



HIV and STI Surveillance in Northern Ireland: 2009

(An analysis of data for the calendar year 2008)

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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 of data. While also reflecting epidemiological trends over time, its main focus will be on data collected in 2008.

Comments on the content and format of this report would be particularly welcome and may be addressed to cdscni@hscni.net

Following recent ONS guidance on data disclosure, where the number of any category of episodes in any one year is 1-4 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.

Summary Points

- ❖ 92 new first-UK HIV diagnoses were made in Northern Ireland during 2008, an increase of 51% on 2007 (61)
- ❖ 396 HIV-infected residents of Northern Ireland received HIV-related care during 2008, an increase of 5% on 2007 (378)
- ❖ 63 new diagnoses of infectious syphilis were reported in 2008, a increase of 142% on 2007 (26)

In Northern Ireland GUM clinics in 2008:

- ❖ New diagnoses of uncomplicated chlamydia increased by 12%; 1,946 in 2008 compared with 1,743 in 2007
- ❖ New diagnoses of uncomplicated gonorrhoea increased by 31%; 226 in 2008 compared with 172 in 2007
- ❖ New diagnoses of genital herpes simplex (first attack) increased by 7%; 296 in 2008 compared with 276 in 2007
- ❖ New diagnoses of genital warts (first attack) increased by 11%; 2,143 in 2008 compared with 1,929 in 2007

Surveillance arrangements and sources of data

HIV

Surveillance arrangements for diagnosed HIV/AIDS infection for 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. There are two main methods:

- ❖ Data relating to individuals whose first UK diagnosis was made in Northern Ireland
- ❖ Data relating to individuals who accessed statutory HIV services in England, Wales or Northern Ireland and who were resident in Northern Ireland as defined when last seen for care in 2008: the Survey of Prevalent HIV Infected cases (SOPHID)

KC60 returns

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

There are two important limitations to KC60 data, however. 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 the geographic location of services may influence the diagnostic rate of STIs. Thus direct comparison of different regions, or indeed of 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 clinic at the Royal Victoria Hospital, clinic location is not a useful proxy for patient residence.

Laboratory Reporting

Laboratory reporting of *Chlamydia trachomatis* and *Neisseria gonorrhoea* for Northern Ireland is provided for 2006-2008 and includes antibiotic susceptibility information for *Neisseria gonorrhoea*. In addition, CDSC (NI) have developed new arrangements in collaboration with the Royal Victoria Hospital's serology laboratory based on anonymised reporting of new cases of laboratory confirmed cases of syphilis. Data have been captured from the start of 2009 and the findings will be available in next year's report.

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 CDSC (NI), a range of demographic, clinical and risk factor data are collected.

1: Diagnoses provided in GUM clinics in Northern Ireland in 2008

During 2008:

- ❖ 7,452 new **STI diagnoses** were made compared with 6,897 in 2007
- ❖ 2,355 **Other STI diagnoses** were made
- ❖ There were 3,480 **Other diagnoses made at GUM clinics**

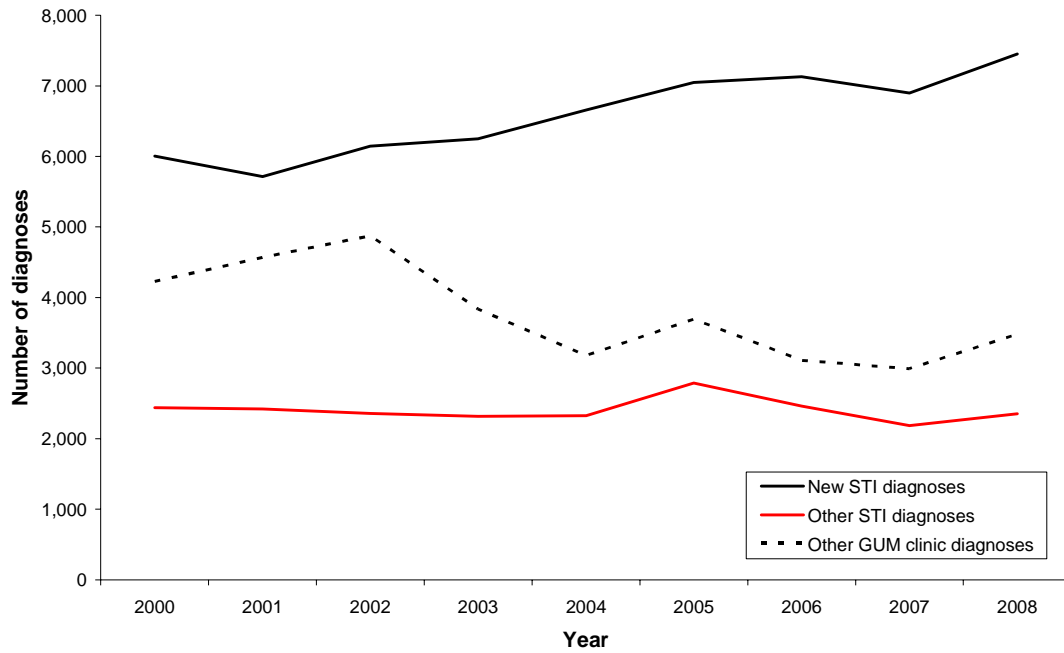
New STI diagnoses
Chlamydial infection (uncomplicated and complicated) Gonorrhoea (uncomplicated and complicated) Infectious and early latent syphilis Genital herpes simplex (first attack) Genital warts (first attack) New HIV diagnosis Non-specific genital infection (uncomplicated and complicated) Chancroid/lymphogranuloma 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

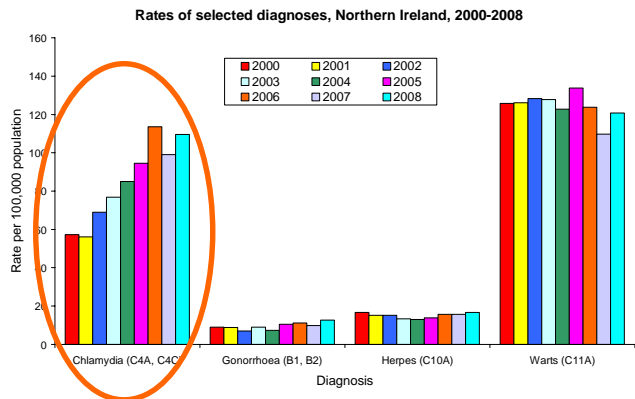
Trends: 2000-2008

The number of *new STI diagnoses* increased by 24% from 2000-2008. The total number of diagnoses (which includes recurrent and follow up presentations) increased by 16% during this time.

Specific disease trends will be examined in subsequent chapters.

Figure 1.1: Trends in diagnoses made in GUM clinics in Northern Ireland, 2000-2008





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 Reiter's Syndrome.

As elsewhere in the UK, chlamydia is the most common bacterial STI diagnosed in GUM in Northern Ireland. Diagnostic rates have been consistently lower than the UK overall.

While there is currently no organised regional Chlamydia testing programme in Northern Ireland, symptomatic testing is undertaken within primary care and sexual health services. Asymptomatic testing is offered to young people by some local providers including Brook clinics, pharmacies, young people's services and GP practices.

During 2008:

Chlamydial infection accounted for 27% (2,037/7,452) of all *new STI diagnoses* made in Northern Ireland GUM clinics.

Uncomplicated chlamydial infection:

- ❖ There were 1,946 new episodes of uncomplicated chlamydial infection diagnosed at GUM clinics in Northern Ireland, compared with 1,743 in 2007
- ❖ 1,050 (54%) of these were diagnosed in males
- ❖ The highest rates of infection in both males and females were diagnosed in the 20-24 years age group, accounting for 45% of male diagnoses and 43% of female diagnoses
- ❖ The rate of diagnoses in the 16-19 years age group is 2.7 times higher in females than males
- ❖ 4% (45/1,050) of the total male diagnoses occurred in men who have sex with men (MSM)

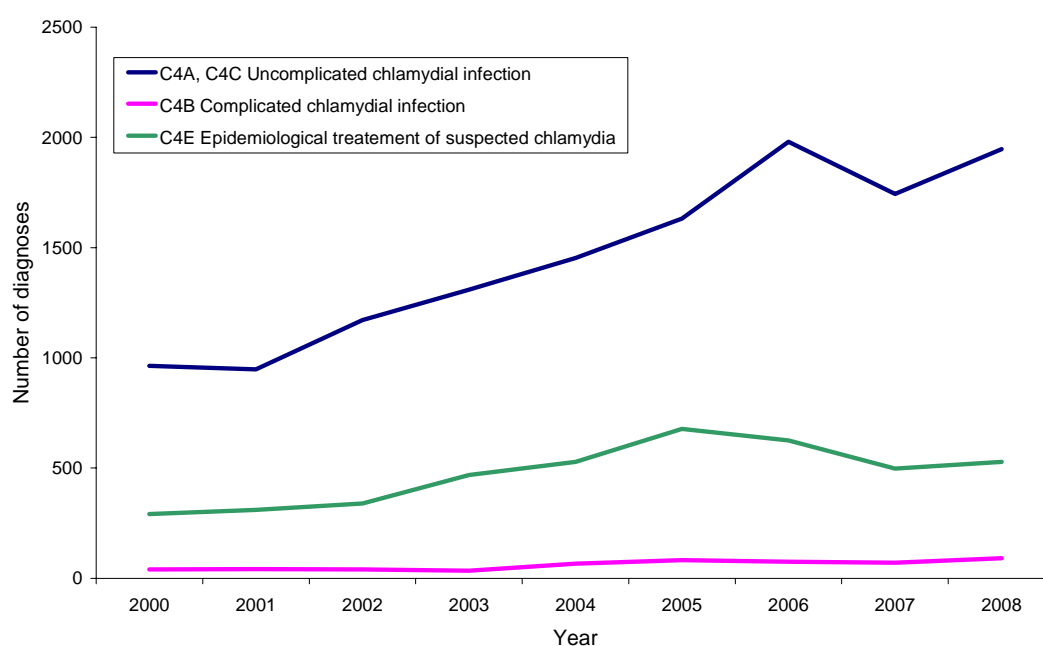
Complicated chlamydial infection:

- ❖ There were 91 new episodes of complicated chlamydial infection diagnosed at GUM clinics in Northern Ireland
- ❖ 74 (81%) of these were diagnosed in females

Trends: 2000-2008

Between 2000 and 2008, diagnoses of uncomplicated chlamydial infection have increased by 102%, from 963 diagnoses in 2000 to 1,946 in 2008. Diagnoses in males have increased by 119% while in females there has been an 86% increase. Diagnoses of complicated chlamydial infection have increased from 40 diagnoses in 2000 to 91 in 2008 but remain at a relatively low level (Figure 2.1).

Figure 2.1: Diagnoses of chlamydia, Northern Ireland, 2000-2008



Age/Gender diagnosis trends: uncomplicated chlamydia

From 2000-2008 diagnostic rates in females have been consistently highest in the 16-24 years age groups, peaking between 20 and 24 years. In males, the highest rates are in the 20-34 years age groups, again peaking between 20 and 24 years. Diagnostic rates in those under 25 years of age have been consistently higher in females, with rates in those 25 years or older consistently higher in males (Figure 2.2). Diagnostic rates among females fall after 24 years due to changes in sexual behaviour as well as decreased susceptibility.

Diagnoses in those <16 years of age accounted for 0.7% (94/13,140) of all diagnoses of uncomplicated chlamydia made during 2000-2008.

Diagnoses in the 45+ age group accounted for 1.6% (207/13,140) of the total diagnoses made during 2000-2008.

The proportion of total male diagnoses attributed to MSM has increased from 2% in 2000 to 4% in 2008.

Figure 2.2: Rates of uncomplicated chlamydial infection by gender and age group, Northern Ireland, 2000-2008

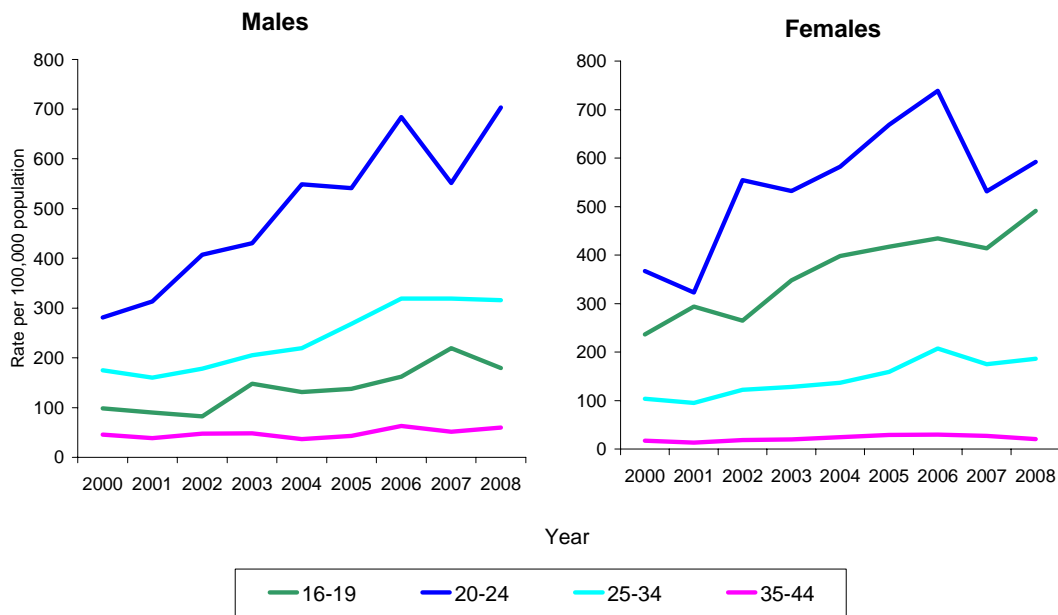
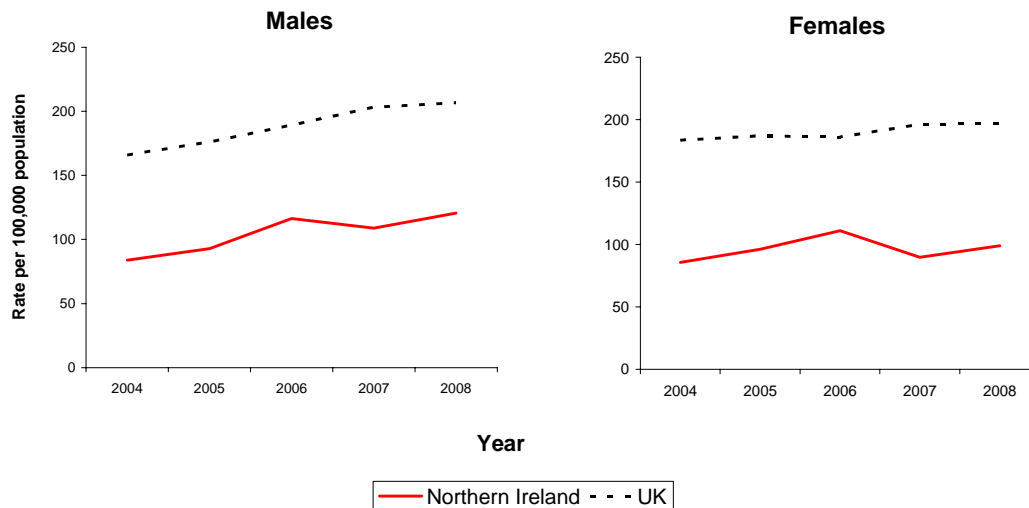


Figure 2.3: Rates of uncomplicated chlamydial infection by gender and country, 2004-2008



Diagnostic rates of uncomplicated chlamydial infection are increasing throughout the United Kingdom. This may be partly due to increasing public and professional awareness and the use of more sensitive testing. Rates in Northern Ireland are lower than the UK overall (Figure 2.3).

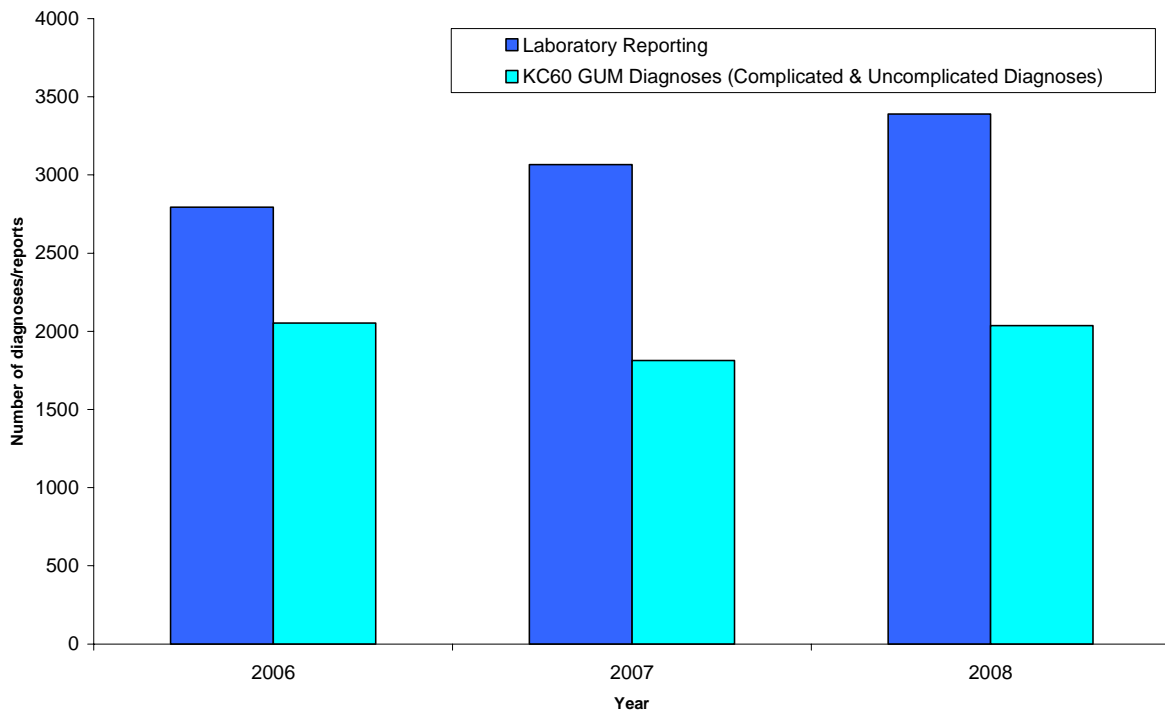
Chlamydia Trachomatis Laboratory Reporting, 2006 – 2008

During 2008, 3,390 laboratory confirmed cases of *chlamydia trachomatis* were reported; an increase of 11% on the 3,065 cases reported in 2007. Over half (55%:5,099/9,250) of the cases reported during 2006 – 2008 were from GUM clinic specimens with 28% (2,631/9,250) from General Practitioner specimens (table 2.1).

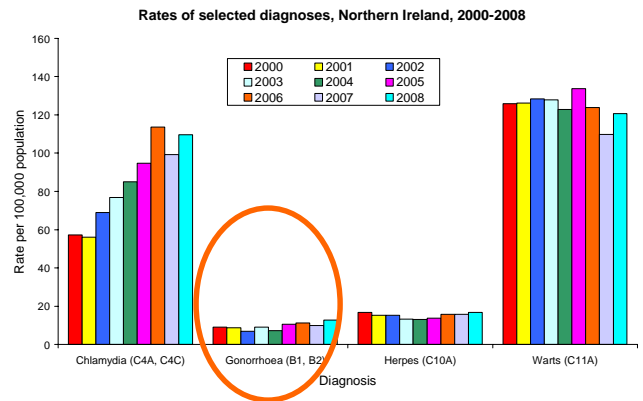
Table 2.1: Distribution of *Chlamydia Trachomatis* Specimens by the Referral Source, 2006 - 2008

Referral Source	2006	2007	2008	TOTAL
General Practitioner	738	911	982	2,631
Genito-urinary Medicine	1,685	1,591	1,823	5,099
Hospital A&E	*	0	*	*
Hospital Inpatient	139	264	90	493
Hospital Outpatient	50	157	290	497
Other	*	22	168	*
Unknown	165	120	*	*
TOTAL	2,795	3,065	3,390	9,250

Figure 2.4 Chlamydia KC60 Reports and Laboratory Reporting in Northern Ireland, 2006-2008



During 2008, there were 3,390 laboratory reports of *chlamydia trachomatis* compared with 2,037 diagnoses reported through the KC60 return. The number of laboratory reports increased by 21% from 2006-2008 and showed a steady year on year increase during this time. This is in contrast to the KC60 trend over the same time and illustrates the need for complementary surveillance sources.



3: Gonorrhoea

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

Diagnostic rates in Northern Ireland remain lower than the UK overall.

During 2008:

Gonorrhoea accounted for 3% (229/7,452) of all *new STI diagnoses* made in Northern Ireland GUM clinics.

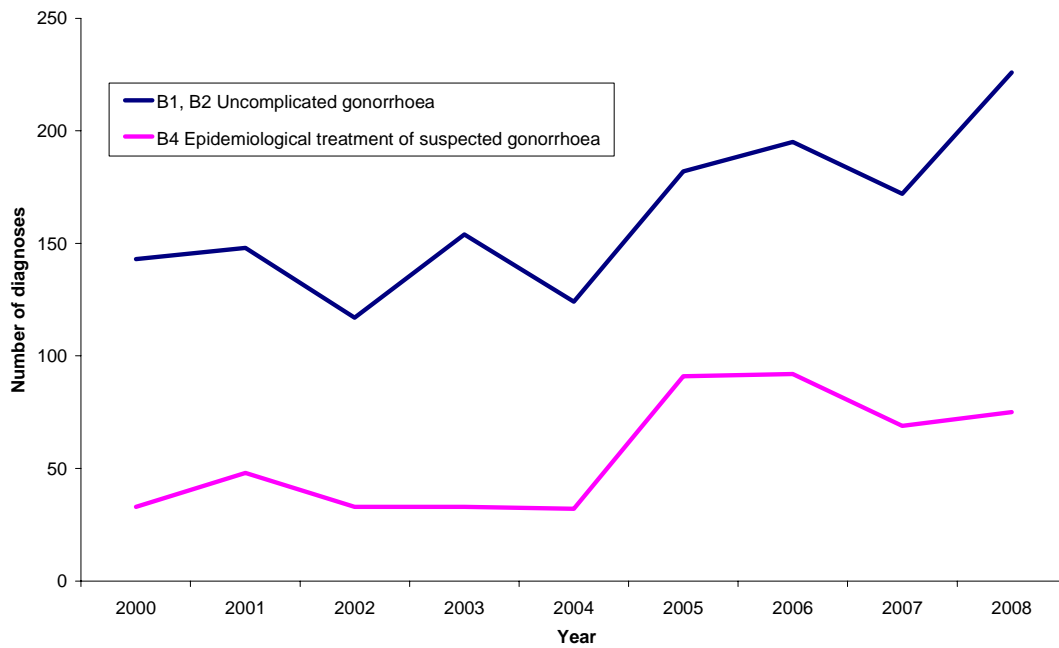
Uncomplicated gonococcal infection:

- ❖ There were 226 new episodes of uncomplicated gonorrhoea diagnosed at GUM clinics in Northern Ireland compared with 172 in 2007, a increase of 31%
- ❖ 194 (86%) of these were diagnosed in males
- ❖ The highest rates of infection in both males and females were diagnosed in the 20-24 years age group.
- ❖ 47% of female diagnoses were in the 16-24 years age group and 41% were in the 25-34 age group.
- ❖ In males, the proportion of diagnoses was more evenly distributed throughout the age groups – 37% were 16-24 years, 30% were 25-34 years and 22% were 35-44 years.
- ❖ 29% (56/194) of the total male diagnoses were attributed to MSM

Trends: 2000-2008

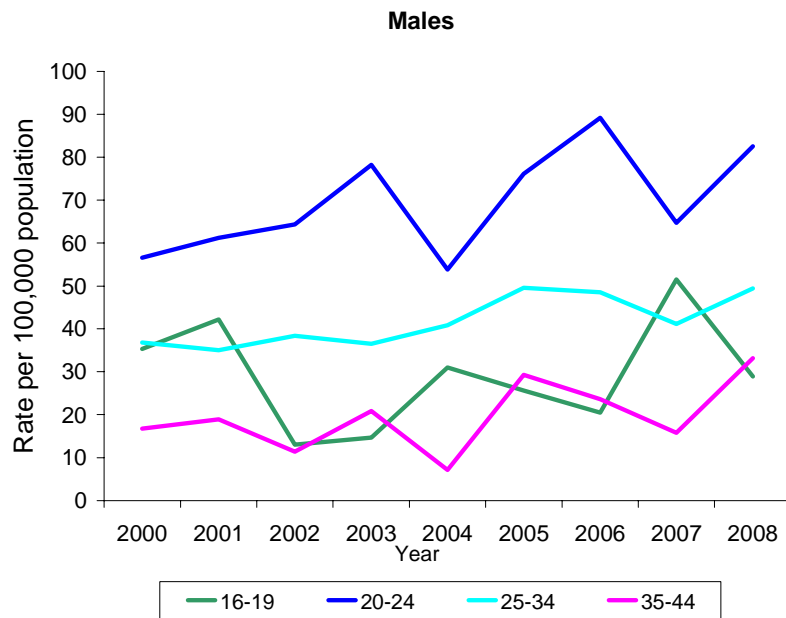
Although numbers have been variable, diagnoses of uncomplicated gonorrhoea have shown a generally increased trend since 2000 with a slight decrease in 2007 (Figure 3.1). During this time the proportion of the total male diagnoses attributed to MSM has ranged from 9% in 2000 to 40% in 2005. There are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

Figure 3.1: Diagnoses of gonorrhoea, Northern Ireland, 2000-2008



Age/Gender diagnosis trends: uncomplicated gonorrhoea

Figure 3.2: Rates of diagnosis of uncomplicated gonorrhoea by gender and age group, Northern Ireland, for 2000-2008



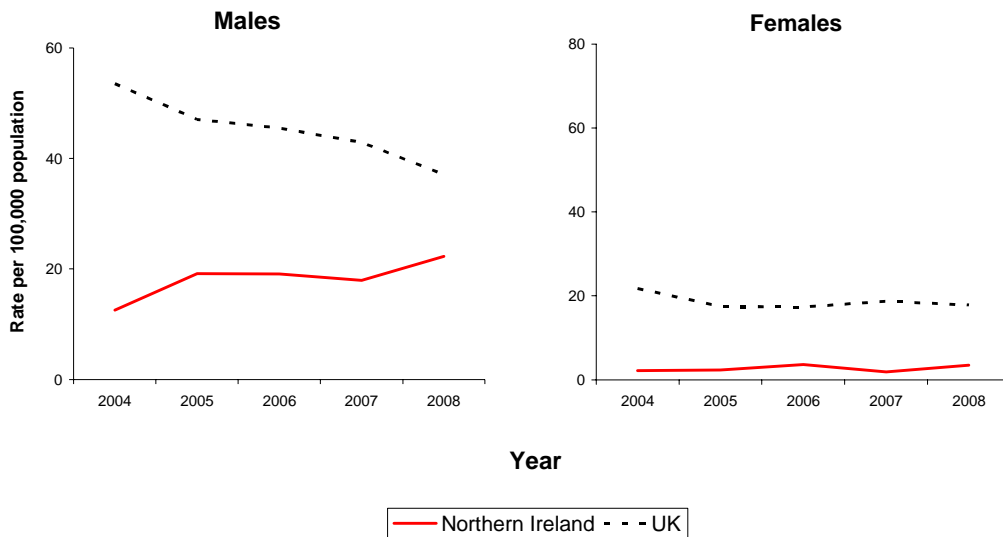
In males, the highest diagnostic rates are in the 20-34 years age groups, peaking between 20 and 24 years. (Figure 3.2).

<5 diagnoses were made in males <16 years old each year during 2000-2008.

Diagnoses in males aged 45+ accounted for 6.2% (78/1,258) of all male diagnoses during this time (2000-2008).

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

Figure 3.3: Rates of uncomplicated gonococcal infection by gender and country, 2004-2008



Between 2004 and 2008 diagnostic rates of gonorrhoea in Northern Ireland have consistently been lower than the UK overall for both males and females (Figure 3.3).

Neisseria gonorrhoea Laboratory Reporting, 2006 – 2008¹

During 2008, 44 laboratory confirmed cases of *Neisseria gonorrhoea* were reported; an increase of 10% on the 40 cases reported in 2007, 61 cases reported in 2006. Over half of the cases reported during 2006 – 2008 were from GUM clinic specimens (68%) with 24% from General Practitioner specimens (table 3.1).

Table 3.1: Distribution of *Neisseria gonorrhoea* Specimens by the Referral Source, 2006-2008

Referral Source	No of specimens	Proportions
General Practitioner	35	24%
Genito-Urinary Medicine	99	68%
Hospital Inpatient	*	*
Hospital Outpatient	*	*
Other	*	*
Unknown	5	3%
Total	145	100%

Effective treatment of gonorrhoea has been compromised by the ability of *Neisseria gonorrhoea* 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. In 2008, 70% (31/44) samples were reported as being tested for antibiotic susceptibility (Table 3.2).

Current guidelines recommend the use of third-generation cephalosporins to treat gonorrhoea. During 2006-2008 none of the limited number of samples tested were reported as resistant to cephalosporins (Table 3.3).

Table 3.2: *Neisseria gonorrhoea* specimens/patients for which Antibiotic susceptibility was reported, 2006-2008

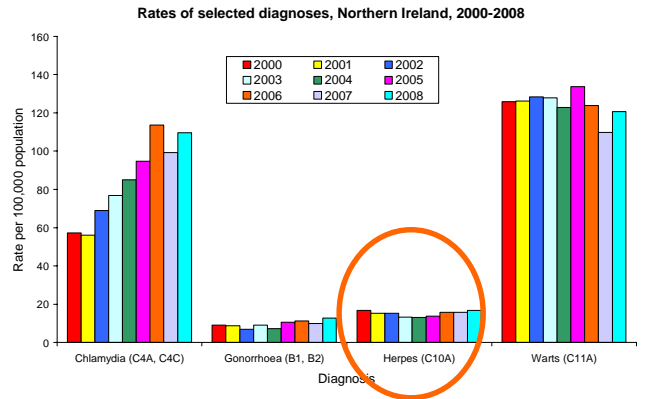
	Total specimen/patients reports	Specimens reported for AB susceptibility (%)	Total no of AB susceptibility reports
2006	61	29 (48%)	107
2007	40	23 (58%)	96
2008	44	31 (70%)	126
Total	145	83 (57%)	329

¹ Figures do not include the Royal Victoria Bacteriology Laboratory

² HPA, London, June 2009. GRASP 2008 Report: Trends in Antimicrobial Resistant Gonorrhoea

Table 3.3: *Neisseria gonorrhoea* antibiotic susceptibility reported activity for antibiotics, 2006-2008

Antibiotics	Susceptible	Resistant (%)	Total specimens Reported (N=329)
CEFIXIME	18	0 (0%)	18
CEFOTAXIME	21	0 (0%)	21
CEFTRIAZONE	7	0 (0%)	7
CEFUROXIME	23	0 (0%)	23
CHLORAMPHENICOL	3	0 (0%)	3
CIPROFLOXACIN	46	24 (34%)	70
CO-AMOXYCLAV	1	0 (0%)	1
DOXYCYCLINE	1	1 (50%)	2
GENTAMICIN	1	0 (0%)	1
NALIDIXIC ACID	15	7 (32%)	22
PENICILLIN	39	32 (45%)	71
POLYMYXIN	0	1 (100%)	1
RIFAMPICIN	1	2 (67%)	3
SPECTINOMYCIN	38	1 (3%)	39
TETRACYCLINE	29	18 (38%)	47



4: Genital Herpes

Genital herpes is caused by the herpes simplex virus (HSV) of which there are two distinct subtypes. Type 2 is almost exclusively associated with genital infection. While historically, HSV1 was mainly associated with oral infection the proportion of genital HSV attributed to HSV1 in the UK is increasing. Genital HSV infection may facilitate HIV transmission, can cause severe systemic disease in those with impaired immunity, and can be potentially fatal to neonates.

Diagnostic rates of genital herpes in Northern Ireland are lower than the UK overall.

During 2008:

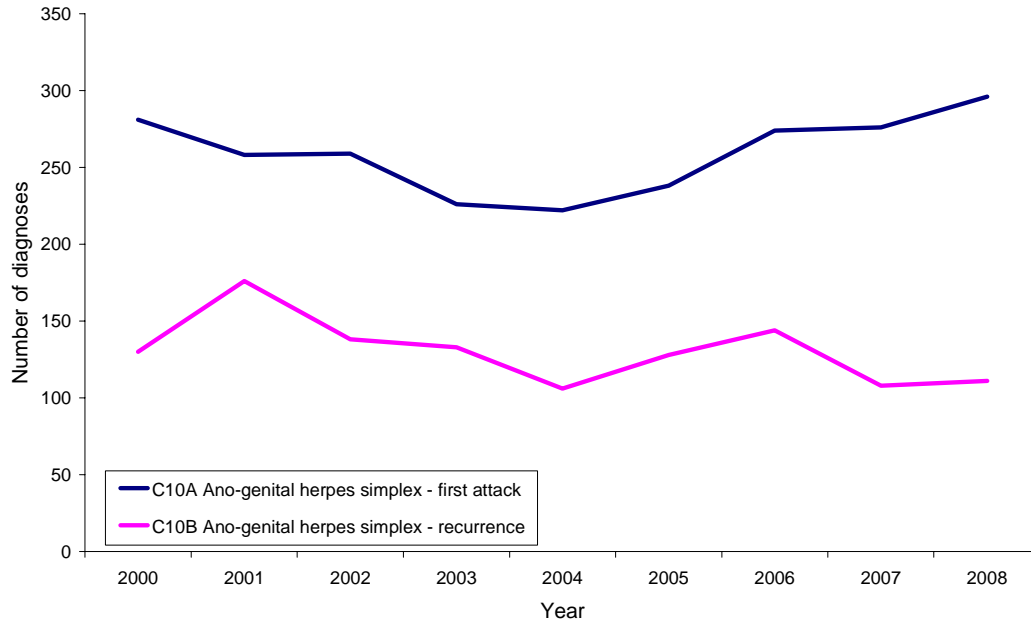
Genital herpes (first episodes) accounted for 4% (296/7,452) of all *new STI diagnoses* made in Northern Ireland GUM clinics.

- ❖ There were 407 episodes (first infections and recurrent infections) of genital herpes diagnosed at GUM clinics in Northern Ireland in 2008 compared with 384 in 2007, a increase of 6%
- ❖ 288 (71%) of these were diagnosed in females
- ❖ 296 (73%) of the total attendances for herpes in 2008 were for treatment of first infections and 111 (27%) were for treatment of recurrent infection
- ❖ 34% of the male diagnoses (41/119) were recurrent infections compared with 24% (70/288) of the female diagnoses
- ❖ The highest rates of first infections in females were diagnosed in the 20-24 years age group (120/100,000 population) and in males were in the 25-34 age group 32/100,000 population)
- ❖ Diagnostic rates of first infections in all age groups were higher in females. The rate in 20-24 year old females was seven times higher than in males in the same age group.
- ❖ 6% (5/78) of the total male first diagnoses occurred in MSM

Trends: 2000-2008

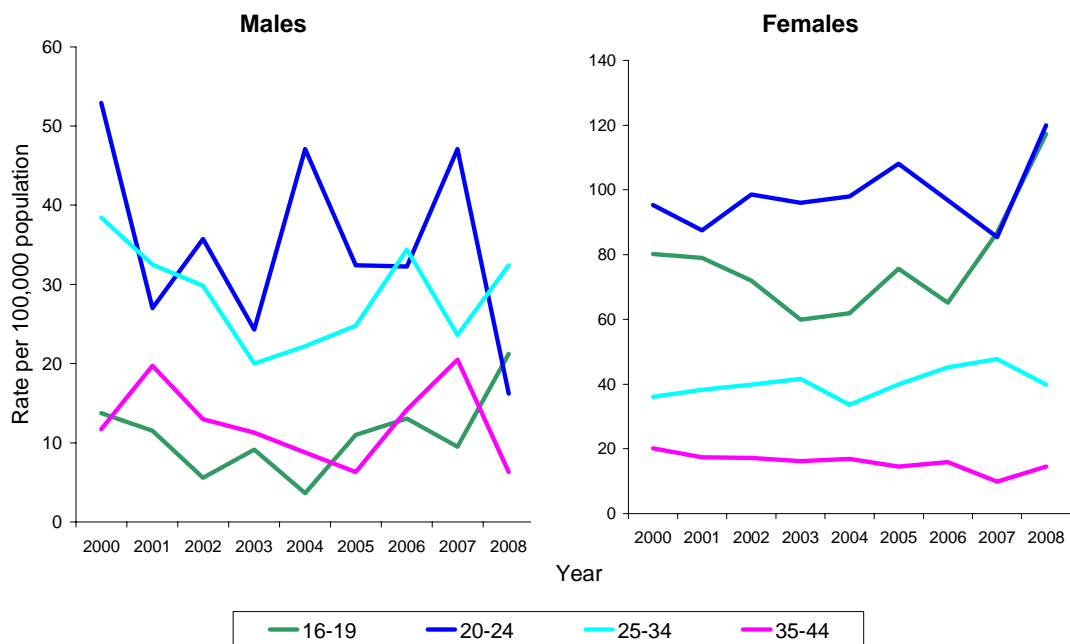
Annual numbers of first diagnoses of genital herpes between 2000 and 2008 show no clear trend with numbers ranging from 222 in 2004 to 281 in 2000. However, this analysis masks an increase now for the fourth successive year (Figure 4.1).

Figure 4.1: Diagnoses of genital herpes, Northern Ireland, 2000-2008



Age/Gender/UK country of diagnosis trends: genital herpes (first attack)

Figure 4.2: Diagnoses of genital herpes (1st attack) by age and gender, Northern Ireland, 2000-2008

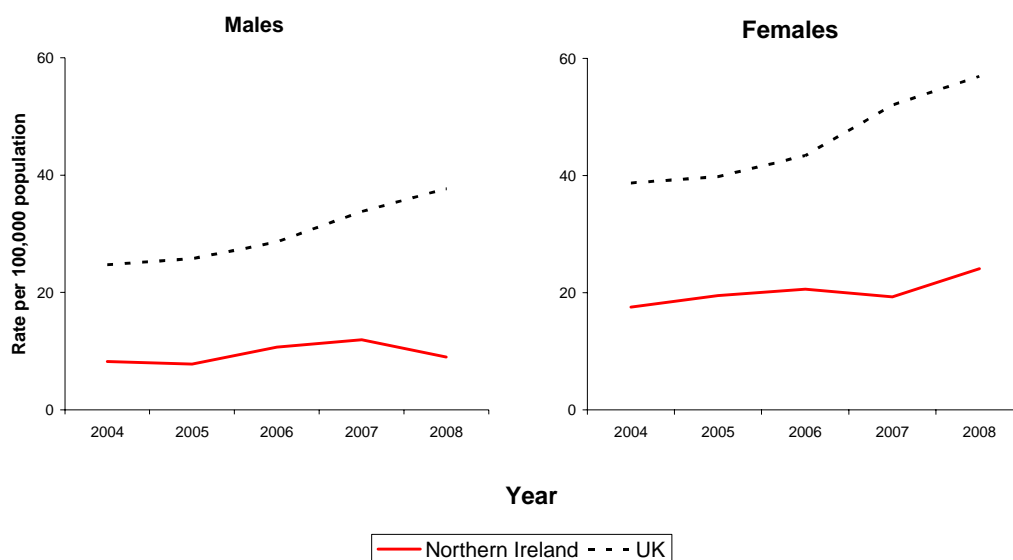


Diagnostic rates in females have been highest in the 16-24 years age groups. In males, the highest rates are in the 25-34 years age group. (Figure 4.2).

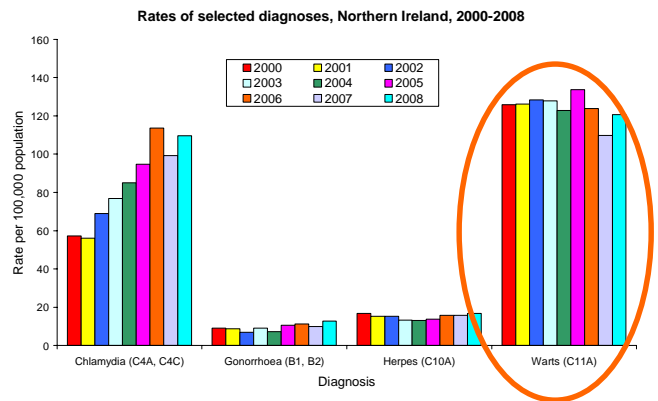
Diagnoses in males <20 years account for 7.1% (53/747) of all male diagnoses of genital herpes (first attack) made during 2000-2008, with diagnoses in the 45+ age group accounting for 8.6% (64/747).

Diagnoses in females aged <16 years account for 1.3% (20/1,583) of female diagnoses made during 2000-2008, with diagnoses in the 45+ age group accounting for 5.0% (79/1,583).

Figure 4.3: Rates of genital herpes (1st attack) by gender and country, 2004-2008



Diagnostic rates of infection are lower for both males and females in Northern Ireland compared with the UK overall (Figure 4.3).



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.

Diagnostic rates for first episodes of genital warts in Northern Ireland are more similar to those in the rest of the UK than for the other selected STIs reviewed in this report.

During 2008:

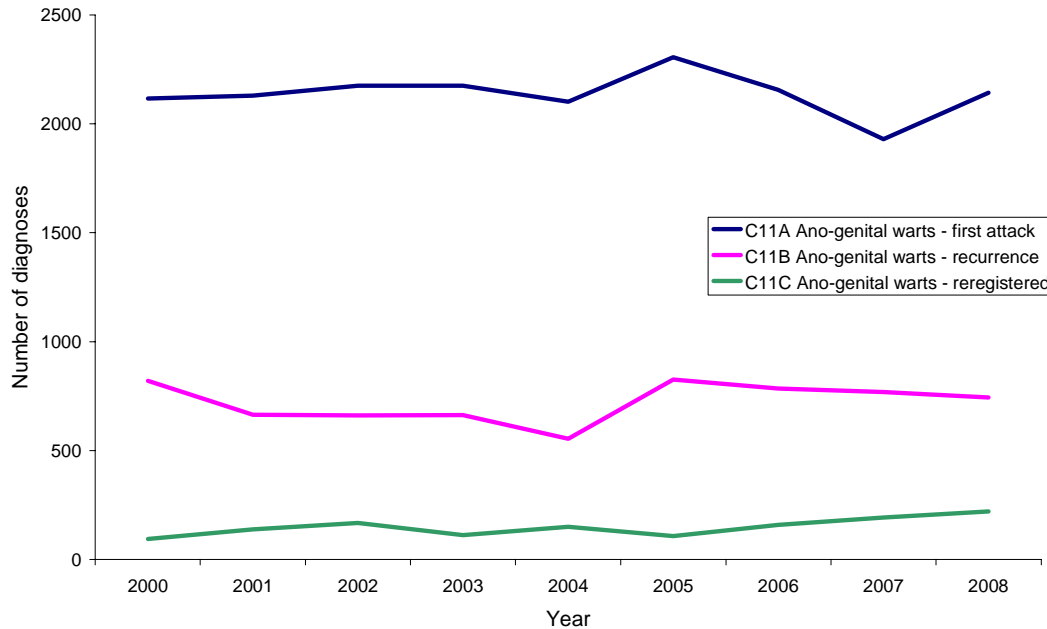
Genital warts (first episodes) accounted for 29% (2,143/7,452) of all *new STI diagnoses* made in Northern Ireland GUM clinics.

- ❖ There were 2,886 episodes (first infections and recurrent infections) of genital warts diagnosed at GUM clinics in Northern Ireland in 2008 compared with 2,697 in 2007, a increase of 7%
- ❖ 1,552 (54%) of these were diagnosed in males
- ❖ 2,143 (74%) of the total attendances for genital warts in 2008 were for treatment of first infections and 743 (26%) were for treatment of recurrent infection
- ❖ 27% of the male diagnoses (420/1,552) were recurrent infections compared with 24% (323/1,334) of the female diagnoses
- ❖ The highest diagnostic rates of first infections in both men and women were diagnosed in the 20-24 years age group
- ❖ 37% of male diagnoses and 36% of female diagnoses for first infections were in the 20-24 years age group
- ❖ The diagnostic rate in females aged 16–19 years (512/100,000) was more than twice that of males of the same age. However, rates in those aged over 19 years were higher in males
- ❖ 3% (39/1,552) of the total male diagnoses occurred in MSM

Trends: 2000-2008

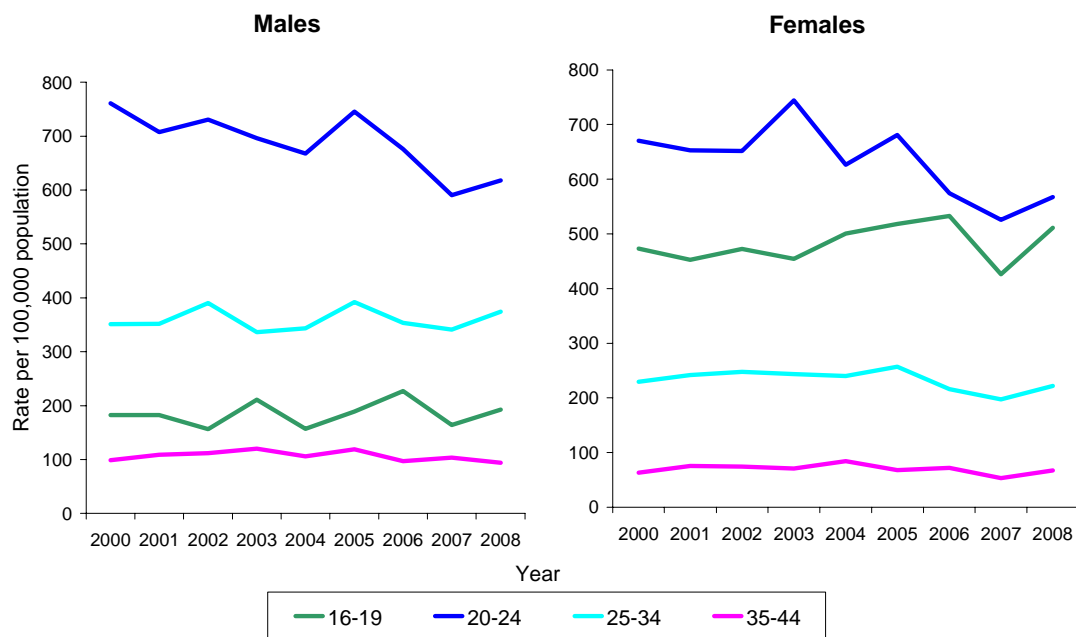
Diagnoses of initial infections of genital warts have shown little variation since 2000. Diagnoses have increased by 1% between 2000 (2,117) and 2008 (2,143) (Figure 5.1). Diagnostic rates tend to be higher overall in males.

Figure 5.1: Diagnoses of genital warts, Northern Ireland, 2000-2008



Age/Gender/UK country of diagnosis trends: genital warts (first attack)

Figure 5.2: Rates of genital warts (1st attack) by age and gender, Northern Ireland, 2000-2008

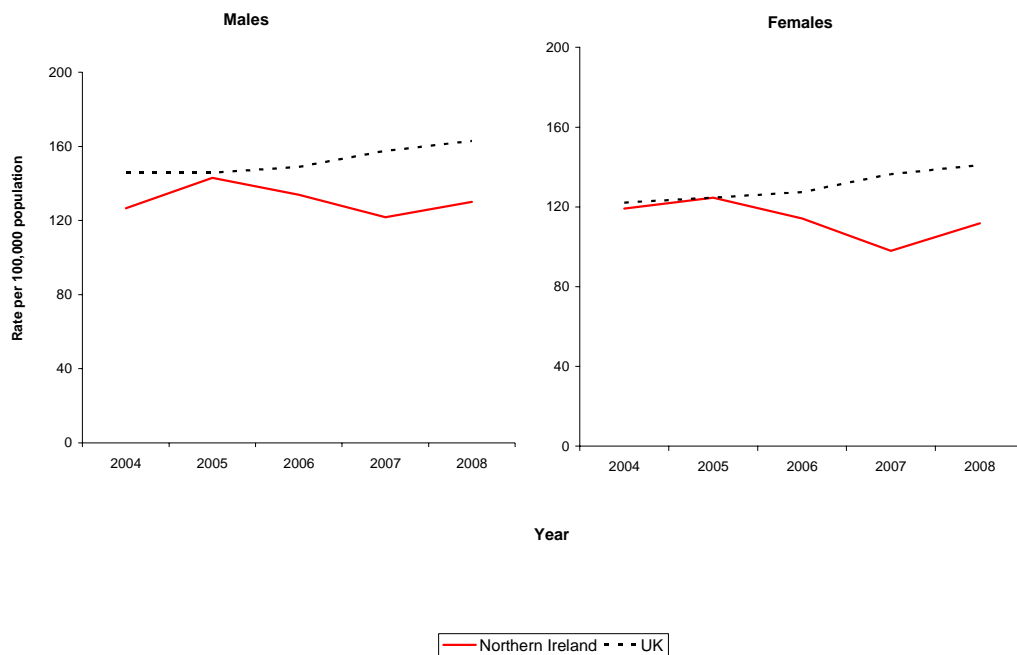


Diagnostic rates in females have been highest in the 16-24 years age groups, peaking between 20 and 24 years. In males, the highest rates are in the 20-34 years age groups, also peaking between 20 and 24 years. Rates in those under 20 years have been consistently higher in females than males whereas rates in age groups greater than 20 years have been higher in males (Figure 5.2).

Diagnoses in those <16 years of age accounted for 0.4% (77/19,234) of all diagnoses of genital warts (first attack) made during 2000-2008. Diagnoses in the 45+ age group accounted for 4.2% (802/19,234) of the total diagnoses made during 2000-2008.

The proportion of total male diagnoses attributed to MSM has remained stable at 2-3% since 2000.

Figure 5.3: Rates of genital warts (1st attack) by gender and country, 2004-2008



Diagnostic rates in both males and females in Northern Ireland are similar to those in the UK overall (Figure 5.3).

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 of syphilis itself for the infected individual 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 UK and Europe, experienced a marked increase in infectious syphilis since 2000. In the preceding decade, on average only one case of infectious syphilis per year was reported.

During 2008:

- ❖ 63 new episodes of infectious syphilis representing 63 individuals were diagnosed
- ❖ 21 presented as primary syphilis, 15 as secondary and 22 as early latent syphilis. For 5 episodes the stage of illness was not known
- ❖ 71% (45/63) episodes were diagnosed in MSM
- ❖ 58 episodes occurred in residents of Northern Ireland and in 38 episodes syphilis was likely to have been acquired through exposure within Northern Ireland
- ❖ Diagnosed co-infections included acute hepatitis B, chlamydia, gonorrhoea, genital warts and non-specific urethritis (NSU).
- ❖ 59% (37/63) reported one sexual partner in the three months preceding diagnosis. The highest number of sexual partners reported in this time was 200.

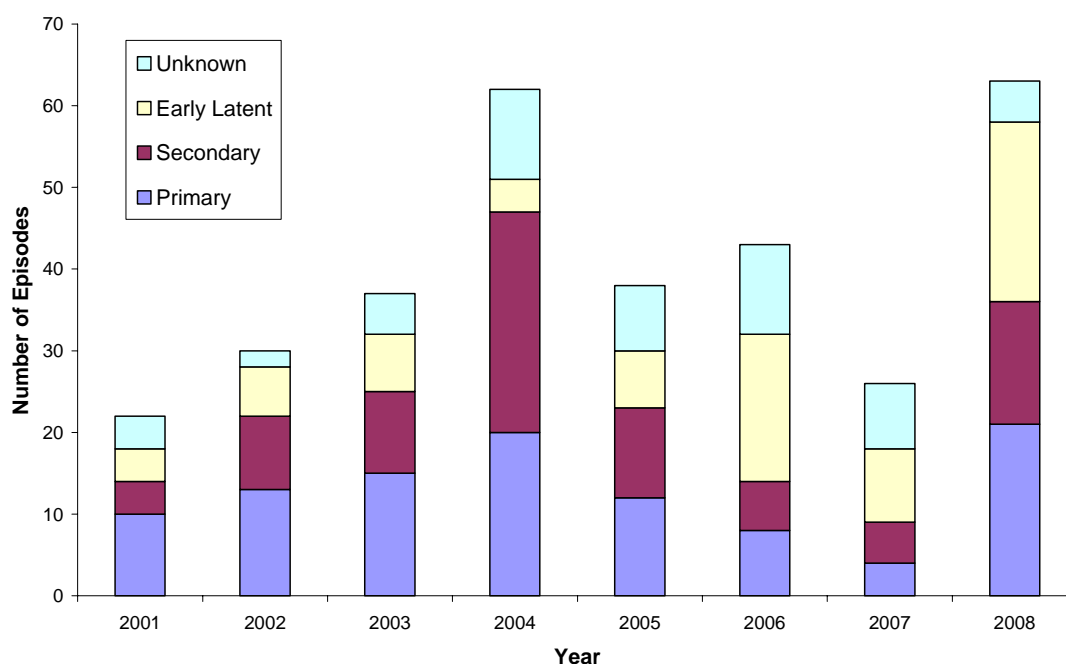
Trend information

During 2008, 63 episodes of infectious syphilis were diagnosed representing a 142% increase on the 2007 figure (26). The outbreak continues to involve predominantly MSM accounting for 70% (225/321) of diagnoses to end 2008. Episodes in heterosexual males and females have accounted for between 13% and 40% of annual totals. Fifty five per cent of heterosexually acquired episodes have been in males.

Cumulative data show the highest number of episodes in heterosexual females in the 25-34 year age group (52%:22/42); and in MSM the 25-44 years age group (60%:135/225). Diagnoses were more evenly spread across age bands in heterosexual males with those aged 25+ accounting for 71% (37/52) of diagnoses in this category.

From 2001-2005 there has been 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 is available. During 2006 and 2007, this fell to 46% (23/50). However, 2008 has seen an increase in the primary and secondary stages of diagnosis to 62% (36/58), with the number of episodes with an unknown stage decreasing to 8% compared to 31% in 2007.

Figure 6.1: Stage of disease by year of diagnosis



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

Table 6.1: Location of acquisition of syphilis infection diagnosed in Northern Ireland 2001-2008

Year	Dublin	Northern Ireland	Elsewhere in the UK	Outside UK/ROI	ROI (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	*

Mathematical modelling of the transmission of sexually transmitted infections has shown how those individuals with high rates of partner change play a disproportionately large role in the spread of infection. Cumulative data from 2001-2008 show that the majority of cases reported between none to two partners (72%:225/313) in the three months prior to diagnosis. It is noteworthy, however, that 4% (11/313) reported 20 or more partners during this period.

7: 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 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 made major advances in survival rates.

While prevalence in Northern Ireland remains lower than the other UK countries, annual new diagnoses have increased year on year since 2001, almost doubling between 2003 and 2004. Diagnoses increased by 51% between 2007 (61) and 2008 (92). Provisional data for the first six months of 2009 (24) suggests a potential decrease in the annual figure. The key routes of transmission remain sexual contact between men who have sex with men (MSM) and sexual contact between men and women.

During 2008:

- ❖ 92 new first – UK cases of HIV were diagnosed in Northern Ireland
- ❖ 55% of diagnoses were acquired through sex between men and women
- ❖ 396 HIV-infected residents of Northern Ireland (as defined when last seen for statutory medical HIV-related care in 2008) received care
- ❖ Of those receiving care, 47% (186/396) acquired their infection through sexual contact between MSM and 50% (197/396) through heterosexual contact

Trend Information

The annual number of new first-UK diagnoses made in Northern Ireland increased by 51% from 61 in 2007 to 92 in 2008 (Table 7.1). The annual number of new AIDS diagnoses have also seen a significant increase during 2008; with 14 diagnoses reported representing a 100% increase compared with 2005. However, deaths continue to remain low, due largely to the influence of HAART.

Table 7.1: HIV and AIDS cases by year of diagnosis and deaths in HIV-infected individuals by year of death, Northern Ireland

Year	HIV diagnoses	AIDS diagnoses	Deaths
1993 or earlier	115	46	34
1994	15	12	7
1995	13	13	8
1996	17	*	9
1997	10	*	*
1998	9	*	*
1999	18	7	*
2000	19	6	*
2001	19	8	*
2002	27	8	5
2003	34	*	0
2004	66	*	0
2005	60	7	*
2006	56	*	0
2007	61	*	*
2008	92	14	5
Total	631	138	82

Analysis of trends of the probable route of exposure is complicated by the small number of cases in each category and the potential for year to year variation. Sex between men and sex between men and women remain the most significant categories of probable route of infection, accounting for 92% (583/631) of new diagnoses to date (Table 7.2). Heterosexual transmission has assumed increasing importance since 2002 and now accounts for 45% (284/631) of new diagnoses made to date. Forty six per cent (130/284) in this category are in men. Cumulative data show that for cases acquired through heterosexual exposure, and where location of exposure is known, the majority have been infected through exposure outside the UK (73%:178/245). For cases acquired through MSM exposure the opposite is the case, with the majority acquired within the UK (76%: 165/216). The numbers in the other exposure categories remain low.

Table 7.2: HIV infected individuals by year of diagnosis and probable route of infection, Northern Ireland

Year of diagnosis	Sex between men	Sex between men and women
1993 or earlier	63	25
1994	12	*
1995	9	*
1996	12	5
1997	7	*
1998	6	*
1999	7	9
2000	6	9
2001	11	7
2002	15	11
2003	8	25
2004	35	29
2005	20	38
2006	25	31
2007	23	32
2008	40	51
Total	299	284

Cumulative data to 2008 show:

- ❖ 13 cases acquired due to injecting drug use
- ❖ 35 cases acquired due to other/undetermined causes

The numbers of HIV-infected residents of Northern Ireland (as defined when last seen for care in 2008) receiving care have increased to 396 in 2008, compared with 190 in 2003. This reflects both the continued increase in new diagnoses being made, and the role of HAART in increasing survival of those infected with HIV.

8: Summary and Conclusions

2008 has seen an increase in the annual number of new STI diagnoses made in Northern Ireland GUM clinics.

As in previous years, diagnostic rates continue to be highest in the 20-24 year old age group, with MSM the group most at risk from infectious syphilis.

The increase in new diagnoses of HIV compared with 2007 is consistent with the overall trend of year on year increase seen since 1999. Analysis also shows that the probable route of exposure is consistent with that of recent previous years with MSM and heterosexual contact being responsible for the majority of transmissions. As expected the number of Northern Ireland residents receiving HIV related care continues to increase. While this report is primarily focused on 2008 data, it is also important to note that provisional data for the first 6 months of 2009, shows a total of 24 new diagnoses during this period. There is therefore the potential for a reduction in the annual figure for 2009.

By providing an overview of the epidemiology of HIV/STIs this report is intended to help inform activities in the prevention and control of HIV/STIs in Northern Ireland. The following recommendations are apparent:

1. Further interpretation of the data in this report would be facilitated by a survey of sexual attitudes and lifestyles of the Northern Ireland population. This would allow a more targeted approach to the development and delivery of sexual health promotion messages.
2. There should be reinforcement of the safer sex message. The risks of unprotected casual sex both within Northern Ireland and outside Northern Ireland need to be made clear.
3. Sexual health messages need to be targeted at both the general heterosexual and the MSM communities. Younger people appear to be especially vulnerable.
4. Service commissioners need to ensure appropriate and adequate access to the range of sexual health services, including specialised GUM services.