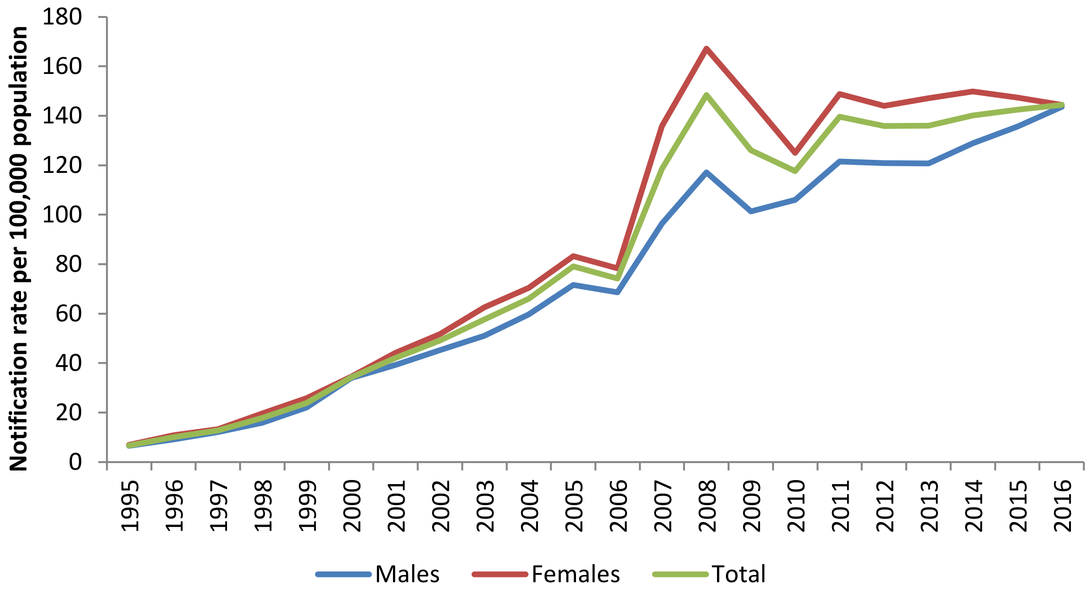
Chlamydia and Lymphogranuloma venereum (LGV) in Ireland, 2016

Summary

- Chlamydia is the most frequently reported STI in Ireland with 6,893 notifications in 2016
- Notification rate increased slightly to 144.7 per 100,000 population compared to 142.7 per 100,000 population in 2015
- Notification rate among males increased by 6% (to 143.6/100,000) and decreased by 2% in women (to 144.3/100,000) in 2016 compared to 2015
- The age-standardised notification rate in HSE East (181.8/100,000 population) was significantly higher than the national rate in 2016 but remains steady compared to previous years
- Forty percent of cases were reported among those aged 20-24 years (age-specific rate 1,006.4 per 100,000 population)
- All Lymphogranuloma venereum (LGV) cases were in men (n=48); 98% among MSM
- At least 85% of LGV cases were associated with an outbreak
- LGV cases were older than chlamydia cases (median age 35 years vs. 25 years)
- The majority of LGV cases were HIV positive (80% where known). Additionally, among those diagnosed with LGV, there were 32 STIs (excluding HIV) diagnosed in 2016.

Figure 1: Trend in notification rate of *Chlamydia trachomatis* infection in Ireland, 1995-2016



1. Background

Chlamydia, caused by the bacterium, *Chlamydia trachomatis*, is the most common curable bacterial sexually transmitted infection (STI) in the western world. Chlamydia has two routes of transmission; sexual transmission, which accounts for the vast majority of cases, and vertical transmission from mother to baby during vaginal childbirth.

Lymphogranuloma venereum (LGV) is an aggressive form of *Chlamydia trachomatis*. LGV is caused by one of three serovars (L1, L2 or L3) of *Chlamydia trachomatis*. The organism targets the lymphatic system and lymph nodes. LGV is a chronic disease that has a variety of acute and late manifestations.

Since 2013, all laboratories report cases of *Chlamydia trachomatis* infection and LGV to the national Computerised Infectious Disease Reporting (CIDR) system. Enhanced information is sought on all cases of LGV including demographic information, symptoms, HIV status, co-infections and probable country of infection.

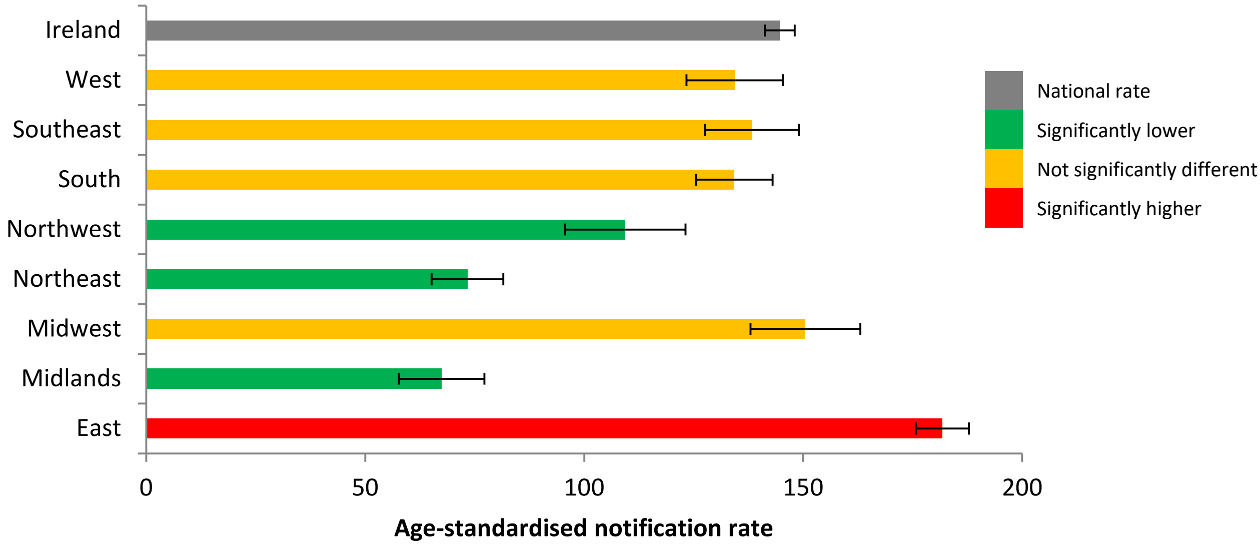
2. Chlamydia

As of 27th October, 2017, there were 6,893 notifications of *Chlamydia trachomatis* infection in 2016, an increase of 1% compared with 2015 when 6,797 cases were notified. The notification rate (NR) increased slightly to 144.7 per 100,000 population in 2016 from 142.7 per 100,000 population in 2015 (figure 1).

2.1 Area of residence

Cases of *Chlamydia trachomatis* infection were reported from all HSE areas with just over half (51%) reported in HSE East. The age-standardised notification rate (ASNR) in HSE East was significantly higher than the national rate while rates in the Northwest (109.3/100,000 population), Northeast (73.3/100,000 population), and Midlands (67.4/100,000 population) were significantly lower than the national rate (figure 2).

Figure 2: Age-standardised notification rate and 95% confidence intervals of chlamydia notifications by HSE area compared with the national rate, 2016 (n=6,890^)



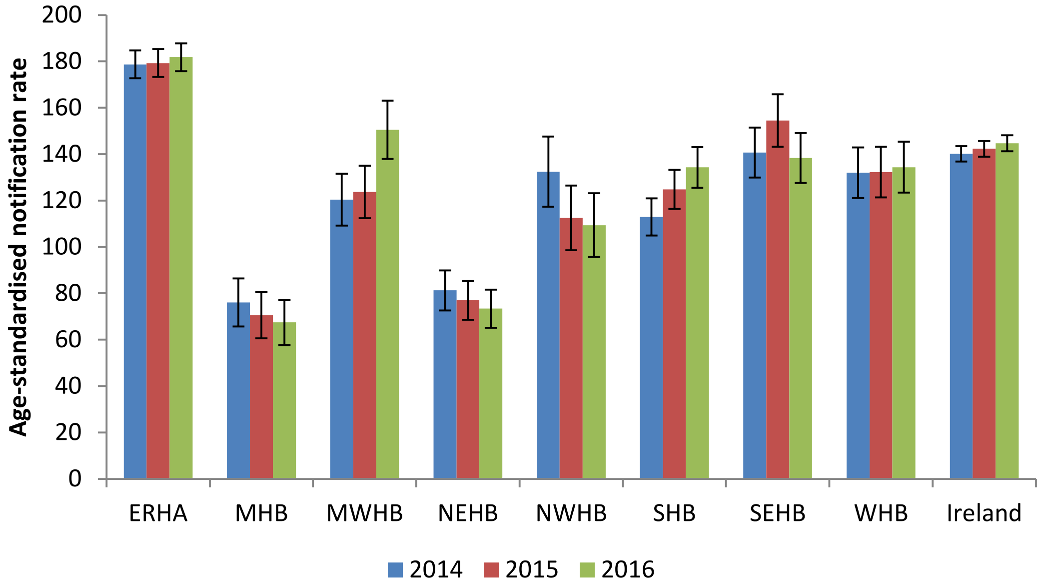
^Excludes three cases where age is unknown

The ASNR in HSE Midwest increased significantly in 2016 compared with 2015 (to 150.5/100,000 from 123.6/100,000) but was not significantly different from the national rate in 2016 (figure 3).

It is important to note that patient's area of residence was not provided for all cases reported through CIDR. For laboratory notifications uploaded to CIDR, the location of the laboratory was used to assign area of residence where patient's address details were not provided. As a result, the rates and numbers of cases by HSE area may reflect the location of STI services, including laboratories, as well as differences in reporting practices by clinics and clinicians from one area to another. A list of STI clinics is available at www.yoursexualhealth.ie.

The large volume of notifications in HSE East and the use of more automated processes for processing notifications in CIDR which do not allow for de-duplication of cases reported more than once, may have contributed to an over estimate of cases of *Chlamydia trachomatis* in HSE East.

Figure 3: Age-standardised notification rate of chlamydia by HSE area, 2014-2016



2.2 Age and Sex

There were 3,388 chlamydia cases diagnosed in men and 3,484 in women (table 1), giving a male to female ratio of 0.9:1. The rate increased by 6% in men (to 143.6/100,000) and decreased by 2% in women (to 144.3/100,000) in 2016 when compared to 2015; the rate in men has been increasing since 2009. In women the rates have been steady since 2011. More than three-quarters of cases were reported in people aged less than 30 years, with the largest proportion aged 20-24 years (40%).

Table 1: Number of cases, NR & median age (range) of chlamydia & LGV cases by sex, 2016[1]

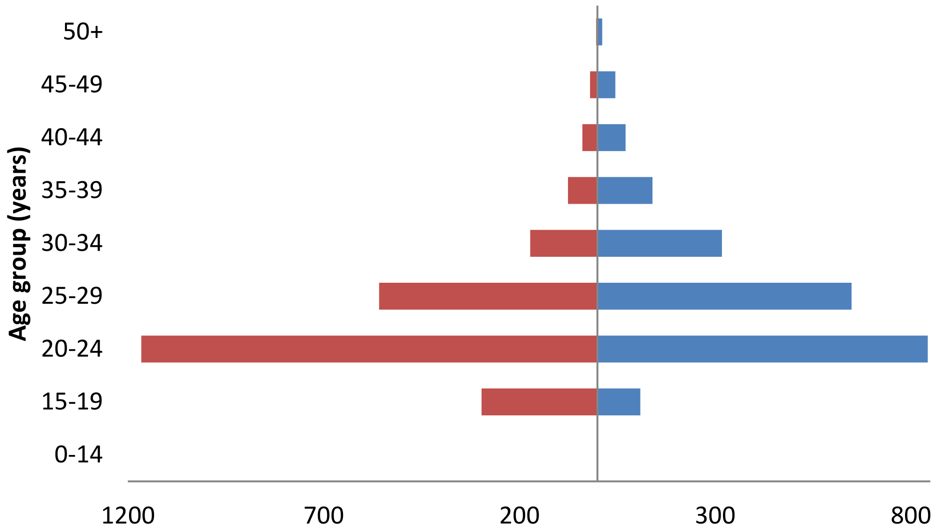
	Total	Male	Female
Chlamydia			
Number of cases[1]	6,893	3,388	3,484
NR/100,000 population[1]	144.7	143.6	144.3
Median age (range)*	25 yrs (15-70 yrs)	26 yrs (15 - 70 yrs)	23 (15 - 68 yrs)
LGV			
Number of cases	48	48	0
NR/100,000 population	1.0	2.0	na
Median age (range)	35 yrs (20-54 yrs)	35 yrs (20-54 yrs)	na

[1] Male and female breakdown excludes 21 cases whereby both age and sex were unknown

*excluding cases <14 years

The highest age-specific rate in 2016 was in 20-24 year olds (1,003.9 per 100,000 population). The rate in females in this age group is consistently higher than males. In 2016, the rate in females (1,165.7 per 100,000 population) was almost 1.4 times greater than in males in this age group (843.8 per 100,000 population). The age-specific rate among women was higher than men in the younger age groups (15-24 years) but the rate was higher among men in all other (older) age groups (figure 4).

Figure 4: Rate of chlamydia (per 100,000 population) by sex and age group, 2016 (n=6,869^)



	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
Males	1.2	109.7	843.8	649.4	318.2	140.3	71.6	46.1	12.5
Females	1.8	296.1	1165.7	557.8	172.1	75.6	38.3	19.0	3.3

^Excludes 24 cases whether age (n=3) or both age and sex (n=21) are unknown

There were 10 cases of *Chlamydia trachomatis* infection in young infants giving a rate of 0.16 per 1,000 births registered in Ireland during 2016 (data taken from the Central Statistics Office (CSO)), a decrease compared to 0.24/1,000 births in 2015. Of the ten cases, 80% were reported as conjunctivitis. Details of the specimen or clinical symptoms were not reported for two cases. The age range was one week to one month. Cases were reported from five HSE areas.

2.3 Other STIs

Since the start of 2013, case-based data on STIs (except ano-genital warts and non-specific urethritis) have been reported via CIDR from all HSE areas. This has enabled linkages to be made between different infections in the same patient facilitating the reporting of multiple infections and providing a clearer understanding of the burden of STIs.

Among cases diagnosed with *Chlamydia trachomatis* infection in 2016, there were 443 additional STIs (other than HIV) diagnosed (table 2). Gonorrhoea was the STI most frequently reported (n=332), this was an 86% increase on the number reported in 2015 (n=178). An increase was also observed in herpes simplex (genital) diagnoses (45 in 2016 versus 33 in 2015) and syphilis diagnoses (60 in 2016 versus 28 in 2015).

Since full patient identifiers were not provided for all cases, the true figures are likely to be much higher. Also, due to the large volume of notifications in HSE East and the use of more automated processes for processing notifications in CIDR, which do not allow for de-duplication of cases, may have contributed to an underestimate of other infections among cases with chlamydia in HSE East.

Table 2: Number* of additional STIs diagnosed in 2016 among those who had chlamydia in 2016

Disease	2016 (N)
Gonorrhoea	332
Herpes simplex (genital)	45
Syphilis	60
Trichomoniasis	6
Total number of STIs	**443**
Human immunodeficiency virus infection	32
Hepatitis B (acute and chronic)	5
Hepatitis C	7

*Patients may be counted more than once in this table

2.4 Patient type

The setting in which the patient was seen was reported for 49% (n=3,399) of chlamydia cases (table 3). Where reported, more than half (56%) of cases were diagnosed in general practice and 38% in a hospital outpatient setting (STI clinic). Where reported, 49% of men were diagnosed in general practice and 46% in a hospital outpatient setting (table 3). Women were more likely than males to be diagnosed in general practice compared all other settings (p<0.001), with 61% diagnosed in general practice and a 32% in a hospital outpatient setting.

Table 3: Percentage of chlamydia cases by sex and patient type (where known), 2016 (n=3,399)

Patient type	Male %(N)		Female %(N)		Unknown %(N)		Total %(N)	
GP	48. 9	(711)	60.5	(1,176)	100	(1)	55.5	(1,888)
Emergency dept.	0.1	(2)	0.5	(10)	0.0	(0)	0.4	(12)
Hospital (day patient)	0.0	(0)	0.4	(8)	0.0	(0)	0.2	(8)
Hospital (inpatient)	0.3	(5)	1.5	(29)	0.0	(0)	1.0	(34)
STI clinic (hospital outpatient)	46.1	(671)	31.8	(619)	0.0	(0)	38.0	(1,290)
Other	4.5	(65)	5.2	(102)	0.0	(0)	4.9	(167)
Total	**42.8**	**(1,454)**	**57.2**	**(1,944)**	**0.0**	**(1)**		**(3,399)**

3. Lymphogranuloma venereum

During 2016, there were 48 cases of LGV reported, giving a notification rate of 1.0 per 100,000 population (compared with 20 cases in 2015, 35 cases in 2014 and 5 cases in 2013).

- Cases ranged in age from 20 years to 54 years; the median age was 35 years.
- The majority of cases were reported in HSE East (n=42). Two cases were reported in each of HSE Midwest and HSE Northeast, and one case was reported in each of HSE Southeast and HSE West. All cases were among men who have sex with men (MSM).
- Most of the cases (n=32) were HIV positive.
- 50% were Irish, 21% were European, 13% were from Latin America and country of birth was unknown for 16%.
- The majority of cases (n=39) were seen in STI clinics.
- Among cases of LGV, there were 32 additional STIs (excluding HIV) diagnosed in 2016; with 26 diagnoses of gonorrhoea and six diagnoses of syphilis.

Of the 48 LGV cases in 2016, most (n=41; 85%) were linked to outbreak(s) among MSM in the Greater Dublin area. Multidisciplinary outbreak control teams (OCTs) were convened by the Dept. of Public Health, HSE East to actively investigate cases and instigate control measures.[1] Control measures included active case finding and partner notification undertaken by Dublin STI clinics as well as enhanced surveillance. Alerts were sent nationally to the range of clinicians thought likely to encounter LGV as it can mimic inflammatory bowel disease. Information materials were developed, including a leaflet and poster (http://www.man2man.ie/lgv) with targeted dissemination to the at-risk group (HIV positive MSM).[1]

References

1. Cooney F., ÓhAiseadha C. and Downes P. LGV outbreak in Ireland. *Epi Insight* 2015; 16(2). http://ndsc.newsweaver.ie/epiinsight/13f78gewgqd?a=1&p=48371552&t=17517774 (accessed 18th September, 2015)

Technical notes

1. Data are analysed by date of notification on CIDR.
2. Data for this report were extracted from CIDR on 23rd October, 2017, and were correct at the time of publication.
3. Please note that information from previous years is updated on an ongoing basis in CIDR, and so information from previous years represents our current understanding and most up to date data as of 23rd October, 2017, and may not correspond exactly with what was reported in previous annual reports. Similarly, data for 2016 may be updated further in due course and will be reported on in subsequent annual reports.
4. Percentages are rounded up in the text and are provided to one decimal place in the tables.
5. The counties covered by each HSE area are as follows: HSE East (ERHA): Dublin, Kildare & Wicklow; HSE Midlands (MHB): Laois, Longford, Offaly & Westmeath; HSE Midwest (MWHB): Clare, Limerick & N. Tipperary; HSE Northeast (NEHB): Cavan, Louth, Meath & Monaghan; HSE Northwest (NWHB): Donegal, Leitrim & Sligo; HSE South (SHB): Kerry & Cork; HSE Southeast (SEHB): Carlow, Kilkenny, S. Tipperary, Waterford & Wexford; HSE West (WHB): Galway, Mayo & Roscommon. Age-standardised notification rates were calculated using the direct method in which the national population was taken as the standard population. Population data were taken from Census 2016 from the Central Statistics Office (http://www.cso.ie). Data were aggregated into the following age groups for the analysis: 0-4 years, 5-9 years, 10-14 years, 15-19 years, 20-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years and ≥65 years.

Acknowledgements

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