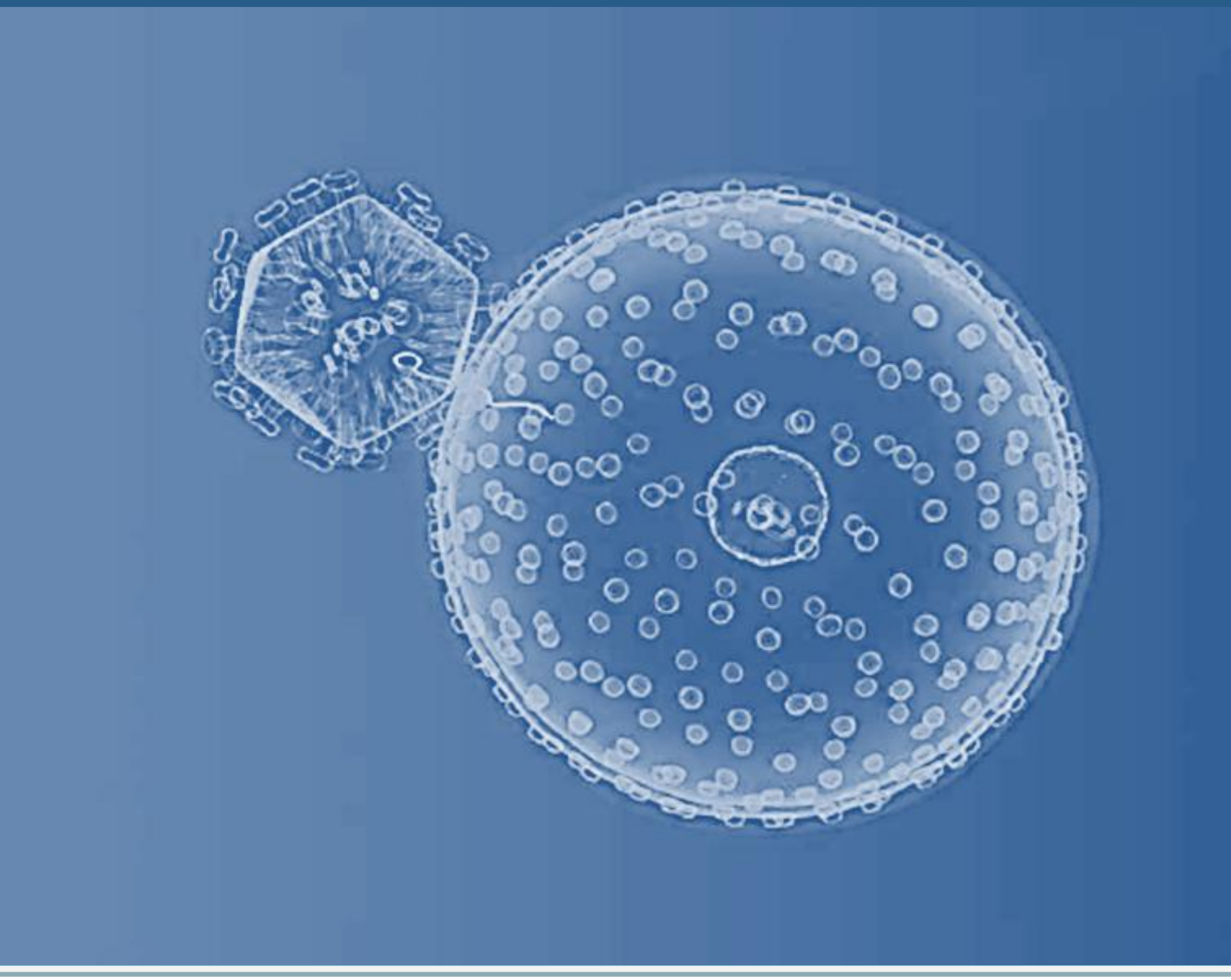
HIV surveillance in Northern Ireland 2012

An analysis of data for the calendar year 2011



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 2011.

Following recent 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.

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 the Health Protection Agency's Centre for Infections 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 2011 (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.

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.

The World Health Organization (WHO) reported that there were 34.2 million people living with HIV in 2011, of whom 2.5 million were newly diagnosed.[1] During 2011, 6,280 new HIV diagnoses were made in the UK.[2] Although prevalence in Northern Ireland remains lower than in the other UK countries, the percentage increase in annual new diagnoses in Northern Ireland between 2000 and 2011 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.

Early diagnosis has important individual benefits (better prognosis) and population benefits (reduced transmission of infection to others).

During 2011:

- 82 new first-UK cases of HIV were diagnosed in Northern Ireland, a rate of 7.5 per 100,000 population aged 15–59 years (12.9 per 100,000 males and 2.2 per 100,000 females);
- of the 82 new diagnoses, 41% were resident in the Belfast LCG area, 15% in the Northern LCG area, 13% in the South Eastern LCG area, 16% in the Southern LCG area, 11% in the Western LCG area, and for 4%, the area of residence was unknown or ROI;
- 48 (59%) new HIV diagnoses occurred in MSM. The majority of these cases were born in the UK (69%:33/48), acquired their infection in the UK (91%:30/33) and were of white ethnicity (100%:30/30);
- 522 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2011) received care;
- of those receiving care, 53% (275/522) acquired their infection through sexual contact involving MSM and 44% (231/522) acquired their infection through heterosexual contact;
- 53,294 HIV tests were carried out in Northern Ireland, of which 25,828 were performed as part of the antenatal screening programme.

Trend information

New diagnoses

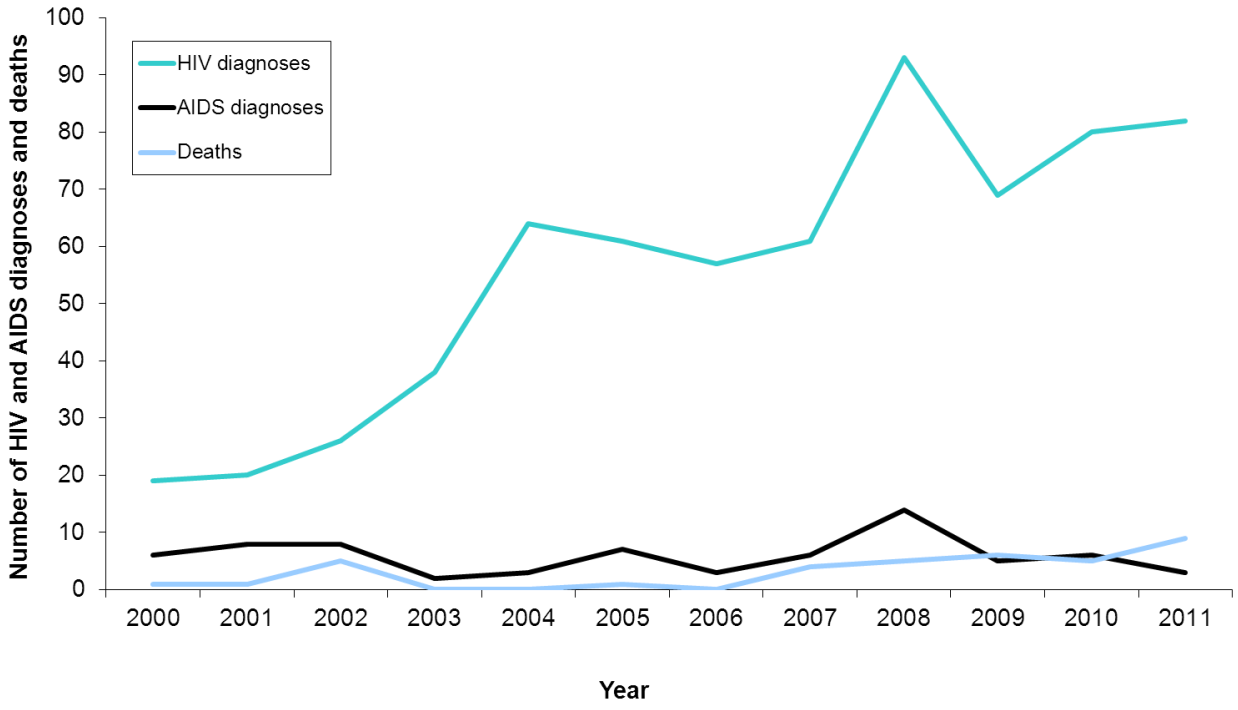
The annual number of new first-UK diagnoses made in Northern Ireland increased by 3% from 80 in 2010 to 82 in 2011 (Figure 1). Compared with the rest of the UK, Northern Ireland had the largest proportional increase (332%) in new HIV diagnoses between 2000 and 2011 (Table 1).

Table 1 New HIV diagnoses, by country

Country	2000	2008	2009	2010	2011	% +/- 2000-2011	% +/- 2010-2011
England	3,770	6,679	6,109	5,845	5,717	52%	-2%
Wales	46	146	141	151	169	267%	12%
Scotland	166	331	316	284	302	82%	6%
Northern Ireland	19	93	69	80	82	332%	3%
United Kingdom*	**4,002**	**7,254**	**6,642**	**6,364**	**6,280**	**57%**	**-1%**

* Includes 22 cases from the Channel Islands and the Isle of Man, and five cases where the region was not known

Figure 1: New HIV and AIDS diagnoses and deaths among HIV-infected persons, by year of diagnosis or death, Northern Ireland, 2000–2011



The number of first-UK HIV diagnoses diagnosed as AIDS during 2011 has been the second lowest annual number reported to date. Although the number of deaths reported in individuals with HIV has remained relatively low, due largely to the influence of HAART, 2011 saw the highest annual number reported to date, (Table 2).

Table 2: New diagnoses of HIV and AIDS in Northern Ireland, by year of diagnosis, and deaths in HIV-infected individuals, by year of death

Year	HIV diagnoses	AIDS diagnoses	Deaths
1996 or earlier	162	72	58
1997	11	*	*
1998	9	*	*
1999	18	7	*
2000	19	6	*
2001	20	8	*
2002	26	8	5
2003	38	*	0
2004	64	*	0
2005	61	7	*
2006	57	*	0
2007	61	6	*
2008	93	14	5
2009	69	5	6
2010	80	6	5
2011	82	*	9
Total	**870**	**155**	**102**

Table 3: New diagnoses of HIV in Northern Ireland, by year of diagnosis and probable route of infection

Year	Sex between men (MSM)	Sex between men and women
1996 or earlier	97	36
1997	8	*
1998	6	*
1999	7	9
2000	7	9
2001	11	8
2002	14	11
2003	10	27
2004	36	26
2005	19	40
2006	27	30
2007	24	32
2008	43	50
2009	40	27
2010	54	26
2011	48	32
Total**	**451**	**369**

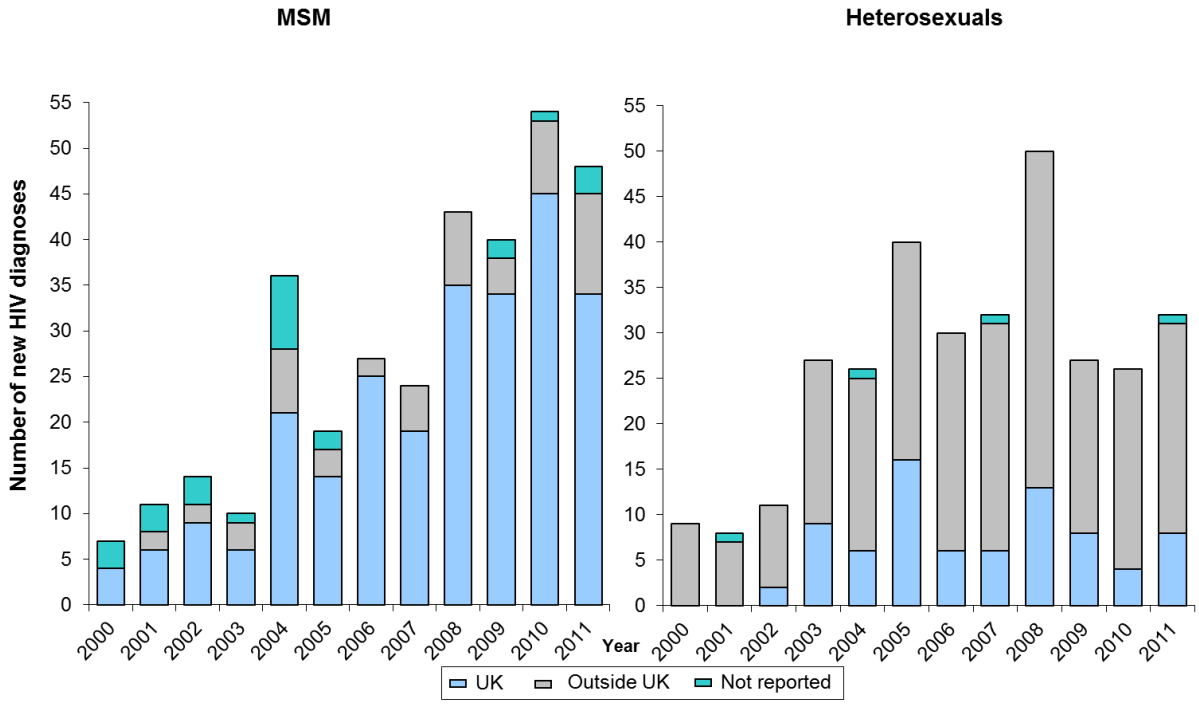
**Excludes other categories

Route of transmission

Sex between men and sex between men and women remain the most significant categories of probable route of infection, accounting for 94% (820/870) of new diagnoses to date (Table 3). Heterosexual transmission has assumed increasing importance since 2002 and has now accounted for 42% (369/870) of new diagnoses made to date. However, MSM exposure accounted for 59% of new diagnoses in 2011 (48/82) and has accounted for 52% (451/870) of new diagnoses made to date. Seventeen new diagnoses have been acquired through injecting drug use and 33 new diagnoses acquired through other/undetermined causes to date.

Cumulative data from 2000–2011 show that for cases acquired through heterosexual exposure, and where location of exposure was known, the majority were infected outside the UK (75%:236/314). In contrast for cases acquired through MSM exposure, the majority were infected within the UK (82%:252/307) (Figure 2).

Figure 2: New HIV diagnoses in Northern Ireland, by year of diagnosis, by country where infection was acquired, 2000–2011



Age and gender

Between 2007-2011 diagnostic rates have been consistently highest in males, with peak rates in the 25–34 and 35–44 years age groups. In females, rates were highest in those aged 25–34 years. Since 2007 there has been a general increase in rates across all age groups in males, in contrast to a general decrease in female age groups (Tables 4, 5).

Table 4: Diagnostic rates of HIV in males in Northern Ireland per 100,000 population, by year of diagnosis, 2007-2011

Age Group	2007	2008	2009	2010	2011
20-24	2.9	8.8	7.4	13.7	9.3
25-34	10.5	16.2	19.2	17.9	18.5
35-44	11.0	13.4	13.6	14.5	14.7
45+	2.3	7.7	2.2	5.2	6.6

Table 5: Diagnostic rates of HIV in females in Northern Ireland per 100,000 population, by year of diagnosis, 2007-2011

Age Group	2007	2008	2009	2010	2011
20-24	6.2	4.6	6.2	0.0	3.2
25-34	10.3	11.0	3.3	3.3	4.9
35-44	4.6	4.6	4.6	3.9	1.6
45+	0.6	0.8	0.3	1.4	0.5

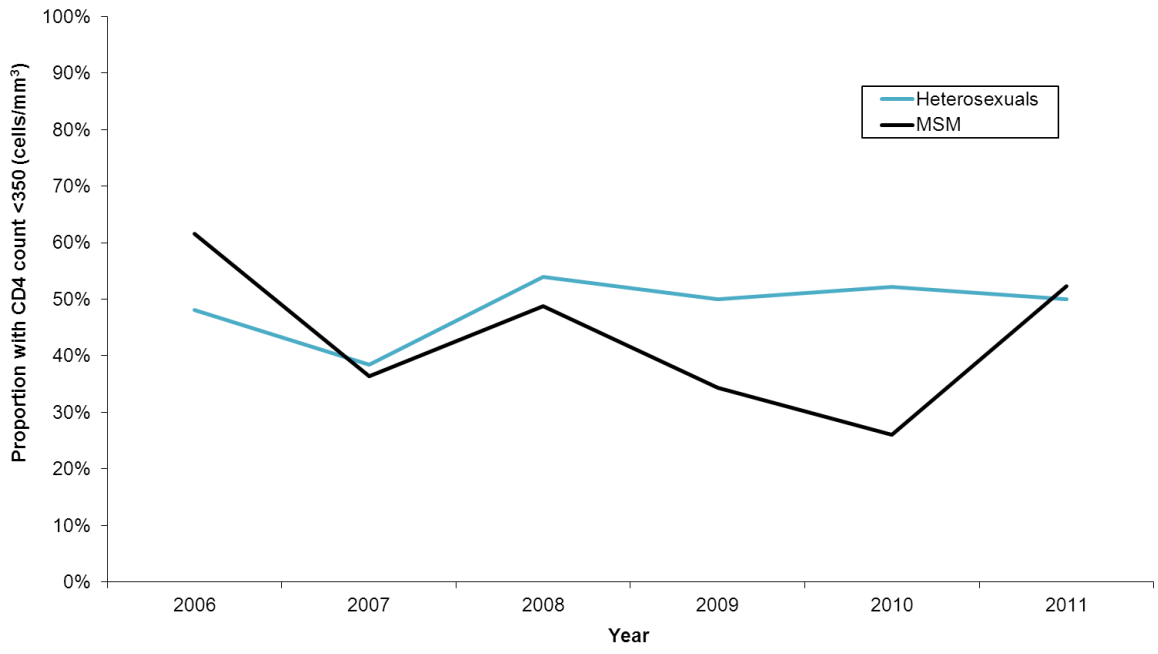
CD4 surveillance

Analysis of CD4 cell counts, combined with other HIV surveillance data, can provide an indication of an individual's stage of disease at diagnosis.

Laboratories across England, Wales and Northern Ireland participate in the surveillance scheme.[3] A cell count of less than 350 cells/mm^3 within 91 days of diagnosis is a proxy indicator of a late diagnosis.

CD4 counts were available for 89% (73/82) of diagnoses made in 2011. The proportion of MSM diagnoses made at a late stage (52%:22/42) was similar to that of heterosexual diagnoses (50%:15/30).

Figure 3: Proportion of HIV-diagnosed adults in Northern Ireland with a CD4 count less than 350 cells/mm^3 within 91 days of diagnosis, by probable route of infection, 2006–2011



The proportion of heterosexuals with a CD4 count less than 350 cells/mm^3 has remained relatively stable each year since 2008, whereas that of MSM has shown greater variation (Figure 3).

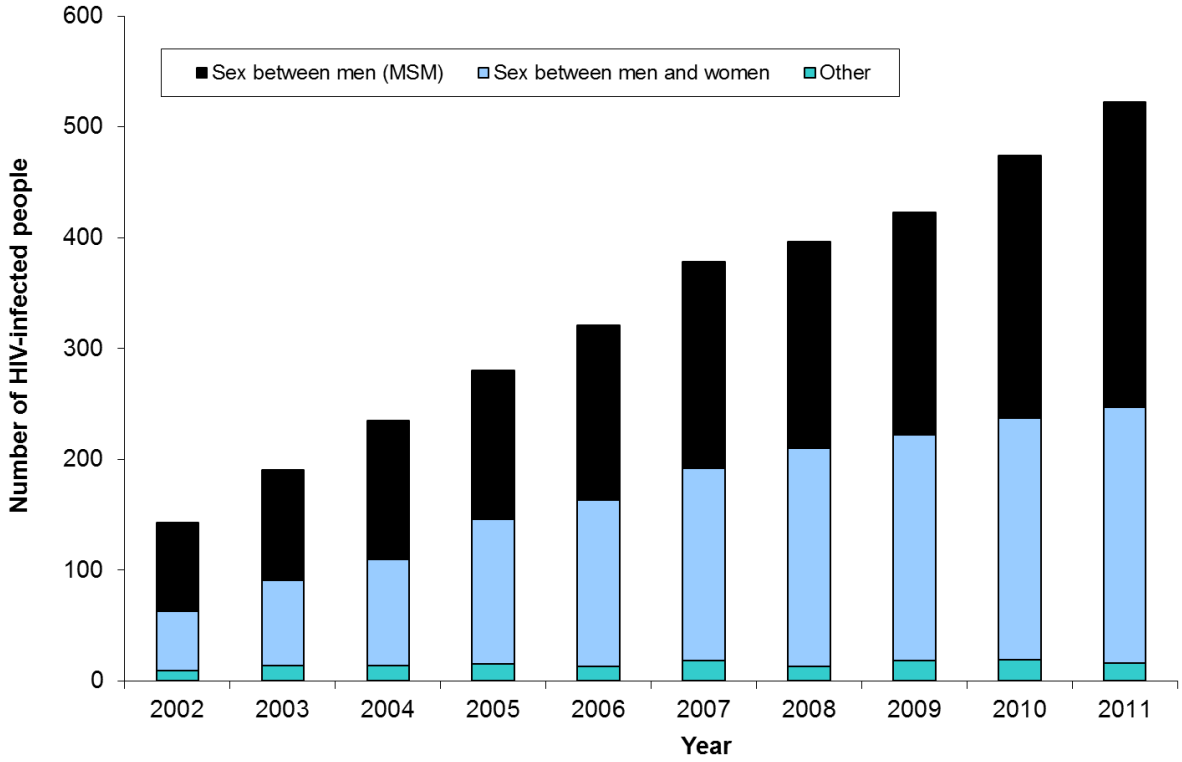
RITA surveillance

The Recent Infection Testing Algorithm (RITA) was extended to Northern Ireland in 2010[4]. This distinguishes recently acquired infection from long-standing infection and can be used to assess incidence at a population level.

During 2011, the Northern Ireland coverage rate for RITA surveillance was 57% (47/82). Results showed that 15% (7/47) of the newly diagnosed HIV infections tested were recent infections (most likely acquired in the four or five months preceding HIV diagnosis).

Prevalent infection

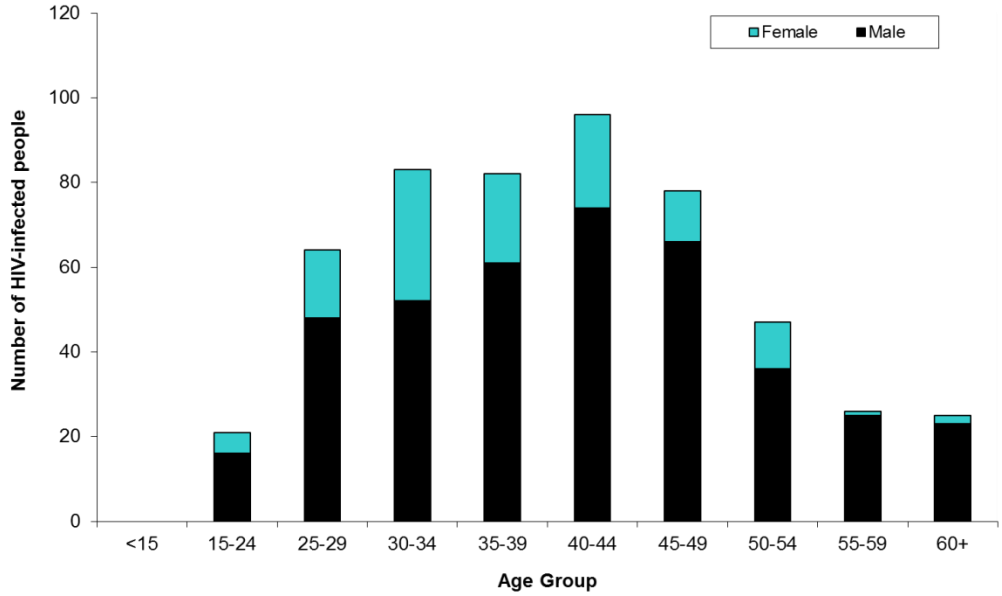
Figure 4: Annual number of HIV infected individuals accessing HIV-related care in Northern Ireland, by probable route of infection, 2002–2011



There were 522 residents of Northern Ireland with diagnosed HIV infection (401 men and 121 women) who accessed care in 2011. This represents a 10% increase on 2010 (474) and more than a three-fold rise since 2002 (143) (Figure 4). These figures reflect both the continued increase in new diagnoses and the role of HAART in increasing survival rates.

Of those who received care during 2011, 37% (195/522) were resident in the Belfast LCG area, 18% (93/522) in the Northern LCG area, 16% (82/522) in the South Eastern LCG area, 14% (71/522) in the Southern LCG area, 10% (52/522) in the Western LCG area, and for 6%, the area of residence was unknown.

Figure 5: Number of HIV infected individuals accessing HIV-related care in Northern Ireland, by age and gender, 2011

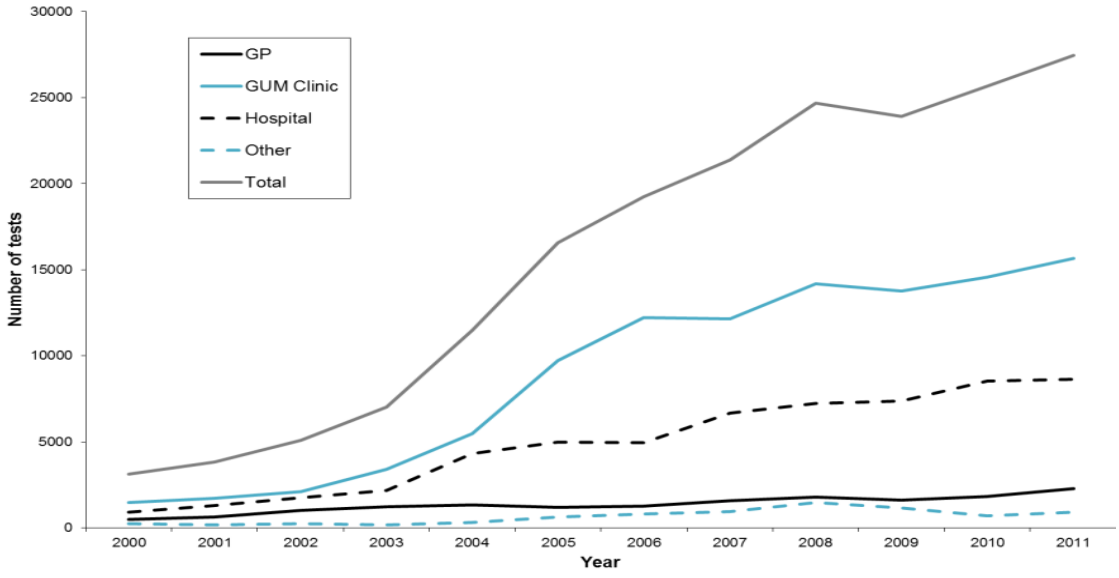


The majority of people who received HIV-related care in 2011 were aged between 30 and 49 years (65%:339/522) (Figure 5). Seventy seven percent of people who received HIV-related care during 2011 were white, 17% were black-African and 6% were classified in other ethnic groups.

HIV testing

Recent guidelines have re-emphasised the importance of HIV testing in key healthcare settings.[5] During 2011, 27,466 HIV tests were performed outside the antenatal screening programme in Northern Ireland. Although all settings showed an increase in testing, rates have been consistently highest in GUM clinics (Figure 6). The rate of increase is also highest in GUM clinics, followed by hospitals and primary care.

Figure 6: Annual number of HIV tests performed, by healthcare setting, Northern Ireland, 2000–2011



Summary and conclusions

- 2011 saw a continuation of the general trend of an increase in the number of annual new HIV diagnoses.
- Sexual exposure is the predominant route of transmission with MSM accounting for the majority of new diagnoses each year since 2009.
- Although the number of new HIV diagnoses in MSM in 2011 has remained similar to 2010, MSM remain the group most at risk of acquiring HIV within the UK.
- The role of primary care in providing HIV testing remains under developed.

Recommendations

- Safer sex messages should continue to be promoted to the general population, young people and MSM. The risks of unprotected casual sex, both within and outside Northern Ireland, need to be made clear.
- The implementation of guidance on HIV testing and the provision of post-exposure prophylaxis should continue to be reinforced.
- There should be a renewed focus on reinforcing prevention messages and promoting regular HIV testing among MSM.

6: References

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