

Key Points

- Chlamydia is the most frequently reported STI with 6,797 notifications in 2015
- Crude incidence rate increased slightly to 148.1 per 100,000 population compared to 145.8/100,000 in 2014
- Crude incidence rate among males increased by 6% (to 139/100,000) and decreased by 2% in women (to 157/100,000) in 2015.
- The age-standardised incidence rate in HSE East (192.8/100,000 population) was significantly higher than the national rate in 2015 but remains steady compared to previous years
- Forty percent of cases were reported among those aged 20-24 years (age-specific rate 915 per 100,000 population)
- All LGV cases were in men (n=20); 95% of which were among MSM
- Almost two-thirds (60%) of LGV cases were associated with an outbreak
- LGV cases were older than chlamydia cases (median age 31 years vs. 25 years)
- The majority of LGV cases were HIV positive (88% where known) and 85% of cases had a diagnosis of another STI in 2016

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.

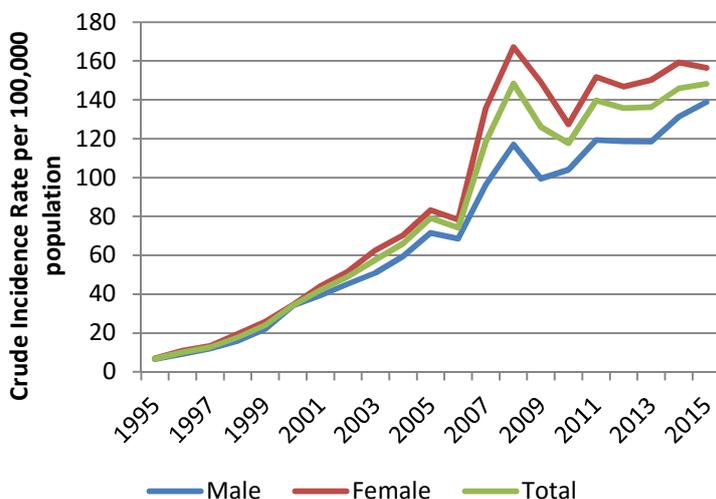
Lymphogranuloma venereum (LGV) is an aggressive form of *Chlamydia trachomatis*. LGV is caused by one of three (L1, L2 or L3) serovars of *C. trachomatis*. The organism targets the lymphatic system and lymph nodes. LGV is a chronic disease that has a variety of acute and late manifestations.

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.

Chlamydia

As of 15th September, 2016, there were 6,797 notifications of *Chlamydia trachomatis* infection in 2015, an increase of 2% compared with 2014 when 6,693 cases were notified. The crude incidence rate (CIR) increased slightly to 148.1 per 100,000 population from 145.9/100,000 population in 2014 (figure 1).

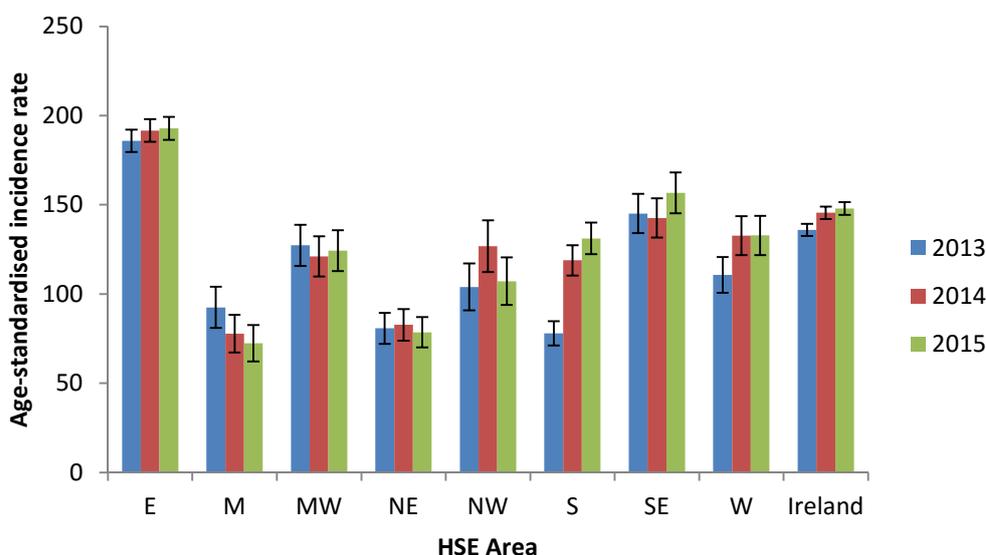
Figure 1: Trend in CIR of *Chlamydia trachomatis* infection in Ireland, 1995-2015



There were 16 cases of *Chlamydia trachomatis* infection in young infants giving a rate of 0.24 per 1,000 births, an increase compared to 0.16/1,000 births in 2014. Three-quarters of these cases were reported as conjunctivitis. Details of the specimen or clinical symptoms were not reported for four cases. The age range was two weeks to two months. Cases were reported from six HSE areas.

Cases of *Chlamydia trachomatis* infection were reported from all HSE areas with just over half (51%) reported in HSE East. The age-standardised incidence rate (ASIR) here remained stable (193/100,000 vs. 192/100,000 in 2014) (figure 2). In 2015 the ASIR in the East was significantly higher than the national rate while rates in Midwest (124/100,000), Northwest (107/100,000), Northeast (79/100,000), and Midlands (72/100,000) were significantly lower than the national rate (figure 3).

Figure 2: Age-standardised incidence rate of chlamydia by HSE area, 2013-2015



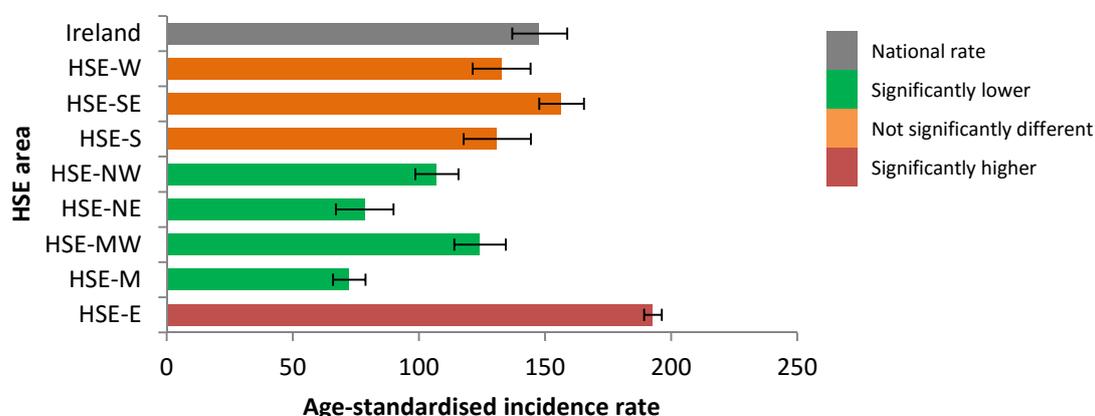
It is important to note that patient's area of residence was not provided for all cases reported through CIDR. For laboratory notifications uploaded to CIDR, the location of the laboratory was used to assign area of residence where patient's address details were not provided. As a result, the rates

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 incidence rate and 95% confidence intervals of chlamydia by HSE area compared with national rate, 2015



Age and Gender

There were 3,214 chlamydia cases diagnosed in men and 3,556 in women (table 1), giving a male to female ratio of 0.9:1. The rate in men increased by 6% (to 139/100,000) and decreased by 2% in women (to 157/100,000). More than three-quarters of cases were reported in people aged less than 30 years, with the largest proportion aged 20-24 years (40.1%).

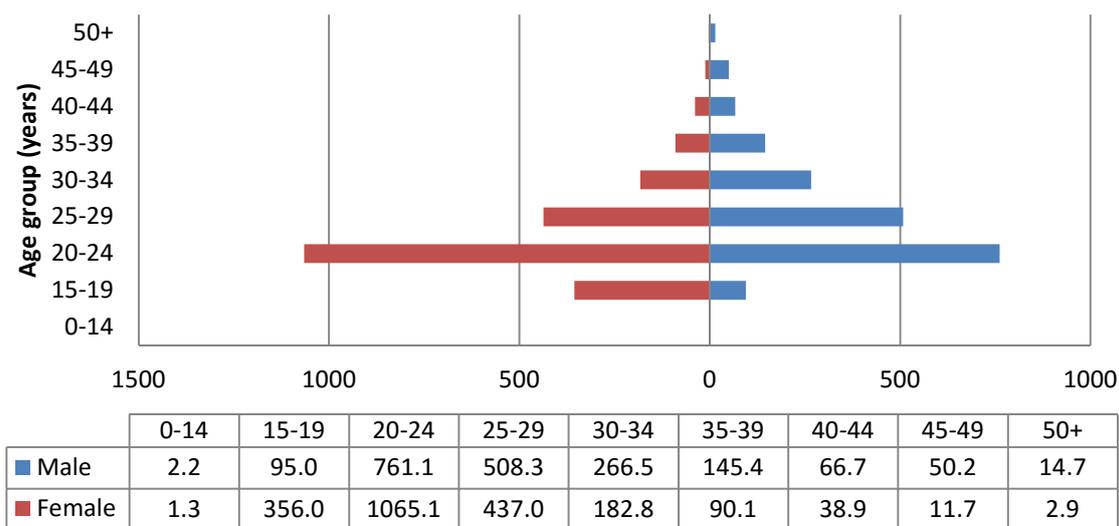
Table 1: Number of cases, CIR & median (range) age of chlamydia & LGV cases by sex, 2015

	Total	Male	Female
Chlamydia			
Number of cases	6,797	3,214	3,556
CIR/100,000 population	148.1	138.8	156.5
Median age (range)	25 yrs (14-72 yrs)	26 yrs (15 - 72 yrs)	23 (14 - 62 yrs)
LGV			
Number of cases	20	20	0
CIR/100,000 population	0.4	0.9	-
Median age (range)	31 yrs (21-62 yrs)	31 yrs (21-62 yrs)	-

*excluding cases <14 years

The highest age specific rate in 2015 was in 20-24 year olds (915 per 100,000 population). The rate in females in this age group is consistently higher than males. In 2015, the rate in females (1,065 per 100,000) was almost 1.4 times greater than in males in this age group (761 per 100,000). 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 gender and age group, 2015 (n=6,760[^])



Age-specific incidence rate

[^]Excludes 37 cases whether gender (n=26), age (n=10) or both (n=1) are unknown

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 2015, 246 were diagnosed with STIs other than HIV in 2015 (table 2). The other diagnoses were predominantly amongst males (74%, n=199). Gonorrhoea was the highest other STI reported in males (75%, n=133), while herpes simplex (genital) was highest among females (64%, n=21). Five cases of hepatitis B were reported, four of which were in males and 1 case of hepatitis C in a male.

Table 2: Number* of additional STIs diagnosed by sex in 2015 among those who had chlamydia in 2015 (n=270)

Disease	Males %(N)	Females %(N)
Gonorrhoea	75 (133)	25 (45)
Herpes simplex (genital)	36 (12)	64 (21)
Syphilis (early infectious)	96 (27)	4 (1)
HIV	93 (22)	7 (2)
Hepatitis B (acute and chronic)	80 (4)	20 (1)
Hepatitis C	100 (1)	0 (0)
Trichomoniasis	0 (0)	100 (1)
Total	(74) 199	(26) 71

*Patients may be counted more than once in this table

Based on notifications in CDIR, 0.7% of chlamydia cases in 2015 were HIV positive (n=48), including 24 diagnosed with HIV in 2015. Since full patient identifiers were not provided for all cases, the true figures are likely to be much higher. HIV data are only available on CIDR since 2012, so linkages cannot be made with patients diagnosed in 2011 or earlier. 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.

Patient type

The setting in which the patient was seen was reported for 47% (n=3,192) of chlamydia cases (table 3). Where reported, more than half (56%) of cases were diagnosed in general practice and 39% in a hospital outpatient setting (STI clinic).

Where reported, 48% of men were diagnosed in general practice and 47% in a hospital outpatient setting (table 3). Women were more likely to be diagnosed in general practice compared to all other settings (p<0.001), with 61% diagnosed in general practice and a third in a hospital outpatient setting.

Table 3: Percentage of chlamydia cases by gender and patient type (where known), 2015 (n=3,192)

Patient type	Male %(N)	Female %(N)	Unknown %(N)	Total %(N)
GP	48.4 (651)	60.8 (1120)	100 (4)	55.6 (1775)
Emergency dept.	0.5 (7)	0.4 (7)	0.0 (0)	0.4 (14)
Hospital (day patient)	0.0 (0)	0.3 (6)	0.0 (0)	0.2 (6)
Hospital (inpatient)	0.7 (9)	1.2 (22)	0.0 (0)	1.0 (31)
STI clinic (hospital outpatient)	47.0 (633)	33.8 (623)	0.0 (0)	39.3 (1256)
Other	3.4 (46)	3.5 (64)	0.0 (0)	3.4 (110)
Total	42.2 (1346)	57.7 (1842)	0.1 (4)	100.0 (3192)

Lymphogranuloma venereum

During 2015, there were 20 cases of LGV reported, giving a crude incidence rate of 0.4 per 100,000 population (compared with 35 cases in 2014, 5 cases in 2013 and 4 in 2012). More than half of these cases (n=12) were linked to outbreak(s) among MSM in the Greater Dublin area.

Cases ranged in age from 21 years to 62 years; the median age was 31 years (table 1). The majority of cases were reported in HSE East (n=16). One case was reported in each of HSE Midlands, HSE Midwest, HSE Northeast and HSE Southeast.

All but one case were among men who have sex with men (MSM) and most (n=14) were HIV positive. Country of birth was available for 19 cases; 60% were Irish, 20% were European, 15% were from Latin America and country of birth was unknown for 5%.

The majority of cases were seen in STI clinics. There was a high incidence of other STIs (excluding HIV) diagnosed among this group in 2015; 60% had gonorrhoea, 30% had chlamydia and 20% had syphilis (table 4). Just 15% (n=3) of cases did not have another STI diagnosis during 2015.

Table 4: Number of additional STIs diagnosed in 2015 persons who had LGV in 2015**

Disease	No.
Gonorrhoea	12
<i>Chlamydia trachomatis</i> (not LGV)	6
Syphilis	4
Herpes simplex (genital)	1

**Patients are counted more than once in this table

Multidisciplinary outbreak control teams (OCTs) were convened by the Dept. of Public Health, HSE East to actively investigate cases and instigate control measures. 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)

This report was prepared by Gillian Cullen, and Dr. Derval Igoe, September 2016.

Technical notes

1. Data are analysed by date of notification on CIDR.
2. Data for this report were extracted from CIDR on 16th September, 2016, 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 16th September, 2016, and may not correspond exactly with what was reported in previous annual reports. Similarly, data for 2015 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: Dublin, Kildare & Wicklow; HSE Midlands: Laois, Longford, Offaly & Westmeath; HSE Midwest: Clare, Limerick & N. Tipperary; HSE Northeast: Cavan, Louth, Meath & Monaghan; HSE Northwest: Donegal, Leitrim & Sligo; HSE South: Kerry & Cork; HSE Southeast: Carlow, Kilkenny, S. Tipperary, Waterford & Wexford; HSE West: Galway, Mayo & Roscommon.
6. Age-standardised incidence rates were calculated using the direct method in which the national population was taken as the standard population. Population data were taken from Census 2011 from the Central Statistics Office. 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.