

HIV and STI surveillance in Northern Ireland 2011

An analysis of data for the calendar year 2010

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This report aims to provide an overview of HIV and STI 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 2010.

Following recent Office for National Statistics (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.

Summary points

- 79 new first-UK HIV diagnoses were made in Northern Ireland during 2010, an increase of 20% on 2009 (66).
- 474 HIV-infected residents of Northern Ireland received HIV-related care during 2010, a increase of 12% on 2009 (423).
- 58 new diagnoses of infectious syphilis were reported during 2010, an increase of 4% on 2009 (56).

In Northern Ireland GUM clinics in 2010

- New STI diagnoses increased by 6%; 7,838 in 2010 compared with 7,417 in 2009.
- New diagnoses of uncomplicated chlamydia decreased by 4%; 1,832 in 2010 compared with 1,906 in 2009.
- New diagnoses of uncomplicated gonorrhoea increased by 13%; 203 in 2010 compared with 180 in 2009.
- New diagnoses of genital herpes simplex (first episode) increased by 18%; 410 in 2010 compared with 346 in 2009.
- New diagnoses of genital warts (first episode) increased by 2%; 2,120 in 2010 compared with 2,086 in 2009.
- New diagnoses of non-specific genital infection increased by 14%; 2,752 in 2010 compared with 2,406 in 2009.

Surveillance arrangements and sources of data

HIV

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 four main surveillance categories are:

- New HIV diagnoses: data relating to individuals whose first UK diagnosis was made in Northern Ireland.
- 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 2010 (Survey of prevalent HIV infections diagnosed – SOPHID).
- CD4 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.

KC60 returns

The most comprehensive source of surveillance data for sexually transmitted infections (STIs) in Northern Ireland is the statutory KC60 return each quarter from GUM clinics. This return records the numbers of new diagnoses for a range of STIs. Individual patients may contribute more than one diagnosis. For selected conditions, additional age, gender and sexual orientation information is provided. Regularly updated summary statistics are presented at: www.publichealthagency.org

There are two important limitations to KC60 data. Firstly, as data reflect only those diagnoses made in GUM clinics, it follows that accessibility of those services to the public, as measured by service capacity and geographic location of services, may influence the diagnostic rate of STIs. Thus, direct comparison of different regions, or indeed different time periods within the same region if service access should change, must be interpreted with caution.

Secondly, unlike HIV surveillance arrangements, no residence-based data are collected. Given that the majority of new diagnoses originate from the GUM clinic at the Royal Victoria Hospital (the clinic that provides greatest access), the clinic location is not a useful proxy for patient residence.

Laboratory reporting

Laboratory data represent an important complementary source to clinician-initiated surveillance arrangements. Laboratory reporting of *Chlamydia trachomatis* in Northern Ireland is provided for 2006–2010. Antibiotic susceptibility information for *Neisseria gonorrhoeae* isolates is provided for 2009–2010.

Enhanced syphilis surveillance

Enhanced surveillance arrangements for infectious syphilis in Northern Ireland have been in place since the outbreak was first recognised in September 2001. Based on anonymised, confidential reporting by GUM clinicians to the Public Health Agency (PHA), a range of demographic, clinical and risk factor data are collected on cases of primary, secondary and early latent stage syphilis.

Enhanced lymphogranuloma venereum (LGV) surveillance

Enhanced surveillance arrangements for cases of LGV in Northern Ireland have been in place since 2004. Based on anonymised, confidential reporting by GUM clinicians to the PHA, a range of demographic, clinical and risk factor data are collected.

1: Diagnoses provided in Northern Ireland GUM clinics in 2010

During 2010:

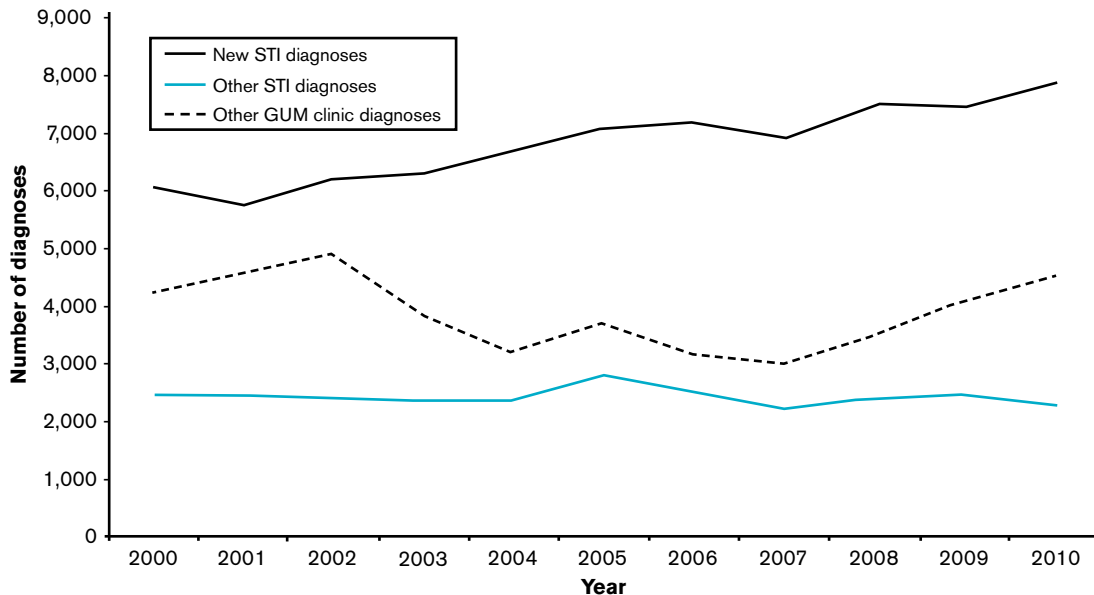
- 7,838 **new STI diagnoses** were made, compared with 7,417 in 2009, an increase of 6%;
- males accounted for 69% (5,420/7,838) of **new STI diagnoses**;
- three types of infection accounted for 86% of **new STI diagnoses** – non-specific genital infection (35%), genital warts (first infections) (27%) and chlamydia (24%);
- 2,243 **other STI diagnoses** were made;
- there were 4,500 **other diagnoses** made at GUM clinics.

New STI diagnoses
Chlamydial infection (uncomplicated and complicated)
Gonorrhoea (uncomplicated and complicated)
Infectious and early latent syphilis
Genital herpes simplex (first episode)
Genital warts (first episode)
New HIV diagnosis
Non-specific genital infection (uncomplicated and complicated)
Chancroid/lymphogranuloma venereum (LGV)/donovanosis
Molluscum contagiosum
Trichomoniasis
Scabies
Pediculus pubis
Other STI diagnoses
Congenital and other acquired syphilis
Recurrent genital herpes simplex
Recurrent and re-registered genital warts
Subsequent HIV presentations (including AIDS)
Ophthalmia neonatorum (chlamydial or gonococcal)
Epidemiological treatment of suspected STIs (syphilis, chlamydia, gonorrhoea, non-specific genital infection)
Other diagnoses made at GUM clinics
Viral hepatitis B and C
Vaginitis and balanitis (including epidemiological treatment)
Anogenital candidiasis (including epidemiological treatment)
Urinary tract infection
Cervical abnormalities
Other conditions requiring treatment at a GUM clinic

Trends: 2000–2010

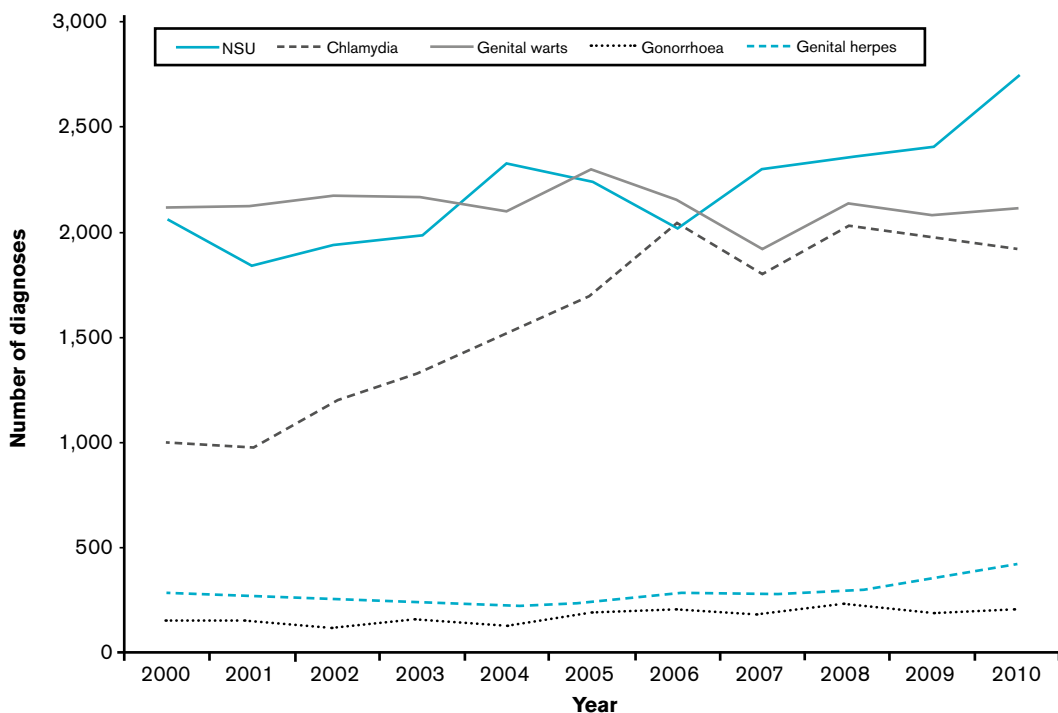
Between 2000 and 2010, the number of **new STI diagnoses** increased by 31%, the number of **other STI diagnoses** decreased by 8% and **other GUM clinic diagnoses** increased by 6% (Figure 1.1).

Figure 1.1: Trends in diagnoses made in Northern Ireland GUM clinics, 2000–2010



During 2000–2010, chlamydia infection, non-specific genital infection and genital warts (first infections) accounted for the highest proportion of new STI diagnoses (88%) made in Northern Ireland GUM clinics (Figure 1.2).

Figure 1.2: Trends in new diagnoses of STIs in Northern Ireland GUM clinics, 2000–2010



Specific disease trends will be examined in chapters 2 to 8.

2: Chlamydia

Genital chlamydia is a bacterial infection caused by *Chlamydia trachomatis*. The infection is asymptomatic in at least 50% of men and 70% of women. In women, untreated infection can cause chronic pelvic pain and lead to pelvic inflammatory disease (PID), ectopic pregnancy and infertility. An infected pregnant woman may also pass the infection to her baby during delivery. Complications in men include urethritis, epididymitis and reactive arthritis.

Consistent with elsewhere in the UK, chlamydia is the most common bacterial STI diagnosed in Northern Ireland GUM clinics.

Although there is currently no organised regional chlamydia testing programme in Northern Ireland, symptomatic testing is undertaken within primary care and sexual health services.

Diagnoses made in GUM clinics during 2010

Chlamydial infection accounted for 24% (1,915/7,838) of all new STI diagnoses made in Northern Ireland GUM clinics during 2010.

Uncomplicated chlamydial infection

- There were 1,832 new episodes of uncomplicated chlamydial infection diagnosed in Northern Ireland GUM clinics in 2010, compared with 1,906 in 2009.
- 1,036 (57%) of these were diagnosed in males.
- The highest rates of infection in both males and females were in the 20–24 years age group, accounting for 41% of male and 42% of female diagnoses.
- The rate of diagnoses in the 16–19 years age group is nearly twice as high in females as in males.
- 14% (142/1,036) of the total male diagnoses occurred in men who have sex with men (MSM).

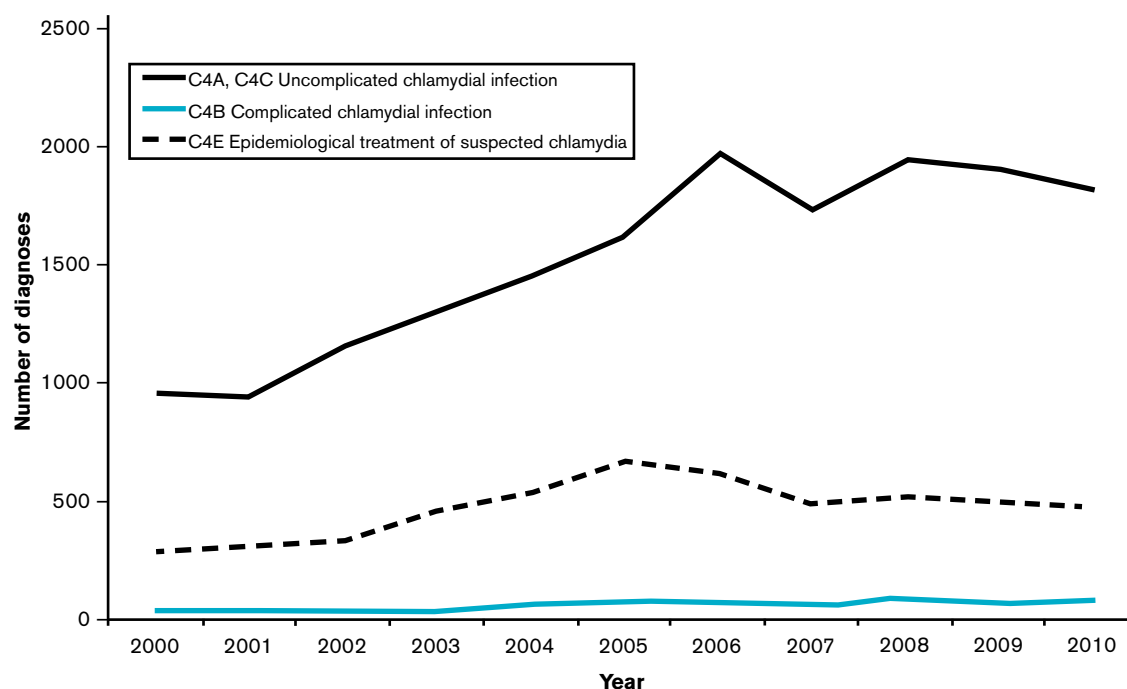
Complicated chlamydial infection

- There were 83 new episodes of complicated chlamydial infection diagnosed in Northern Ireland GUM clinics in 2010.
- 66 (80%) of these were diagnosed in females.

Trends: 2000–2010

Between 2000 and 2010, diagnoses of uncomplicated chlamydial infection increased by 90%, from 963 diagnoses in 2000 to 1,832 in 2010. Diagnoses in males increased by 116%, while in females, there was a 65% increase. Diagnoses of complicated chlamydial infection increased from 40 diagnoses in 2000 to 83 in 2010, but remained at a relatively low level (Figure 2.1).

Figure 2.1: Diagnoses of chlamydia in Northern Ireland, 2000–2010



Age and gender trends: uncomplicated chlamydia

From 2000–2010, diagnostic rates in females were consistently highest in the 16–24 years age group, peaking between 20 and 24 years. In males, the highest rates were in the 20–34 years age group, again peaking between 20 and 24 years.

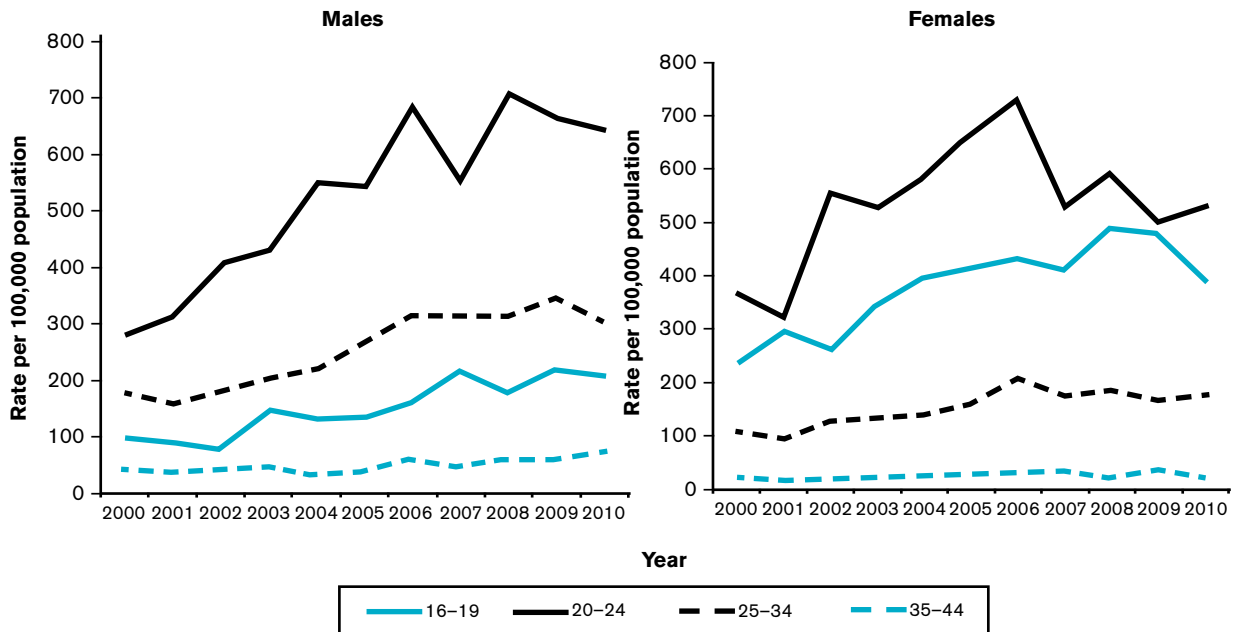
Diagnostic rates in those under 25 years of age were consistently higher in females, with rates in those aged 25 years and over consistently higher in males (Figure 2.2). Diagnostic rates in females fall after 24 years due to changes in sexual behaviour, as well as decreased susceptibility.

Diagnoses in those under 16 years of age accounted for 1% (113/16,878) of all diagnoses made during the period 2000–2010.

Diagnoses in the 45+ years age group accounted for 2% (291/16,878) of all diagnoses made during the period 2000–2010.

The proportion of male chlamydia diagnoses attributed to MSM has ranged from 2% in 2000 and 2002 to 14% in 2010.

Figure 2.2: Rates of uncomplicated chlamydial infection in Northern Ireland, by gender and age group, 2000–2010



Chlamydia trachomatis laboratory reporting, 2006–2010

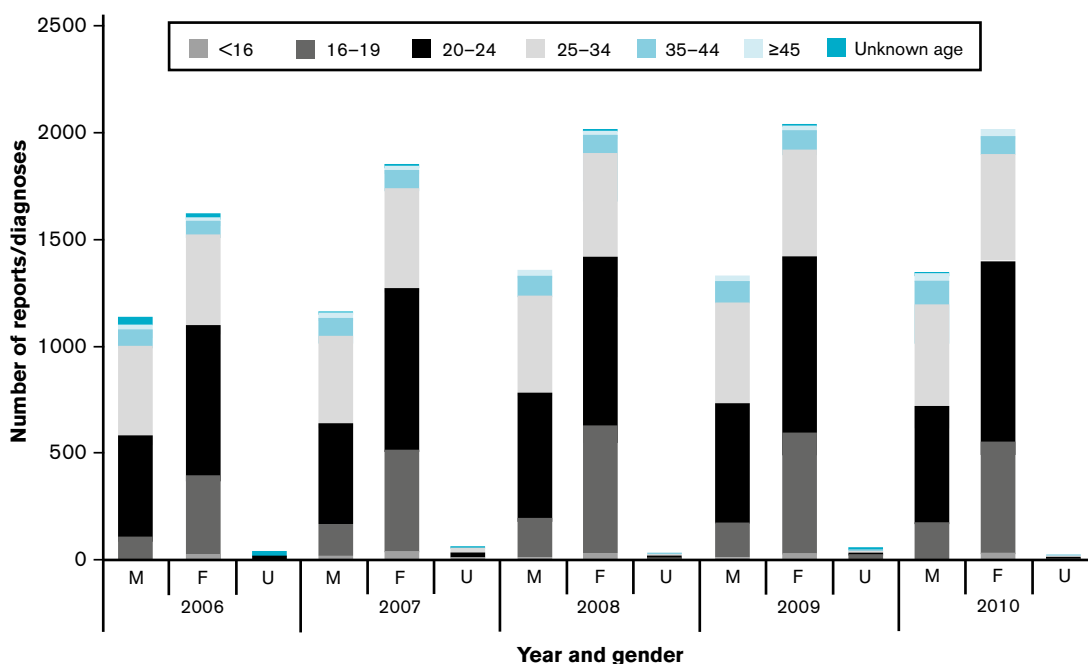
During 2010, 3,392 laboratory confirmed cases of *Chlamydia trachomatis* were reported, similar to the number reported in 2009. GP specimens accounted for 33% (1,128/3,392) of cases reported during 2010 (Table 2.1). Between 2006 and 2010, confirmations from GP specimens increased by 53%.

Table 2.1: Distribution of *Chlamydia trachomatis* specimens, by the referral source, 2006–2010

Referral source	2006	2007	2008	2009	2010	Total
GP	738	911	982	1,029	1,128	4,788
Other	2,057	2,154	2,408	2,370	2,264	11,253
Total	2,795	3,065	3,390	3,399	3,392	16,041

Females accounted for 59% (2,018/3,392) of all cases reported by laboratories during 2010. The majority (68%; 6,462/9,540) of female cases reported in the period 2006–2010 were aged between 16 and 24 years. Males accounted for between 38% and 41% of cases reported annually since 2006. The majority of male cases reported since 2006 were in the 20–34 years age group (Figure 2.3). Information on gender was missing for 1% of cases reported during the period 2006–2010.

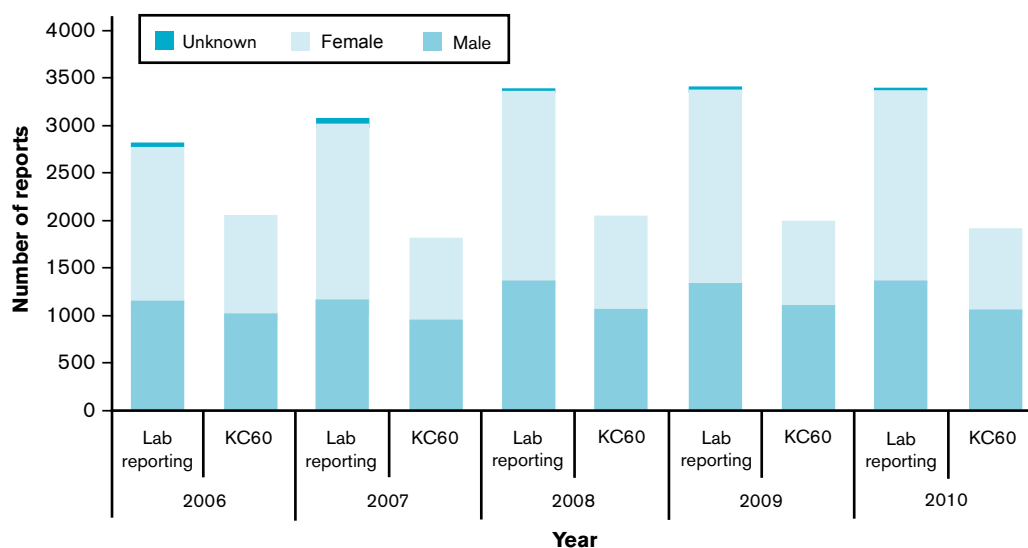
Figure 2.3: Laboratory reports of *Chlamydia trachomatis*, by age and gender, 2006–2010



Comparison of GUM clinic and laboratory reporting, 2006–2010

During 2010, there were 3,392 laboratory reports of *Chlamydia trachomatis*, compared with 1,915 diagnoses reported through the GUM clinics (KC60 reporting). The majority of laboratory reports during 2010 were from females (59%). This contrasts with the KC60 reports, which had more male (1,053) than female (862) diagnoses during 2010. The number of laboratory reports has shown a general increasing trend since 2006, in contrast to KC60 reports, which have effectively levelled off during this time (Figure 2.4).

Figure 2.4: *Chlamydia trachomatis* KC60 (complicated and uncomplicated diagnoses) and laboratory reports in Northern Ireland, 2006–2010



3: Gonorrhoea

Gonorrhoea is a bacterial STI caused by *Neisseria gonorrhoeae*. Untreated, gonorrhoea can enter the bloodstream or spread to the joints, and in women it can cause pelvic inflammatory disease, ectopic pregnancy and infertility. An infected pregnant woman may pass the infection to her baby during delivery.

Diagnoses made in GUM clinics during 2010

Gonorrhoea accounted for 3% (205/7,838) of all new STI diagnoses made in Northern Ireland GUM clinics during 2010.

Uncomplicated gonococcal infection

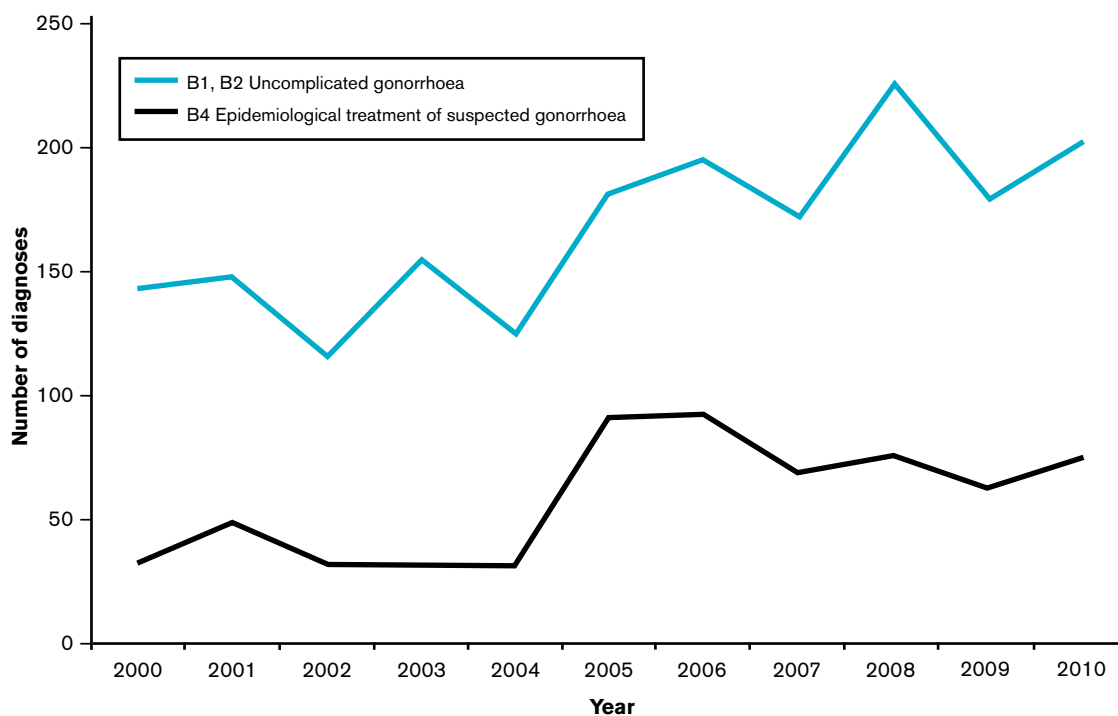
- There were 203 new episodes of uncomplicated gonorrhoea diagnosed in Northern Ireland GUM clinics in 2010, compared with 180 in 2009, an increase of 13%.
- 171 (84%) of these were diagnosed in males.
- The highest diagnostic rates in both men and women were in the 20–24 years age group.
- 69% of female diagnoses were in the 16–24 years age group and 19% were in the 25–34 years age group.
- 43% of male diagnoses were in the 16–24 years age group and 30% were in the 25–34 years age group.
- 34% (58/171) of male diagnoses were attributed to MSM.

Trends: 2000–2010

Although numbers have been variable, diagnoses of uncomplicated gonorrhoea have shown a general increased trend since 2000, with a slight decrease in 2007 and 2009 (Figure 3.1). During this time, the proportion of male diagnoses attributed to MSM ranged from 9% in 2000 to 40% in 2005. There are fewer than six diagnoses of complicated gonorrhoea annually.

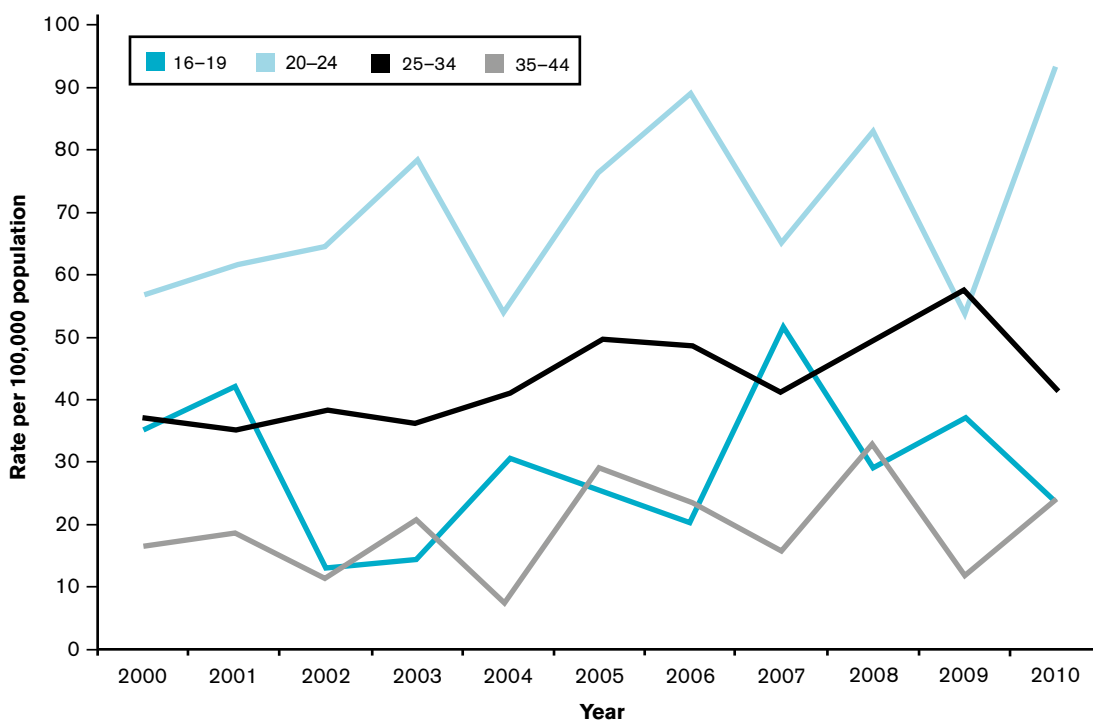
It is important to note that the introduction of more sensitive nucleic acid amplification tests (NAATs) occurred across Northern Ireland during 2009 and 2010.¹ This might be expected to increase the number of diagnoses by around 10% when compared to traditional culture methods.

Figure 3.1: Diagnoses of gonorrhoea in Northern Ireland, 2000–2010



Age and gender trends: uncomplicated gonorrhoea

Figure 3.2: Rates of diagnosis of uncomplicated gonorrhoea in males in Northern Ireland, by age group, 2000–2010



In males, the highest diagnostic rates were in the 20–34 years age group (Figure 3.2). From 2000–2010, fewer than five diagnoses were made annually in males aged under 16 years.

Males aged 45 years and over accounted for 7% (104/1,577) of all male diagnoses during the period 2000–2010.

There was no clear trend in females due to the small numbers involved.

Neisseria gonorrhoeae laboratory reporting, 2009–2010

Effective treatment of gonorrhoea has been compromised by the ability of *Neisseria gonorrhoeae* to develop resistance to antimicrobial agents.² Ongoing monitoring of antimicrobial resistance in Northern Ireland is important to ensure that first line treatments for gonorrhoea remain effective, as patterns of resistance can change rapidly. During 2009 and 2010, 99% of samples reported by laboratories were tested for antimicrobial susceptibility (Table 3.1).

Current guidelines recommend the use of third generation cephalosporins to treat gonorrhoea. During 2010, no isolates were reported as resistant to third generation cephalosporins (Table 3.2).

Table 3.1: *Neisseria gonorrhoeae* specimens/patients for whom antimicrobial susceptibility was reported, 2009–2010

	Total specimen/ patient reports	Specimens reported for antimicrobial susceptibility (%)	Total number of antimicrobial susceptibility reports
2009	149	147 (99%)	568
2010	154	152 (99%)	604

Table 3.2: *Neisseria gonorrhoeae* antimicrobial susceptibility reported activity for antimicrobial agents, 2009–2010

Antimicrobial agents	Susceptible		Resistant (%)		Indeterminate		Total specimens reported	
	2009	2010	2009	2010	2009	2010	2009	2010
Cefixime	14	21	0 (0%)	0 (0%)	0	0	14	21
Cefotaxime	111	105	0 (0%)	0 (0%)	0	0	111	105
Ceftriaxone	3	8	0 (0%)	0 (0%)	0	0	3	8
Ceftizoxime	1	0	0 (0%)	0 (0%)	0	0	1	0
Cefuroxime	19	21	1 (5%)	3 (13%)	0	0	20	24
Ciprofloxacin	85	99	43 (34%)	49 (33%)	0	0	128	148
Nalidixic acid	17	17	8 (32%)	8 (32%)	0	0	25	25
Penicillin	92	89	52 (36%)	57 (39%)	0	0	144	146
Spectinomycin	5	8	0 (0%)	1 (11%)	0	0	5	9
Tetracycline	83	93	33 (28%)	25 (21%)	1	0	117	118

4: Genital herpes

Genital herpes is caused by the herpes simplex virus (HSV), of which there are two distinct subtypes. HSV2 is almost exclusively associated with genital infection. Historically, HSV1 has mainly been associated with oral infection, but the proportion of genital herpes attributed to HSV1 in the UK is increasing. Genital herpes infection may facilitate HIV transmission, can cause severe systemic disease in those with impaired immunity, and can be potentially fatal to neonates.

Diagnoses made in GUM clinics during 2010

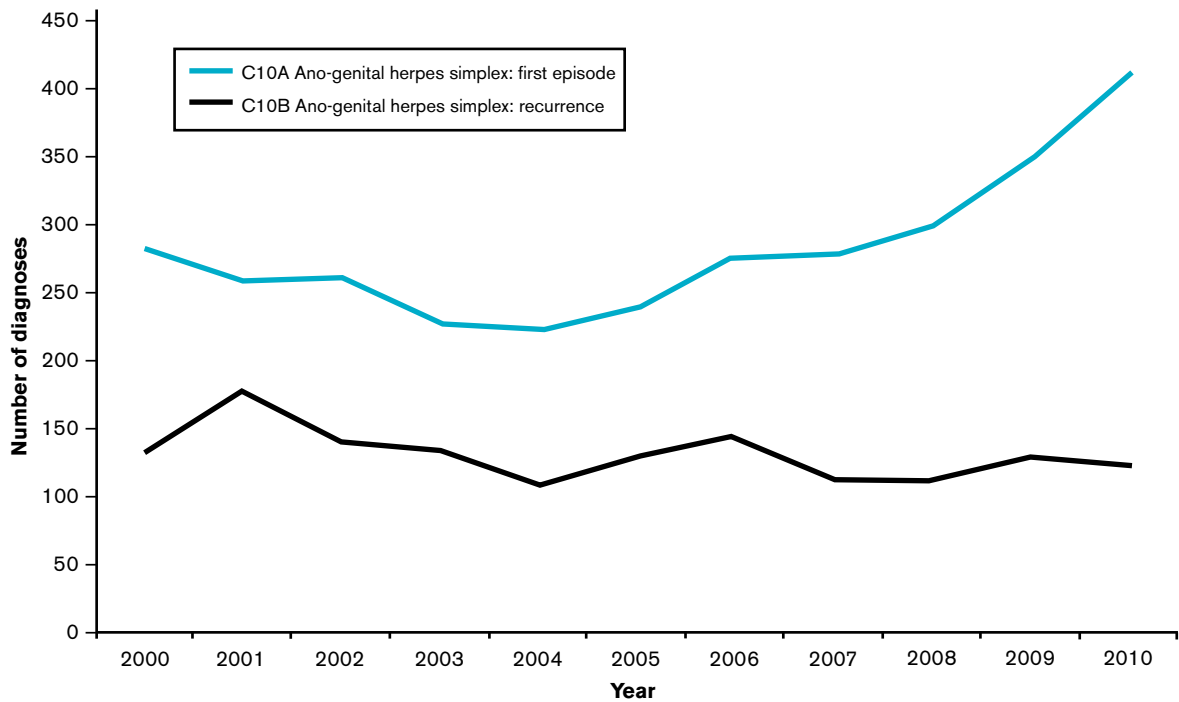
Genital herpes (first episodes) accounted for 5% (410/7,838) of all new STI diagnoses made in Northern Ireland GUM clinics during 2010.

- There were 532 episodes (first infections and recurrent infections) of genital herpes diagnosed in Northern Ireland GUM clinics in 2010.
- 333 (63%) of these were diagnosed in females.
- 410 (77%) of the total attendances for herpes in 2010 were for treatment of first infection and 122 (23%) were for treatment of recurrent infection.
- 24% of male diagnoses (47/199) were recurrent infections, compared with 23% (75/333) of female diagnoses.
- The highest diagnostic rates of first infection in both men and women were in the 20–24 years age group.
- Diagnostic rates of first infection in most age groups were higher in females. The diagnostic rate in 16–19 year old females was nearly six times higher than in males of the same age.
- 12% (18/152) of male first diagnoses occurred in MSM.

Trends: 2000–2010

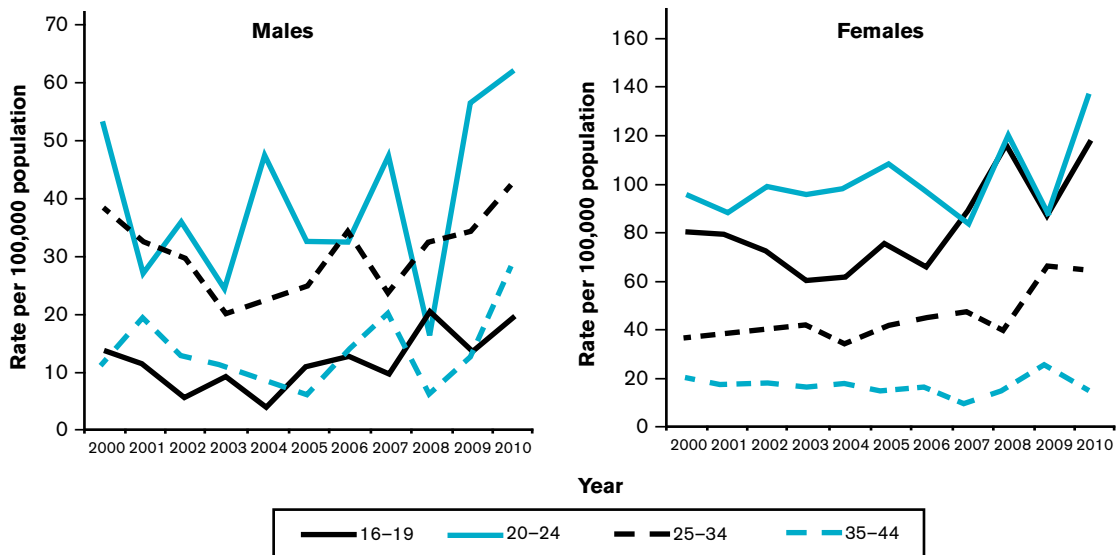
Annual numbers of first diagnoses of genital herpes increased for the sixth successive year in 2010 (Figure 4.1).

Figure 4.1: Diagnoses of genital herpes in Northern Ireland, 2000–2010



Age and gender trends: genital herpes (first episode)

Figure 4.2: Rates of diagnosis of genital herpes (first episode) in Northern Ireland, by age and gender, 2000–2010



Diagnostic rates in females were consistently highest in the 16–24 years age group. In males, the highest diagnostic rates were in the 20–34 years age group (Figure 4.2).

Males under 20 years of age accounted for 7% (70/1,020) of all male diagnoses of genital herpes (first episode) made during the period 2000–2010, with diagnoses in the 45+ years age group accounting for 9% (95/1,020).

Females under 16 years of age accounted for 1% (24/2,066) of all female diagnoses made during the period 2000–2010, with diagnoses in the 45+ years age group accounting for 5% (103/2,066).

5: Genital warts

Genital warts are caused by human papillomavirus (HPV). More than 90 HPV types have been identified, of which approximately one third are sexually acquired. Although around 20 different types of HPV have been linked to cervical cancer, these particular types are less frequently linked to genital warts.

The HPV vaccine was introduced as a school-based programme in Northern Ireland in 2008/09. This vaccine protects against the oncogenic types 16 and 18, but not those types causing genital warts.³

Diagnoses made in GUM clinics during 2010

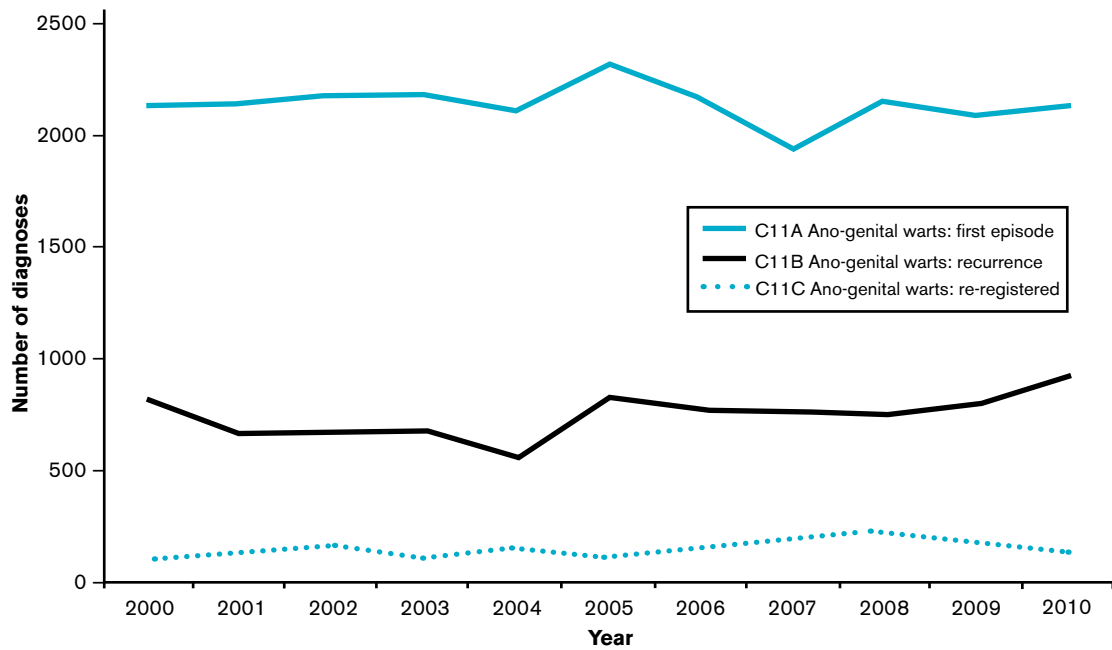
Genital warts (first episodes) accounted for 27% (2,120/7,838) of all new STI diagnoses made in Northern Ireland GUM clinics during 2010.

- There were 3,033 episodes (first infections and recurrent infections) of genital warts diagnosed in Northern Ireland GUM clinics in 2010.
- 1,756 (58%) of these were diagnosed in males.
- 2,120 (70%) of the total attendances for genital warts in 2010 were for treatment of first infection and 913 (30%) were for treatment of recurrent infection.
- 33% of male diagnoses (579/1,756) were recurrent infections, compared with 26% (334/1,277) of female diagnoses.
- The highest diagnostic rates of first infection in both men and women were in the 20–24 years age group.
- 37% of male diagnoses and 36% of female diagnoses of first infection were in the 20–24 years age group.
- The diagnostic rate in females aged 16–19 years (474/100,000) was more than twice that of males the same age. However, diagnostic rates in those aged over 19 years were higher in males.
- 8% (93/1,177) of male first diagnoses occurred in MSM.

Trends: 2000–2010

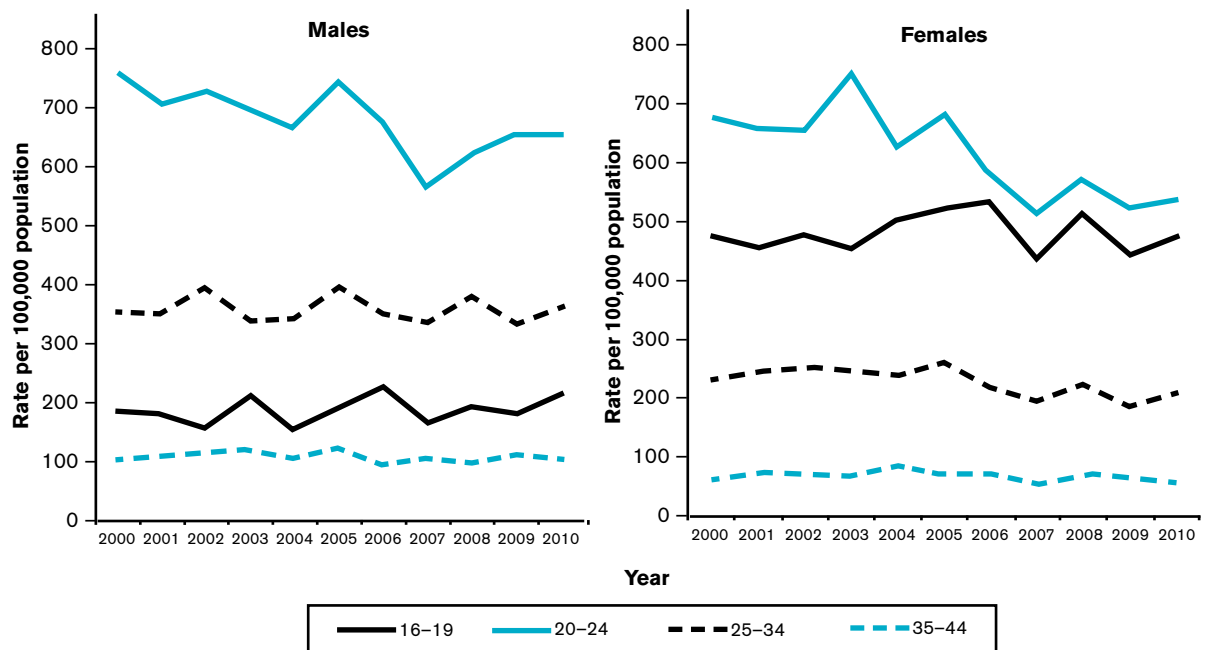
Diagnoses of first infections of genital warts have shown little variation since 2000 (Figure 5.1). Diagnostic rates tend to be higher overall in males.

Figure 5.1: Diagnoses of genital warts in Northern Ireland, 2000–2010



Age and gender trends: genital warts (first episode)

Figure 5.2: Rates of diagnosis of genital warts (first episode) in Northern Ireland, by age and gender, 2000–2010



Diagnostic rates in females were highest in the 16–24 years age group, peaking between 20 and 24 years. In males, the highest diagnostic rates were in the 20–34 years age group, also peaking between 20 and 24 years. Rates in those under 20 years of age were consistently higher in females, whereas rates in those over 20 years of age were higher in males (Figure 5.2). Those under 16 years of age accounted for 0.5% (106/23,440) of all diagnoses (first episode) made during the period 2000–2010, while the 45+ years age group accounted for 4% (1,033/23,440).

During 2000–2010, the proportion of male diagnoses attributed to MSM ranged from 2% in 2000 and 2002 to a peak of 8% in 2010.

6: Syphilis

Syphilis is a bacterial infection caused by the spirochete *Treponema pallidum*. Its importance lies in its ability to promote both the acquisition and transmission of HIV, and in the potential for serious or even fatal consequences if left untreated. Late syphilis can cause complications of the cardiovascular, central nervous and mucocutaneous systems. Infectious syphilis in pregnant women can cause miscarriage, stillbirth or congenital infection.

Northern Ireland has, in common with elsewhere in the UK and Europe, experienced a marked increase in infectious syphilis since 2000. In the decade prior to 2000, on average only one case of infectious syphilis per year was reported.

Reports from enhanced syphilis surveillance arrangements

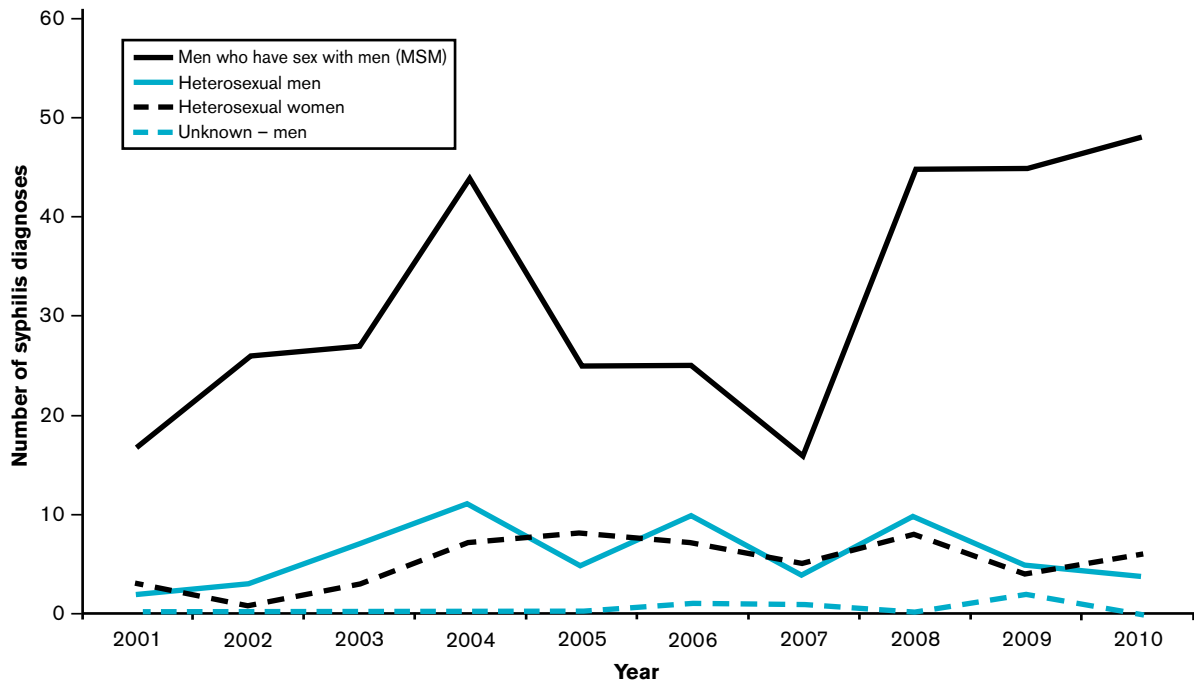
During 2010:

- 58 new episodes of infectious syphilis, representing 58 individuals, were diagnosed;
- 26 presented as primary syphilis, 19 as secondary syphilis and eight as early latent syphilis;
- for five episodes, the stage of illness was not known;
- 83% (48/58) of episodes were diagnosed in MSM;
- 52 episodes occurred in Northern Ireland residents and, in 46 episodes, syphilis was likely to have been acquired through exposure within Northern Ireland;
- diagnosed co-infections included HIV, chlamydia, gonorrhoea, genital warts, non-specific urethritis (NSU), balanitis and ano-genital candidosis;
- 53% (31/58) reported one sexual partner in the three months preceding diagnosis;
- the highest number of reported sexual partners of any one individual in the preceding three months was 30.

Trends: 2000–2010

While there has been no overall annual trend since the outbreak began in 2000, it is clear that infectious syphilis is now endemic within Northern Ireland. One individual presented with infectious syphilis to the GUM clinic in 2000 (this episode has been excluded from the analysis below). Overall, there have been 435 new episodes of infectious syphilis since 2001: 22 in 2001, 30 in 2002, 37 in 2003, 62 in 2004, 38 in 2005, 43 in 2006, 26 in 2007, 63 in 2008, 56 in 2009 and 58 in 2010. The outbreak continues to involve predominantly MSM, who accounted for 73% (318/435) of diagnoses to the end of 2010. Episodes in heterosexual males and females accounted for between 13% and 40% of annual totals. Fifty four percent of heterosexually acquired episodes were in males (Figure 6.1).

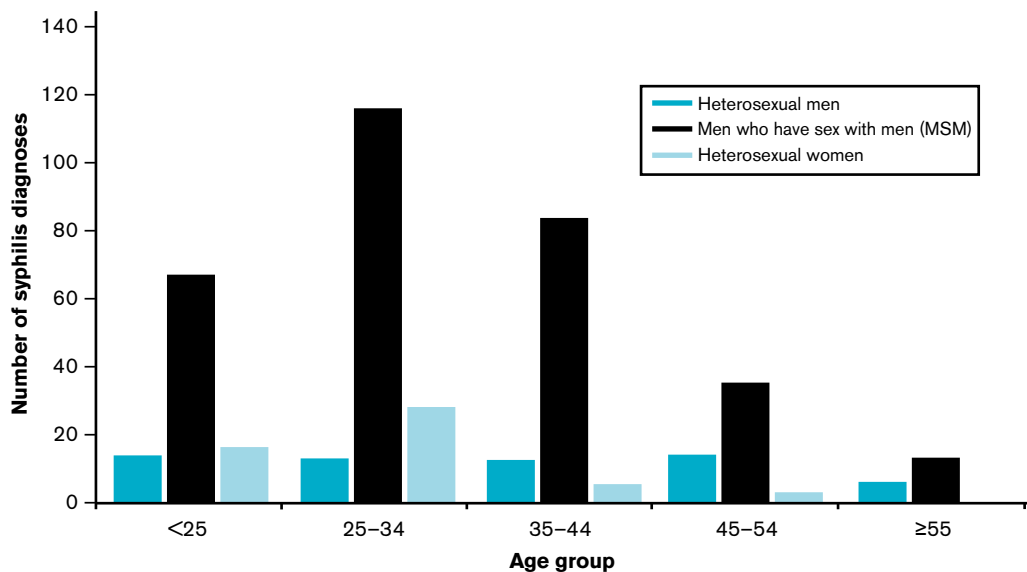
Figure 6.1: Number of syphilis diagnoses in Northern Ireland, by gender and sexual orientation, 2001–2010



Age and sexual orientation

Analysis of cumulative data by age and sexual orientation shows the highest number of episodes in heterosexual females was in the 25–34 years age group (54%; 28/52). In MSM, the highest number of episodes was in the 25–44 years age group (62%; 198/318). In heterosexual males, diagnoses were more evenly spread across the age bands, with those aged 25+ years accounting for 74% (45/61) of diagnoses. Information on age was missing for four episodes (Figure 6.2).

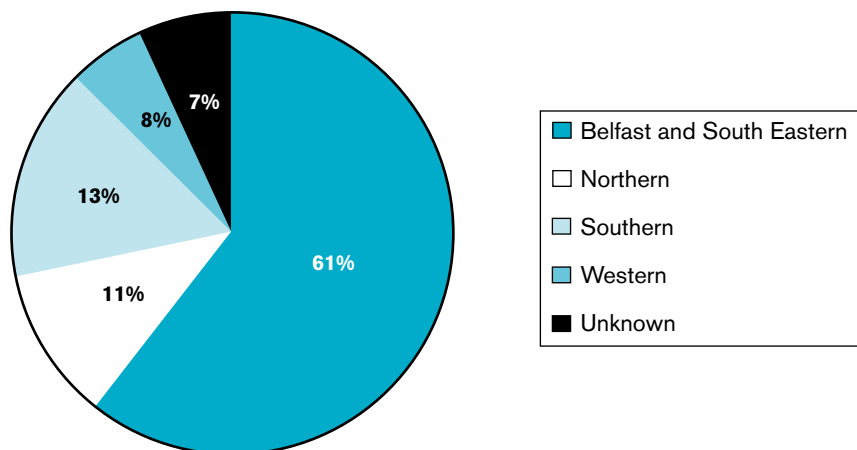
Figure 6.2: Age distribution of syphilis diagnoses in Northern Ireland, by gender and sexual orientation, 2001–2010



LCG area of residence

Of the 435 new episodes reported since 2001, 263 (61%) were resident in the Belfast and South Eastern Local Commissioning Group (LCG) areas, 49 (11%) in the Northern LCG area, 58 (13%) in the Southern LCG area, 35 (8%) in the Western LCG area, and for 7% (30), the area of residence was unknown (Figure 6.3).

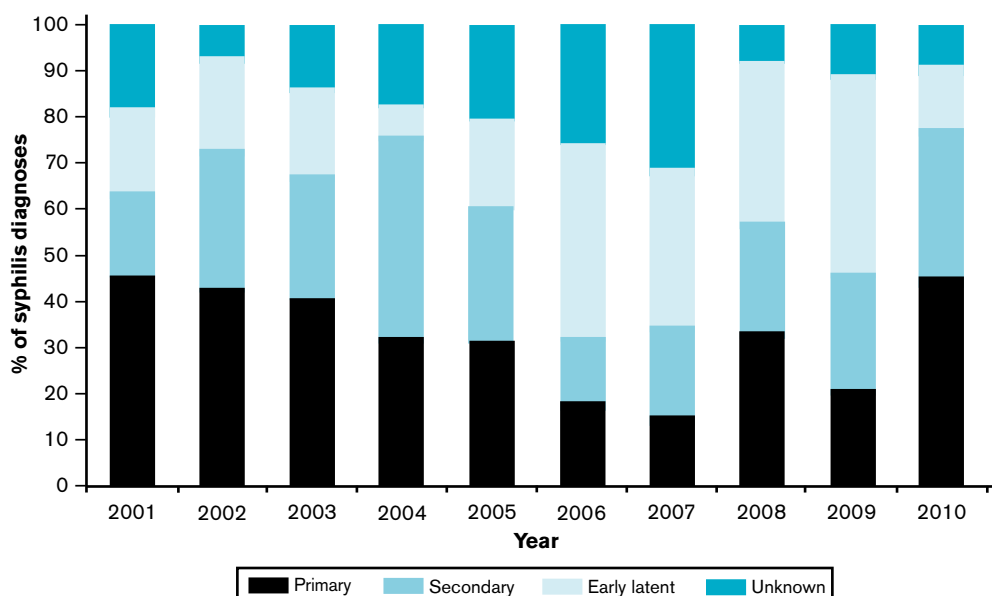
Figure 6.3: Syphilis diagnoses, by LCG area of residence, 2001–2010



Stage of disease

From 2001 to 2005, there was little variation in the stage of disease at which diagnosis was made, with primary and secondary stages accounting for 82% (131/159) of episodes for which this information was available. During 2006 and 2007, this fell to 46% (23/50), with the proportion of early latent episodes increasing to 54% (27/50), representing late diagnosis of syphilis. However, 2008 and 2009 saw an increase in primary and secondary stage diagnoses to 62% (36/58) and 52% (26/50) respectively. A further increase was noted in 2010, with 85% of episodes in the primary and secondary stage, representing early diagnosis of syphilis. The number of episodes at an unknown stage has decreased to 9%, compared with 31% in 2007 (Figure 6.4).

Figure 6.4: Stage of disease, by year of diagnosis



Location of exposure

Although initial episodes were linked to an outbreak among MSM in Dublin, the majority of episodes in both MSM and heterosexuals were acquired in Northern Ireland (Table 6.1).

Table 6.1: Location of acquisition of syphilis infection diagnosed in Northern Ireland, 2001–2010

Year	Dublin	Northern Ireland	Elsewhere in the UK	Outside UK/ Republic of Ireland	Republic of Ireland (excluding Dublin)
2001	9	*	*	*	0
2002	*	18	*	*	*
2003	*	23	*	*	*
2004	*	43	7	*	0
2005	*	24	*	5	*
2006	*	21	5	11	0
2007	0	14	0	5	0
2008	*	38	*	9	*
2009	*	41	*	*	0
2010	*	46	*	*	0

Partner change

Cumulative data from 2001–2010 show that the majority of cases reported between zero and two partners (69%: 301/435) in the three months prior to diagnosis. It is noteworthy, however, that 3% (13/435) reported 20 or more partners during this period.

Co-infections

Of the 435 new episodes of syphilis reported since 2001, 47 (11%) were HIV positive. In addition to HIV and syphilis, eight of these cases had another STI co-infection. A further 108 episodes had one of the following STI co-infections: chlamydia, gonorrhoea, genital herpes, genital warts, non-specific urethritis (NSU), balanitis, bacterial vaginosis, scabies, anogenital candidosis, hepatitis A, hepatitis B or trichomoniasis. Four episodes had two STI co-infections.

7: Lymphogranuloma venereum (LGV)

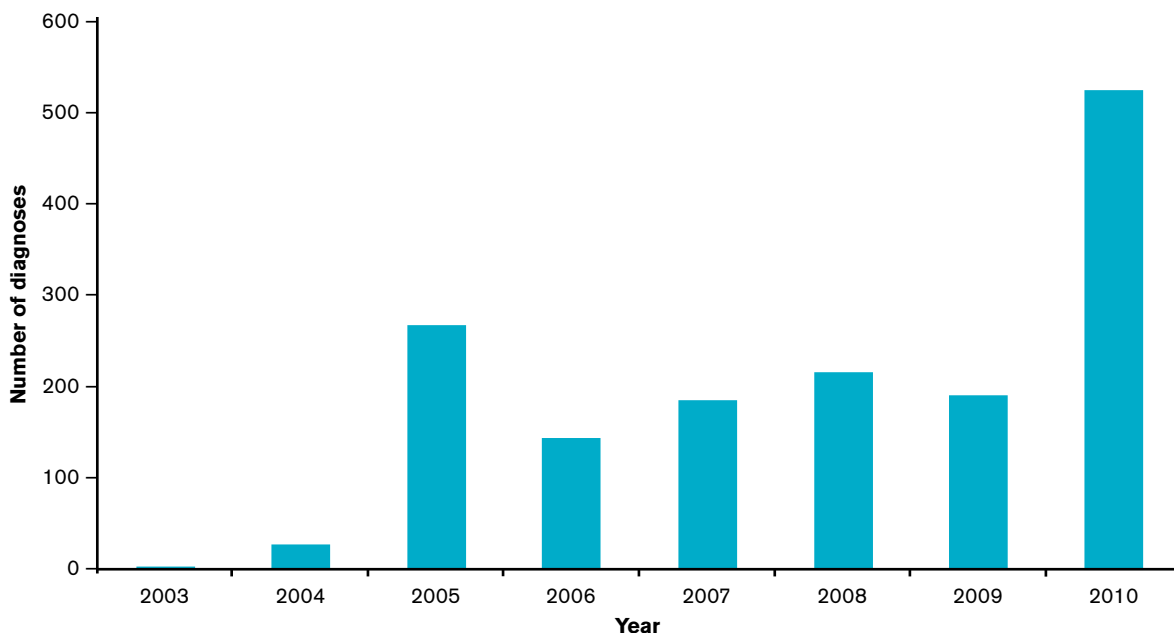
Lymphogranuloma venereum (LGV) is a bacterial infection caused by a specific type of *Chlamydia trachomatis* (serovars L1, L2 and L3). LGV is highly prevalent in parts of Africa, Asia, and Central and South America. For many years, LGV was rare in Western Europe, with the majority of cases being imported. However, since 2003 a series of outbreaks have emerged across different countries in Europe. The majority of cases seen in the UK have been HIV-positive white MSM. The most common presentation is proctitis.⁴

Reports from enhanced LGV surveillance arrangements

During 2010:

- two new LGV cases were diagnosed at Northern Ireland GUM clinics.

Figure 7.1: United Kingdom LGV diagnoses, by year of diagnosis



Trends: 2003–2010

Compared with the rest of the UK, Northern Ireland has had very few cases of LGV, with only 10 cases reported since 2008. The majority of Northern Ireland cases were white MSM. The median age of cases was 28 years, range 20–44 years. Five of the 10 cases were HIV-positive.

8: HIV

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 33.3 million people living with HIV in 2009 (30.8 million adults and 2.5 million children), of whom 2.6 million were newly diagnosed.⁵ During 2010, 6,658 new HIV diagnoses were made in the UK.⁶ Although prevalence in Northern Ireland remains lower than in the other UK countries, annual new diagnoses have generally increased since 2001, almost doubling between 2003 and 2004. Diagnoses increased by 20% between 2009 (66) and 2010 (79). The key routes of transmission remain sexual contact involving 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 2010:

- 79 new first-UK cases of HIV were diagnosed in Northern Ireland, a rate of 7.3 per 100,000 population aged 15–59 years (12.0 per 100,000 males and 2.6 per 100,000 females);
- of the 79 new diagnoses, 41% were resident in the Belfast LCG area, 18% in the Northern LCG area, 11% in the South Eastern LCG area, 14% in the Southern LCG area, 11% in the Western LCG area, and for 5%, the area of residence was unknown;
- 53 (67%) new HIV diagnoses occurred in MSM, the largest ever annual number recorded in Northern Ireland. The majority of these cases were born in the UK (75%), acquired their infection in the UK (83%) and were of white ethnicity (94%);
- 474 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2010) received care;
- of those receiving care, 50% (237/474) acquired their infection through sexual contact involving MSM and 46% (218/474) acquired their infection through heterosexual contact;
- 51,771 HIV tests were carried out in Northern Ireland, of which 26,113 were performed as part of the antenatal screening programme.

Trends: 2000–2010

New diagnoses

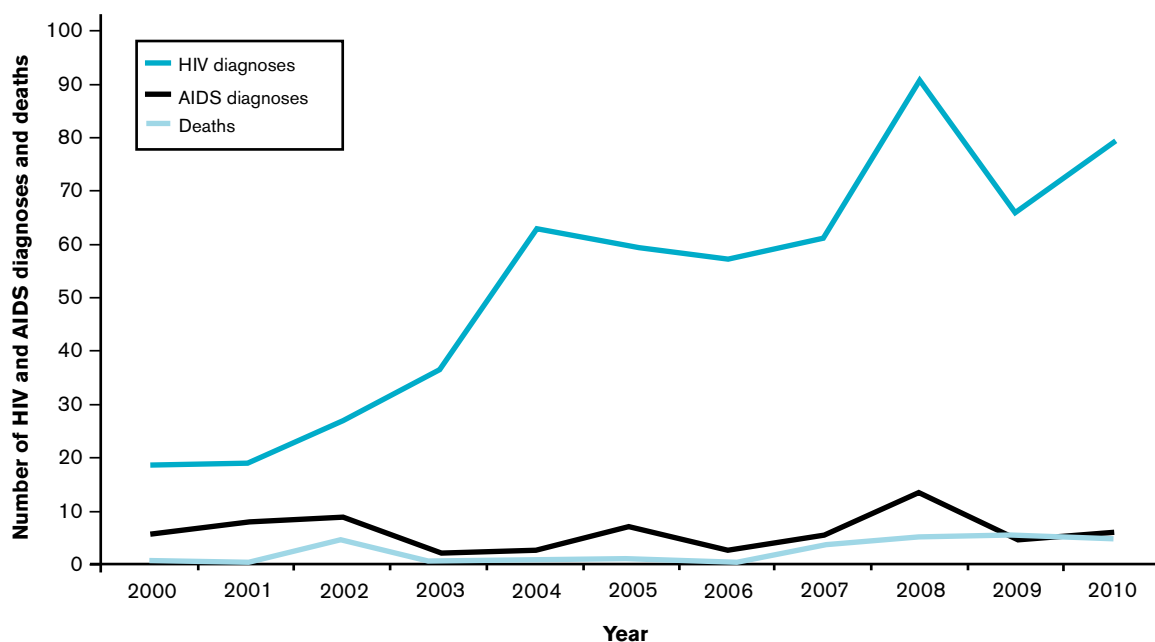
The annual number of new first-UK diagnoses made in Northern Ireland increased by 20% from 66 in 2009 to 79 in 2010 (Figure 8.1). Compared with the rest of the UK, Northern Ireland had the largest proportional increase (316%) in new HIV diagnoses between 2000 and 2010 (Table 8.1).

Table 8.1 New HIV diagnoses, by country

Country	2000	2008	2009	2010	% +/- 2000–2010	% +/- 2009–2010
England	3,728	6,665	6,082	6,108	64%	0%
Wales	46	141	138	161	250%	17%
Scotland	160	336	333	305	91%	-8%
Northern Ireland	19	91	66	79	316%	20%
United Kingdom*	3,954	7,238	6,625	6,658	68%	0%

* Includes 14 cases from the Channel Islands and the Isle of Man, and three cases where the region was not known

Figure 8.1: New HIV and AIDS diagnoses in Northern Ireland, and deaths among HIV-infected individuals, 2000–2010



The annual number of first-UK HIV diagnoses that were diagnosed as AIDS during 2010 remained similar to that reported in 2009. Deaths reported in individuals with HIV remained low, due largely to the influence of HAART (Table 8.2).

Table 8.2: First-UK 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
1995 or earlier	146	71	49
1996	17	*	9
1997	10	*	*
1998	9	*	*
1999	18	7	*
2000	19	6	*
2001	19	8	*
2002	27	9	5
2003	36	*	0
2004	63	*	0
2005	60	7	*
2006	57	*	0
2007	61	6	*
2008	91	14	6
2009	66	5	6
2010	79	6	5
Total	778	153	94

Table 8.3: First-UK diagnoses of HIV in Northern Ireland, by year of diagnosis and probable route of infection

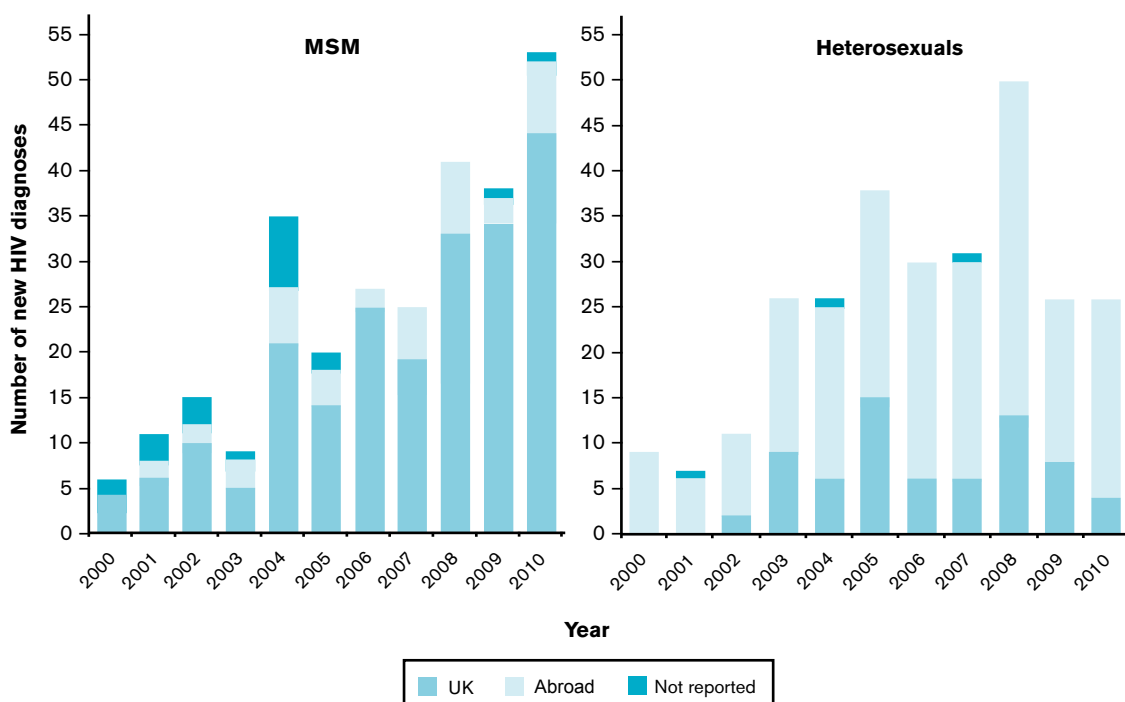
Year	Sex between men (MSM)	Sex between men and women
1995 or earlier	86	31
1996	12	5
1997	7	*
1998	6	*
1999	7	9
2000	6	9
2001	11	7
2002	15	11
2003	9	26
2004	35	26
2005	20	38
2006	27	30
2007	25	31
2008	41	50
2009	38	26
2010	53	26
Total	398	331

Route of transmission

Sex between men (MSM) and sex between men and women remain the most significant categories of probable route of infection, accounting for 94% (729/778) of new diagnoses to date (Table 8.3). Heterosexual transmission has assumed increasing importance since 2002 and has now accounted for 43% (331/778) of new diagnoses made to date. However, MSM exposure accounted for 67% of new diagnoses in 2010 (53/79) and has accounted for 51% (398/778) of new diagnoses made to date. Sixteen new diagnoses were acquired through injecting drug use and 33 new diagnoses were acquired through other/undetermined causes to date.

Cumulative data from 2000–2010 show that for cases acquired through heterosexual exposure, and where location of exposure was known, the majority were infected outside the UK (75%, 208/277). For cases acquired through MSM exposure, the opposite applied and the majority were infected within the UK (83%, 215/259) (Figure 8.2).

Figure 8.2: New HIV diagnoses in Northern Ireland, by region where infection was acquired, 2000–2010



Age and gender

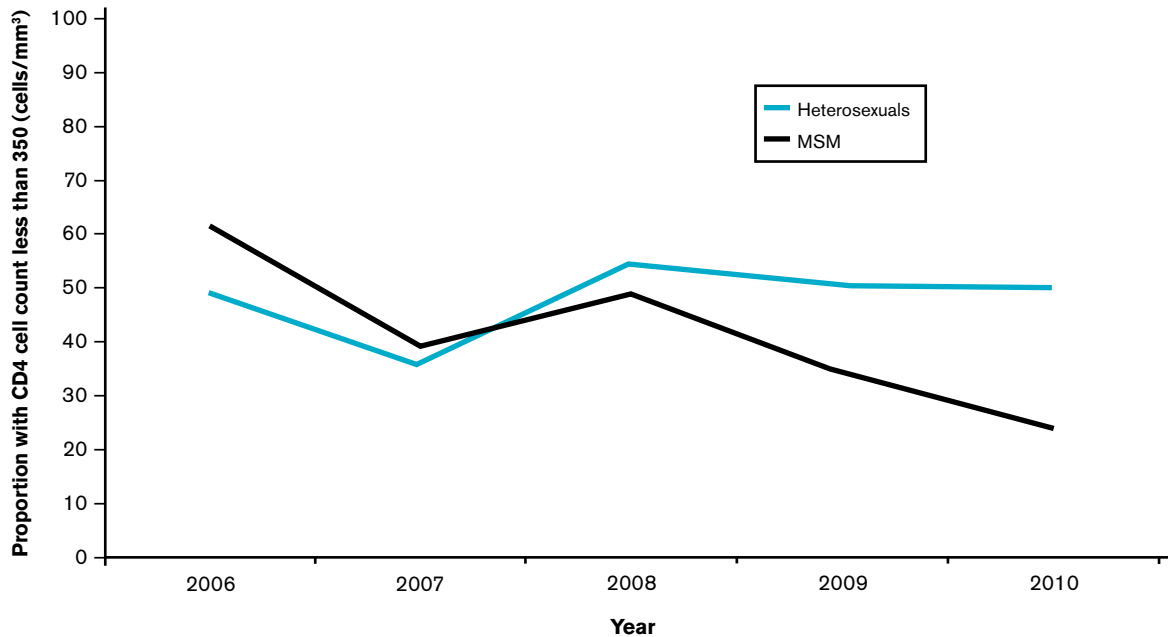
Diagnostic rates were higher overall in males between 2000–2010, with peak rates in the 25–34 and 35–44 years age groups. In females, rates were highest in those aged 25–34 years. Those under 16 years of age accounted for 1% (6/578) of all HIV diagnoses made during the period 2000–2010.

CD4 cell surveillance

Analysis of CD4 cell counts, combined with other HIV surveillance data, provides information on late diagnoses, trends in immunosuppression and the population effect of antiretroviral therapy. Laboratories across Northern Ireland, England and Wales participate in the surveillance scheme.⁷ A CD4 cell count of less than 350 cells/mm³ within 91 days of diagnosis is a proxy indicator of a late diagnosis.

CD4 cell counts within three months of diagnosis were available for 84% (66/79) of diagnoses made in 2010. Twenty four percent (10/42) of diagnoses in MSM were diagnosed at a late stage compared with 50% (12/24) of heterosexual diagnoses.

Figure 8.3: Proportion of HIV-diagnosed adults in Northern Ireland with a CD4 cell count less than 350 cells/mm³ within 91 days of diagnosis, by probable route of infection, 2006–2010



The proportion of MSM with a CD4 cell count less than 350 cells/mm³ within three months of diagnosis has decreased each year since 2008, whereas the proportion of heterosexuals has remained higher and shown little change over this period (Figure 8.3).

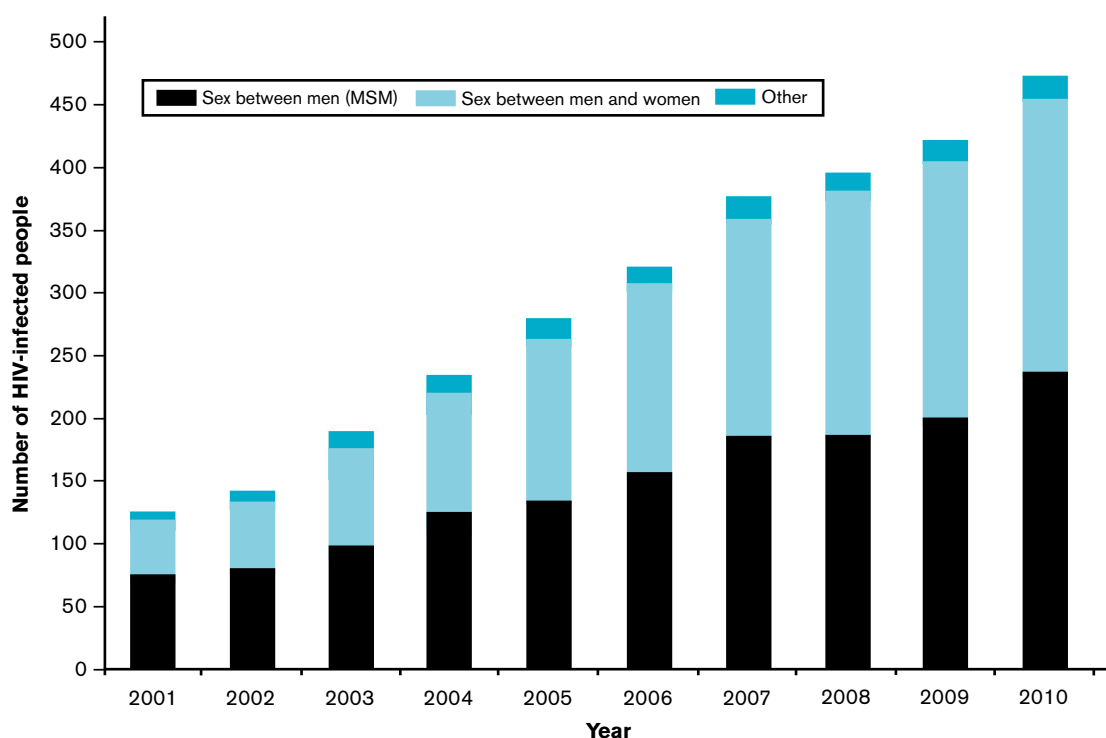
RITA surveillance

The Recent Infection Testing Algorithm (RITA) was extended to Northern Ireland in 2010.⁸ This distinguishes recently acquired infection from long-standing infection and can be used to assess incidence at a population level.

During 2010, the Northern Ireland coverage rate for RITA surveillance was 77% (61/79). Results showed that 28% (17/61) of the newly diagnosed HIV infections tested were recent infections (most likely acquired in the four or five months preceding HIV diagnosis) and 88% of these were in MSM.

Prevalent infection

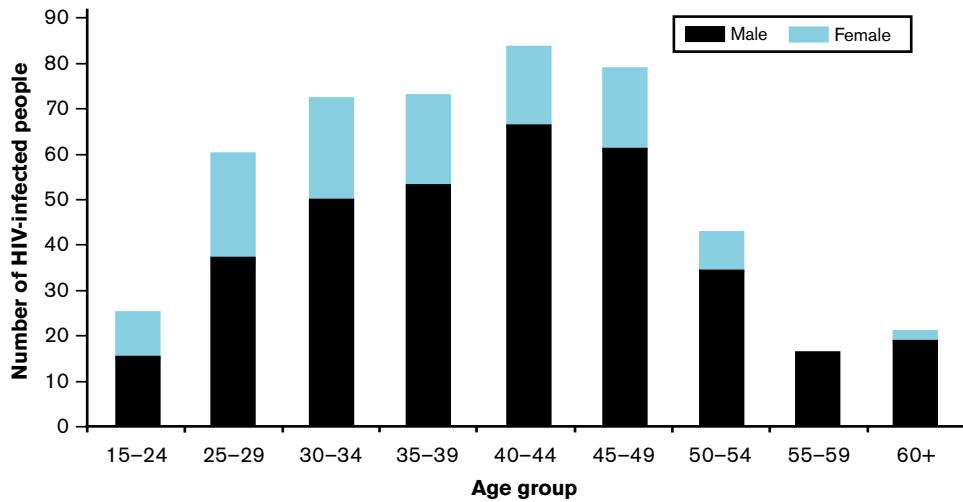
Figure 8.4: Number of people accessing HIV-related care in Northern Ireland, 2001–2010



There were 474 people living in Northern Ireland with diagnosed HIV infection (352 men and 122 women) who accessed care in 2010. This represents a 12% increase on 2009 (423) and more than a three-fold rise since 2001 (126) (Figure 8.4). 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 2010, 39% (183/474) were resident in the Belfast LCG area, 18% (86/474) in the Northern LCG area, 15% (72/474) in the South Eastern LCG area, 14% (67/474) in the Southern LCG area, 9% (43/474) in the Western LCG area, and for 5%, the area of residence was unknown.

Figure 8.5: Number of people accessing HIV-related care in Northern Ireland, by age and gender, 2010



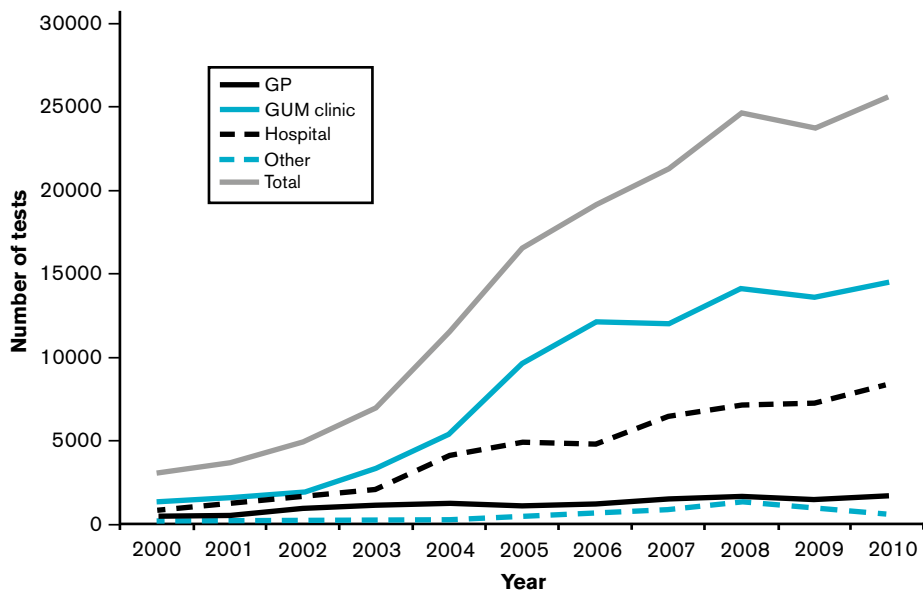
The majority of people who received HIV-related care in 2010 were aged between 30 and 49 years (65%, 308/474) (Figure 8.5). Fewer than five people aged under 14 years accessed HIV-related care during 2010. Seventy five percent of people who received HIV-related care during 2010 were white, 18% were black-African and 7% were classified in other ethnic groups.

Of those who received HIV-related care during 2010, 67% (319/474) were prescribed antiretroviral therapy, a slight decrease on 2009 (71%) but similar to previous years.

HIV testing

Recent guidelines have re-emphasised the importance of HIV testing in key healthcare settings.⁹ During 2010, 25,658 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 8.6). The rate of increase is also highest in GUM clinics, followed by hospitals and primary care.

Figure 8.6: HIV testing in Northern Ireland, by service setting, 2000–2010



9: Summary and conclusions

- 2010 saw a continuation of the increasing trend in annual numbers of new STI diagnoses made in Northern Ireland GUM clinics.
- Together, chlamydia, non-specific genital infection and genital warts accounted for 86% of all new STI diagnoses made in Northern Ireland GUM clinics in 2010.
- 2010 saw the highest annual number of new HIV diagnoses in MSM to date.
- MSM is the group most at risk of acquiring HIV through sexual exposure in the United Kingdom.
- MSM is also the group most at risk of acquiring gonorrhoea, infectious syphilis and now LGV.
- During 2010, 54% of new STI diagnoses for which age group information was available occurred in young people under the age of 25 years.

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.

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Appendix 1: Number of new episodes of selected diagnoses by gender and age group, Northern Ireland, 2000-2010

	2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010						
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total	Total					
Chlamydia	Total		Total		Total		Total		Total		Total		Total		Total		Total		Total		Total						
% in MSM	<16	50	118	168	47	149	196	44	136	180	261	7	7	0	13	13	0	9	9	0	9	9	22				
	16-19	15	200	354	174	177	351	428	304	532	542	334	396	730	445	458	903	375	342	717	477	385	862				
	20-24	214	130	344	192	117	309	209	147	356	236	151	387	247	159	406	303	184	487	362	239	601	371				
	25-34	54	22	76	47	17	64	48	24	82	66	32	78	54	38	92	80	39	119	65	36	101	76	27			
	45+	8	7	15	13	9	21	13	20	5	25	12	7	19	17	6	23	19	17	6	23	19	17	6			
Total	480	483	963	473	474	947	548	622	1,170	645	663	1,308	703	750	1,455	763	848	1,631	993	986	1,979	1,743	1,050	896	1,946		
	2%	3%	3%	2%	2%	2%	4%	4%	4%	4%	7%	7%	4%	6%	6%	29%	4%	4%	29%	7%	7%	4%	4%	4%	7%	7%	
Gonorrhoea	Total		Total		Total		Total		Total		Total		Total		Total		Total		Total		Total						
% in MSM	<16	18	10	28	22	7	29	7	0	7	8	16	17	8	25	3	0	0	0	0	0	0	0	0	0	0	
	16-19	31	5	36	*	37	*	39	45	10	55	32	5	37	47	13	60	58	17	75	44	7	51	56	10	66	
	20-24	*	49	42	10	52	45	6	51	42	6	48	*	49	*	58	55	7	62	49	58	49	58	13	71	69	
	25-34	*	22	*	22	24	14	0	14	*	0	*	28	*	10	*	38	*	21	*	32	*	21	*	45	24	24
	45+	*	*	6	0	6	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
Total	119	24	143	127	21	148	106	11	117	127	27	154	105	19	124	162	20	182	163	32	195	155	17	172	194	32	226
	9%	18%	18%	11%	11%	31%	31%	23%	23%	40%	40%	24%	24%	24%	29%	29%	29%	29%	52%	52%	29%	29%	29%	29%	29%	29%	29%
Syphilis	Total		Total		Total		Total		Total		Total		Total		Total		Total		Total		Total						
% in MSM	<16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	16-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	20-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	25-34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	45+	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Herpes	Total		Total		Total		Total		Total		Total		Total		Total		Total		Total		Total						
% in MSM	<16	7	40	47	6	40	46	5	31	36	*	34	6	39	45	5	44	49	11	58	69	7	43	50	10	57	
	16-19	29	52	81	15	48	63	20	54	74	14	53	67	28	56	84	21	60	81	32	53	85	11	78	89	38	
	20-24	47	45	92	39	47	86	35	48	83	23	49	72	25	39	64	28	46	74	39	52	91	27	55	82	38	
	25-34	14	25	39	24	22	46	16	22	38	14	21	35	11	22	33	8	19	27	18	21	39	26	13	39	8	
	45+	11	*	*	*	*	*	19	*	*	*	*	*	*	*	*	13	*	*	10	*	*	13	*	18	*	13
Total	108	173	281	93	165	258	79	180	259	69	153	222	66	172	238	91	183	274	103	173	276	78	218	296	121	225	
	3%	3%	3%	1%	1%	1%	5%	5%	7%	7%	8%	8%	8%	6%	6%	4%	4%	4%	6%	6%	4%	4%	4%	4%	4%	7%	
Warts	Total		Total		Total		Total		Total		Total		Total		Total		Total		Total		Total						
% in MSM	<16	5	7	12	*	9	9	84	243	327	115	235	350	86	289	345	103	267	370	122	270	382	88	216	304	100	
	16-19	93	236	329	95	229	324	84	243	327	401	411	812	387	568	755	460	403	663	440	356	786	444	334	778	444	
	20-24	417	366	783	393	358	751	409	357	766	401	311	673	387	278	665	443	296	739	401	249	650	387	227	614	439	
	25-34	429	287	716	422	297	719	458	298	756	386	287	673	337	210	243	150	89	239	123	95	218	131	70	201	119	
	45+	56	25	81	*	88	*	92	*	92	*	88	*	92	*	88	*	89	*	92	*	89	*	89	*	92	*
Total	1,118	999	2,117	1,107	1,023	2,130	1,147	1,029	2,176	1,059	1,042	2,101	1,208	1,098	2,306	1,142	1,014	2,156	1,050	879	1,929	1,132	1,011	2,143	1,160	926	
	2%	2%	3%	3%	2%	2%	2%	2%	3%	3%	3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	3%	3%	2%	2%	2%	6%	
Total diagnoses	5,141	5,031	11,172	6,048	5,252	11,300	6,185	5,682	11,867	6,316	6,531	12,847	6,292	5,718	12,010	6,211	5,110	11,321	6,546	5,787	12,333	6,966	5,356	12,322	7,294	5,212	
Total workload	3,658	2,872	6,530	4,435	3,451	7,886	5,128	3,616	8,744	7,188	6,021	13,209	7,327	7,056	14,983	9,302	7,542	16,844	8,871	7,104	15,975	8,480	6,488	14,968	9,997	8,321	
	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	23,746	13,222	10,524	

Notes on using these tables.

% in MSM represents the proportion of the total male diagnoses attributed to men who have sex with men (MSM)

* Data is confidential
Following recent ONS guidance on data disclosure, the rules on publication of STI data with small cell sizes have changed. Cells with a value between 1 and 4 will now be anonymised with an asterisk. In addition, where the anonymised cell can be deduced from the totals, the next smallest cells will also be anonymised.

Definitions of selected conditions:

- Chlamydia uncomplicated genital chlamydial infection, ICD10 code C44, C4c
- Gonorrhoea uncomplicated gonorrhoea, ICD10 code B1, B2
- Syphilis primary and secondary infectious syphilis, ICD10 code A1, A2
- Herpes genital herpes simplex (first attack), ICD10 code B24
- Warts genital warts (first attack), ICD10 code C11a
- Total diagnoses all diagnoses made, includes all A, B, C and E ICD10 codes
- Total workload all workload not requiring a diagnosis, includes all D, P and S ICD10 codes



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