



Annual Epidemiological Report

September 2019

Anogenital warts in Ireland, 2018

Key Facts

- There were 1,031 cases of anogenital warts notified in 2018 (21.7 per 100,000 population), down from 1,281 cases in 2017. Anogenital warts data were underreported in the second half of 2018; therefore the trends in the number and rate of cases should be interpreted with caution
- Fifty-seven percent of cases were male, 29% were female, and sex was unknown for 14%
- The highest age and sex-specific notification rate was among 25-29 year-old males (119.8/100,000). The highest age-specific notification rate among females was also among those aged 25-29 years (69.0/100,000)

Suggested citation: HSE Health Protection Surveillance Centre. Anogenital warts in Ireland, 2018. Dublin: HSE HPSC; 2019

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Introduction

Anogenital warts (AGW) are a sexually transmitted infection (STI) caused by certain types of human papillomavirus (HPV). There are over 100 different HPV types; some cause common skin warts and are transmitted through direct physical contact, and some cause anogenital warts and are transmitted through sexual contact of the anogenital or pharyngeal areas. See Appendix 1 for further information on HPV and the national HPV vaccination programme.

Cases of AGW are notifiable under the Infectious Disease Regulations in Ireland [1]. Notifications from STI clinics and primary care are collated by Departments of Public Health and notified in aggregate format by quarter to the Health Protection Surveillance Centre (HPSC). Data on sex and age group have been requested since 2013. Data on HPV type are not requested.

Data completeness

Data could not be provided for the second half of 2018 for all STI services in HSE Midwest; trends in numbers and rates of AGW should be interpreted with caution due to this underreporting.

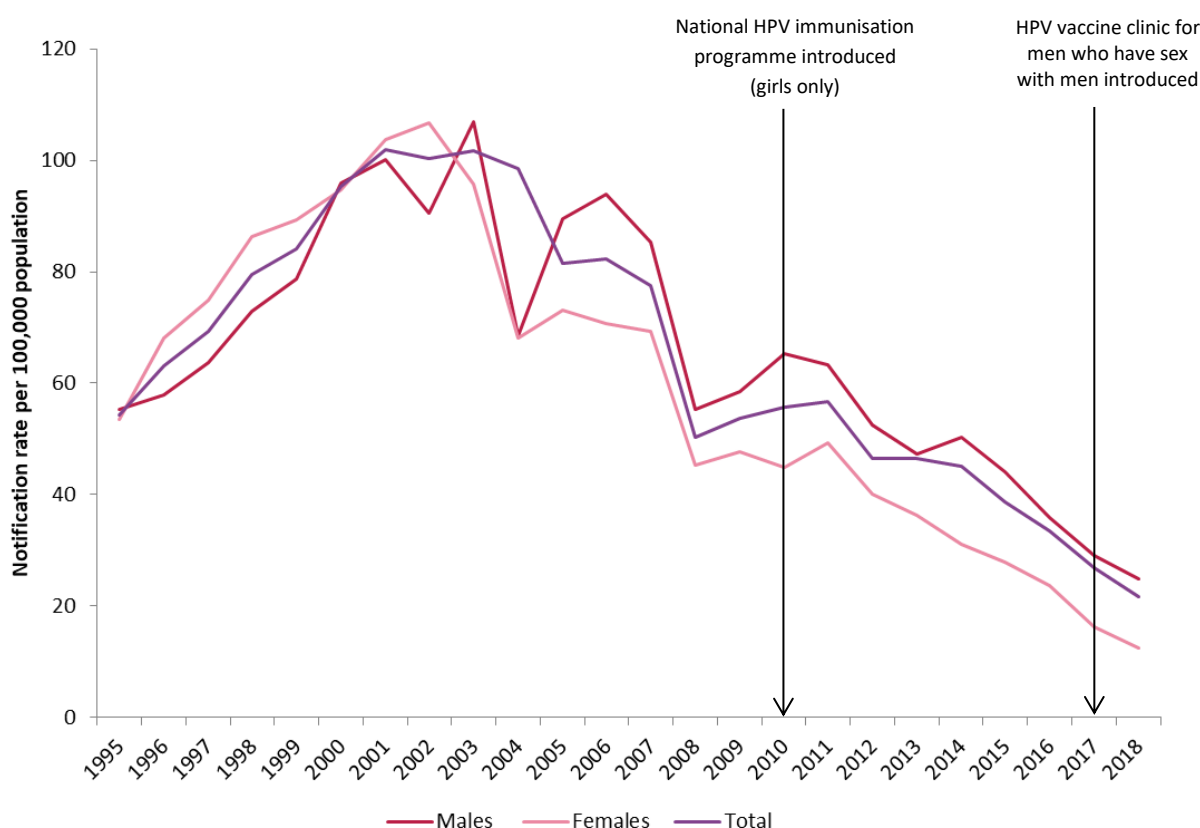
AGW data for three STI clinics in HSE East and for all STI clinics in HSE West are outstanding for 2018, it is unlikely that these data will be reported as the pattern of missing data for these areas is unchanged since 2013 (see Appendix 1).

Epidemiology

Cases and notification rates

There were 1,031 cases of AGW notified in Ireland in 2018, a notification rate of 21.7 per 100,000 population (Figure 1). This was a 20% decrease from the rate in 2017 (26.9/100,000), a 61% decrease from the rate in 2010 (55.7/100,000), and a 79% decrease since the rate peaked in 2001 (101.9/100,000). The rate continued to fall among both males (to 24.9/100,000) and females (to 12.5/100,000) in 2018.

Trends in the number and rate of AGW notifications should be interpreted with caution due to underreporting of cases in HSE Midwest for the second half of 2018, and due to missing data from HSE East and HSE West since 2013. Excluding data from HSE Midwest for both years, there was a 12% decrease between 2017 and 2018.

Figure 1 Notification rate of anogenital warts by sex, 1995-2018, Ireland*

*Data completeness varied prior to 2013, with no information available on this variability prior to 2013. Data completeness remained fairly steady from 2013 to 2017; however it decreased in the second half of 2018. See Appendix 1 for further details.

HSE area

There was a 31% increase in cases notified by HSE East between 2017 and 2018. The majority (61%) of this increase was among males aged 20-29 years of age.

Rates and numbers by HSE area should be interpreted with caution; HSE area is based on the clinic location if the patient's address is not available. Consequently, rates and numbers by HSE area may reflect the location of STI services and differences in reporting practices by clinics and clinicians from one area to another (a list of STI clinics is available at <https://www.sexualwellbeing.ie/sexual-health/hse-sti-services-in-ireland.html>).

Age-standardised notification rate (ASNR) of AGW could be calculated for five HSE areas and could not be calculated for three; HSE Northeast, as age group could not be provided; HSE Midwest, as data on AGW could not be provided for the second half of 2018; and HSE West, due to low numbers reported (n=1). ASNR of AGW for HSE South could be calculated for the first time in 2018 due to reporting, for the first time, of data on age group.

ASNR by HSE area, 2016-2018, is shown in Table 1. By HSE area, there were no significant increases or decreases in ASNR between 2017 and 2018.

Table 1 Age-standardised notification rate of anogenital warts by HSE area, 2016-2018, Ireland

HSE area*	2016	2017	2018
Age-standardised notification rate per 100,000 population			
East†	20.6	9.3	12.2
Midlands	28.8	18.1	10.2
Midwest	98.0	60.7	‡
Northeast	§	§	§
Northwest	76.5	58.7	43.0
South	¶	¶	42.9
Southeast	71.7	34.2	31.6
West	**	**	**

* See Technical Note 4 and 5 for a list of the counties in each HSE area, and details on ASNR calculation methodology

† Does not include data from three STI clinics in HSE East

‡ Data not reported for the second half of 2018 for HSE Midwest

§ Data on age group not provided for HSE Northeast

¶ Data on age group provided by HSE South for the first time in 2018

** Does not include data from STI clinics in HSE West; the number of cases notified by GPs is too low to calculate ASNR

Age and sex

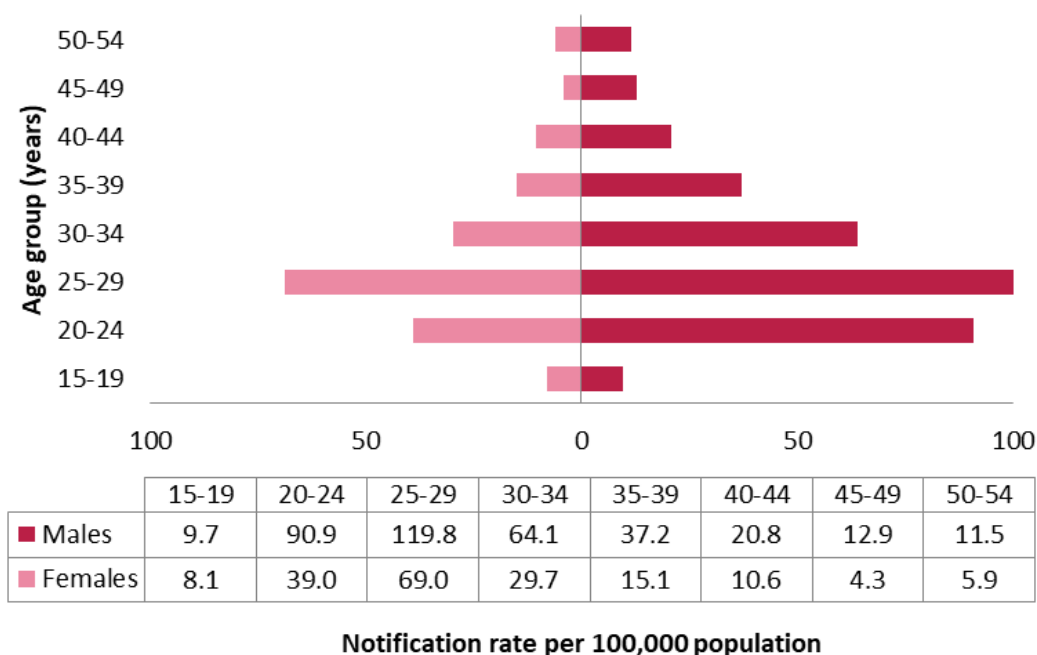
Completeness of data on age group increased from 58% in 2017 to 86% in 2018; this increase was mainly due to reporting of data on age group by HSE South for the first time. Completeness of data on sex increased slightly, from 84% in 2017 to 86% in 2018. In 2018, the proportion of cases that was male was 57%, the proportion that was female was 29%, and sex was unknown for 14%. By age group, the proportion of cases was highest in those aged 25 to 29 years, for both males and females (Table 2).

Table 2: Notifications of anogenital warts by age group and sex, 2018, Ireland

Age group (years)	Male		Female		Unknown sex		Total	
	N	%	N	%	N	%	N	%
0-14	0	0.0	0	0.0	0	0.0	0	0.0
15-19	15	2.6	12	4.0	0	0.0	27	2.6
20-24	125	21.3	53	17.5	0	0.0	178	17.3
25-29	174	29.6	105	34.8	0	0.0	279	27.1
30-34	111	18.9	56	18.5	0	0.0	167	16.2
35-39	71	12.1	30	9.9	0	0.0	101	9.8
40-44	37	6.3	19	6.3	0	0.0	56	5.4
45-49	21	3.6	7	2.3	0	0.0	28	2.7
50-54	17	2.9	9	3.0	0	0.0	26	2.5
55+	15	2.6	11	3.6	0	0.0	26	2.5
Unknown age group	1	0.2	0	0.0	142	100.0	143	13.9
Total	587	100.0	302	100.0	142	100.0	1031	100.0

Age- and sex-specific notification rates of AGW in 2018 are shown in Figure 2. Rates were higher in males than in females for all age groups. The highest age and sex-specific notification rate was among 25-29 year-old males (119.8/100,000). The highest age-specific notification rate among females was also among those aged 25-29 years (69.0/100,000).

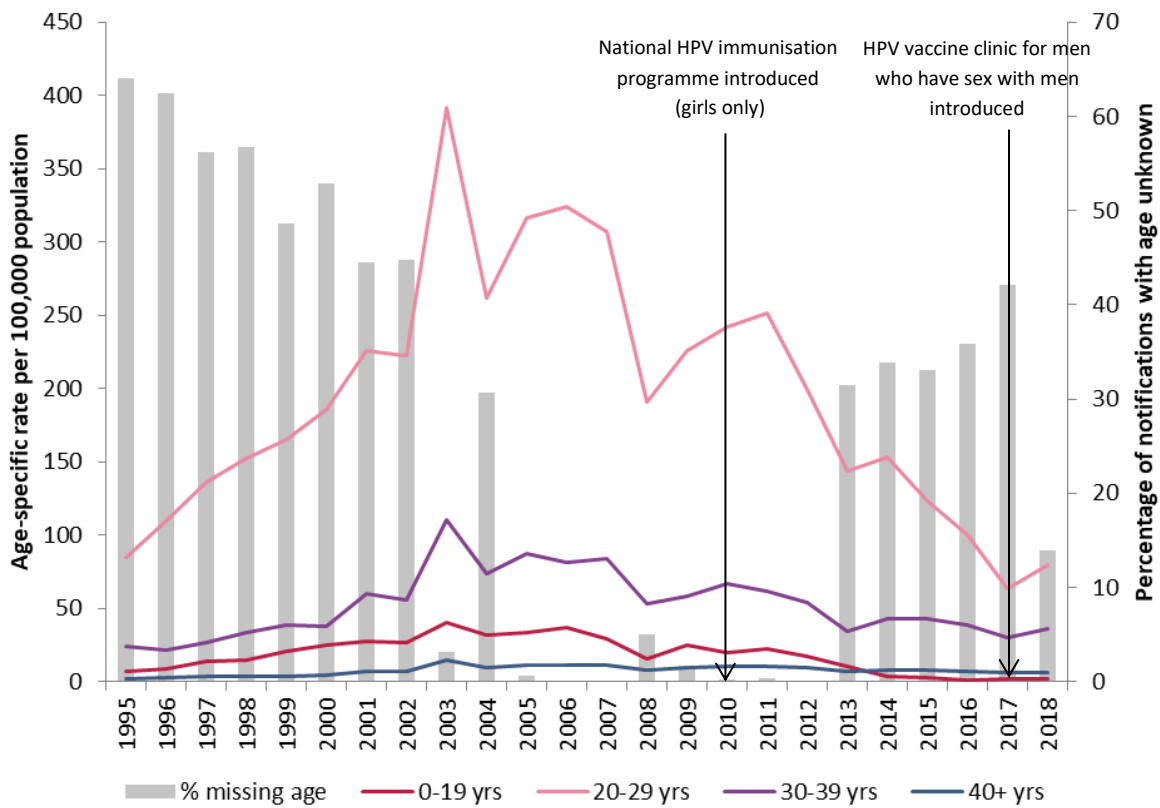
Figure 2 Age- and sex-specific notification rates of anogenital warts, 2018, Ireland[†]



[†]Excludes 142 cases of unknown age group and sex, and one male case of unknown age group. Also excludes cases for individuals over the age of 55 (n=26).

Age-specific notification rates by year (both males and females) are shown in Figure 3. The increase in the rate across all age groups can be explained by the higher proportion of cases notified with data on age group in 2018.

Figure 3 Age-specific notification rates of anogenital warts, 1995-2018, Ireland[§]



[§]2018 includes, for the first time, data on age group for cases reported by HSE South, but excludes all cases of AGW in HSE Midwest for the second half of the year.

Discussion

The downward trend in notifications of AGW continued in 2018, however interpretation of this trend is difficult for reasons including; that there is no information on data completeness prior to 2013; that some clinics consistently have not reported data since 2013; and that cases were not notified by one HSE area for the second half of 2018.

The proportion of cases that were male increased from 53% in 2017 to 57% in 2018, and the commonest age group for both sexes was 25-29 years. Trends by sex and age group are difficult to interpret however due to the varied proportion of cases notified as unknown age (range: 14%-42%) and unknown sex (range: 7%-16%), since 2013.

There was considerable improvement in completeness of data on age group in 2018, though some clinics continue to be unable to provide data in the requested format (Appendix 2). Further improvements in data completeness, namely all sites reporting, and sex and age data being available (age group in the requested format) are necessary in order to interpret trends and for AGW notification data to be useful for monitoring the effect of HPV vaccination programmes on AGW notifications.

Condom use reduces but does not eliminate the risk of sexual transmission of HPV and anogenital warts. HPV vaccines are highly effective at preventing HPV infection and anogenital warts in susceptible males and females, with the HPV types covered by the vaccine [2]. The recent decline in genital warts among young people in England reflects the high coverage of the HPV vaccination programme [3]. Coverage of the HPV vaccination programme in Ireland is suboptimal; national uptake of at least HPV stage 2 vaccine (completion of a two dose course) was 64.1% among girls in the academic year 2017/2018 in Ireland; this is an improvement on the previous year but remains below the target of $\geq 85\%$ [4].

Technical notes

1. Data for this report were provided in aggregate format by Departments of Public Health.
2. Aggregate data were collated on 28 June 2019, and were correct at the time of publication. Data may be updated in future reports.
3. Percentages are rounded to the nearest whole number 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 (ASNR) were calculated using the direct method in which the national population was taken as the standard population. Population data were taken from Census 2016. Data were aggregated into the following age groups for the analysis: 0-14 years, 15-19 years, 20-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years and ≥ 65 years.

Further information

Previous years' reports are available at

- <https://www.hpsc.ie/a-z/sexuallytransmittedinfections/anogenitalwarts/surveillancereports/>
- <https://www.hpsc.ie/abouthpsc/annualreports/>

Keep up to date with HIV and STIs in Ireland at <https://www.hpsc.ie/a-z/sexuallytransmittedinfections/publications/stireports/stiweeklyreports/>.

Get information on the HPV vaccine and vaccine uptake at <https://www.hpsc.ie/a-z/vaccinepreventable/vaccination/immunisationuptakestatistics/hpvimmunisationuptakestatistics/>.

The template for reporting AGW is available at <https://www.hpsc.ie/a-z/sexuallytransmittedinfections/ano-genitalwarts/surveillanceforms/>.

Acknowledgements

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References

1. Government of Ireland Infectious Diseases (Amendment) Regulations 2018 (S.I. No. 567 of 2018)
2. [https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-\(hpv\)-and-cervical-cancer](https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-(hpv)-and-cervical-cancer). Accessed 24/07/2019
3. Sexually transmitted infections and screening for chlamydia in England, 2018. Public Health England Health Protection Report Volume 13 Number 19. Advanced Access Report, June 2019
4. HSE Health Protection Surveillance Centre. HPV, MenC booster and Tdap vaccine uptake in Ireland, 2017/2018. Dublin: HSE HPSC; 2019

Appendices

Appendix 1 Further information on HPV and the national HPV vaccination programme

Over 90% of anogenital warts are caused by nononcogenic (low risk) HPV types 6 or 11. There are 13 high risk types associated with cervical, vaginal, vulvar, anal, penile and oropharyngeal cancers, with two high risk types (HPV 16 and 18) causing 70% of cervical cancers and pre-cancerous cervical lesions [1]. An estimated 80% of sexually active women become infected with at least one type of HPV by the age of 50 years [2].

In Ireland, a national HPV vaccination programme was first introduced in September 2010, which aimed to protect young women from HPV infection and the risk of developing cervical cancer later in life. The quadrivalent HPV vaccine (HPV4), which protects against types 6, 11, 16 and 18, was offered to girls in first and second year of second level schools, and to their age equivalent counterparts who had not previously been targeted. In September 2011 a catch-up programme was introduced, with all girls in sixth year or equivalent from 2011 to 2014 offered HPV4 vaccine [2]. Efficacy of HPV4 vaccine against HPV 6, 11, 16, or 18–related anogenital warts, is 99%, and partial cross-protection has been demonstrated against infection with several non-vaccine high risk types [2]. From September 2019, on the recommendation of the National Immunisation Advisory Committee, the programme will be extended to include boys. Nonavalent HPV vaccine (HPV9) will be offered to all male and female students in first year of second level schools to protect them against AGW and cancers caused by HPV virus [3].

The HPV vaccine is also available to HIV positive men and women under the age of 26 attending public HIV clinics and to men who have sex with men (MSM) under the age of 26. In April 2017, a HPV vaccine clinic was introduced by the Gay Men's Health Service (GMHS), to deliver targeted vaccination services to MSM aged 26 and younger [4].

Appendix 1 references

1. [https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-\(hpv\)-and-cervical-cancer](https://www.who.int/news-room/fact-sheets/detail/human-papillomavirus-(hpv)-and-cervical-cancer). Accessed 24/07/2019
2. HSE National Immunisation Committee, Immunisation Guidelines for Ireland. Chapter 10 - Human Papillomavirus (Updated February 2019). 2019
3. <https://www.hse.ie/eng/health/immunisation/pubinfo/schoolprog/hpv/about/>. Accessed 24/07/2019
4. HSE Gay Men's Health Service, GMHS25 The Annual Report, 2017. 2018

Appendix 2 Returns of anogenital warts notifications by HSE area, 2013-2018

HSE area	Site*	2013	2014	2015	2016	2017	2018
East	Public Health	Yes	Yes	Yes	Yes	Yes	Yes
	GUIDE clinic	Yes	Yes	Yes	Yes	Yes	Yes
	Mater clinic	-	-	-	-	-	-
	Gay Men's Health Service	-	-	-	-	-	-
	Beaumont Hospital STI clinic	-	-	-	-	-	-
Midlands	Public Health	Yes	Yes	Yes	Yes	Yes	Yes
	Portlaoise STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
	Mullingar STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
Midwest	Public Health	Yes	Yes	Yes	Yes	Yes	‡
	Limerick STI clinic	Yes	Yes	Yes	Yes	Yes	‡
	Nenagh STI clinic	Yes	Yes	Yes	Yes	Yes	‡
	Ennis STI clinic	Yes	Yes	Yes	Yes	Yes	‡
Northeast	Public Health	Yes	Yes	Yes	Yes	Yes	Yes
	STI clinic	Yes [†]	Yes	Yes	Yes	Yes	Yes
Northwest	Public Health [§]	Yes	Yes	Yes	Yes	Yes	Yes
	Sligo STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
	Letterkenny STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
Southeast	Public Health	Yes	Yes	Yes	Yes	Yes	Yes
	Carlow STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
	Clonmel STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
	Waterford STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
South	Public Health	Yes	Yes	Yes	Yes	Yes	Yes
	STI clinic	Yes	Yes	Yes	Yes	Yes	Yes
West	Public Health	Yes	Yes	Yes	Yes	Yes	Yes
	STI clinic	-	-	-	-	-	-

* Public Health includes GPs, other primary care, student health and others.

Yes, data returned; -, data not returned.

‡ Data returned for quarter 1 and quarter 2, data not returned for quarter 3 and quarter 4.

† Quarter 4 data did not include December.

§ Data does not include Donegal patients who may have attended Altnagelvin, Derry.

Appendix 3 Returns of anogenital warts notifications in the requested format, 2018

HSE area	Site*	Data returned in the requested format
East	Public Health	Yes
	GUIDE clinic	Yes
	Mater clinic	-
	Gay Men's Health Service	-
	Beaumont Hospital STI clinic	-
Midlands	Public Health	Yes
	Portlaoise STI clinic	Yes
	Mullingar STI clinic	Yes
Midwest	Public Health	Yes [‡]
	Limerick STI clinic	Yes [‡]
	Nenagh STI clinic	Yes [‡]
	Ennis STI clinic	Yes [‡]
Northeast	Public Health	Yes
	STI clinic	No [§]
Northwest	Public Health	Yes
	Sligo STI clinic	Yes
	Letterkenny STI clinic	Yes
Southeast	Public Health	Yes
	Carlow STI clinic	Yes
	Clonmel STI clinic	Yes
	Waterford STI clinic	Yes
South	Public Health	Yes
	STI clinic	Yes
West	Public Health	Yes
	STI clinic	-

*Public Health includes GPs, other primary care, student health and others.

Yes, data returned in required format; No, data not returned in required format; -, data not returned.

[‡]Data returned for quarter 1 and quarter 2 only.

[§]Data provided as the total number of cases; breakdown by age group and sex could not be provided.