1,832	2,272	2,786	2,783	3,433	4,093	660	19%
Other	701	927	783	741	611	738	127	21%
Total	25,658	27,466	31,176	30,550	35,184	36,795	1,611	5%

Note: 2014 data has been recalculated

Since 2000 there has been a continued upward trend in the total number of tests carried out. There were 3,138 tests carried out in 2000 and 36,795 carried out in 2015, representing a greater than eleven-fold increase (Figure 9). Most testing is carried out in the GUM or hospital setting accounting for over 87% of all tests.

Figure 9: Annual number of HIV tests performed, by healthcare setting, Northern Ireland, 2000–2015 (excludes antenatal screening programme)



National UK guidance⁴ recommends that routine testing should be considered for all general medical admissions to hospital and for all men and women registering in general practice

areas where the prevalence of diagnosed HIV infection is >2/1000 population aged 15-59 years.

Estimates of prevalence derived from the Survey of Prevalent Infection Diagnosed (SOPHID) show that Lisburn and Castlereagh, and Belfast Local Government District areas have the highest rates in Northern Ireland but remain significantly below the 2/1000 threshold (Table 6). The rate for Northern Ireland overall has increased from 0.68 (2014) to 0.78 per 1,000 population for this age group.

Table 6: Diagnosed HIV prevalence per 1,000 population aged 15-59 years, by Local Government District, Northern Ireland, 2015

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

4: Summary and conclusions

- The annual overall number of new diagnoses has increased again in 2015
- Sexual exposure is the predominant route of transmission, with MSM accounting for the majority of new diagnoses each year since 2009
- The majority of heterosexually acquired infections are acquired outside the UK, while the majority of MSM diagnoses are acquired within the UK
- Overall HIV testing activity levels continue to increase. They remain lower in primary care compared with GUM or hospital settings

5: Recommendations

1. Promoting safer sex and the benefits of HIV testing to the general population, young people and MSM remain key sexual health messages.
2. Guidance on HIV testing should continue to be reinforced to health professionals.

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