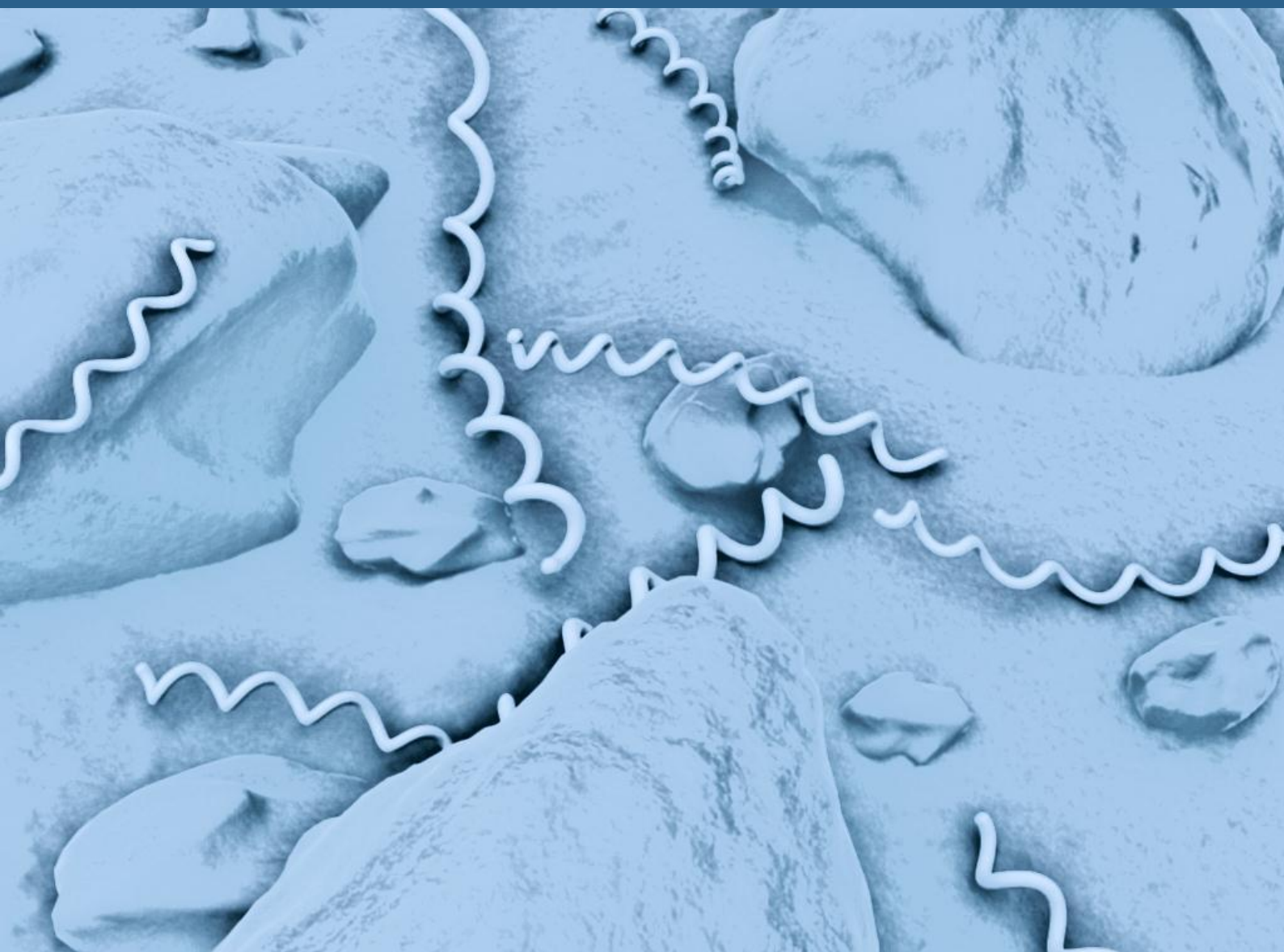


# **Sexually Transmitted Infection surveillance in Northern Ireland 2013**

An analysis of data for the calendar year 2012



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This report aims to provide an overview of 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 2012.

Following recent ONS guidance on data disclosure, where the number of any category of episodes in any one year is between one and four, this is reported either within a cumulative figure, or as an asterix. In addition, where the anonymised figure can be deduced from the totals, the next smallest figure will also be anonymised.

# Summary points

## In Northern Ireland Genito-Urinary Medicine (GUM) clinics in 2012

- New diagnoses of uncomplicated chlamydia decreased by 8%; 1,676 diagnoses in 2012 compared with 1,830 in 2011.
- New diagnoses of uncomplicated gonorrhoea increased by 34%; 451 in 2012 compared with 336 in 2011.
- New diagnoses of genital herpes simplex (first episode) decreased by 8%; 357 in 2012 compared with 386 in 2011.
- New diagnoses of genital warts (first episode) decreased by 5%; 2,190 in 2012 compared with 2,305 in 2011.
- New diagnoses of infectious syphilis increased by 8%; 70 in 2012 compared with 65 in 2011.

# Surveillance arrangements and sources of data

## 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 are provided. Regularly updated summary statistics are presented at: [www.publichealthagency.org](http://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, no residence-based data is 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 2006–2012. Antibiotic susceptibility information for *Neisseria gonorrhoeae* isolates is provided for 2010–2012.

## 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.

# 1: Diagnoses provided in Northern Ireland GUM clinics in 2012

During 2012:

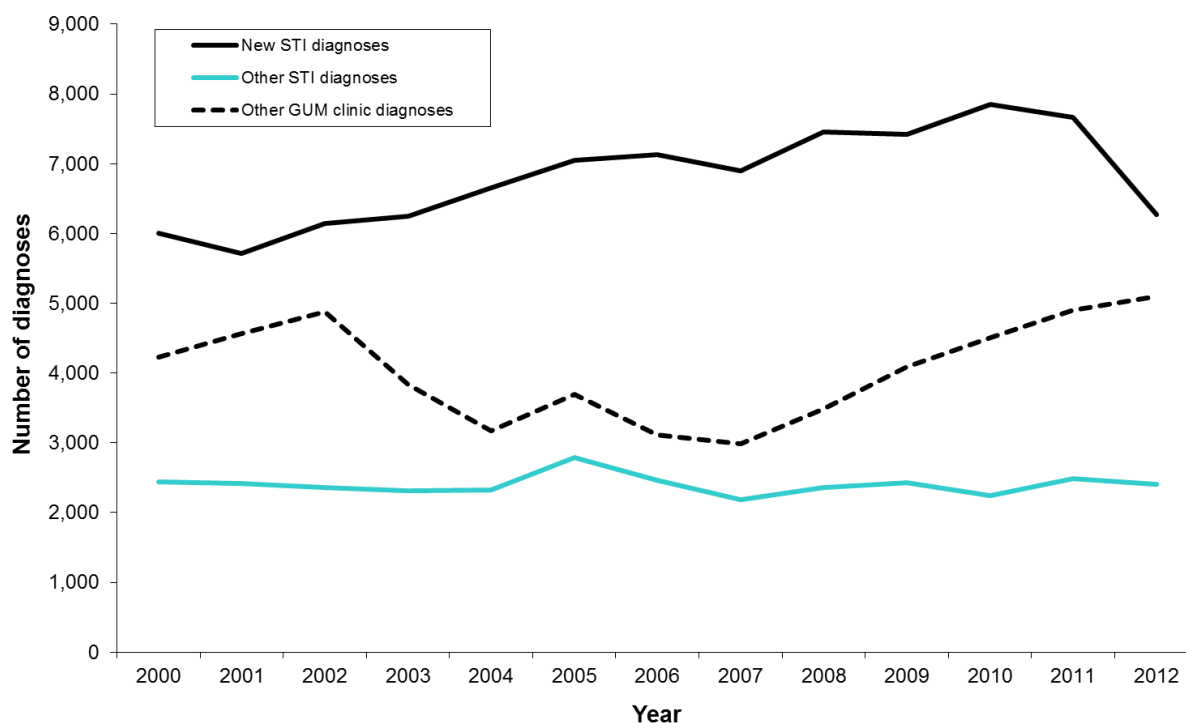
- 6,267 **new STI diagnoses** were made, compared with 7,661 in 2011, a decrease of 18%;
- 63% (3,965/6,267) of **new STI diagnoses** were in males;
- three types of infection accounted for 78% of **new STI diagnoses** – genital warts (first infections) (35%), non-specific genital infection (15%), and chlamydia (28%);
- 2,410 **other STI diagnoses** were made;
- 5,095 **other diagnoses were made at GUM clinics**.

The decrease in new STI diagnoses in 2012 compared with 2011 must be interpreted with caution. This largely reflects a decline of 57% in new diagnoses of complicated and uncomplicated non-specific genital infection (NSGI) (Figure 1.2). This decrease is likely to be due to the change in testing practice within GUM clinics, whereby the more sensitive NAATs tests have largely replaced the invasive urethral culture<sup>1</sup> in asymptomatic patients. This has resulted in more detections of organisms with proven pathogenicity, causing gonorrhoea and chlamydia and thus uncomplicated NSGI diagnoses have fallen.

## Trends: 2000–2012

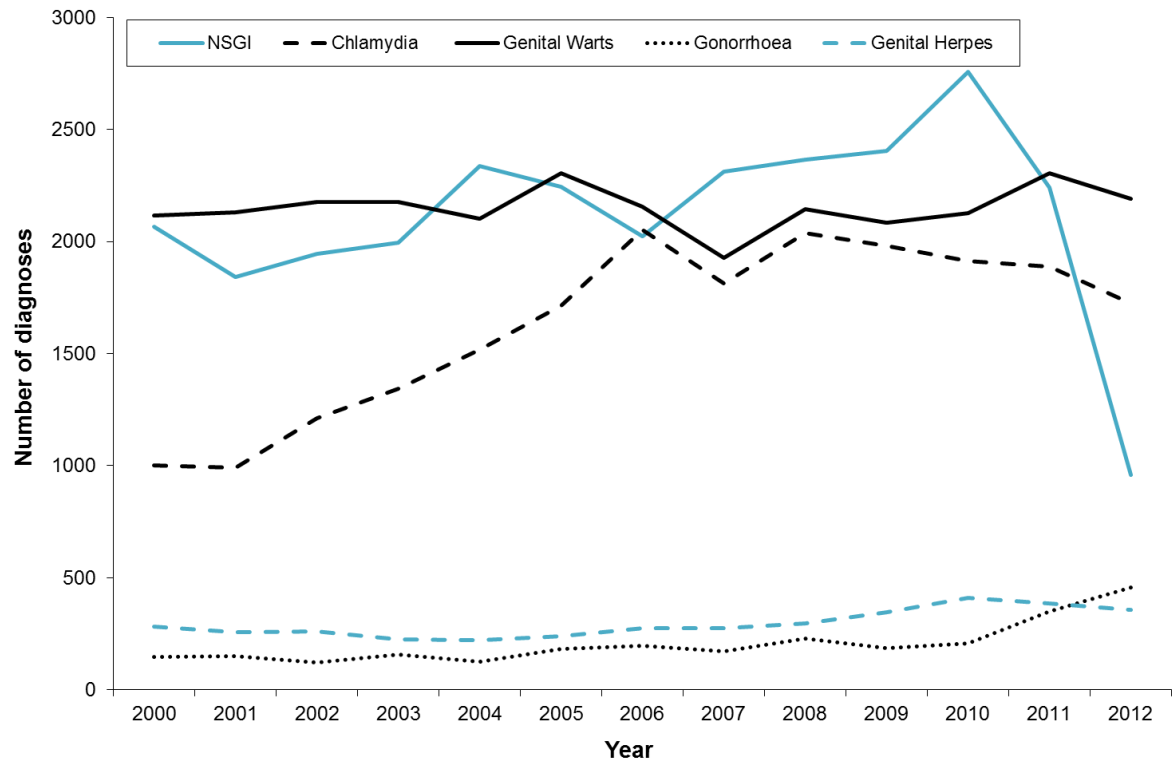
Between 2000 and 2012, the number of **new STI diagnoses** increased by 4%, the number of **other STI diagnoses** decreased by 1% and **other GUM clinic diagnoses** increased by 21% (Figure 1.1).

**Figure 1.1: Trends in diagnoses made in Northern Ireland GUM clinics, 2000–2012**



During 2000–2012, chlamydia infection, non-specific genital infection (NSGI) and genital warts (first infections) accounted for the highest proportion of new STI diagnoses (87%) made in Northern Ireland GUM clinics (Figure 1.2). Specific disease trends will be examined in chapters 2 to 6.

**Figure 1.2: Trends in new diagnoses of STIs in Northern Ireland GUM clinics, 2000–2012**



**Note:** New STI diagnoses, other STI diagnoses and other diagnoses made in GUM clinics are defined in Appendix A.

## 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.

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 2012

Chlamydial infection accounted for 28% (1,724/6,267) of all new STI diagnoses made in Northern Ireland GUM clinics during 2012.

### Uncomplicated chlamydial infection

- There were 1,676 new episodes of uncomplicated chlamydial infection diagnosed in Northern Ireland GUM clinics in 2012, compared with 1,830 in 2011.
- 940 (56%) 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 43% of female diagnoses.
- The rate of diagnoses in the 16–19 years age group is twice as high in females as in males.
- 10% (93/940) of the total male diagnoses occurred in men who have sex with men (MSM).

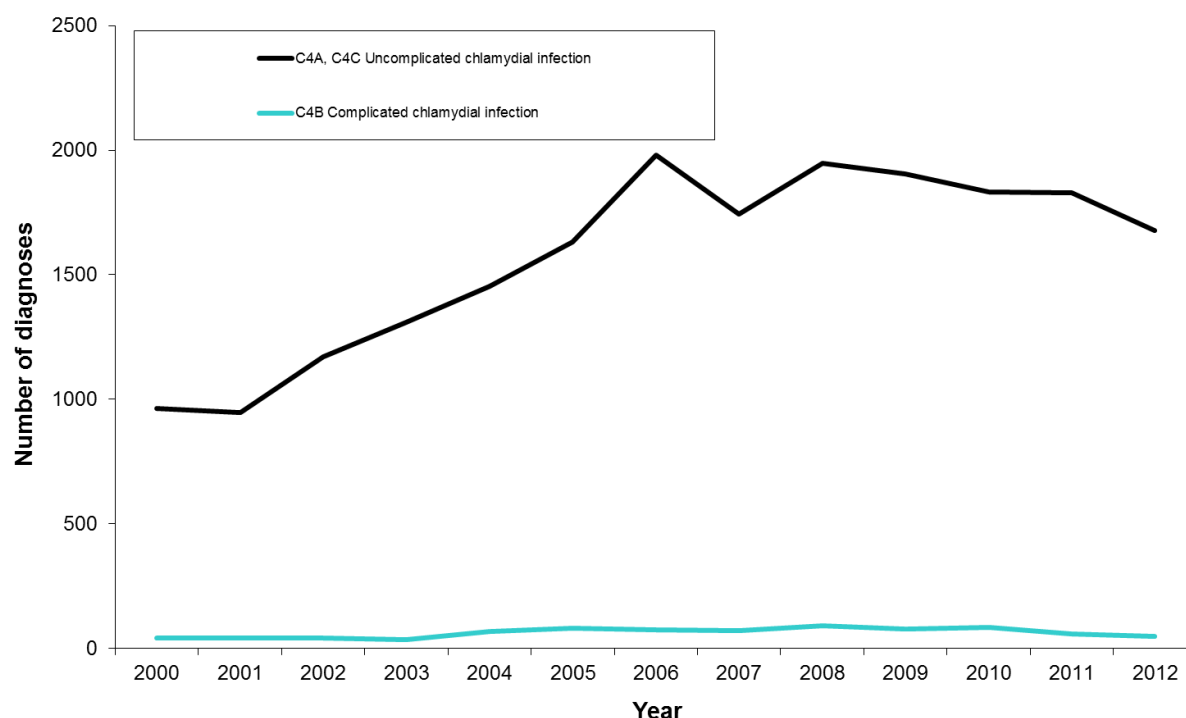
### Complicated chlamydial infection

- There were 48 new episodes of complicated chlamydial infection diagnosed in Northern Ireland GUM clinics in 2012.
- 29 (60%) of these were diagnosed in females.

## Trends: 2000–2012

Between 2000 and 2012, diagnoses of uncomplicated chlamydial infection increased by 74%, from 963 diagnoses in 2000 to 1,676 in 2012, reaching an annual peak of 1,979 in 2006. Diagnoses in males increased by 96%, while in females, there was a 52% increase. Diagnoses of complicated chlamydial infection increased from 40 in 2000 to 48 in 2012, but have remained at a relatively low level (Figure 2.1).

**Figure 2.1: Diagnoses of chlamydia in Northern Ireland, 2000–2012**



## Age and gender trends: uncomplicated chlamydia

From 2000–2012, diagnostic rates in females were consistently highest in the 16–24 years age group, peaking between 20 and 24 years (Figure 2.2). 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. Diagnostic rates in females aged over 24 years decrease due to changes in sexual behaviour, as well as decreased susceptibility.

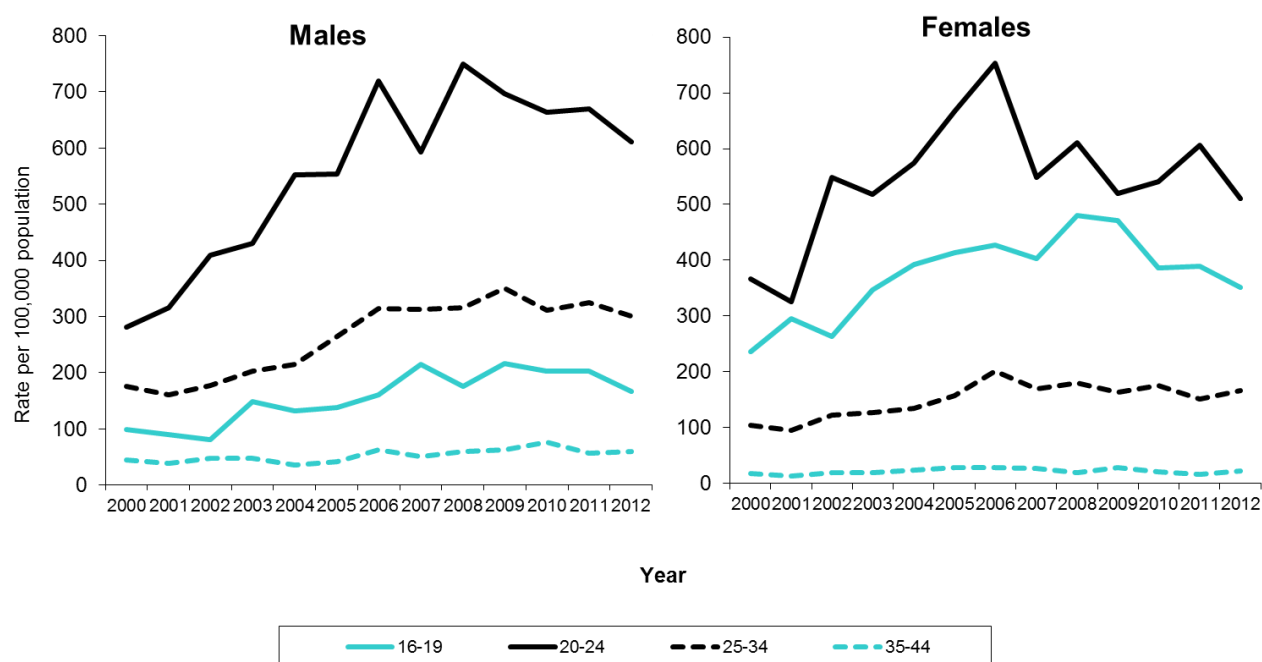
Diagnoses in those under 16 years of age accounted for 1% (126/20,384) of all diagnoses made during the period 2000–2012.

Diagnoses in the 45+ years age group accounted for 2% (388/20,384) of all diagnoses made during the period 2000–2012.

The proportion of male chlamydia diagnoses attributed to MSM has ranged from 2% in 2000 and 2002 to 15% in 2011, with 10% being attributed to MSM in 2012.



**Figure 2.2: Rates of uncomplicated chlamydial infection in Northern Ireland, by gender and age group, 2000–2012**



## Genital *chlamydia trachomatis* laboratory reporting, 2006–2012

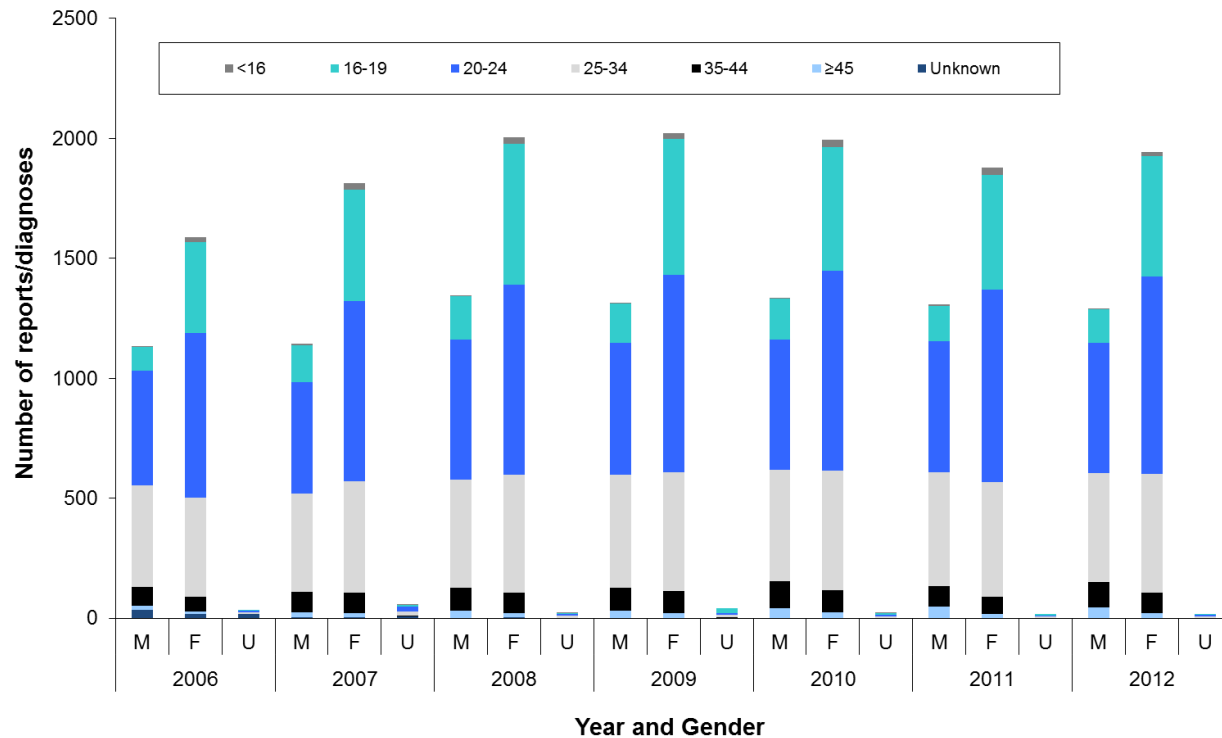
During 2012, 3,251 laboratory confirmed cases of genital *chlamydia trachomatis* were reported, an increase of 2% compared with 2011. GP specimens accounted for 37% (1,207/3,251) of cases reported during 2012 (Table 2.1). Between 2006 and 2012, confirmations from GP specimens increased by 68%.

**Table 2.1: Referral source of genital *Chlamydia trachomatis* specimens, 2006–2012**

Referral Source	2006	2007	2008	2009	2010	2011	2012	TOTAL
GP Number (%)	720 (26.1)	894 (29.7)	979 (29.0)	1025 (30.3)	1124 (33.5)	1096 (34.3)	1207 (37.1)	7,045
Other	2,036	2,121	2,396	2,353	2,231	2,104	2,044	15,285
<b>Total</b>	<b>2,756</b>	<b>3,015</b>	<b>3,375</b>	<b>3,378</b>	<b>3,355</b>	<b>3,200</b>	<b>3,251</b>	<b>22,330</b>

Higher numbers of diagnoses are consistently reported in females, accounting for 60% (1,943/3,251) of all cases reported by laboratories during 2012. The majority (68%; 9001/13,246) of female cases reported in the period 2006–2012 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 2006–2012.

**Figure 2.3: Laboratory reports of genital *Chlamydia trachomatis*, by age and gender, 2006–2012**



## 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 2012

Gonorrhoea accounted for 7% (458/6,267) of all new STI diagnoses made in Northern Ireland GUM clinics during 2012.

#### Uncomplicated gonococcal infection

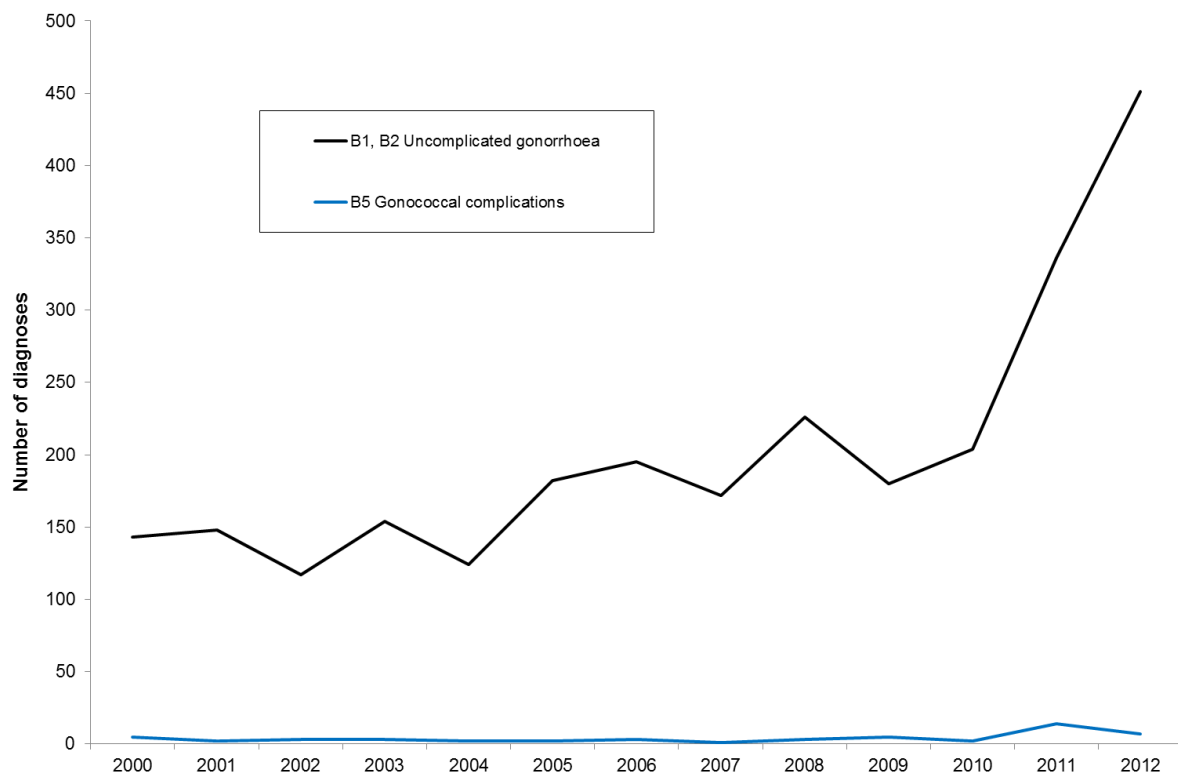
- There were 451 new episodes of uncomplicated gonorrhoea diagnosed in Northern Ireland GUM clinics in 2012, compared with 336 in 2011, an increase of 34%.
- 344 (76%) of these were diagnosed in males.
- The highest diagnostic rates in both men and women were in the 20–24 years age group.
- 61% of female diagnoses were in the 16–24 years age group and 33% were in the 25–34 years age group.
- 42% of male diagnoses were in the 16–24 years age group and 35% were in the 25–34 years age group.
- 65% (222/344) of male diagnoses were attributed to MSM.

### Trends: 2000–2012

Although numbers have been variable, diagnoses of uncomplicated gonorrhoea have shown a general increased trend since 2004 with a further steep increase in 2011 and again in 2012 (Figure 3.1). The number of diagnoses in 2012 (451) have been the highest ever recorded in Northern Ireland. The proportion of male diagnoses attributed to MSM ranged from 9% in 2000 to 65% in 2012.

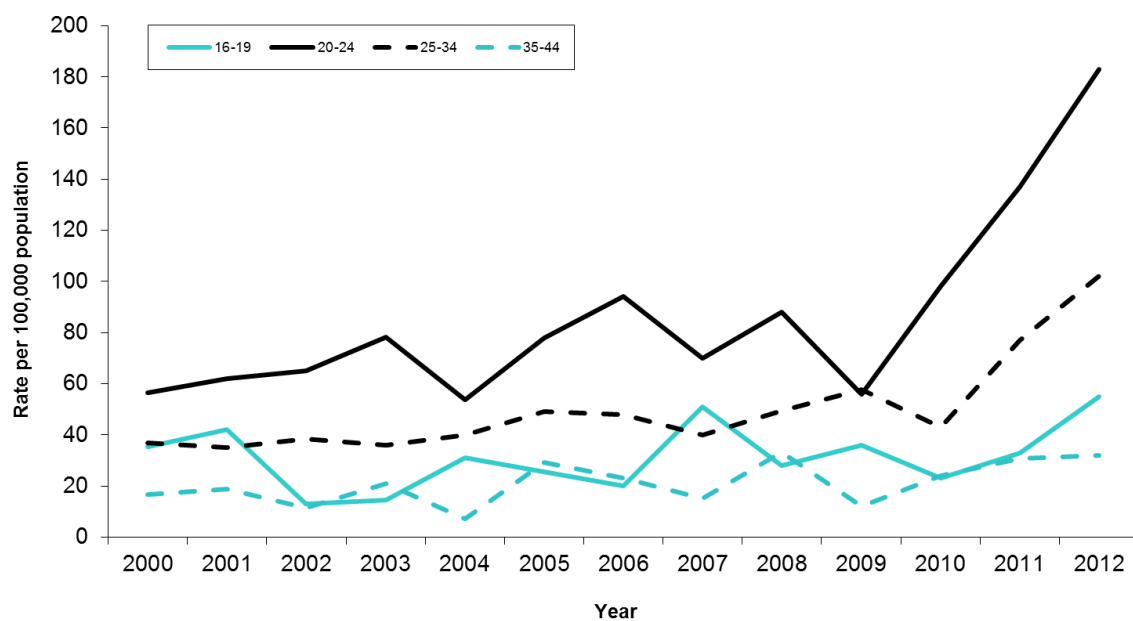
The number of diagnoses of complicated gonorrhoea has ranged from 1 in 2007 to 14 in 2011 with 7 being reported in 2012.

**Figure 3.1: Diagnoses of gonorrhoea in Northern Ireland, 2000–2012**



#### Age, gender and sexual orientation trends: uncomplicated gonorrhoea

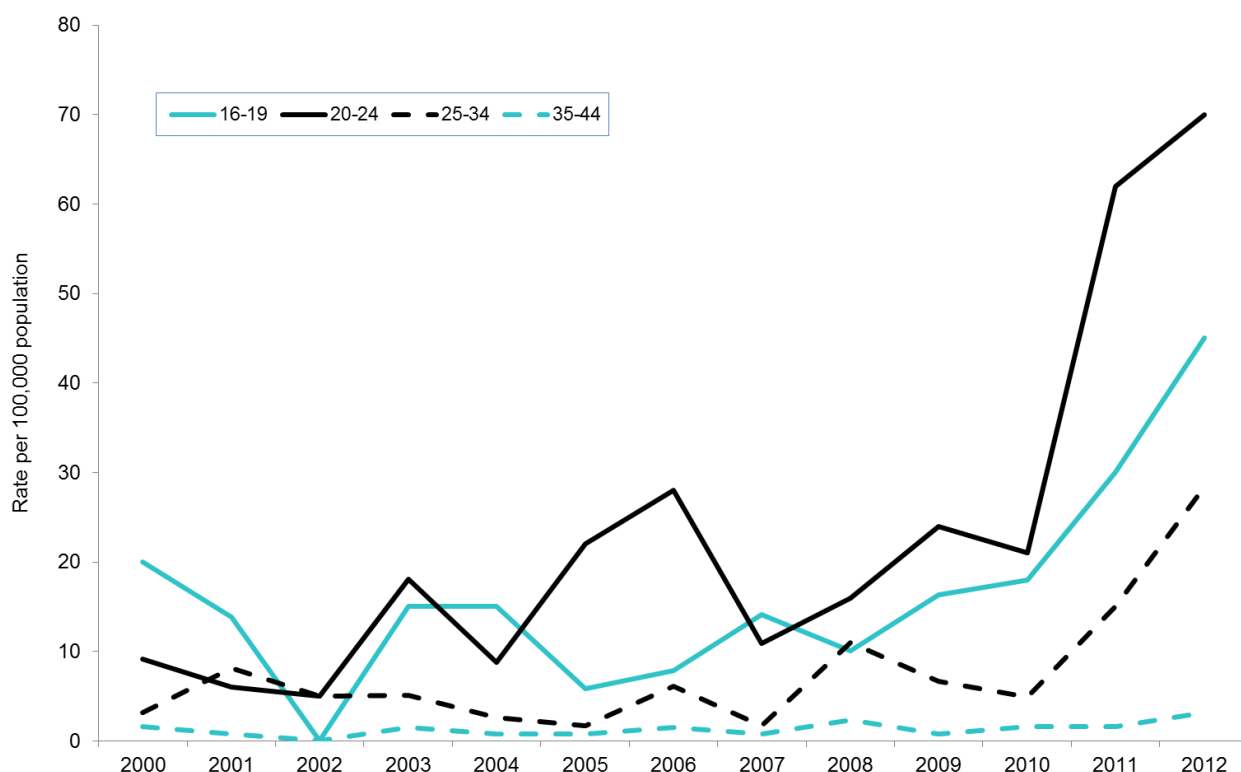
**Figure 3.2: Rates of uncomplicated gonorrhoea in males in Northern Ireland, by age group, 2000–2012**



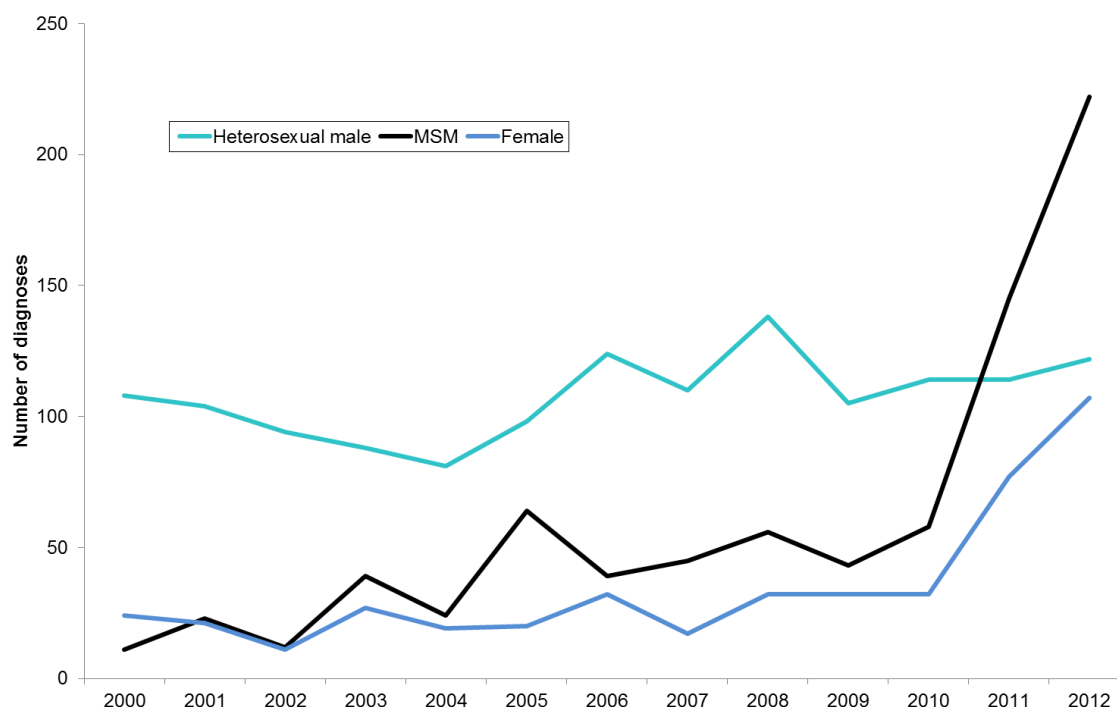
In males, the highest diagnostic rates have consistently been in the 20–34 years age groups (Figure 3.2). From 2000–2012, fewer than five diagnoses were made annually in males aged under 16 years. Males aged 45 years and over accounted for 8% (166/2,181) of all male diagnoses during the period 2000–2012.

Trends in age-specific diagnostic rates in females have been less obvious due to small number variation. The increases in 2011 and 2012 have clearly mostly affected the 16-19, 20-24 and 25-34 age groups (Figure 3.3). The increase in diagnoses since 2010 has largely affected MSM and females. Diagnoses in heterosexual males have remained relatively constant since 2005 (Figure 3.4).

**Figure 3.3: Rates of uncomplicated gonorrhoea in females in Northern Ireland, by age group, 2000–2012**



**Figure 3.4: Number of diagnoses of uncomplicated gonorrhoea by sexual orientation in Northern Ireland, 2000-2012**



Interpretation of the increase is made difficult by the introduction across Northern Ireland of the more accessible and more sensitive PCR tests. The increase in numbers of people tested, and the increased sensitivity of the test compared with traditional culture methods may at least partly explain why diagnoses in females have increased to the point where they are now approaching the levels seen in heterosexual males. Similarly the increase in testing and use of more sensitive tests at extra genital sites is likely to explain part of the increase in MSM. However, given the increase in syphilis and HIV in this group, it is also likely to reflect increased unsafe sex activity.

### ***Neisseria gonorrhoeae* laboratory reporting, 2010–2012**

Effective treatment of gonorrhoea has been compromised by the ability of *Neisseria gonorrhoeae* to develop resistance to antimicrobial agents.<sup>2</sup> 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 2012, laboratories reported antibiotic susceptibility data for 158 isolates.

Current guidelines recommend the use of third generation cephalosporins to treat gonorrhoea. During 2011, only 1 isolate was reported as resistant to third generation cephalosporins (Ceftriaxone), with none being recorded in 2012 (Table 3.1).

**Table 3.1: *Neisseria gonorrhoeae* antibiotic susceptibility reported activity for antibiotics, 2011–2012**

Antibiotics	Susceptible		Resistant (%)		Indeterminate		Total specimens Reported	
	2011	2012	2011	2012	2011	2012	2011	2012
Azithromycin	4	6	0 (0%)	0	0	0	4	6
Cefixime	23	15	0 (0%)	0	0	0	23	15
Cefotaxime	27	0	0 (0%)	0	0	0	27	0
Ceftriaxone	109	131	1 (1%)	0	0	0	110	131
Ceftizoxime	0	1	0 (0%)	0	0	0	0	1
Cefuroxime	12	3	2 (14%)	2 (40%)	0	0	14	5
Cephalexin	1	0	0 (0%)	0	0	0	1	0
Ciprofloxacin	122	133	43 (26%)	17 (11%)	2	0	167	150
Doxycycline	88	113	10 (10%)	4 (3%)	0	0	98	117
Nalidixic Acid	23	13	7 (23%)	0	0	0	30	13
Penicillin	127	88	37 (23%)	57 (39%)	0	1	164	146
Spectinomycin	11	0	0 (0%)	0	0	0	11	0
Erythromycin	0	2	0	0	0	0	0	2
Tetracycline	44	6	4 (8%)	0	0	0	48	6

## 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 2012

Genital herpes (first episodes) accounted for 6% (357/6,267) of all new STI diagnoses made in Northern Ireland GUM clinics during 2012.

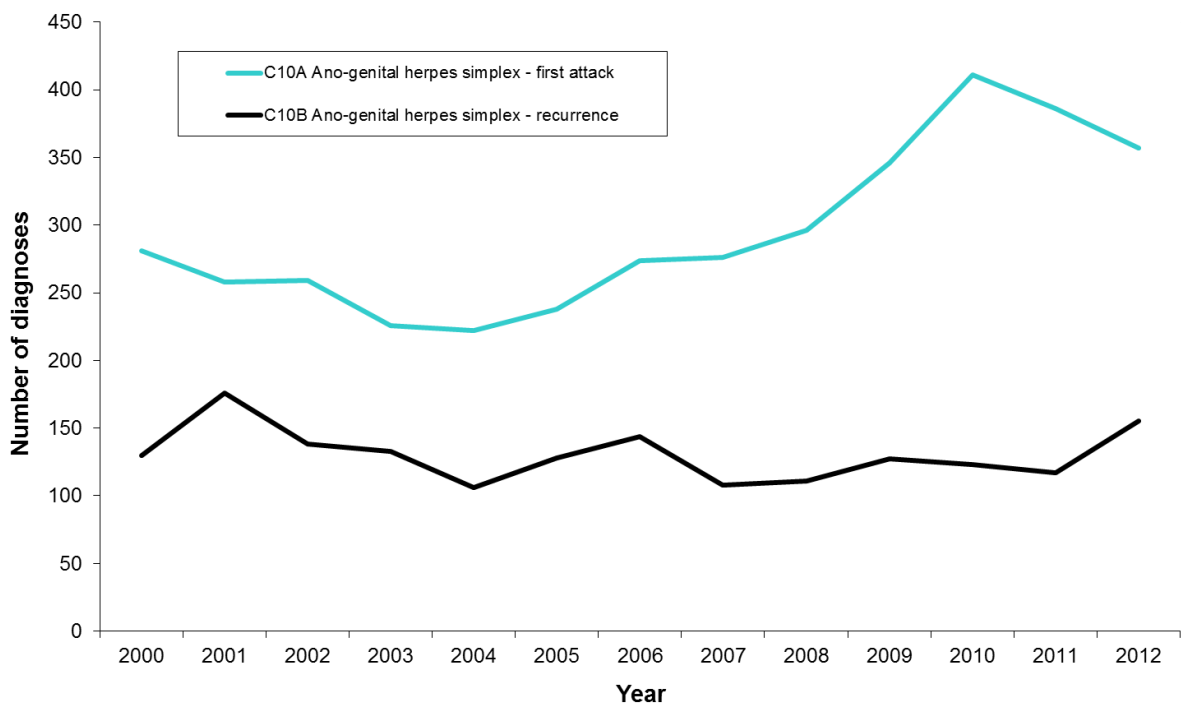
- There were 512 episodes (first infections and recurrent infections) of genital herpes diagnosed in Northern Ireland GUM clinics in 2012.
- 320 (63%) of these were diagnosed in females.
- 357 (70%) of the total attendances for herpes in 2012 were for treatment of first infection and 155 (30%) were for treatment of recurrent infection.
- 34% of male diagnoses (65/192) and 28% (90/320) of female diagnoses were recurrent infections.
- The highest diagnostic rates of first infection in men were in the 20-34 years age group and in women were in the 16-24 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 4 times higher than in males of the same age.
- 10% (13/127) of male first diagnoses occurred in MSM.

### Trends: 2000–2011

Annual numbers of first diagnoses of genital herpes increased each year from 2004-2010 with numbers decreasing in both 2011 and 2012. (Figure 4.1).

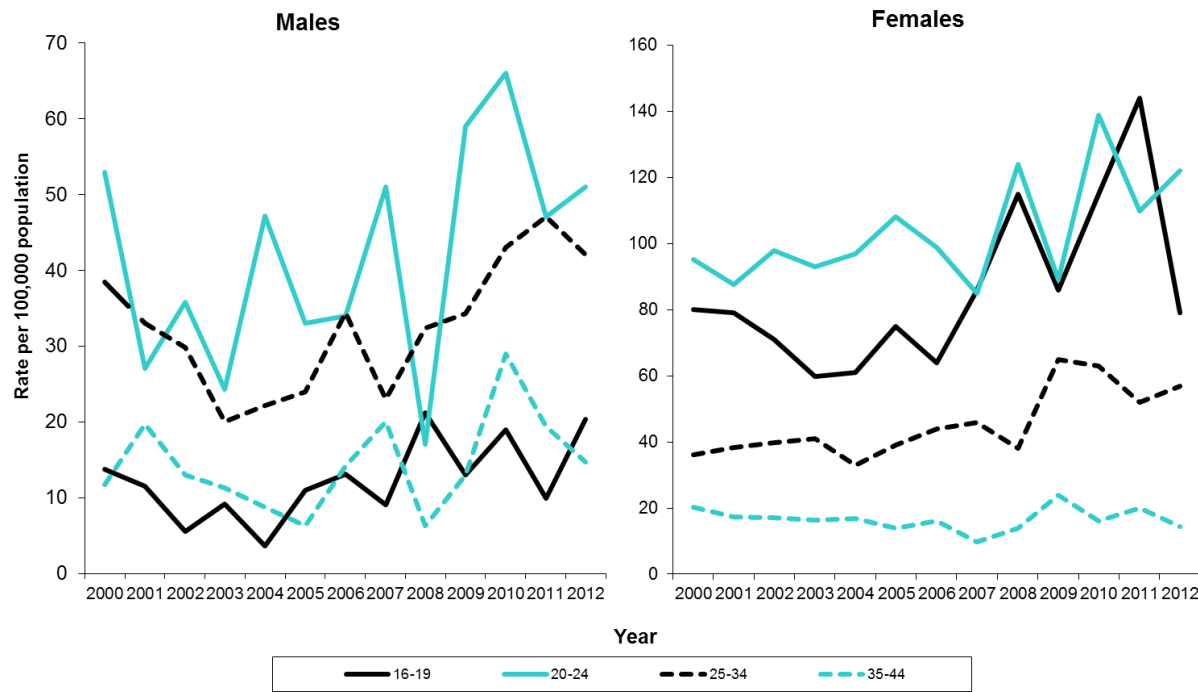


Figure 4.1: Diagnoses of genital herpes in Northern Ireland, 2000–2012



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, 2000–2012



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% (85/1,277) of all male diagnoses of genital herpes (first episode) made during the period 2000–2012, with diagnoses in the 45+ years age group accounting for 10% (126/1,277).

Females under 16 years of age accounted for 1% (35/2,553) of all female diagnoses made during the period 2000–2012, with diagnoses in the 45+ years age group accounting for 6% (145/2,553).

## 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.

HPV vaccine was introduced as a school-based programme in Northern Ireland in 2008/09. Until September 2012 the vaccine used protected against the oncogenic types 16 and 18, but not those types causing genital warts.<sup>3</sup> From September 2012 onwards, the vaccine used will protect against types 6 and 11, accounting for 90% of genital warts<sup>4</sup>.

### Diagnoses made in GUM clinics during 2012

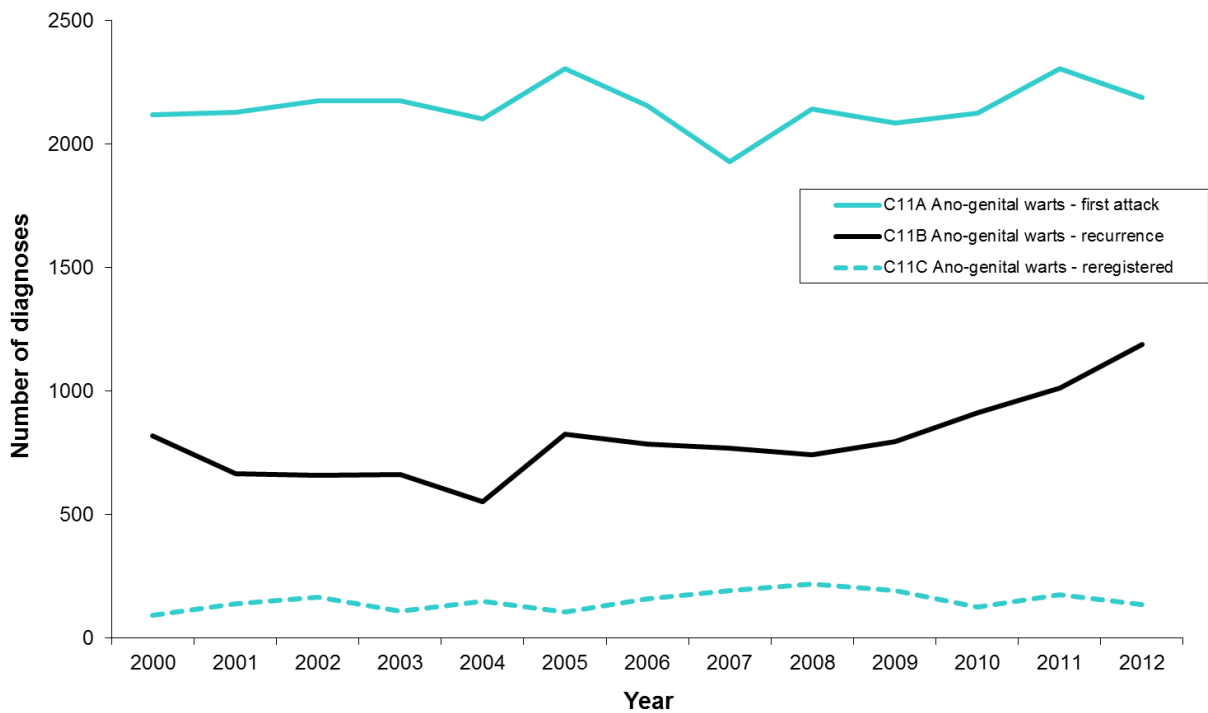
Genital warts (first episodes) accounted for 35% (2,190/6,267) of all new STI diagnoses made in Northern Ireland GUM clinics during 2012.

- There were 3,377 episodes (first infections and recurrent infections) of genital warts diagnosed in Northern Ireland GUM clinics in 2012.
- 2,000 (59%) of these were diagnosed in males.
- 2,190 (65%) of the total attendances for genital warts in 2012 were for treatment of first infection and 1,187 (35%) were for treatment of recurrent infection.
- 38% of male diagnoses (752/2,000) were recurrent infections, compared with 32% (435/1,377) of female diagnoses.
- The highest diagnostic rates of first infection in both men and women were in the 20–24 years age group.
- 38% of male diagnoses and 33% of female diagnoses of first infection were in the 20–24 years age group.
- The diagnostic rate in females aged 16–19 years (406/100,000) was more than twice that of males the same age. However, diagnostic rates in those aged over 19 years were higher in males.
- 10% (119/1,248) of male first diagnoses occurred in MSM.

### Trends: 2000–2012

Diagnoses of first infections of genital warts have shown little variation since 2000 (Figure 5.1).

Figure 5.1: Diagnoses of genital warts in Northern Ireland, 2000–2012



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, 2000–2012



Diagnostic rates in females were highest in the 16–24 years age group, peaking between 20 and 24 years (Figure 5.2). 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% (126/27,941) of all diagnoses (first episode) made during the period 2000–2012, while the 45+ years age group accounted for 5% (1,344/27,941).

During 2000–2010, the proportion of male diagnoses attributed to MSM ranged from 2% in 2000 and 2008 to a peak of 10% in 2012.

## 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.

### Diagnoses made in GUM clinics 2012

During 2012:

- 50 new episodes of primary and secondary syphilis were reported;
- 90% (45/50) were diagnosed in MSM
- 20 additional episodes of early latent syphilis were also reported;

### Enhanced surveillance 2012

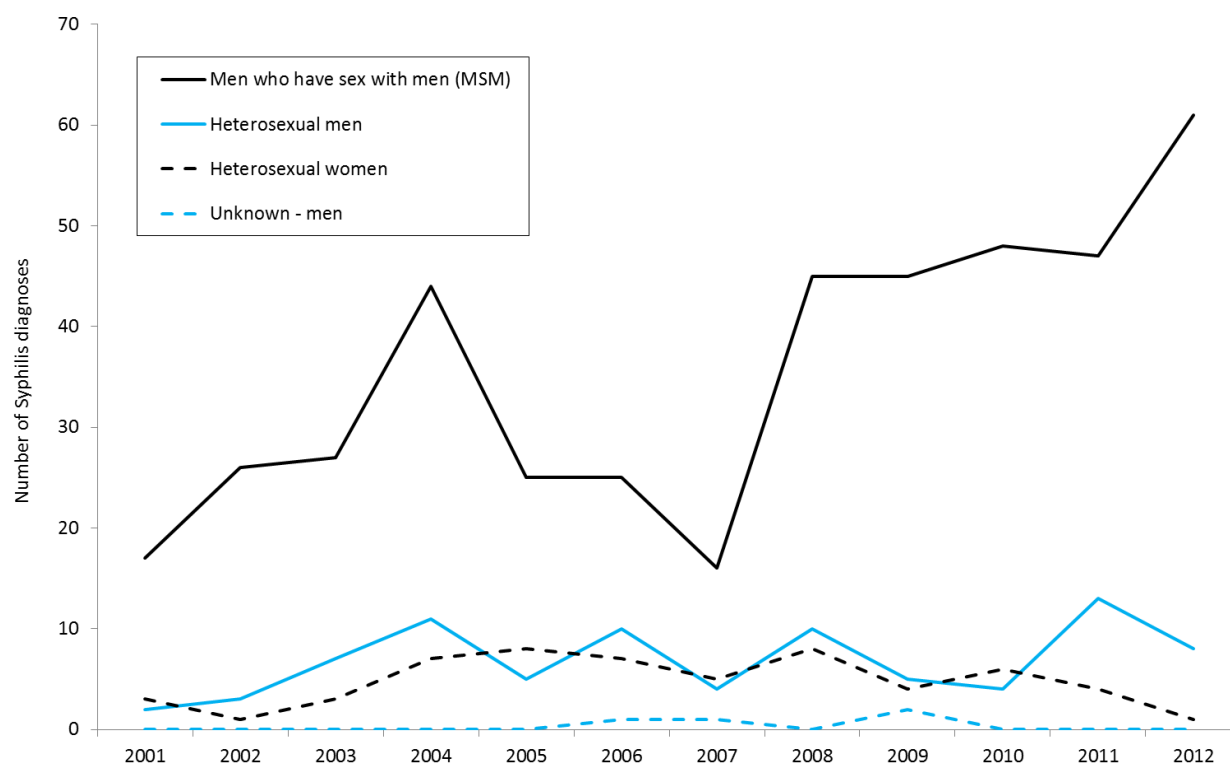
Information from enhanced surveillance arrangements is available for 67% (47/70) of cases:

- 45 episodes occurred in Northern Ireland residents and, in 39 episodes, syphilis was likely to have been acquired through exposure within Northern Ireland;
- diagnosed co-infections included chlamydia, gonorrhoea, genital warts, herpes and NSU (NSGI);
- 32% (15/47) 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 20;

### Trend information

Infectious syphilis is now endemic once again within Northern Ireland. Annual numbers of new diagnostic episodes have been consistently highest in MSM (Figure 6.1). Following an annual decrease from 2004 to 2007, numbers have increased from 2008 with a further increase again in 2012. Numbers in females and heterosexual males have remained relatively constant.

**Figure 6.1: Number of infectious syphilis diagnoses in Northern Ireland, by gender and sexual orientation, 2001-2012**

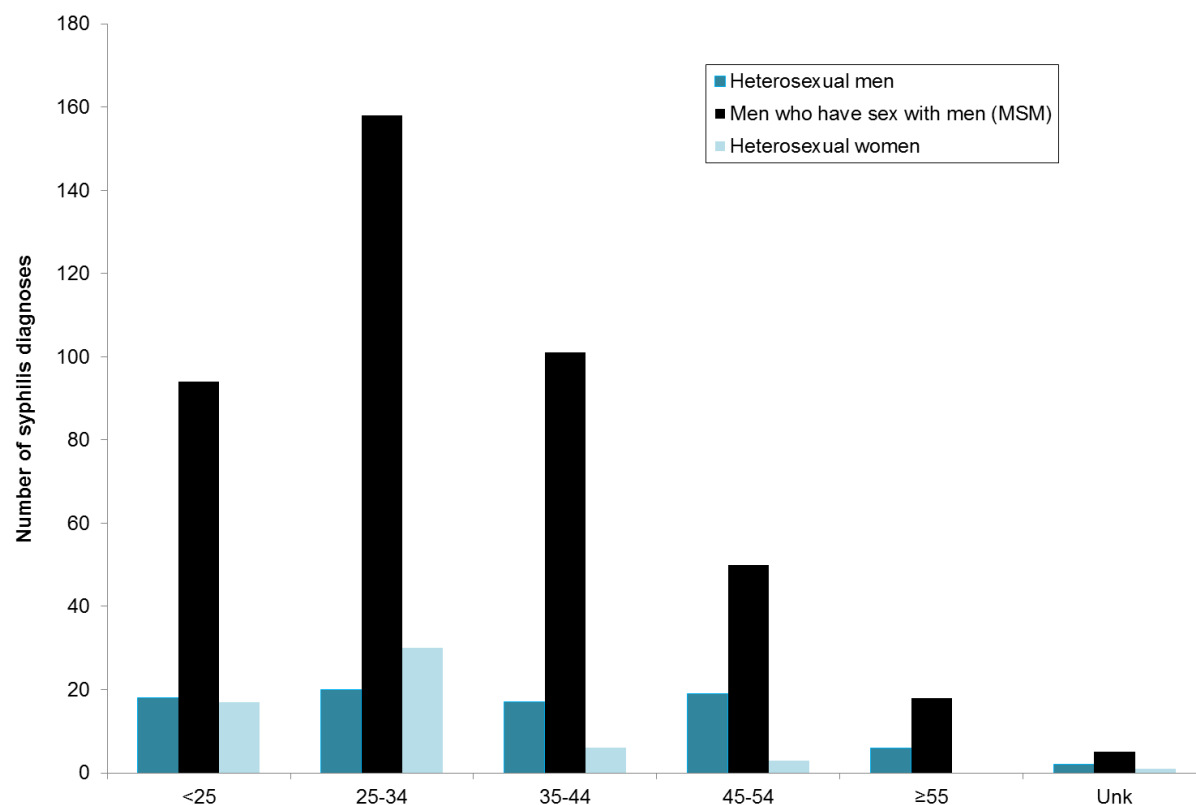


**Note:** Data derived from enhanced syphilis arrangements from 2001-2010 and from KC60 for 2011 and 2012

### 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 (53%; 30/57). In MSM, the highest number of episodes was in the 25–44 years age group (61%; 259/426). In heterosexual males, diagnoses were more evenly spread across the age bands, with those aged 25+ years accounting for 76% (62/82) of diagnoses. Information on age was missing for eight episodes (Figure 6.2).

**Figure 6.2: Age distribution of syphilis diagnoses in Northern Ireland, by gender and sexual orientation, 2001–2012**



**Note:** Data derived from enhanced syphilis arrangements from 2001-2010 and from KC60 returns for 2011 and 2012

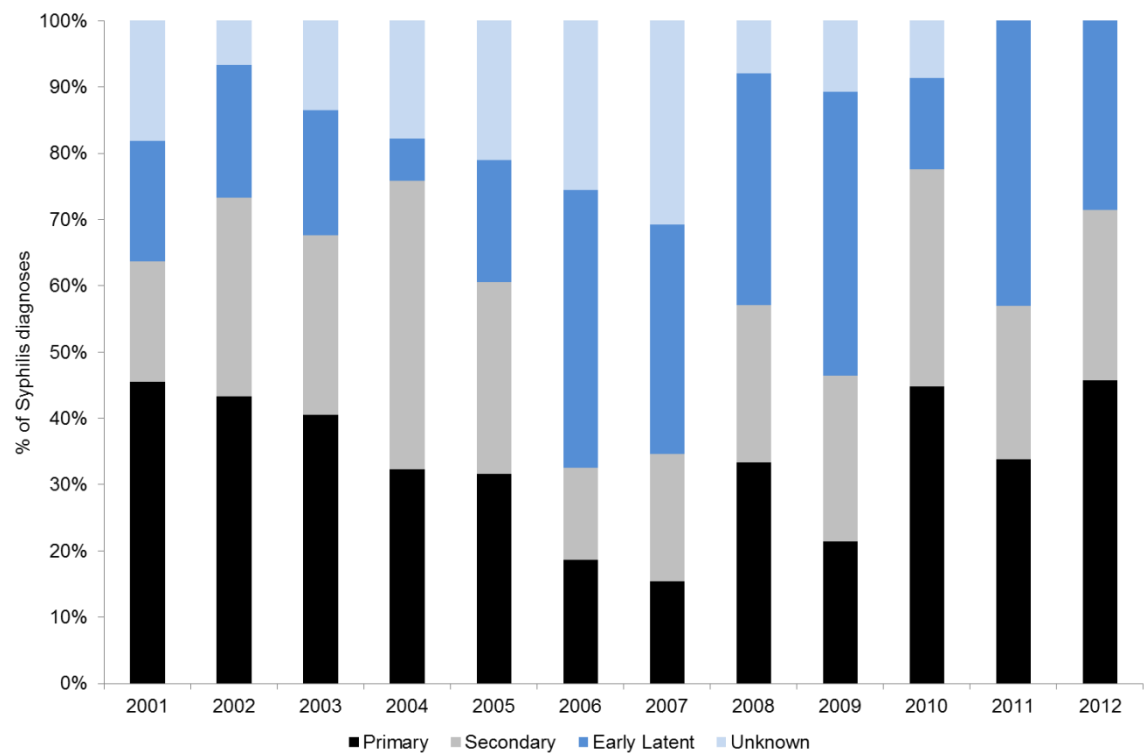
### Stage of disease

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 diagnosis of syphilis at a later stage. However, 2008 and 2009 saw an increase in primary and secondary stage diagnoses to 62% (36/58) and 52% (26/50) respectively.

From 2010 to 2012 a further increase was noted in the primary and secondary stages accounting for 70% of episodes (132/188), representing early diagnosis of syphilis (Figure 6.4).



**Figure 6.3: Stage of disease, by year of diagnosis**



**Note:** Data derived from enhanced syphilis arrangements from 2001-2010 and from KC60 returns for 2011 and 2012

## 7: Summary and conclusions

Although 2012 saw a 18% decrease in annual numbers of new STI diagnoses made in Northern Ireland GUM clinics this masks an increase in diagnoses of gonorrhoea and continued high numbers of infectious syphilis and genital herpes.

Between 2010 and 2012, diagnoses of uncomplicated gonorrhoea have more than doubled. The increase has been seen mainly in females and in MSM, with relatively little change in heterosexual males. This would suggest that the newer more sensitive tests introduced in recent years are showing that prevalence in females was higher than previously thought. The new tests are also likely to explain some of the increase seen in MSM. However, there is also likely to be increased transmission in this group due to unsafe sex, given that infectious syphilis and HIV diagnoses have also increased in recent years.

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 reinforced. Individuals can reduce their risk of acquiring or transmitting an STI by:

- Always using a condom when having sex with casual and new partners;
- Getting tested if at risk, as these infections are frequently asymptomatic;
- MSM having unprotected sex with casual or new partners should have an HIV/STI screen at least annually, and every three months if changing partners regularly;
- Reducing the number of sexual partners and avoiding overlapping sexual relationships.

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## Appendix 1: STI groupings

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	
Vaginosis and balanitis (including epidemiological treatment)	
Anogenital candidiasis (including epidemiological treatment)	
Urinary tract infection	
Cervical abnormalities	
Other conditions requiring treatment at a GUM clinic	

## Appendix 2: Number of new episodes of selected diagnoses by gender and age group, Northern Ireland, 2003-2012

		2003			2004			2005			2006			2007			2008			2009			2010			2011			2012 <sup>A</sup>			
		M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total				
Chlamydia	<16	0	7	7	0	13	13	0	9	9	*	*	22	*	*	11	*	*	13	0	8	8	*	*	11	0	9	9	0	*	*	
	16-19	81	180	261	72	206	278	75	215	290	87	220	307	115	206	321	93	243	336	113	236	349	105	192	297	104	191	295	85	173	258	
	20-24	248	294	542	326	333	659	334	396	730	445	458	903	375	342	717	477	385	862	447	327	774	423	338	761	424	374	798	387	315	702	
	25-34	236	151	387	247	159	406	303	184	487	362	239	601	365	205	570	371	220	591	416	201	617	373	220	593	390	191	581	360	210	570	
	35-44	60	26	86	46	32	78	54	38	92	80	39	119	65	36	101	76	27	103	81	39	120	96	28	124	71	20	91	73	28	101	
	45+	20	5	25	12	7	19	17	6	23	*	*	27	*	*	23	*	*	41	33	5	38	*	*	46	47	9	56	35	*	*	
	Total	645	663	1,308	703	750	1,453	783	848	1,631	993	986	1,979	938	805	1,743	1,050	896	1,946	1,090	816	1,906	1,036	796	1,832	1,036	794	1,830	940	736	1,676	
	% in MSM	4%			4%			7%			6%			4%			4%			11%			14%			15%			10%			
Gonorrhoea	<16	0	0	0	0	*	*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*	*	*	*	0	*	*	
	16-19	8	8	16	17	8	25	*	*	17	*	*	15	27	7	34	15	5	20	19	8	27	12	9	21	17	15	32	*	22	*	
	20-24	45	10	55	32	5	37	47	13	60	58	17	75	44	7	51	56	10	66	36	15	51	61	13	74	87	38	125	116	43	159	
	25-34	42	6	48	*	*	49	*	*	58	55	7	62	*	*	49	58	13	71	69	8	77	51	6	57	93	19	112	122	35	157	
	35-44	*	*	28	*	*	10	*	*	38	*	*	32	*	*	21	*	*	45	*	*	16	30	*	*	*	*	*	40	*	*	44
	45+	*	*	7	*	*	*	*	*	9	*	*	11	17	0	17	*	*	24	*	*	9	18	*	*	*	*	*	*	38	*	*
	Total	127	27	154	105	19	124	162	20	182	163	32	195	155	17	172	194	32	226	148	32	180	172	32	204	259	77	336	344	107	451	
	% in MSM	31%			23%			40%			24%			29%			29%			29%			34%			56%			65%			
Syphilis	<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	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	*
	20-24	*	0	*	5	5	10	5	0	5	*	*	13	5	0	5	*	*	10	*	*	*	*	*	12	5	0	5	15	0	15	
	25-34	5	0	5	*	*	11	*	*	9	10	0	10	*	*	9	*	*	10	*	*	11	18	0	18	11	0	11	18	0	18	
	35-44	*	0	*	*	*	15	12	0	12	*	0	*	*	0	*	*	0	*	9	0	9	6	0	6	*	*	*	8	0	8	
	45+	*	0	*	5	0	5	5	*	*	*	0	*	*	0	*	8	0	8	6	0	6	*	*	10	10	0	10	*	0	*	
	Total	10	0	10	31	10	41	29	5	34	*	*	30	*	*	22	*	*	33	*	*	29	*	*	46	*	*	38	50	0	50	
	% in MSM	50%			68%			66%			52%			52%			45%			78%			75%			78%			90%			
Herpes	<16	*	*	*	0	*	*	*	*	*	0	*	*	0	*	*	0	*	*	0	*	*	0	*	*	0	6	6	0	5	5	
	16-19	5	31	36	*	*	34	6	39	45	7	33	40	5	44	49	11	58	69	7	43	50	10	57	67	5	71	76	10	39	49	
	20-24	14	53	67	28	56	84	20	64	84	21	60	81	32	53	85	11	78	89	38	56	94	42	87	129	30	68	98	32	75	107	
	25-34	23	49	72	25	39	64	28	46	74	39	52	91	27	55	82	38	47	85	41	80	121	52	79	131	56	65	121	50	72	122	
	35-44	14	21	35	11	22	33	8	19	27	18	21	39	26	13	39	8	19	27	17	32	49	36	21	57	24	26	50	18	18	36	
	45+	*	*	*	*	*	*	*	*	*	6	*	*	13	*	*	10	*	*	18	*	*	13	*	*	13	14	21	35	17	21	38
	Total	60	166	226	69	153	222	66	172	238	91	183	274	103	173	276	78	218	296	121	225	346	153	258	411	129	257	386	127	230	357	
	% in MSM	5%			7%			8%			2%			4%			6%			7%			12%			11%			10%			
Warts	<16	*	*	9	0	9	9	0	6	6	*	*	11	*	*	5	*	*	10	*	*	18	*	*	11	*	*	*	0	10	10	
	16-19	115	235	350	86	259	345	103	267	370	122	270	392	88	216	304	100	253	353	95	217	312	107	230	337	104	245	349	88	200	288	
	20-24	401	411	812	397	358	755	460	403	863	440	356	796	384	326	710	419	369	788	444	334	778	432	342	774	467	394	861	475	314	789	
	25-34	386	287	673	387	278	665	443	296	739	401	249	650	387	227	614	439	262	701	400	221	621	442	255	697	448	254	702	462	278	740	
	35-44	149	91	240	133	110	243	150	89	239	123	95	218	131	70	201	119	88	207	138	86	224	135	74	209	138	91	229	124	82	206	
	45+	*	*	92	56	28	84	52	37	89	*	*	89	*	*	95	*	*	84	*	*	133	*	*	98	*	*	154	99	58	157	
	Total	1,111	1,065	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	2,086	1,179	947	2,126	1,237	1,068	2,305	1,248	942	2,190	
	% in MSM	2%			3%			3%			2%			3%			2%			6%			8%			8%			10%			
Total diagnoses		5,823	5,727	11,550	5,723	5,784	11,507	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	7,304	5,222	12,526	7,046	5,729	12,775	6,117	5,000	11,117	
Total workload		7,188	6,021	13,209	7,327	7,056	14,383	9,302	7,542	16,844	8,871	7,104	15,975	8,480	6,488	14,968	9,897	8,321	18,218	11,903	9,698	21,601	13,242	10,542	23,784	14,035	11,704	25,739	16,140	11,887	28,027	

Notes on using these tables:

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

<sup>a</sup> It is likely that the use of more sensitive Nucleic Acid Amplification Tests (NAATs) has contributed to the increase in gonorrhoea.

\* 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, KC60 code C4a, C4c  
 Gonorrhoea uncomplicated gonorrhoea, KC60 code B1, B2  
 Syphilis primary and secondary infectious syphilis, KC60 code A1, A2  
 Herpes anogenital herpes simplex (first attack), KC60 code C10a  
 Warts anogenital warts (first attack), KC60 code C11a  
 Total diagnoses all diagnoses made, includes all A, B, C and E KC60 codes  
 Total workload all workload not requiring a diagnosis, includes all D, P and S KC60 codes

### Appendix 3: Rates of new episodes of selected diagnoses by gender and age group, Northern Ireland, 2003-2012

		2003			2004			2005			2006			2007			2008			2009			2010			2011			2012^			
		M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total				
Chlamydia	<16	0.0	18.1	8.8	0.0	34.0	16.6	0.0	23.8	11.6	*	*	28.8	*	*	14.6	*	*	17.4	0.0	22.1	10.8	*	*	14.9	0.0	25.0	12.2	0.0	*	*	
	16-19	148.5	346.6	245.1	130.9	393.3	258.9	137.4	413.5	272.1	161.1	427.1	291.0	215.4	402.6	307.0	176.1	481.1	325.3	216.4	471.1	341.1	203.0	386.2	292.8	203.1	387.7	293.6	167.6	356.1	259.9	
	20-24	430.6	518.4	474.2	552.4	575.0	563.6	552.5	667.2	609.3	718.5	753.3	735.7	593.0	548.5	570.9	749.5	610.9	680.6	697.1	519.2	609.0	663.5	540.7	602.7	669.5	606.0	638.2	614.3	517.5	566.7	
	25-34	203.0	126.5	164.3	215.3	134.6	174.4	263.8	155.6	208.9	314.2	201.1	256.8	313.3	169.8	240.3	314.5	179.6	240.3	349.5	162.5	254.2	311.0	176.3	242.3	324.6	152.1	236.4	297.4	166.5	230.6	
	35-44	47.9	20.0	33.7	36.2	24.4	30.2	42.1	28.8	35.3	62.1	29.3	45.4	50.2	27.0	38.4	58.8	20.2	39.2	63.4	29.4	46.1	76.2	21.4	48.3	57.3	15.5	36.0	60	22.1	40.7	
	45+	7.1	1.5	4.1	4.2	2.1	3.1	5.8	1.8	3.7	*	*	4.2	*	*	3.5	*	*	6.1	10.3	1.4	5.6	*	*	6.6	14.0	2.4	7.9	10.2	*	*	
	Total	77.4	76.0	76.7	83.9	85.6	84.8	92.6	96.1	94.4	116.4	110.8	113.5	108.8	89.5	98.9	120.6	98.7	109.4	124.1	89.2	106.3	117.1	86.5	101.5	116.5	85.8	100.9	105.1	79.2	91.9	
Gonorrhoea	<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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	*	*	*	*	*	*		
	16-19	14.7	15.4	15.0	30.9	15.3	23.3	*	*	15.9	*	*	14.2	50.6	13.7	32.5	28.4	9.9	19.4	36.4	16.0	26.4	23.2	18.1	20.7	33.2	30.4	31.9	*	45.3	*	
	20-24	78.1	17.6	48.1	54.2	8.6	31.6	77.8	21.9	50.1	93.6	28.0	61.1	69.6	11.2	40.6	88.0	15.9	52.1	56.1	23.8	40.1	95.7	20.8	58.6	137.4	61.6	100.0	184.1	70.6	128.4	
	25-34	36.1	5.0	20.4	*	*	21.0	*	*	24.9	47.7	5.9	26.5	*	*	20.7	49.2	10.6	29.5	58.0	6.5	31.7	42.5	4.8	23.8	77.4	15.1	45.6	100.8	27.7	63.5	
	35-44	*	*	11.0	*	*	3.9	*	*	14.6	*	*	12.2	*	*	8.0	*	*	17.1	*	*	6.1	23.8	*	*	*	*	15.8	*	*	17.7	
	45+	*	*	1.2	*	*	0.3	*	*	1.4	*	*	1.7	5.6	0.0	2.6	*	*	3.6	*	*	1.3	5.5	*	*	*	*	*	11.1	*	*	
	Total	15.2	3.1	9.0	12.5	2.2	7.2	19.2	2.3	10.5	19.1	3.6	11.2	18.0	1.9	9.8	22.3	3.5	12.7	16.8	3.5	10.0	19.4	3.5	11.3	29.1	8.3	18.5	38.5	11.5	24.7	
Syphilis	<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	0.0	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	
	16-19	0.0	0.0	0.0	0.0	0.0	0.0	*	0.0	*	0.0	*	*	*	0.0	*	*	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	*	*	*	*	0.0	*	
	20-24	*	0.0	*	8.5	8.6	8.6	8.3	0.0	4.2	*	*	10.6	7.9	0.0	4.0	*	*	7.9	*	*	*	*	*	9.5	7.9	0.0	4.0	23.8	0.0	12.1	
	25-34	4.3	0.0	2.1	*	*	4.7	*	*	3.9	8.7	0.0	4.3	*	*	3.8	*	*	4.2	*	*	4.5	15.0	0.0	7.4	9.2	0.0	4.5	14.9	0.0	7.3	
	35-44	*	0.0	*	*	*	5.8	9.4	0.0	4.6	*	0.0	*	*	0.0	*	*	0.0	*	7.0	0.0	3.5	4.8	0.0	2.3	*	*	*	6.6	0.0	3.2	
	45+	*	0.0	*	1.7	0.0	0.8	1.7	*	*	*	0.0	*	*	0.0	*	2.6	0.0	1.2	1.9	0.0	0.9	*	*	1.4	3.0	0.0	1.4	*	0.0	*	
	Total	1.2	0.0	0.6	3.7	1.1	2.4	3.4	0.6	2.0	3.2	0.3	1.7	*	*	1.2	3.3	0.4	1.9	*	*	1.6	*	*	2.5	*	*	2.1	5.6	0.0	2.7	
Herpes	<16	*	*	*	0.0	*	*	*	*	*	0.0	*	*	0.0	*	*	0.0	*	*	0.0	*	*	0.0	*	*	*	0.0	16.7	8.1	0.0	14.0	6.8
	16-19	9.2	59.7	33.8	*	*	31.7	11.0	75.0	42.2	13.0	64.1	37.9	9.4	86.0	46.9	20.8	114.8	66.8	13.4	85.8	48.9	19.3	114.7	66.1	9.8	144.1	75.6	19.7	80.3	49.4	
	20-24	24.3	93.4	58.6	47.4	96.7	71.8	33.1	107.8	70.1	33.9	98.7	66.0	50.6	85.0	67.7	17.3	123.8	70.3	59.3	88.9	74.0	65.9	139.2	102.2	47.4	110.2	78.4	50.8	123.2	86.4	
	25-34	19.8	41.0	30.6	21.8	33.0	27.5	24.4	38.9	31.7	33.8	43.8	38.9	23.2	45.5	34.6	32.2	38.4	35.3	34.4	64.7	49.8	43.4	63.3	53.5	46.6	51.8	49.2	41.3	57.1	49.4	
	35-44	11.2	16.2	13.7	8.7	16.8	12.8	6.2	14.4	10.4	14.0	15.8	14.9	20.1	9.7	14.8	6.2	14.2	10.3	13.3	24.1	18.8	28.6	16.1	22.2	19.4	20.2	19.8	14.8	14.2	14.5	
	45+	*	*	*	*	*	*	*	*	*	2.0	*	*	4.2	*	*	3.2	*	*	5.6	*	*	4.0	*	*	4.2	5.6	4.9	5.0	5.5	5.3	
	Total	7.2	19.0	13.3	8.2	17.5	13.0	7.8	19.5	13.8	10.7	20.6	15.7	11.9	19.2	15.7	9.0	24.0	16.6	13.8	24.6	19.3	17.3	28.0	22.8	14.5	27.8	21.3	14.2	24.8	19.6	
Warts	<16	*	*	11.4	0.0	23.6	11.5	0.0	15.9	7.7	*	*	14.4	*	*	6.6	*	*	13.4	*	*	24.2	*	*	14.9	*	*	*	0.0	27.9	13.6	
	16-19	210.8	452.5	328.7	156.4	494.5	321.3	188.7	513.5	347.1	226.0	524.2	371.6	164.8	422.1	290.7	189.4	500.9	341.7	182.0	433.2	305.0	206.9	462.7	332.3	203.1	497.3	347.4	173.6	411.6	290.1	
	20-24	696.3	724.7	710.4	672.7	618.2	645.7	761.0	679.0	720.3	710.4	585.5	648.6	607.2	522.8	565.3	658.4	585.5	622.1	692.4	530.4	612.1	677.6	547.1	613.0	737.4	638.4	688.5	754.0	515.8	637	
	25-34	332.1	240.4	285.6	337.4	235.4	285.6	385.7	250.3	317.0	348.0	209.6	277.7	332.2	188.0	258.8	372.1	213.9	291.5	336.0	178.6	255.8	368.6	204.3	284.8	372.8	202.3	285.7	381.7	220.4	299.4	
	35-44	118.9	70.1	94.1	104.7	83.9	94.2	117.0	67.4	91.8	95.4	71.4	83.2	101.2	52.5	76.5	92.1	65.9	78.8	108.0	64.9	86.0	107.1	56.6	81.4	111.4	70.6	90.6	102.0	64.7	83	
	45+	*	*	15.1	19.5	8.5	13.6	17.7	11.0	14.1	*	*	13.9	*	*	14.5	*	*	12.6	*	*	19.5	*	*	14.1	*	*	21.7	28.9	15.2	21.7	
	Total	133.4	122.2	127.6	126.3	119.0	122.6	142.9	124.4	133.5	133.9	113.9	123.7	121.8	97.7	109.5	130.0	111.3	120.5	132.0	101.2	116.3	133.3	102.9	117.8	139.1	115.5	127.0	139.5	101.4	120.1	

#### Notes on using these tables:

Diagnoses are calculated on GUM clinics in the region, rates are calculated for the region's resident population

Diagnostic rates for specific age groups were estimated by dividing the annual number of diagnoses in each age bracket by the estimated mid-year resident population of Northern Ireland for each age group. The denominators used to calculate rates in people under 16 and over 44 years of age were the population aged 13 to 15, and the population aged over 44 years respectively. The total population was used for the calculation of overall rates.

2001-2011 rates have been revised using revised mid year estimates to take into account the 2011 Census

2012 rates are based on 2012 mid year estimates

\* 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 C4a, C4c

Gonorrhoea uncomplicated gonorrhoea, ICD10 code B1, B2

Syphilis primary and secondary infectious syphilis, ICD10 code A1, A2

Herpes anogenital herpes simplex (first attack), ICD10 code C10a

Warts anogenital warts (first attack), ICD10 code C11a



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