



CDSC (NI)

HIV and STI Surveillance in Northern Ireland: 2004

Supplement to Monthly Report
Vol 14 No 10

Introduction

This report reviews the epidemiology of HIV and Sexually Transmitted Infections (STIs) in Northern Ireland for the year 2004.

Key points

- 63 new cases of HIV infection whose first UK diagnosis was made in Northern Ireland have been reported in 2004, an increase of 98% on the figure for 2003
- New diagnoses of infectious syphilis and chlamydia continue to increase

HIV

Surveillance arrangements

Surveillance arrangements for diagnosed HIV/AIDS infection for England, Wales and Northern Ireland are based largely on the confidential reporting by clinicians of HIV infected individuals to Centre for Infections, Colindale. There are two main outputs:

- Surveillance data relating to individuals whose first UK diagnosis has been made in Northern Ireland, published as quarterly tables
- Data relating to individuals who accessed UK-based statutory HIV services, published as annual reports of the Survey of Prevalent HIV Infected cases (SOPHID)

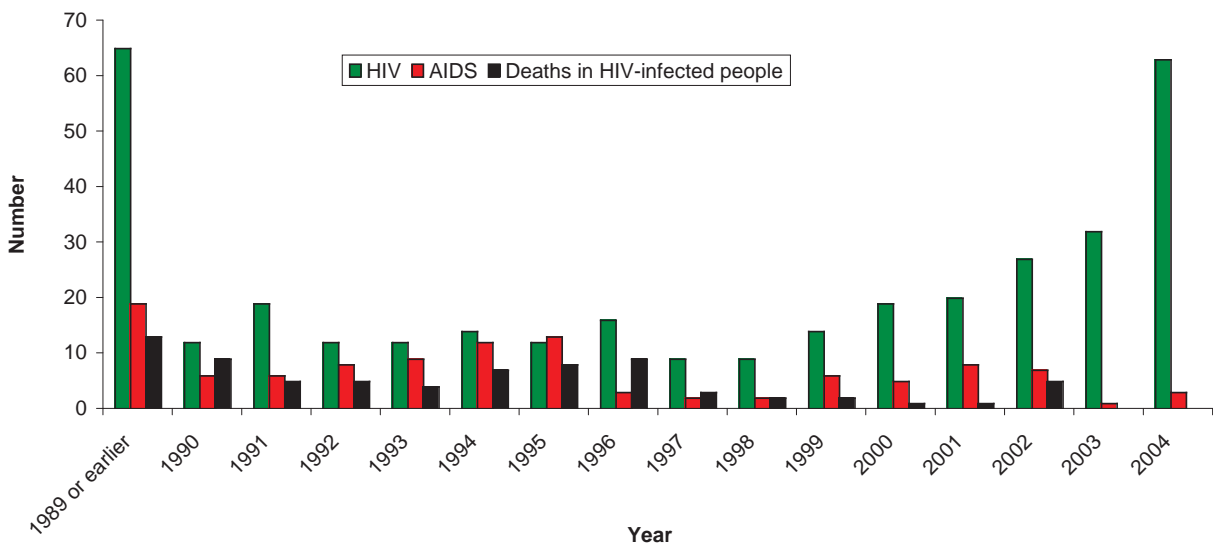
Both are accessible at:

http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/epidemiology.htm

Newly Diagnosed HIV infections

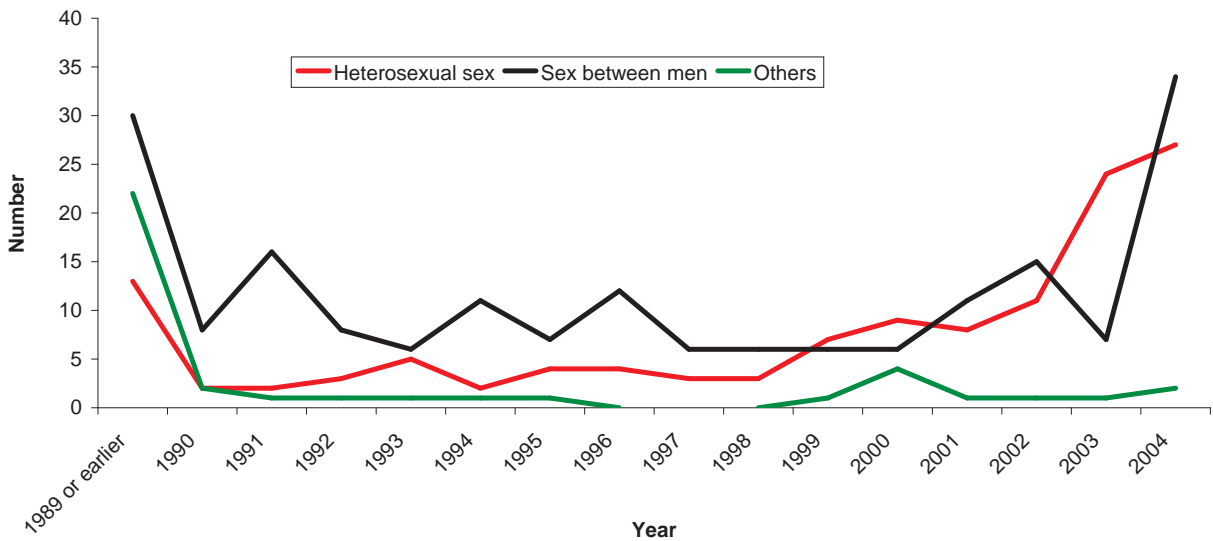
Annual new diagnoses of HIV have increased yearly since 1998. Sixty-three new diagnoses were made during 2004, an increase of 98% compared with 2003 figures. The numbers of new diagnoses of AIDS, however, have remained low since 1996, due in large part to the introduction of highly active antiretroviral therapy. A similar pattern is seen for deaths due to AIDS.

Fig 1: HIV and AIDS diagnoses and deaths in HIV-infected people, to end 2004, Northern Ireland



Analysis of the trends of probable route of exposure is complicated by the small numbers of cases in Northern Ireland and the resulting year on year variation. While new diagnoses continue to be made among men who have sex with men (MSM), the numbers acquired through heterosexual transmission are increasing since 1999. Analysis of the cumulative data to end 2004 shows that, as elsewhere in the UK, the majority of those infected through heterosexual contact, and with no evidence of exposure to "high risk" partners, have been infected through exposure outside the UK (75%:87/116), with 64% (56/87) of these individuals reporting exposure in Africa.

Fig 2: Exposure category of HIV-infected individuals by year of diagnosis in Northern Ireland



As a consequence the cumulative proportion of cases in NI due to MSM is now 52.3% with heterosexual cases now accounting for 36.9%. This compares with 46.9% and 39.1% respectively for the UK as a whole. The number acquired through injecting drug use remains low at 2.6% compared with 5.8% for the UK.

Numbers seen for care

Table 1: Diagnosed HIV-infected patients resident in Northern Ireland when last seen for care, by exposure category 2000-2004

	MSM	IDU	Heterosexual men and women	Mother to infant	Other/ not reported	Total
2000	61	4	35	1	3	104
2001	74	4	45	2	3	128
2002	82	5	52	1	3	143
2003	96	5	78	5	5	189
2004	124	5	99	8*	3	239

* This includes 3 children born to HIV-infected mothers, whose HIV status is unknown

239 HIV-infected individuals resident in Northern Ireland received care in 2004. This represents an increase of 129.8% from 2000. 58.9% are resident in the EHSSB. While the majority of individuals receiving care continue to be MSM the increase in numbers from 2000-2004 is greatest in heterosexual men and women (182.9% compared with 103.3% for MSM).

Table 2: Numbers and population rates of diagnosed HIV-infected patients seen for care in 2004, by Health Board of residence when last seen for care (n=238*)

Board	Number	Rate per 100,000 population
EHSSB	141	21.23
NHSSB	51	11.69
SHSSB	23	7.15
WHSSB	23	7.96

*Board of residence unknown for 1 individual

Other Sexually Transmitted Infections

Surveillance arrangements

The most comprehensive source of surveillance data for sexually transmitted infections in Northern Ireland is provided by the KC60 statutory return made each quarter from GUM clinics. Using the same format as England and Wales, this records the numbers of new diagnoses for a range of STIs. For selected conditions, additional age/gender/sexual orientation information is provided. Summary statistics are presented on the CDSC (NI) website at www.cdscni.org.uk/Surveillance/STI/Default.asp.

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 trends in rates of diagnoses. Secondly, unlike HIV surveillance arrangements, no residence-based data are collected. Given that the majority of new diagnoses originate from the largest and most accessible clinic at the RGHT site, clinic location is not a useful proxy for patient residence.

Analysis of KC60 data in this report uses the following definitions:

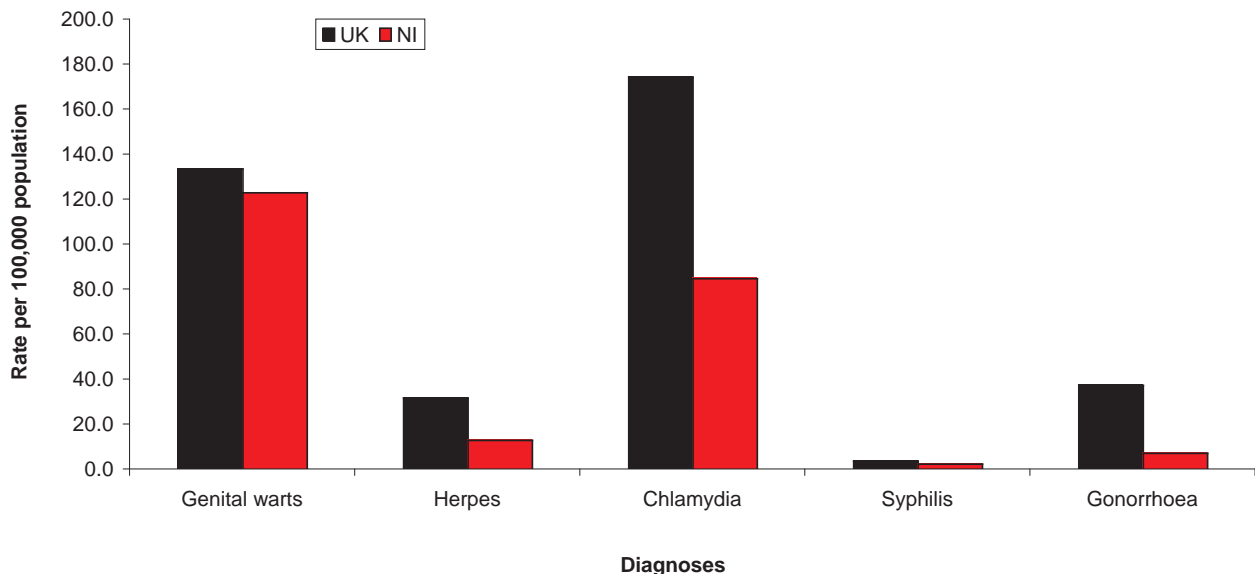
- Chlamydia** uncomplicated genital chlamydia infection, KC60 code C4a, C4c
- Gonorrhoea** uncomplicated gonorrhoea, KC60 code, B1,B2
- Syphilis** primary and secondary infectious syphilis, KC60 code, A1, A2
- Herpes** anogenital herpes (first attack), KC60 code, C10a
- Warts** anogenital warts (first attack), KC60 code, C11a

Compared with 2003, the numbers of new diagnoses of:

- **Chlamydia have increased by 10.5% to 1,446**
- **Syphilis have increased by 320% to 42**
- **Gonorrhoea have decreased by 19.5% to 124**
- **Herpes have decreased by 1.8% to 222**
- **Warts have decreased by 3.6% to 2,096**

The highest new episode rate in Northern Ireland during 2004 was that seen for genital warts followed by those of chlamydia, herpes, gonorrhoea and syphilis. Elsewhere in the UK, chlamydia is the most common diagnosis made.

Fig 3: Rates of new episodes of selected diagnoses made in Northern Ireland and UK GUM clinics, 2004



While new episode rates of chlamydia and syphilis during 2004 were below the UK average, they are following a similar trend to the UK. Thus, from 2000, chlamydia diagnostic rates have increased by 48% and syphilis by 250%. Rates of herpes, gonorrhoea and warts have fallen by 22%, 14% and 2% respectively.

In line with elsewhere in the UK, higher rates of gonorrhoea, syphilis and warts are seen in males, with rates for chlamydia and herpes highest in females (Figures 4 - 8).

Fig 4: Rates of new diagnoses of chlamydia by gender, Northern Ireland and UK, 2000 - 2004

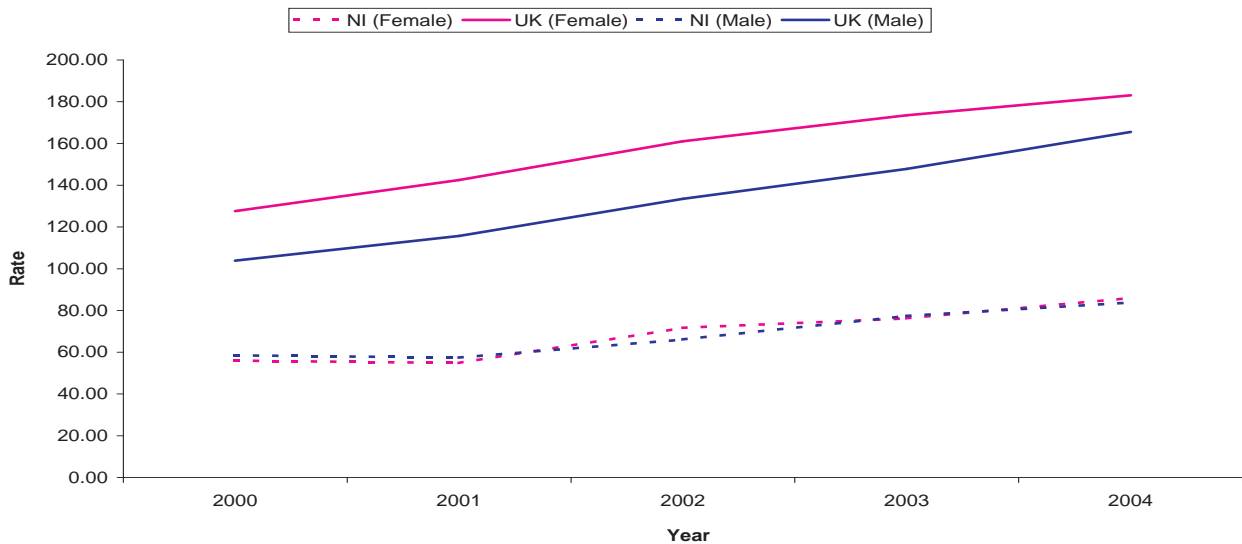


Fig 5: Rates of new diagnoses of gonorrhoea by gender, Northern Ireland and UK, 2000 - 2004

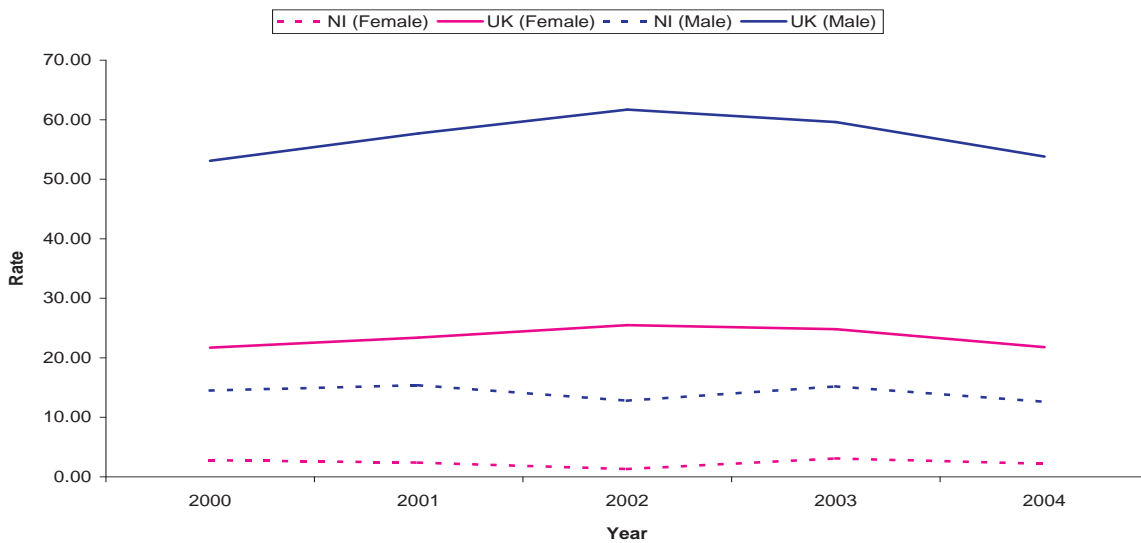


Fig 6: Rates of new diagnoses of syphilis by gender, Northern Ireland and UK, 2000 - 2004

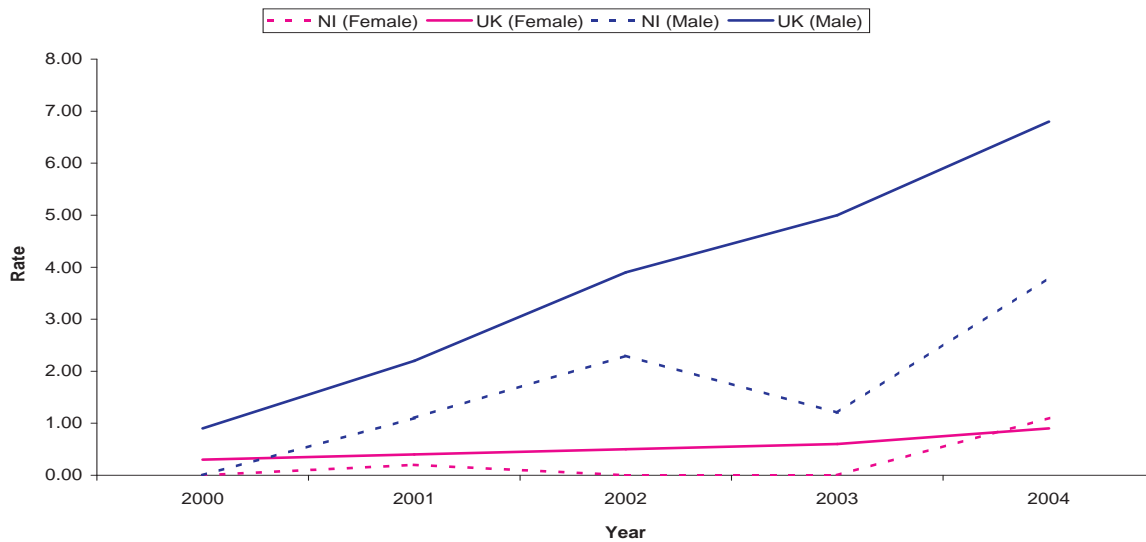


Fig 7: Rates of new diagnoses of herpes by gender, Northern Ireland and UK, 2000 - 2004

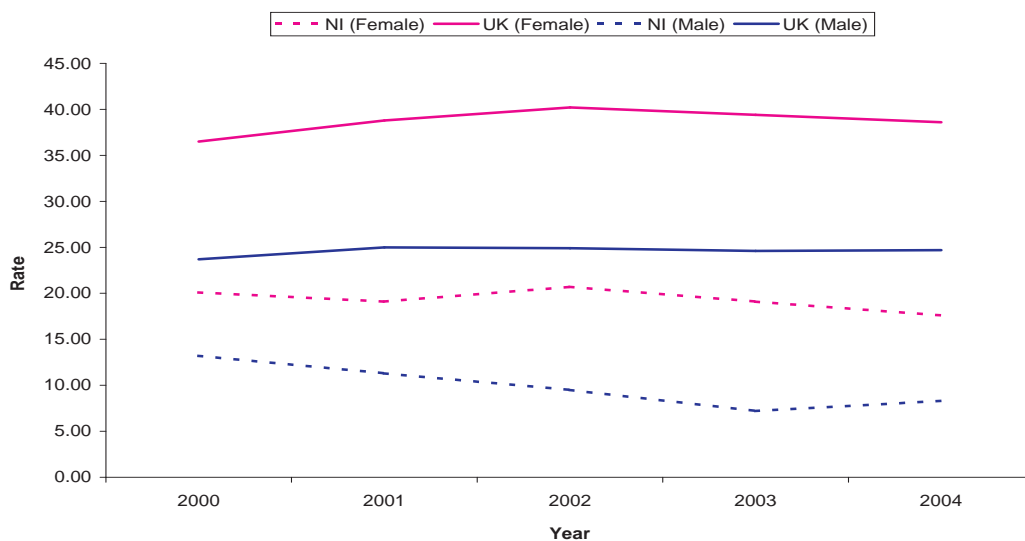
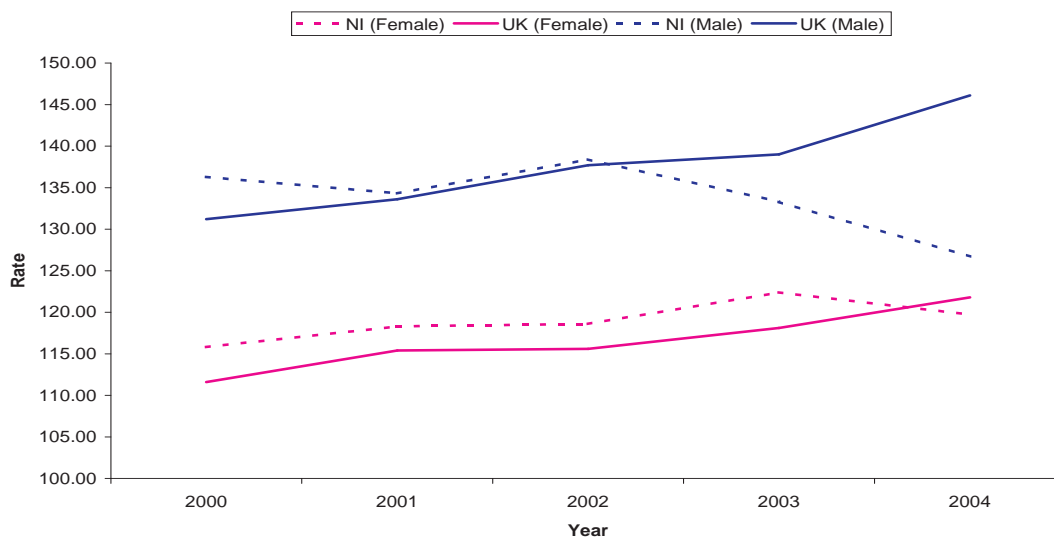


Fig 8: Rates of new diagnoses of warts by gender, Northern Ireland and UK, 2000 - 2004



The highest new age-specific diagnosis rates for warts, chlamydia and herpes in 2004 are seen in the 20 – 24 year age groups for both males and females. This is also true for gonorrhoea in males, with the highest new episode rate for gonorrhoea in females seen in the 16 – 19 year age group (Figures 9 -12).

Fig 9: Rates of new diagnoses of chlamydia, warts, gonorrhoea and herpes, by age group in males, 2004

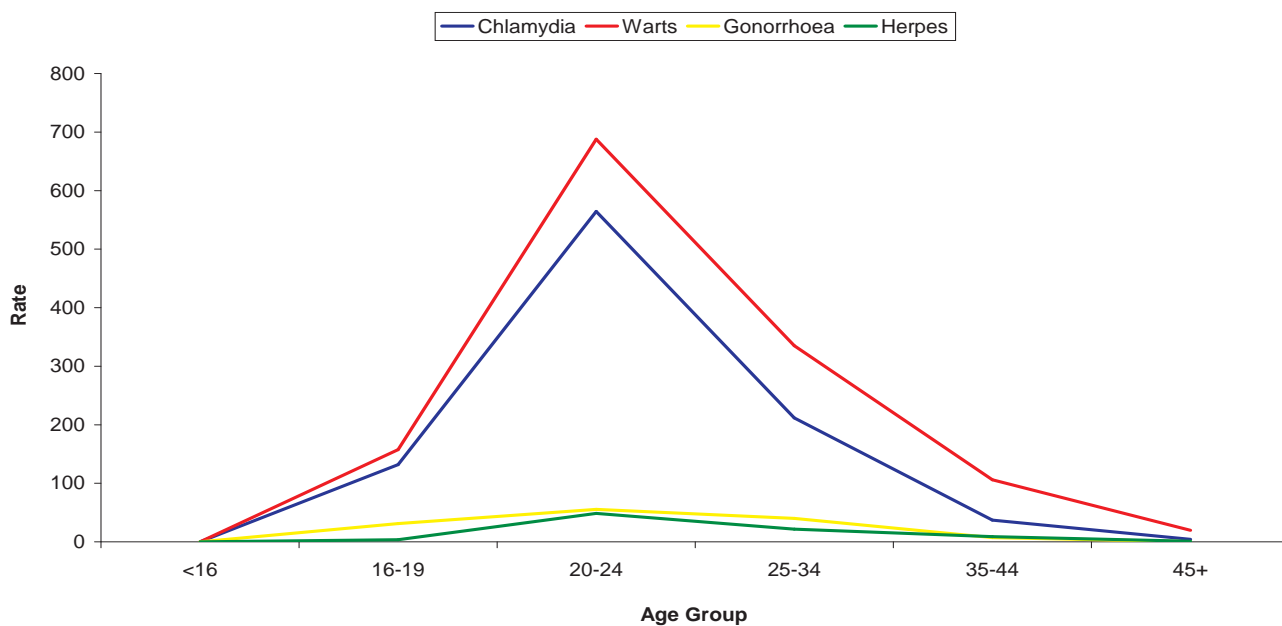
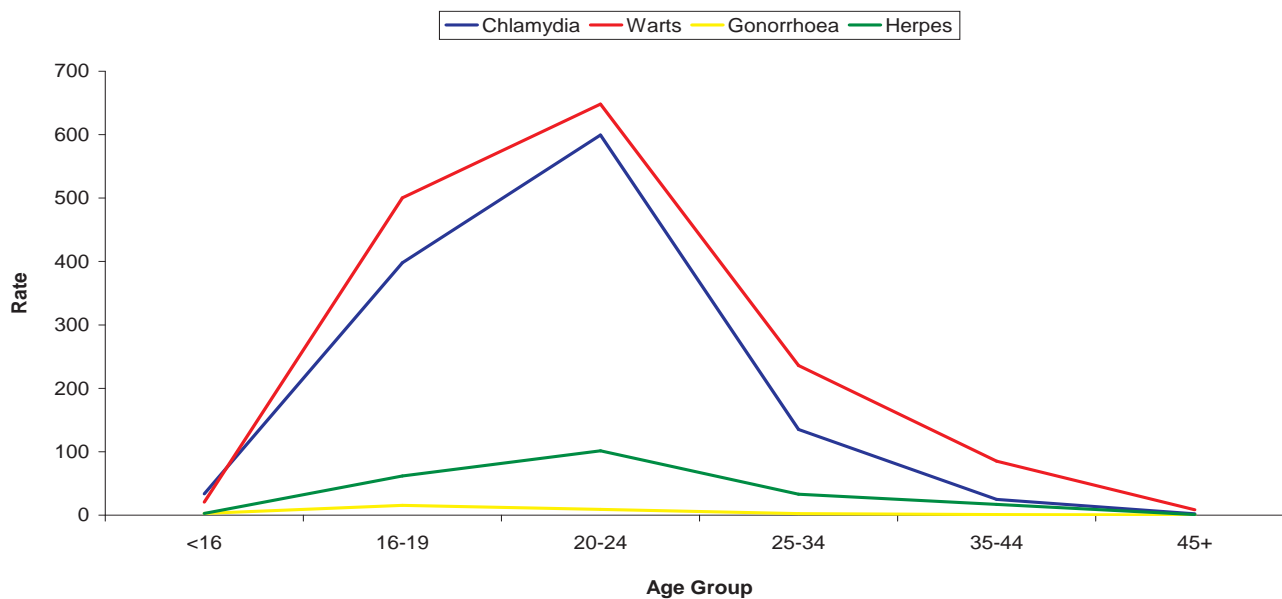


Fig 10: Rates of new diagnoses of chlamydia, warts, gonorrhoea and herpes, by age group in females, 2004



The largest age-specific increase in new diagnosis rates of chlamydia from 2000 – 2004 are seen in 20 – 24 year old males (100.8%), 16 – 19 year old females (68%) and 20 – 24 year old females (63.5%).

Fig 11: Rates of new episodes of chlamydia in males by age group, Northern Ireland, 2000 - 2004

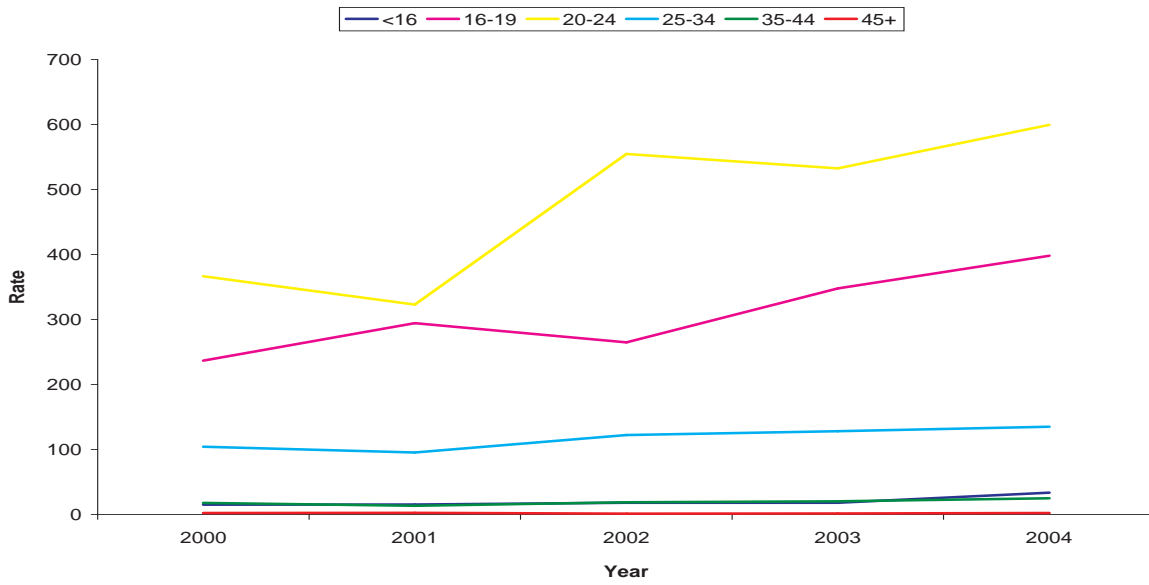
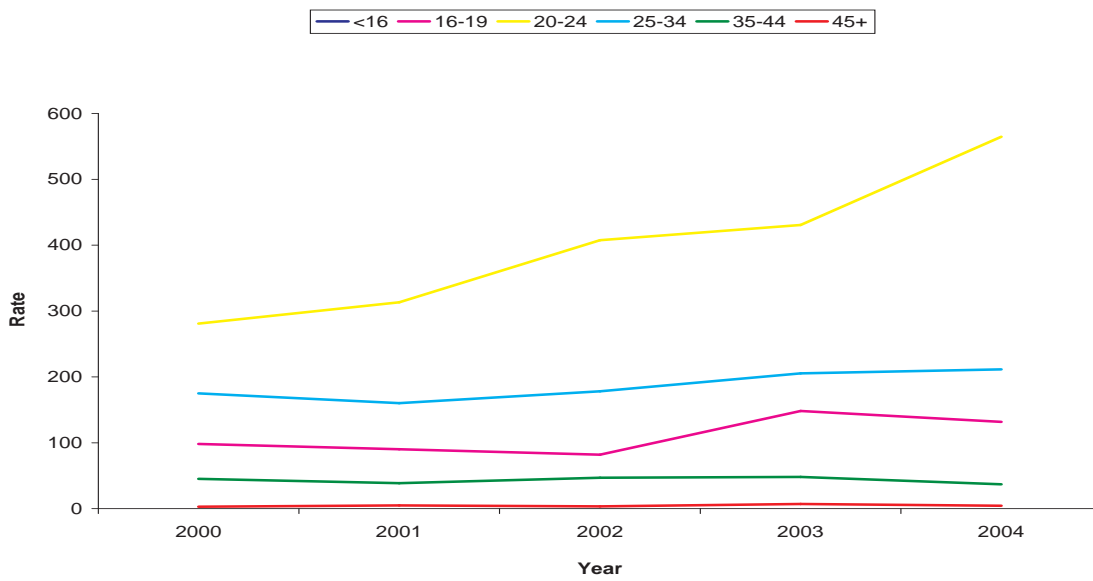


Fig 12: Rates of new episodes of chlamydia in females by age group, Northern Ireland, 2000 - 2004



Enhanced surveillance of syphilis

An outbreak of infectious syphilis in MSM in Northern Ireland was first recognised by genitourinary medicine (GUM) physicians in September 2001. Enhanced surveillance arrangements were established to support the regional outbreak team. The case definition comprises new episodes of primary, secondary or early latent syphilis and diagnosed at any GUM clinic in Northern Ireland since 1 July 2000.

The first case was diagnosed in 2000. 153 episodes, involving 143 individuals, meeting the epidemiological case definition were reported between January 2001 and December 2004.

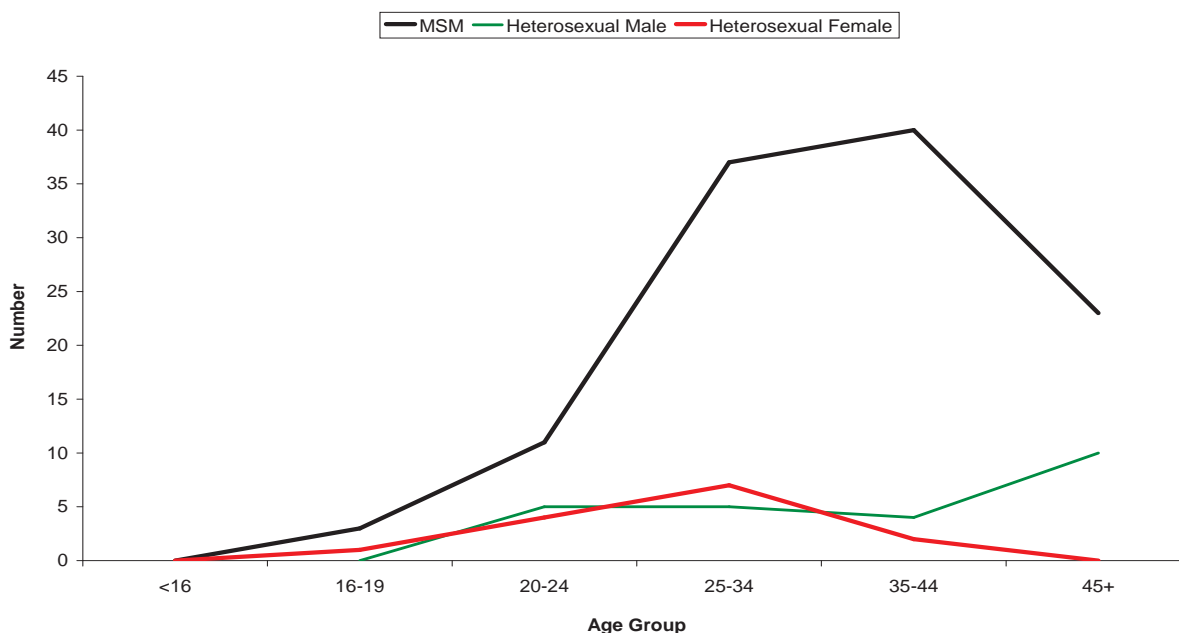
MSMs account for 75% of the total number of episodes reported during the 4-year period. In 2001, they represented 78% of the total number of episodes reported that year with heterosexual transmission accounting for 22%; however, the proportion of episodes acquired through heterosexual contact has increased to 30% in 2004.

Table 3: Gender and sexual orientation of episodes diagnosed with infectious syphilis, by year of diagnosis, 2001-2004

	Homosexual Male	Heterosexual Male	Bisexual Male	Heterosexual Female	Total
2001	16 (73%)	2 (9%)	1 (5%)	3 (13%)	22
2002	25 (81%)	4 (13%)	1 (3%)	1 (3%)	31
2003	26 (70%)	7 (19%)	1 (3%)	3 (8%)	37
2004	38 (60%)	12 (19%)	6 (10%)	7 (11%)	63
Total	105	25	9	14	153

The highest number of syphilis episodes have been observed in older age groups. Cumulative data from 2001 – 2004 shows heterosexual men in the 45+ age group and heterosexual women aged 25 – 34 to be most often affected. Among MSM most episodes have occurred in the 25 – 34 and 35 – 44 year age groups.

Fig 13: Syphilis infection by sexual orientation and age group, Northern Ireland, 2001 - 2004



While initial episodes were linked to an outbreak among MSM in Dublin, the majority of episodes in both MSM and heterosexuals in 2004 were acquired in Northern Ireland. The highest rate of new diagnoses per 100,000 population is seen in EHSSB residents.

Figure 14: Epidemic Curve and location of acquisition of syphilis infection, 2001 - 2004

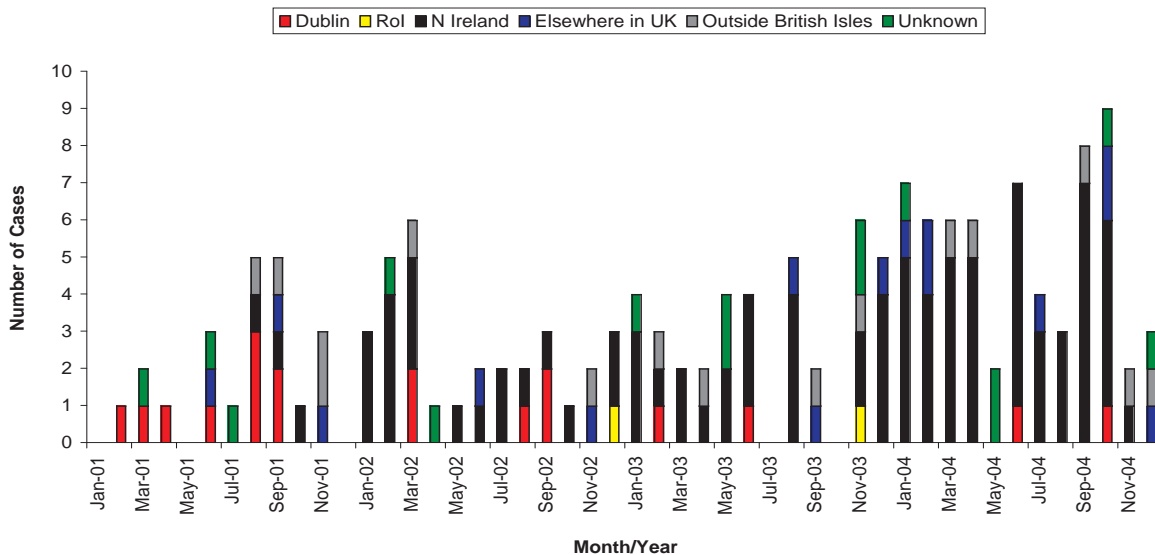


Table 4: Board of residence by year of diagnosis 2001-2004 (n=141*)

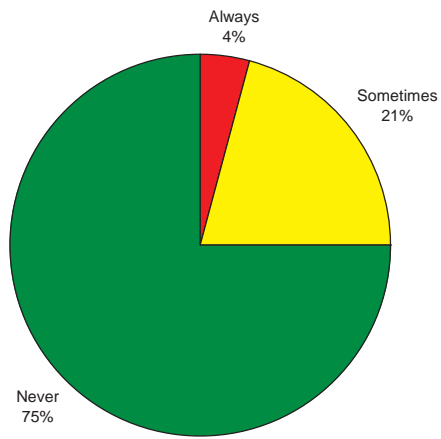
Board	Year of diagnosis				New diagnoses per 100,000 population 2001-2004
	2001	2002	2003	2004	
EHSSB	10	14	21	39	3.15
NHSSB	4	8	5	7	1.38
SHSSB	2	4	5	8	1.49
WHSSB	3	3	4	4	1.22

*Residence details unknown or resident outside Northern Ireland for an additional 12 episodes

As an ulcerative condition, patients with syphilis are at increased risk of transmitting/contracting HIV infection. Of 13 individuals with HIV co-infection detected, 8 were already aware of their HIV status, 5 being previously undiagnosed. Other co-infections occurring in significant numbers are Chlamydia (11), Gonorrhoea (5) and Warts (6).

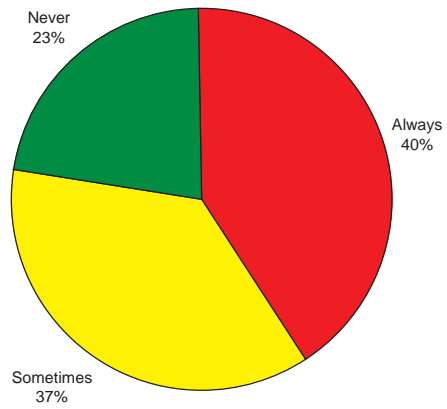
The enhanced surveillance arrangements also provide an opportunity to explore risk/protective behaviours in cases. Figures 15 – 17 illustrate how the benefits of condom use during oral and vaginal sex in particular do not appear to be appreciated.

Figure 15: Use of condoms in oral sex, 2002 - 2004



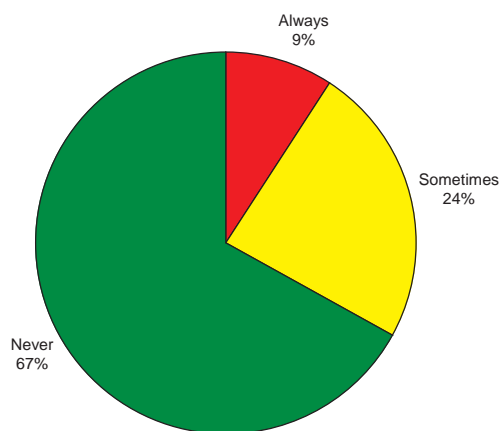
n = 96

Figure 16: Use of condoms in anal sex, 2002 - 2004



n = 71

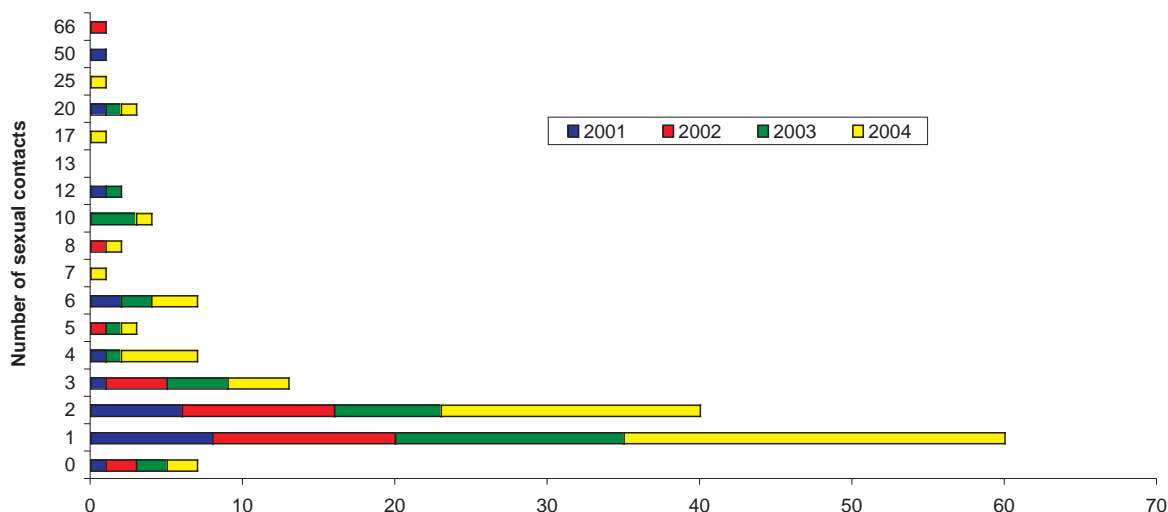
Figure 17: Use of condoms in vaginal sex, 2002 - 2004



n = 33

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.¹ While 73.8% (113/153) of cases report three or fewer sexual contacts in the three months prior to diagnosis, there is a significant tail to the right.

Figure 18: Number of sexual contacts in the three months prior to diagnosis



Enhanced surveillance has failed to identify significant specific sexual networks. Thus, the majority of activity to date has focused on the provision of information to health professionals and to the general and gay communities. A limited number of outreach sessions around gay nightspots have occurred.

Sexual Health Services

The rise in STI levels has also highlighted the need to further enhance and improve services for their diagnosis and treatment.

Currently, sexual health services are led by 3.1 whole-time equivalent consultant physicians working from GUM clinics situated at Royal Group, Altnagelvin, Causeway and Daisy Hill hospitals. The Royal Group clinic in Belfast is the only one of these providing daily clinics and accounted for 69.8% of new diagnoses and 66.1% of total workload in Northern Ireland in 2004, as recorded by KC60 returns. HIV care is largely centralised to the Royal Group clinic.

Increasing clinic workload necessitated the introduction of appointment systems being introduced in three of the four clinics during 2004. The resulting wait for routine/screening appointments is of concern, given the increased opportunity for disease transmission.

Sexual Health Promotion Strategy and Action Plan

The increasing burden of sexually transmitted infections in Northern Ireland has been recognised by a five year Sexual Health Promotion Strategy and Action Plan.² Following extensive consultation by DHSSPS, this will be finalised and published in Spring 2006. The document lists actions under four areas; prevention, education and training, services and data collection and research. Following publication an implementation group will convene to take the strategy’s recommendations forward.

¹ Anderson R, Nokes DJ. Mathematical models of transmission and control. In: Oxford Textbook of Public Health. The Methods of Public Health. Oxford: Oxford University Press, 2002.

² http://www.dhsspsni.gov.uk/publications/2003/sexual_health_promotion_strategy_action_plan.pdf