Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

hpsc

Early Infectious Syphilis in Ireland, 2016

Acknowledgements

Timely, accurate and complete data are essential to the surveillance of syphilis in Ireland. The Health Protection Surveillance Centre (HPSC) would like to thank all those who collected, collated and validated the data for this report, particularly the STI clinics, the infectious disease surveillance staff within the departments of public health, the laboratories and GP clinics.

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Contents

Key Points

- In 2016, 305 cases of early infectious syphilis (EIS) were notified, giving a notification rate of 6.4 per 100,000 population. This is an increased compared to 2015 (5.6/100,000) and continues the increasing trend seen since 2012.
- The notification rate in 2016 is the highest rate recorded since enhanced surveillance of syphilis began in 2000 and exceeds the rate during the syphilis outbreak among MSM in Dublin in 2001 (6.1/100,000). However a change in the case definition in July 2016 increased the sensitivity of the system, and this could account for some of the increase seen.
- The increase in EIS in 2016 was concentrated among men though the rate of increase among men (+14%) was not as great as the increase between 2014 and 2015 (+36%)
- 97% of cases were among men and 3% in women giving a male to female ratio of 30:1
- The rate among men increased to 12.5 per 100,000 (from 11.0/100,000 in 2015) while the rate among women remained stable
- Median age: 33 years (range: 18-73 years)
- The highest age-specific rate in males was among 25-29 year olds (53.0 per 100,000 population) and in females was among 20-24 year olds (1.5 per 100,000 population)
- The age standardised notification rate (ASNR) in HSE East (10.4/100,000) was 1.6 times the national rate confirming that this region remains a centre of transmission within Ireland
- Where mode of transmission was recorded, 88% of cases were among men who have sex with men (MSM)
- Since 2012, EIS among MSM has increased by 170% in that time (from 81 in 2012 to 222 in 2016). Most of this increase occurred between 2014 and 2015. In 2016 the numbers amongst MSM were similar to 2015.
- Thirty-four percent (n=104) of EIS cases diagnosed in 2016 were co-infected with HIV at the time of their diagnosis. A quarter of these were newly diagnosed with HIV in 2016 and 27% were diagnosed in 2014 or 2015.
- The percentage of cases among MSM who were co-infected with HIV continued to rise (39% compared to 30% in 2015)
- The work of the MSM Outbreak Response Group continued in 2016 with a number of interventions implemented during 2016 including an extra clinic at the Gay Men's Health Service, employment of outreach workers and increased distribution of condoms and lubricant.

1. Introduction

Syphilis is a sexually transmitted infection (STI) caused by the bacterium, *Treponema pallidum*. Despite availability of sensitive diagnostic tests and effective treatment, it remains a serious health problem. Syphilis has two routes of transmission; sexual transmission, which accounts for the vast majority of cases, and vertical transmission from mother to fetus *in utero*. Without treatment, infection will progress. Clinical symptoms may appear after an incubation period of 10 to 90 days (three weeks on average). At first a primary lesion at the site of infection (chancre) appears, then a series of eruptions on mucous membranes and skin (secondary syphilis), followed by long periods of latency (latent or tertiary syphilis). The earlier an infection is diagnosed and treated, the greater the chance of preventing onward transmission. Early infectious syphilis (EIS) relates to the following clinical stages; primary, secondary and early latent. It should be noted that many people with EIS may be asymptomatic. Individuals with late latent syphilis or tertiary syphilis are not sexually infectious.

2. Data Collection

A change in the case definition and laboratory notification criteria for syphilis was made in January 2014, whereby only laboratory diagnosed EIS cases, and re-infections of syphilis, became notifiable. These laboratory diagnosed notifications are then reviewed clinically, staged, and subsequently deactivated in the CIDR system by Public Health if they are not EIS cases as determined by clinical assessment.

A review of syphilis cases notified to HSE East (Dublin, Kildare and Wicklow) in quarter one of 2014 was undertaken as it was originally anticipated that, with the new laboratory criteria for notification, a relatively small proportion of events would be deactivated following clinical review, but this was not the case. In Q1 2014, 47% of laboratory notifications were later deactivated. This review found that it was possible to refine the laboratory criteria for notifying new cases of syphilis, which would lead to fewer cases being reported, and of these, the likelihood of them being deactivated subsequently would be much lower.

The staging of syphilis cases, Public Health follow-up and CIDR deactivation is time consuming for both STI clinics and Public Health Departments with a time lag of up to six months following initial notification. Simplifying the surveillance provides more timely information which is essential to inform the response to the current increase in EIS amongst men who have sex with men (MSM).

From 1st July, 2016, updated laboratory criteria for notification of syphilis cases to Public Health have been applied. Laboratories are requested to notify **any new case** that fits one or more of the updated laboratory criteria, **and** any syphilis **re-infections**. Laboratories use their own internal criteria for notification of re-infections.

The case definitions are provided in Appendices 1-2 and copies of the syphilis data collection forms used in 2016 are shown in Appendices 3-4.

3. 2016 Data

During 2016, 430* cases of syphilis were notified in CIDR based on laboratory criteria (data extracted 20th Sept., 2017); 260 between January and June and 170 between July and December.

Of the 260 notified in the first half of the year, stage of infection was reported as EIS following clinical review for 135 cases (i.e. enhanced surveillance forms were received for 52% of cases). Based on the updated laboratory criteria applied from 1st July, the 170 cases notified in the second half of the year were reported as EIS. Enhanced surveillance forms were received for 46% of cases in the second half of the year.

In addition to notifications of EIS there was one possible case of congenital syphilis notified in 2016. This child will be followed-up until they are 18 months old to determine whether positive laboratory test results were a result of infection or the presence of maternal antibodies.

4. Early Infectious Syphilis

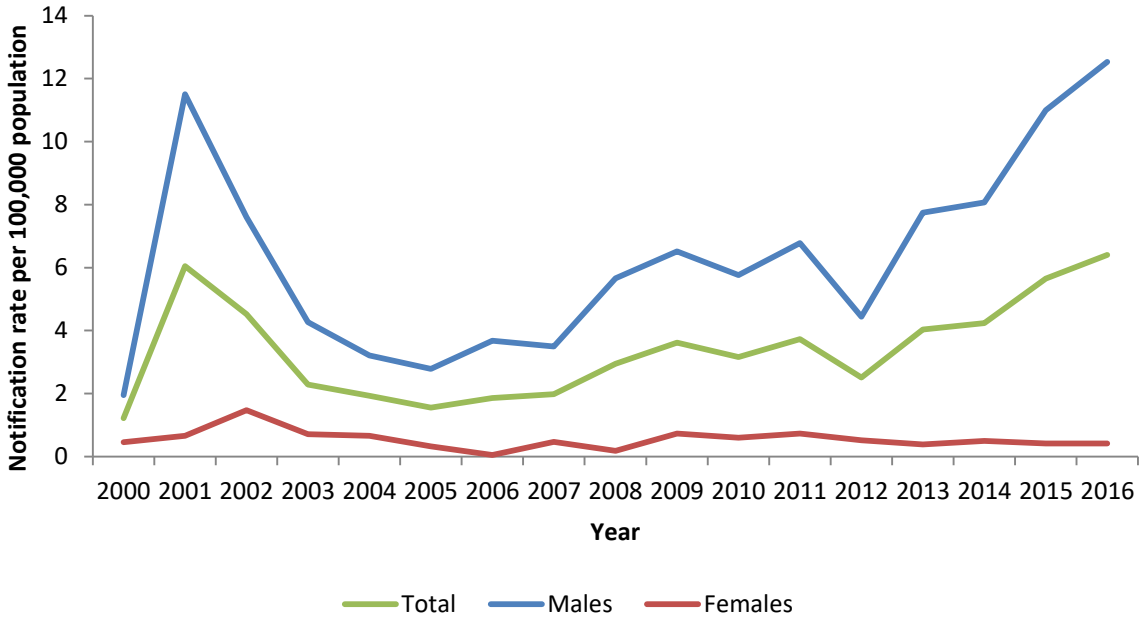
In 2016, 305 cases of EIS were notified, giving a notification rate of 6.4 per 100,000 population (figure 1). This compares to 269 early infectious cases in 2015 (NR: 5.6/100,000) and 202 in 2014 (NR: 4.2/100,000).

Of the 305 early infectious cases notified in 2016, 124 (41%) were classified as primary syphilis, 35 (11%) as secondary syphilis, 48 (16%) as early latent and 98 (32%) as EIS, not otherwise specified (n.o.s.). A summary of EIS cases diagnosed in 2012-2016 is shown in Table 1. Three cases of

neurosyphilis were reported; two of which were classified as secondary syphilis and the third as EIS, not otherwise specified.

While the notification rate of EIS increased in 2016 to 6.4 per 100,000 population the increase was not as steep as that seen between 2014 (4.2/100,000) and 2015 (5.6/100,000) (figure 1). In 2016, the rate among men increased to 12.5 per 100,000 compared to 11.0/100,000 and 8.1/100,000 in 2015 and 2014, respectively. The rate among women remained the same in 2016 as 2015 at 0.4/100,000 population which was a slight decrease compared to 2014 (0.5/100,000).

Figure 1: Notification rate of early infectious syphilis by sex (per 100,000 population), 2000-2016



In quarters 1 and 2 the average number of cases notified per month was 28 and 17, respectively. Following the introduction of the updated laboratory criteria, this rose to 23 in quarter 3. In quarter 4, there was a steep rise in cases and the average monthly number of cases climbed to 33. Figure 2 shows the number of EIS cases notified by month.

Figure 2. Number of of early infectious syphilis cases notified by month, 2016

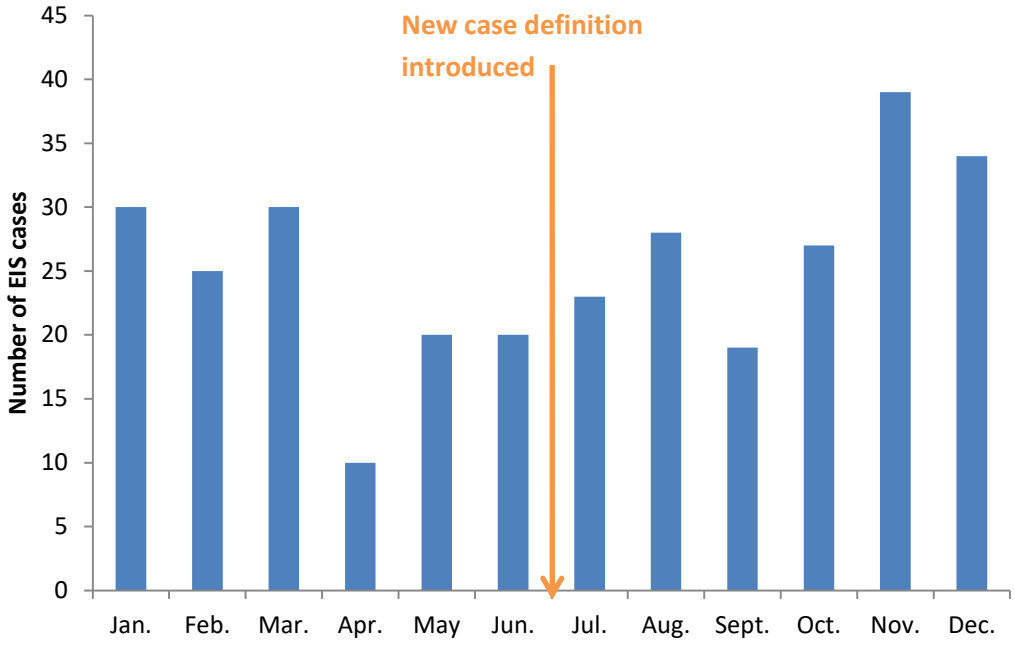


Table 1: Summary of trends in early infectious syphilis, 2012-2016

		2012 n (%)	2013 n (%)	2014 n (%)	2015 n (%)	2016 n (%)
Total number of early cases		115	185	202	269	305
Rate per 100,000 population		2.5	4.0	4.2	5.6	6.4
Stage of infection	Primary syphilis	62 (53.9)	85 (45.9)	119 (58.9)	135 (50.2)	124 (40.7)
	Secondary syphilis	31 (27)	53 (28.6)	40 (19.8)	60 (22.3)	35 (11.5)
	Early latent syphilis	22 (19.1)	47 (25.4)	43 (21.3)	74 (27.5)	48 (15.7)
	Early infectious syphilis, n.o.s.	NA	NA	NA	NA	98 (32.1)
Sex	Males	101 (87.8)	176 (95.1)	190 (94.1)	259 (96.3)	295 (96.7)
	Females	12 (5.9)	9 (4.9)	12 (5.9)	10 (3.7)	10 (3.3)
	Unknown	2 (1.0)	0	0	0	0
	Male to female ratio	8	20	16	26	30
Age	Median age (years)	34	33	32	33	33
	Age range (years)	19-68	19-73	19-70	20-65	18-73
Mode of transmission	Men who have sex with men (MSM)	81 (70.4)	119 (64.3)	142 (70.3)	221 (82.2)	222 (72.8)
	Heterosexuals	24 (20.9)	22 (11.9)	36 (17.8)	33 (12.3)	29 (9.5)
	Unknown	10 (8.7)	44 (23.8)	42 (11.9)	15 (5.6)	54 (17.7)
Syphilis in pregnancy	Diagnosed in pregnancy	3	1	3	1	2
	Rate per 1,000 births[1]	0.04	0.01	0.04	0.02	0.03
Region of birth	Born in Ireland	85 (73.9)	77 (41.6)	100 (49.5)	124 (46.1)	143 (46.9)
	Born abroad	23 (20.0)	64 (34.6)	75 (37.1)	118 (43.4)	99 (32.5)
	Unknown	7 (6.1)	44 (23.8)	27 (13.4)	27 (10.0)	63 (20.7)
Country of infection	Acquired in Ireland	72 (62.6)	93 (50.3)	109 (54.0)	193 (71.8)	178 (58.4)
	Acquired abroad	15 (13.0)	22 (11.9)	44 (21.7)	39 (14.5)	30 (9.8)
	Unknown	28 (24.6)	70 (37.8)	49 (24.3)	37 (13.4)	97 (31.8)
HIV status	Positive	28 (24.3)	55 (29.7)	50 (24.8)	78 (29.0)	104 (34.1)
	Negative	73 (63.5)	89 (48.1)	133 (65.8)	165 (61.3)	136 (44.6)
	Unknown	14 (12.2)	41 (22.2)	19 (9.4)	26 (9.7)	65 (21.3)
Symptomatic	Yes	47	71	60	96	107
	% where known	44.8	50.7	33.5	37.0	46.9
	No	58	69	119	163	121
	% where known	55.2	49.3	66.5	63.0	53.1
Reinfection	Yes	20	18	14	10	22
	% where known	29.4	41.9	60.9	40.0	37.3
	No	48	25	9	15	37
	% where known	70.6	58.1	39.1	60.0	62.7

[1] Vital Statistics Central Statistics Office

4.1 HSE area

Cases of EIS were reported from all HSE areas. The age standardised notification rate (ASNR) in HSE East (10.4/100,000) was 1.6 times the national rate confirming that this region remains a centre of transmission within Ireland. The ASNR in four HSE areas (West, Southeast, Northwest and Northeast) were significantly lower than the national rate (figure 3).

Figure 3: Age-standardised notification rate of early infectious syphilis by HSE area[2] compared with national rate (per 100,000 population), 2016

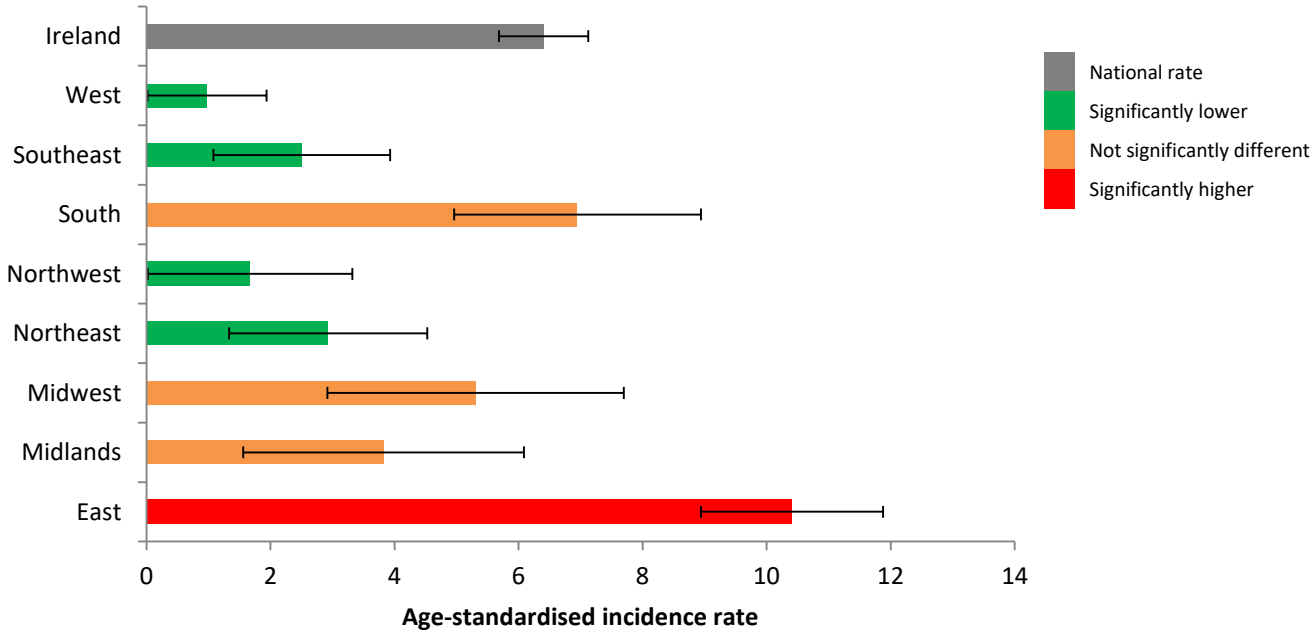
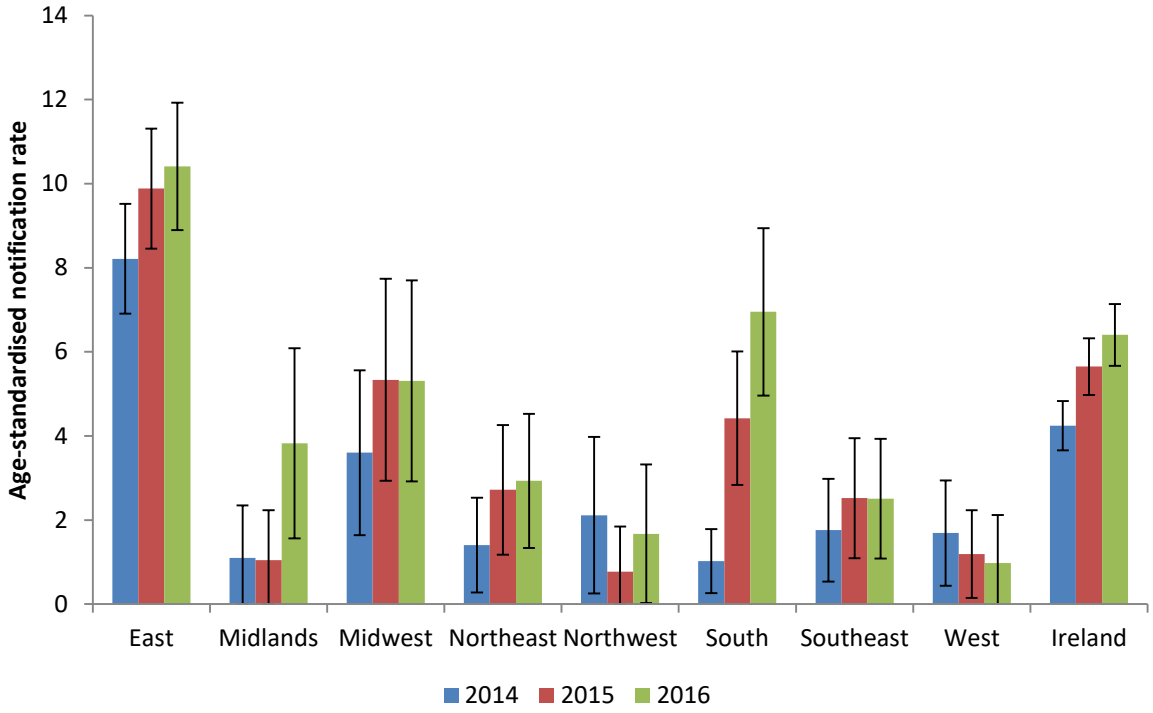


Figure 4 shows the trends in ASNR of EIS by HSE area between 2014 and 2016. Compared to 2015, the ASNR in HSE South increased by 60% in 2016 (7.0/100,000 population versus 4.4/100,000 population in 2015) but was not significantly different to the national rate in 2016.

[2]See Technical Note for details of HSE areas and counties.

Figure 4: Age-standardised notification rate of early infectious syphilis by HSE area, 2014-2016



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

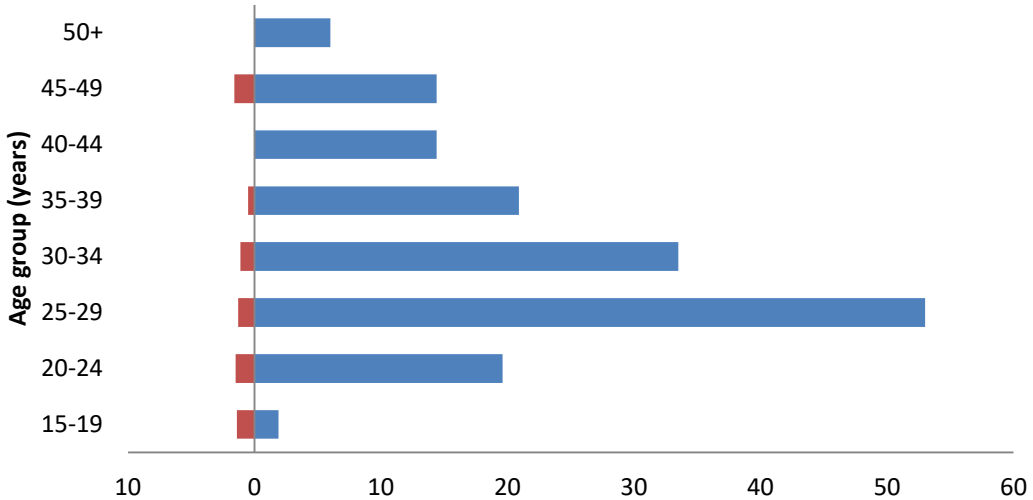
4.2 Age and sex

There were 295 EIS cases diagnosed in men and 10 in women, giving a male to female ratio of 30:1. The crude notification rates in men and women were 12.5 and 0.4 per 100,000 population, respectively (figure 1).

Eleven percent of the EIS cases were reported in young people aged between 15 and 24 years, while the majority of cases (60%) were in people aged between 25 and 39 years. The overall median age was 33 years (range: 18-73 years), 33 years in males (range: 18-73 years) and 27 years in females (range: 19-45 years).

The highest age-specific rate in 2016 was in 25-29 year olds (26.6 per 100,000 population). The highest rate in males was in 25-29 year olds (53.0 per 100,000 population) and in females was in 20-24 year olds (1.5 per 100,000 population) (figure 5).

Figure 5: Rate of early infectious syphilis (per 100,000 population) by sex and age group, 2016



	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
Males	1.9	19.6	53.0	33.5	20.9	14.4	14.4	6.0
Females	1.4	1.5	1.3	1.1	0.5	0.0	1.6	0.0

4.3 Antenatal syphilis

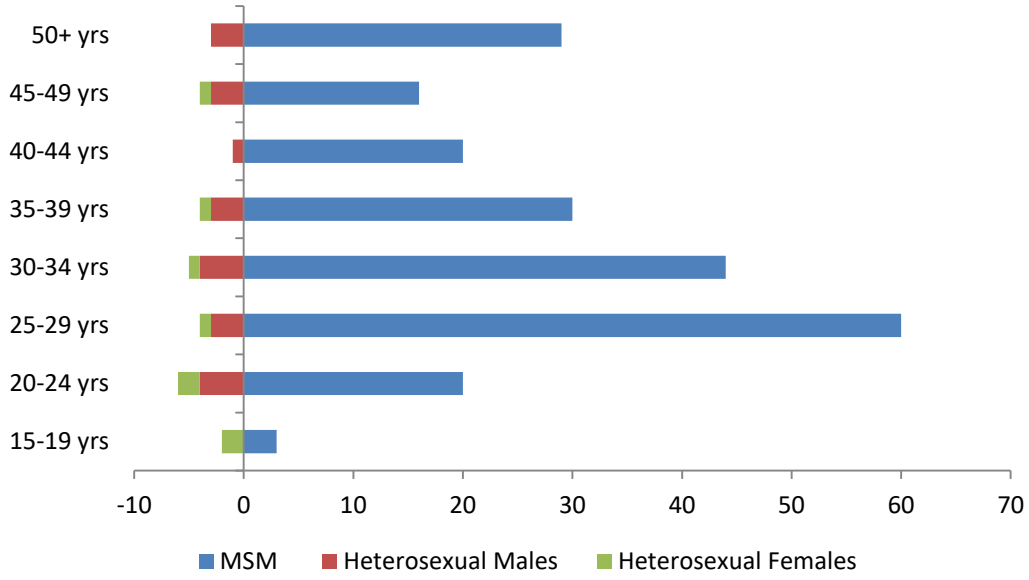
Of the ten women diagnosed with EIS, two were pregnant at the time of diagnosis giving a rate of 0.03 per 1,000 births[3]. This is a slight increase in the rate compared with 2015 (0.02/1,000 births) though the numbers remain low. Both cases were identified through antenatal screening in the first trimester. One case was diagnosed as primary syphilis and the other as secondary syphilis.

4.4 Transmission mode

Of the 305 EIS cases in 2016, 222 (73%) were among MSM and 29 (10%) were among heterosexuals (8 female and 21 male). For 54 cases (17%), the mode of transmission was unknown. The number of cases among MSM remained stable compared with 2015 whilst cases among heterosexuals decreased by 12%. Figure 6 describes EIS cases by mode of transmission, sex and age group and Table 3 describes EIS cases by mode of transmission.

[3] Vital Statistics Central Statistics Office

Figure 6: Proportion of early infectious syphilis cases by age group, sex and transmission mode where known*, 2016 (n=251)



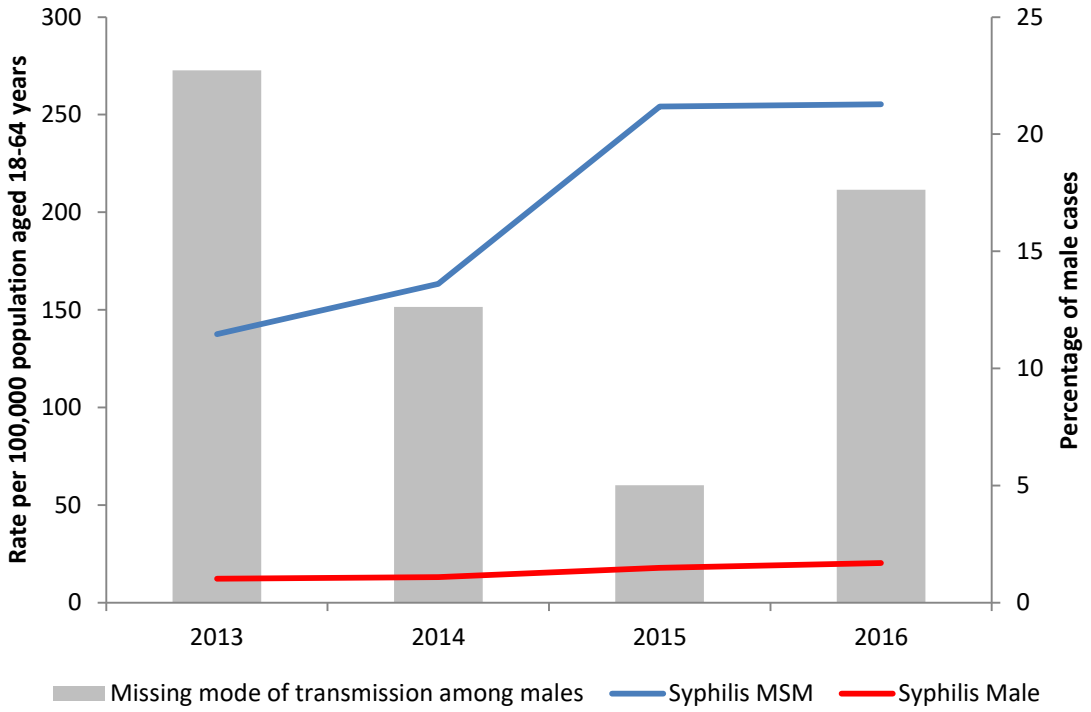
*Excludes 54 cases where mode of transmission is unknown

Table 3: Characteristics of early Infectious syphilis by mode of transmission where known*, 2016 (n=251)

		MSM % (n)	Heterosexual - Males % (n)	Heterosexual - Females % (n)
Total cases		222	100 (21)	100 (8)
Stage of infection	Primary	48 (106)	38 (8)	62 (5)
	Secondary	14 (31)	10 (2)	13 (1)
	Early latent	19 (43)	19 (4)	0
	Early infectious syphilis n.o.s	19 (42)	33 (7)	25 (2)
Age	Median age	32 years	34 years	27 years
	Age range	18-73 years	20-55 years	19-45 years
Country of birth	Borin in Ireland	50 (110)	71 (15)	38 (3)
	Born abroad	36 (80)	10 (2)	50 (4)
	Unknown	14 (32)	19 (4)	13 (1)
Probable counttry of infection	Acquired in Ireland	70 (156)	48 (10)	75 (6)
	Acquired abroad	12 (25)	19 (4)	0
	Unknown	18 (41)	33 (7)	25 (2)
HIV status	HIV positive	39 (87)	5 (1)	0
	HIV negative	47 (104)	90 (19)	75 (6)
	Unknown	14 (31)	5 (1)	25 (2)

*Excludes 54 cases where mode of transmission is unknown

Figure 7: Rate of EIS notifications in men and MSM[4], respectively, per 100,000 population aged 18-64 years, 2013-2016



The notification rate among MSM in 2016 was little changed compared with 2015 (254.2/100,000 vs. 255.4/100,000; figure 7). However, there was a large increase in the percentage of males cases for which mode of transmission was missing (up to 18% from 5%). The notification rate among males continued to increase in 2016 to 20.4/100,000 from 17.9/100,000 in 2015 and 13.1/100,000 in 2014.

4.5 Country of birth/county of infection/ethnicity

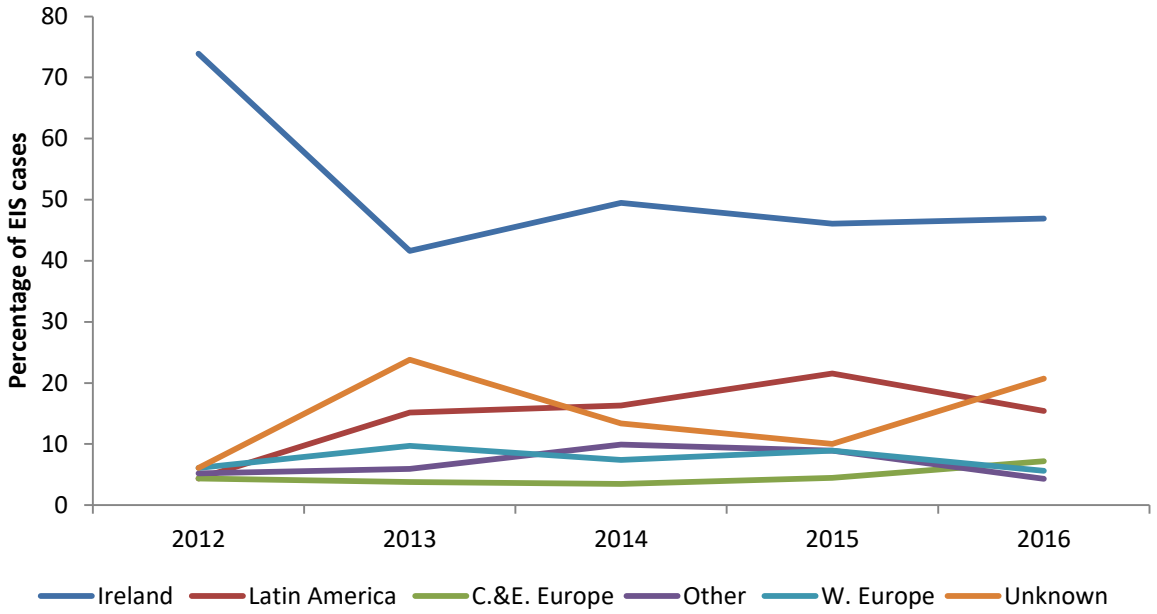
Ireland was the most frequently reported country of birth (47%) among cases of early infectious syphilis (table 4). The proportion of cases from Latin America dropped to 15% in 2016 compared with 22% in 2015 (figure 8). However, the proportion cases for which region of origin was missing doubled in 2016 to 21% (from 10%).

[4] The MSM population was calculated as 6% of the Irish male population aged between 18 and 64 years (Census 2016), as estimated by the Healthy Ireland survey, which is a nationally representative survey[7]

Table 4: Early infectious syphilis cases by mode of transmission and region of birth, 2016

Region of birth	MSM		Heterosexual		Unknown		Total	
	n	%	n	%	n	%	n	%
Ireland	110	49.5	18	62.1	15	27.8	143	46.9
Latin America	38	17.1	1	3.4	8	14.8	47	15.4
Unknown	32	14.4	5	17.2	26	48.1	63	20.7
Western Europe	15	6.8	0	0.0	2	3.7	17	5.6
Central & Eastern Europe	17	7.7	3	10.3	2	3.7	22	7.2
Other	10	4.5	2	6.9	1	1.9	13	4.3
Total	222	100	29	100	54	100	305	100

Figure 8: Trend in region of birth of early infectious syphilis cases, 2012-2016

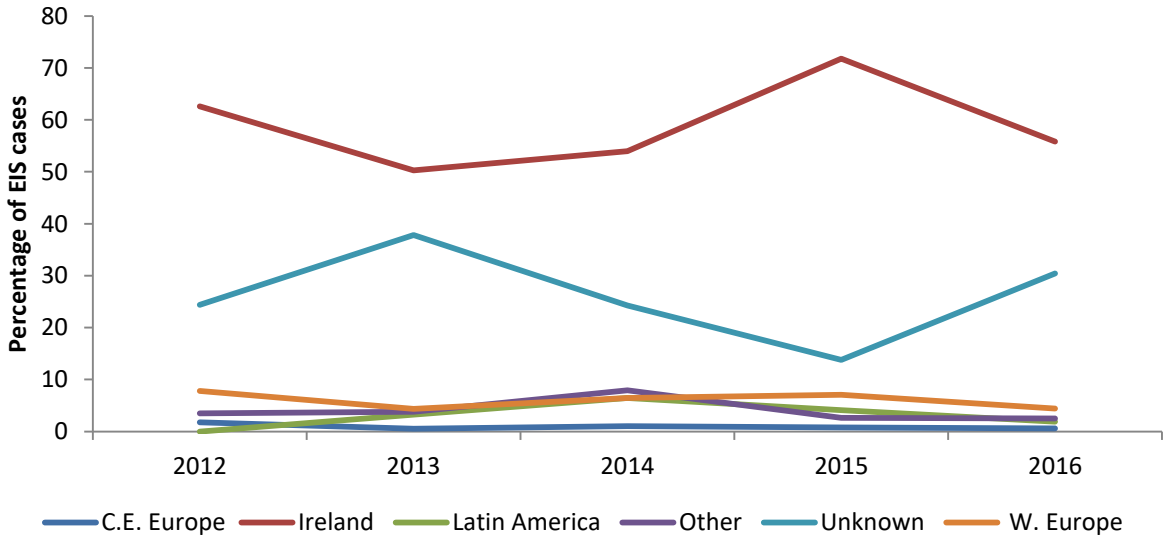


Fifty-eight percent of EIS cases acquired their infection in Ireland (table 5). This is a decrease compared to 2015 (72%) but may be attributable in part to less complete information as the proportion of unknown increased to 30% (from 14%; figure 9).

Table 5: Early infectious syphilis cases by mode of transmission and region of infection, 2016

Region of infection	MSM		Heterosexual		Unknown		Total	
	n	%	n	%	n	%	n	%
Ireland	156	70.3	16	55.2	6	11.1	178	58.4
Unknown	41	18.5	9	31.0	47	87.0	97	31.8
Latin America	6	2.7	0	0.0	0	0.0	6	2.0
Western Europe	12	5.4	1	3.4	1	1.9	14	4.6
Other	6	2.7	2	6.9	0	0.0	8	2.6
Central & Eastern Europe	1	0.5	1	3.4	0	0.0	2	0.7
Total	222	100.0	29	100.0	54	100.0	305	100.0

Figure 9: Trend in country of infection of early infectious syphilis cases, 2012-2016



4.6 HIV co-infection

Thirty-four percent (n=104) of EIS diagnosed in 2016 were co-infected with HIV at the time of their diagnosis. A quarter of these (n=26) were newly diagnosed with HIV in 2016 and 27% were diagnosed in 2014 or 2015.

All HIV positive cases were in men (n=104). Thirty-nine percent of cases were aged 30-39 years and 24% were aged 29 years or younger.

Three percent (n=1 male) of heterosexual cases were co-infected with HIV in 2016 compared with 18% in 2015 and 11% in 2014. The percentage of cases among MSM who were co-infected with HIV in 2016 continued to rise (39% compared to 30% in 2015).

Table 6: Early infectious syphilis cases by mode of transmission and HIV status, 2016

HIV Status	MSM		Heterosexual		Unknown		Total	
	n	%	n	%	n	%	n	%
Positive	87	39.2	1	3.4	16	29.6	104	34.1
Negative	104	46.8	25	86.2	7	13.0	136	44.6
Unknown	31	14.0	3	10.3	31	57.4	65	21.3
Total	222	100	29	100	54	100	305	100.0

4.7 Other STIs diagnosed in 2016

Since 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 between different infections in a patient facilitating the reporting of multiple infections and providing a clearer understanding of the burden of STIs.

Among patients diagnosed with EIS, there were also 126 cases of STIs other than HIV during 2016 (table 7).

Since full patient identifiers were not provided for all cases, the true figure is likely to be much higher. In addition, 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 under-estimate of other infections in cases of EIS in HSE East.

Table 7: Number* of STI, hepatitis B/C and HIV notifications in 2016 among EIS cases diagnosed in 2016

Disease	Total
Chlamydia trachomatis infection	53
Gonorrhoea	55
Hepatitis B (acute and chronic)	2
Hepatitis C	4
Herpes simplex (genital)	6
HIV	36
Lymphogranuloma venereum	6

*patients may be counted more than once in this table

4.8 Service where syphilis first identified

Almost three quarters of cases were identified at a dedicated STI clinic and 18% were identified in general practice. Table 8 describes the service at which cases were first identified by mode of transmission.

Seventy-eight percent of MSM were first identified at a dedicated STI service compared to 38% of heterosexuals, while 28% of heterosexuals were identified in general practice compared to 17% among MSM.

Table 8: Early infectious syphilis cases by mode of transmission and service where syphilis first identified, 2016

Service where syphilis first identified	MSM		Heterosexual		Unknown		Total	
	n	%	n	%	n	%	n	%
Antenatal	0	0.0	2	6.9	0	0.0	2	0.7
Dedicated STI clinic	173	77.9	11	37.9	36	66.7	220	72.1
General Practice	38	17.1	8	27.6	8	14.8	54	17.7
Infectious disease clinic	2	0.9	1	3.4	4	7.4	7	2.3
Other	8	3.6	7	24.1	4	7.4	19	6.2
Unknown	1	0.5	0	0.0	2	3.7	3	1.0
Total	222	100.0	29	100.0	54	100.0	305	100.0

5. Discussion

In 2016, the crude incidence rate of EIS increased to 6.4 per 100,000, the highest rate recorded since enhanced surveillance of syphilis began in 2000 and exceeding the rate during the syphilis outbreak among MSM in Dublin in 2001 (6.1/100,000). While some of this increase is due to the change in case definition, not all of the increase can be attributed to this.

2016 was the third year for which only cases of EIS were notifiable. The aim of reporting EIS was to improve completeness of information and data quality. The number of cases for first half of 2016 is likely to be an under estimate as only cases with both laboratory and clinical data indicating EIS, were included in the analysis. Enhanced surveillance forms were received for just 52% of case notified in quarters 1 and 2 (compared with 60%-73% between 2013 and 2015). All cases notified after 1st July and meeting the updated case definition are counted as EIS. The change to the case definition in July 2016 has resulted in more accurate timely data on the number of EIS cases but less complete information on individual cases.

The increase in EIS in 2016 was concentrated among men (97% of cases) though the rate of increase among men (+14%) was not as great as the increase between 2014 and 2015 (+36%). The increase in 2016 was among men for whom mode of transmission was not recorded. Cases without mode of transmission increased from 6% to 18%. Of these, the proportion by gender is the same as those cases where mode of transmission is reported (96% among males and 4% among females). Since 2012, EIS among MSM has increased by 170% (from 81 in 2012 to 222 in 2016).

Rates of EIS in HSE East remain significantly higher than the national rate with most cases in HSE East occurring among MSM, confirming that this area remains a centre of transmission within Ireland. Most of the other cases in HSE East were among men for whom mode of transmission were missing.

The proportion of EIS cases co-infected with HIV in 2016 increased compared to 2015 and 2014 The proportion of HIV co-infection continues to be higher among MSM compared to heterosexuals. The proportion of cases co-infected with HIV remains a concern as co-infection increases the risk of acquiring and transmitting HIV[1].

The latest data from Public Health England show cases of EIS continued to rise among MSM in 2016, with an increase of 14% compared to 2015. This is consistent with the trend since 2012, with syphilis among MSM increasing 123% over that time period (from 2,147 in 2012 to 4,788 in 2016)[2].

In the United States, the national primary and secondary syphilis rate increased in 2016 to 8.7 cases per 100,000 population, the highest rate reported since 1993. This represents an increase of 18% compared with 2015 and 74% compared with 2012. While the increase in cases since 2000 is primarily attributable to an increase among MSM, an increase among women has been observed since 2013. Alongside this the rate of congenital syphilis has increased each year since 2012 reaching 15.7 cases per 100,000 live births in 2016[3]. While there was a slight increase in 2016, there has not been a similar increasing trend of congenital cases in Ireland.

6. MSM Outbreak Response Group

In December 2015, preliminary analysis of 2015 data pointed to a significant increase in EIS and other STIs among MSM[4]. In response, a national multidisciplinary multi-sectoral group was established in early 2016. The response involves three main strands of work covering epidemiology, interventions, and communications. Throughout 2016 ongoing analysis of trends were undertaken by the epidemiological subgroup and this continues in 2017.

During 2016 a number of interventions were implemented including an additional clinic at the Gay Men's Health Service, employment of two outreach workers, increased distribution of condoms and lubricant as well as health promotion materials. This work continues in 2017. Information on the work of the National MSM Outbreak Response Group is available at http://www.hpsc.ie/a-z/specificpopulations/menwhohavesexwithmenmsm/.

Further refinement of the case definition since July 2016[5] has simplified the surveillance and provides more timely information which is essential to inform the response to the current increase in syphilis amongst MSM.

Appendix 1: Syphilis case definition, January, 2014-June, 2016

Syphilis

(*Treponema pallidum*)

Clinical criteria

A case may be asymptomatic or present with:

A. Primary syphilis

Any person with one or several (usually painless) chancres in the genital, perineal, anal area, or mouth, or pharyngeal mucosa, or elsewhere

B. Secondary syphilis

Any person with at least one of the following:

- Diffuse maculo-papular rash often involving palms and soles
- Generalised lymphadenopathy
- Condyloma lata
- Enanthema
- Alopecia diffusa
- Ocular manifestations of early syphilis
- Neurological manifestations of early syphilis

C. Early latent syphilis (<1 year)

- Positive syphilis serology, no symptoms or signs of early syphilis and a negative reference syphilis screening test within previous 12 months.

Laboratory criteria

At least one of the following laboratory tests:

- Demonstration of Treponema pallidum in appropriate lesions, exudates or tissues by dark-ground microscopic examination
- Demonstration of Treponema pallidum in appropriate lesions, exudates or tissues by PCR
- Detection of Treponema pallidum antibodies (total antibodies e.g. TPHA, TPPA , CIA, or EIA) and additionally detection of Tp-IgM antibodies (e.g. IgM ELISA or immunoblot or 19S-IgM-FTA-abs) or cardiolipin non-Tp IgM (e.g. RPR, VDRL)

Epidemiological criteria:

NA

Case classification:

Possible:

NA

Probable:

NA

Confirmed: Any person meeting the clinical criteria for early syphilis, who also meets the laboratory criteria for case confirmation

Appendix 2: Syphilis case definition, July, 2016

Syphilis

(*Treponema pallidum*)

Clinical criteria

A case may be asymptomatic or present with:

A. Primary syphilis

Any person with one or several (usually painless) chancres in the genital, perineal, anal area, or mouth, or pharyngeal mucosa, or elsewhere

B. Secondary syphilis

Any person with at least one of the following:

- Diffuse maculo-papular rash often involving palms and soles
- Generalised lymphadenopathy
- Condyloma lata
- Enanthema
- Alopecia diffusa
- Ocular manifestations of early syphilis
- Neurological manifestations of early syphilis

C. Early latent syphilis (<1 year)

Positive syphilis serology, no symptoms or signs of early syphilis and a negative reference syphilis screening test within previous 12 months.

Laboratory criteria

For new cases, at least one of the following:

- Demonstration of treponemes in lesions, exudates or tissues from clinically appropriate sites by dark-ground microscopy
- Demonstration of treponemes in exudates or tissues from clinically appropriate sites by PCR
- Detection of Treponema pallidum antibodies (total antibodies) using EIA and TPHA/ TPPA and additionally detection of Tp-IgM antibodies (e.g. IgM ELISA or immunoblot or 19S-IgM-FTA-abs)
- Detection of Treponema pallidum antibodies (total antibodies) using EIA and TPHA/ TPPA and additionally detection of cardiolipin non-Tp IgM with RPR titre of >=1:16

For re-infections, laboratories should use their own internal criteria.

Epidemiological criteria:

NA

Case classification:

Possible:

NA

Probable:

NA

Confirmed:

Any person meeting the clinical criteria for early syphilis, who also meets the laboratory criteria for case confirmation

Acute Infectious Syphilis Enhanced Form v11.0 (Jan. 2016)

CONFIDENTIAL

CIDR Event ID:

Section A: Patient Identifiers

Patient Firstname | Patient surname

Patient Clinic ID | Clinic/Practice Name/Service

Lab specimen ID | Laboratory name:

Sex F ☐ M ☐ U ☐ | Date of birth

Section B: Stage of infection - please choose one

Primary Syphilis ☐

Secondary Syphilis ☐

Early latent syphilis (<1 year) ☐

If this is a case of early syphilis, please complete sections C, D and E and return to your local Department of Public Health. See definitions on page 2.

Late Syphilis ☐

If this is a case of late syphilis, please complete section E only and return to your local Department of Public Health.

Section C: Patient Information (for completion for early syphilis cases)

County of residence (plus postcode) | HSE Area of residence

Country of birth:

Ethnicity: White Irish ☐ | White Irish Traveller ☐ | White other ☐ | Black African ☐ | Black other ☐ | Chinese ☐ | Asian other ☐ | Unknown ☐ | Other / Mixed ethnicity ☐

If other, please specify

Section D: Clinical Details (for completion for early syphilis cases)

Country of infection: | Probable place/city of acquisition:

Mode of Transmission Heterosexual ☐ MSM (homo/bisexual male) ☐ Other ☐ Unknown ☐

Date of diagnosis

HIV status Positive ☐ Negative ☐ Unknown ☐ | If HIV positive, year of diagnosis:

	Yes	No	Unk
Is the patient symptomatic?	☐	☐	☐
Is the patient pregnant?	☐	☐	☐
Was the patient identified via contact tracing?	☐	☐	☐
Is the patient a commercial sex worker (CSW)	☐	☐	☐
Did the patient have contact with a CSW	☐	☐	☐

If yes, date of onset:

If yes, please complete section F overleaf

Section E: Form completed by

Completed by: | Date:

Position: Doctor ☐ Nurse ☐ Public health ☐ Health advisor ☐

Comments

Acute Infectious Syphilis Enhanced Form v11.0 (Jan. 2016)
CONFIDENTIAL

Section F: For cases diagnosed in pregnancy

Patient diagnosed as a result of antenatal screening? Yes ☐ No ☐ Unknown ☐

If yes, gestation at screening ___ /40

History of treated syphilis prior to pregnancy? Yes ☐ No ☐ Unknown ☐

For this pregnancy, date syphilis treatment completed

Pregnancy outcome Live birth ☐ Stillbirth ☐ Miscarriage ☐ Termination ☐

Gestation at birth ___ /40

Definitions

Primary Syphilis:
Any person with one or several (usually painless) chancres in the genital, perineal, anal area, or mouth, or pharyngeal mucosa, or elsewhere.

Secondary Syphilis:
Any person with at least one of the following:
- Diffuse maculo-papular rash often involving palms and soles
- Generalised lymphadenopathy
- Condyloma lata
- Enanthema
- Alopecia diffusa
- Ocular manifestations of early syphilis
- Neurological manifestations of early syphilis

Early latent syphilis (<1 year):
Positive syphilis serology, no symptoms or signs of early syphilis and a negative reference syphilis screening test within previous 12 months.

Please return this completed form to your local Department of Public Health.
See www.hpsc.ie/hpsc/NotifiableDiseases/NotifyingInfectiousDiseases/ for names and contact details

A separate form is available from www.hpsc.ie for congenital cases

Appendix 3: Syphilis enhanced surveillance form, January – June, 2016

Acute Infectious Syphilis Enhanced Form v12.0 (July 2016)

CONFIDENTIAL

CIDR Event ID:

Section A: Patient Identifiers

Patient Firstname | Patient surname

Patient Clinic ID | Clinic/Practice Name/Service

Lab specimen ID | Laboratory name:

Sex F ☐ M ☐ U ☐ | Date of birth

Section B: Stage of infection - please choose one (see definitions on page 2)

☐ Latent of undetermined duration OR Late Syphilis

For cases of latent of undetermined duration or late syphilis, please sign & return to your local Dept. of Public Health.

→ Name Date:

☐ Early Syphilis - Primary, Secondary or Early latent (<1 year)

Please complete sections C-F and return to your local Department of Public Health.

Section C: Patient Information (for completion for early syphilis cases)

County of residence (plus postcode) | HSE Area of residence

Country of birth:

Section D: Clinical Details (for completion for early syphilis cases)

Country of infection: | Probable place of acquisition (e.g. city, sex on premises venue):

Mode of Transmission Heterosexual ☐ MSM (homo/bisexual male) ☐ Other ☐ Unknown ☐

Date of diagnosis

HIV status Positive ☐ Negative ☐ Unknown ☐ If HIV positive, year of diagnosis

	Yes	No	Unk
Does the patient have symptoms of syphilis (see overleaf)?	☐	☐	☐
Is the patient pregnant?	☐	☐	☐
Was the patient identified via contact tracing?	☐	☐	☐
Is the patient a commercial sex worker (CSW)	☐	☐	☐
Did the patient have contact with a CSW	☐	☐	☐

If yes, please complete section F overleaf

Section E: Form completed by (for completion for early syphilis cases)

Completed by: | Date:

Position: Doctor ☐ Nurse ☐ Public health ☐ Health advisor ☐

Comments

Section F: For cases diagnosed in pregnancy (for completion for early syphilis cases)

Patient diagnosed as a result of antenatal screening? Yes ☐ No ☐ Unknown ☐

If yes, gestation at screening ___ /40

History of treated syphilis prior to pregnancy? Yes ☐ No ☐ Unknown ☐

For this pregnancy, date syphilis treatment completed

Pregnancy outcome Live birth ☐ Stillbirth ☐ Miscarriage ☐ Termination ☐

Gestation at birth ___ /40

Definitions

Primary Syphilis:
Any person with one or several (usually painless) chancres in the genital, perineal, anal area, or mouth, or pharyngeal mucosa, or elsewhere.

Secondary Syphilis:
Any person with at least one of the following:
- Diffuse maculo-papular rash often involving palms and soles
- Generalised lymphadenopathy
- Condyloma lata
- Enanthema
- Alopecia diffusa
- Ocular manifestations of early syphilis
- Neurological manifestations of early syphilis

Early latent syphilis (<1 year):
Positive syphilis serology, no symptoms or signs of early syphilis and a negative reference syphilis screening test within previous 12 months.

Please return this completed form to your local Department of Public Health.
See www.hpsc.ie/hpsc/NotifiableDiseases/NotifyingInfectiousDiseases/ for names and contact details

A separate form is available from www.hpsc.ie for congenital cases

Appendix 4: Syphilis enhanced surveillance form, July, 2016

References

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3. Centres for Disease Control. Syphilis National Profile – Overview. Available at https://www.cdc.gov/std/stats16/syphilis.htm. Accessed on 26th October, 2017.
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5. Cullen G and Igoe D. Changes to syphilis case definition *Epi Insight* 2016:17(7). Available at http://ndsc.newsweaver.ie/epiinsight/x6pcgkfavoy10gkzp9yxn5?a=1&p=50495690&t=17517774

Technical notes

1. Data are analysed by date of notification in CIDR.
2. 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 20th September, 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.
3. Percentages are rounded up in the text and provided to one decimal place in the tables.
4. The counties covered by each HSE area are as follows HSE East (E): Dublin, Kildare & Wicklow; HSE Midlands (M): Laois, Longford, Offaly & Westmeath; HSE Midwest (MW): Clare, Limerick & N. Tipperary; HSE Northeast (NE): Cavan, Louth, Meath & Monaghan; HSE Northwest (NW): Donegal, Leitrim & Sligo; HSE South (S): Kerry & Cork; HSE Southeast (SE): Carlow, Kilkenny, S. Tipperary, Waterford & Wexford; HSE West (W): Galway, Mayo & Roscommon.
5. 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 (for calculations for 2015-2016) and Census 2011 (for calculations for 2014) 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.
6. Rate per 1,000 births was calculated using total number of births in 2016 reported in vital statistics by Central Statistics Office. Data are provisional and were downloaded on 21st September, 2017.