Chlamydia in Ireland, 2014

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.

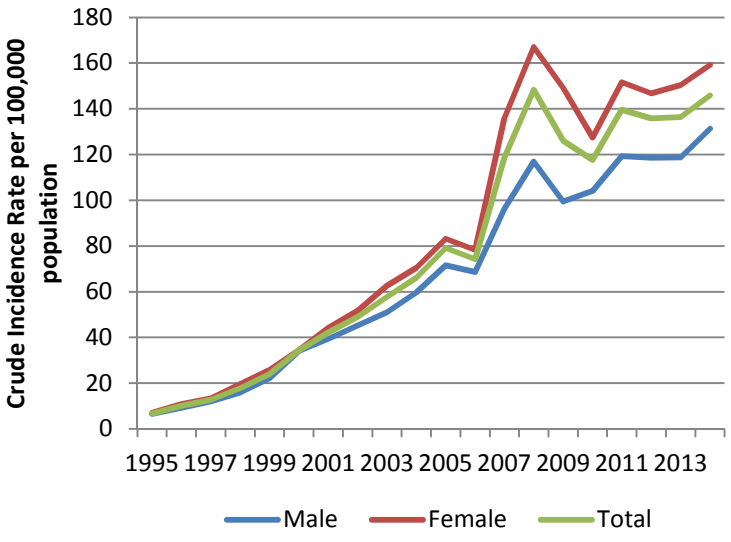
Lymphogranuloma venereum (LGV) is an aggressive form of *Chlamydia trachomatis*. LGV is caused by one of three (L1, L2 or L3) serovars of *C. trachomatis*. The organism targets the lymphatic system and lymph nodes. LGV is a chronic disease that has a variety of acute and late manifestations.

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

Chlamydia

As of 18th September, 2015, there were 6,695 notifications of *Chlamydia trachomatis* infection in 2014, an increase of 7% compared with 2013 when 6,257 cases were notified. The crude incidence rate (CIR) increased to 145.9 per 100,000 population having remained steady in recent years with rates between 139.6/100,000 and 136.4/100,000 between 2011 and 2013 (figure 1).

Figure 1: Trend in CIR of *Chlamydia trachomatis* infection in Ireland, 1995-2014



There were 10 cases of *Chlamydia trachomatis* infection in young children giving a rate of 0.15 per 1,000 births, a decrease compared to 0.25/1,000 births in 2013. Half of these cases were reported as conjunctivitis. Details of the specimen or clinical symptoms were not reported for five cases. The age range was six days to two months. Cases were reported from four HSE areas.

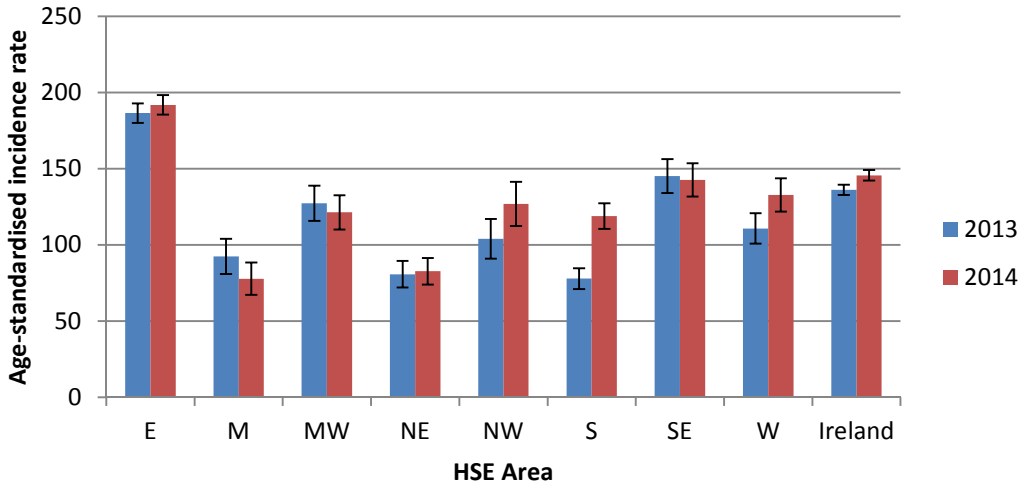
Cases of *Chlamydia trachomatis* infection were reported from all HSE areas with just over half (51%) reported in HSE East though the age-standardised incidence rate here remained stable (192/100,000 vs. 187/100,000 in 2013). There were significant increases in HSE South (119/100,000) and HSE West (133/100,000) compared to 2013 (78/100,000 and 111/100,000, respectively). Figure 2 shows the age-standarised incidence rates by HSE area.

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 2: Age-standardised incidence rate of chlamydia by HSE area, 2013-2014



There were 3,041 chlamydia cases diagnosed in men and 3,618 in women (table 1), giving a male to female ratio of 0.8:1. The rate in men increased by 11% (to 131/100,000) and by 6% in women (to 159/100,000). 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%).

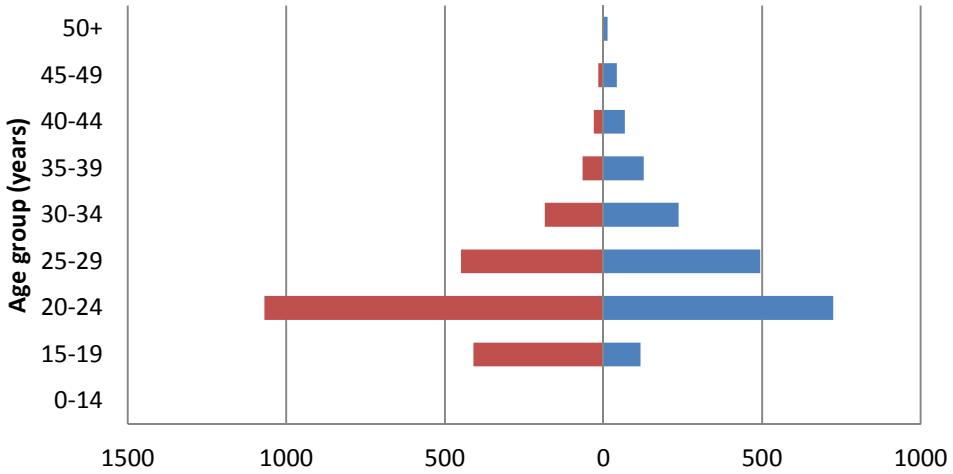
Table 1: Number of cases, CIR & median age of chlamydia & LGV cases by gender, 2014

	Total	Male	Female
Chlamydia			
Number of cases	6695	3,041	3,618
CIR/100,000 population	145.9	131.3	159.2
Median Age (range)*	27 yrs (14 -89 yrs)	28 yrs (15 -75 yrs)	26 yrs (14 -89 yrs)
LGV			
Number of cases	35	35	0
CIR/100,000 population	0.8	1.9	0.0
Median Age (range)	35 yrs (20 -55 yrs)	35 yrs (20 -55 yrs)	-

*excluding cases <14 years

The highest age specific rate in 2013 was in 20-24 year olds (899 per 100,000 population). The rate in females (1,068.4 per 100,000) was almost 1.5 times greater than in males in this age group (724.9 per 100,000) (see figure 3).

Figure 3: Rate of chlamydia (per 100,000 population) by gender and age group, 2014 (n=6,644^)



	0-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
Male	0.2	116.5	724.9	494.5	236.7	126.8	67.3	42.2	12.6
Female	2.3	409.3	1068.4	448.8	185.3	65.4	30.4	16.3	2.4

Age-specifc incidence rate

^Excludes 91 cases whether gender (n=36), age (n=11) are unknown

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 patients diagnosed with *Chlamydia trachomatis* infection, there were also 303 cases of STIs other than HIV, 16 cases of HIV, 3 cases of hepatitis B and 1 case of hepatitis C during 2014 (table 2). Since full patient identifiers were not provided for all cases, the true figure is likely to be much higher.

Table 2: Number of additional STIs diagnosed in persons who had chlamydia in 2014**

Disease	No.
Gonorrhoea	229
Herpes simplex (genital)	34
Syphilis	23
HIV	16
Trichomoniasis	10
Lymphogranuloma venereum (LGV)	7
Hepatitis B (acute and chronic)	3
Hepatitis C	1

**Patients may be counted more than once in this table

The setting in which the patient was seen was reported for 47% (n=3,127) 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 48% in a hospital outpatient setting. Women were more likely to be diagnosed in general practice, with more than 61% diagnosed in general practice and a third in a hospital outpatient setting (table 3).

Table 3: Gender by probability of attending GP where patient type is known for chlamydia cases, 2014 (n=3,127)

	Male		Female		Unknown		Total
GP	48.0	(602)	60.9	(1138)	13.9	(5)	100.0
Emergency dept.	0.2	(2)	0.8	(15)	0	(0)	100.0
Hospital (day patient)	0	(0)	0.4	(7)	0	(0)	100.0
Hospital (inpatient)	0.4	(5)	1.6	(30)	0	(0)	100.0
STI clinic (hospital outpatient)	48.4	(607)	33.4	(623)	2.8	(1)	100.0
Other	3.0	(37)	2.9	(55)	0	(0)	100.0
Total	**40.1**	**(1253)**	**59.7**	**(1868)**	**0.2**	**(6)**	**3127**
Chi square P<0.001	**50.4**						

Lymphogranuloma venereum

During 2014, there were 35 cases of LGV reported in 2014 giving a crude incidence rate of 0.8 per 100,000 population (compared with 5 cases in 2013 and 4 in 2012). This is the highest number of LGV cases ever notified in a single year; all cases were link to an outbreak among MSM in the Greater Dublin area.

Cases ranged in age from 20 years to 55 years; the median age was 35 years. All cases were reported in HSE East (n=34) or HSE North East (n=1) in men who have sex with men (MSM) and most were HIV positive. Country of birth was available for 24 cases; 40% were Irish, 17% were European, 12% were from North/South America and country of birth was unknown for 31%.

The majority of cases were seen in STI clinics with three cases requiring admission to hospital. There was a high incidence of other STIs diagnosed among this group in 2014; eight chlamydia, 10 gonorrhoea, one herpes simplex virus and six syphilis.

A multidisciplinary outbreak control team (OCT) was convened in October, 2014, to actively investigate cases and instigate control measures[1]. Control measures included active cases finding and partner notification undertaken by Dublin STI clinics as well as enhanced surveillance by the

Dept. of Public Health, HSE East. The molecular virology laboratory at St. James' Hospital tested and sequenced all isolates; preliminary results indicated that most of the cases may be very closely linked. Alerts were sent to range of clinicians nationally who might 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). The outbreak was declared over in July, 2015.

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 18th September, 2015, and were correct at the time of publication.
3. Percentages are rounded up in the text and are provided to one decimal place in the tables.
4. 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.
5. 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.