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SURVEILLANCE REPORT

Sexually transmitted infections in Europe

1990–2010

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Sexually transmitted infections in Europe

1990–2010

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List of abbreviations

ECDC	European Centre for Disease Prevention and Control
EEA	European Economic Area
ESSTI	European Surveillance of Sexually Transmitted Infections
EU	European Union
IDU	Injecting drug user
LGV	Lymphogranuloma venereum
MSM	Men who have sex with men
STI	Sexually transmitted infection(s)
TESSy	The European Surveillance System

Summary

This ECDC surveillance report on sexually transmitted infections (STI) in Europe covers the years 1990 to 2010 and aims to describe the basic trends and epidemiological features of the five STI under EU surveillance: syphilis, congenital syphilis, gonorrhoea, chlamydia and lymphogranuloma venereum (LGV). EU Member States are expected to submit data related to all variables in the dataset, if available and relevant, as per Decision 2119/98/EC of the European Commission.

Chlamydia is the most frequently reported STI in Europe, accounting for the majority of all STI reports. In 2010, 345 421 cases of chlamydia were reported in 24 EU/EEA Member States, an overall rate of 186 per 100 000 population. Chlamydia was reported more frequently in women than in men, with an overall rate of 203 per 100 000 in women and 145 per 100 000 in men. The true incidence of chlamydia is likely to be considerably higher than reported here. Three quarters (76%) of all cases were reported in young people between 15 and 24 years of age. The age distribution of cases is significantly affected by testing and screening practices in the United Kingdom which reports the majority of cases and targets young people in its screening programme: young women are diagnosed more often than young men. Overall, the number of chlamydia cases have increased continuously over the past years.

In 2010, 32 028 gonorrhoea cases were reported from 28 EU/EEA Member States (no data were available from Germany and Liechtenstein), an overall rate of 10.4 per 100 000 population. Gonorrhoea was reported three times more often in men than in women, with an overall rate of 17.1 per 100 000 in men and 6.4 per 100 000 in women. Young people between 15 and 24 years of age accounted for 45% of all gonorrhoea cases. A quarter of all gonorrhoea cases in 2010 (26%) were reported in MSM. Compared with 2009, marked increases were observed in Ireland and Sweden. Iceland and Bulgaria reported large decreases in rates, whereas five other countries reported small decreases.

In 2010, 17 884 syphilis cases were reported from 29 EU/EEA Member States (no data available from Liechtenstein), resulting in an overall rate of 4.4 per 100 000 population. Syphilis was reported more than three times more often in men than in women, with an overall rate in men of 6.6 per 100 000 and 1.8 in women. One sixth of all syphilis cases in 2010 (17%) were reported in young people between 15 and 24 years of age; the majority of the cases were reported in people older than 25 years. More than half (55%) of the syphilis cases in countries with information on transmission category were reported in MSM. Compared with 2009, the rate of reported syphilis dropped overall in 2010; however, Denmark, Malta, Norway and Cyprus reported increases in syphilis rates of over 30%. Romania, Latvia and the Czech Republic reported lower rates compared with 2009.

In 2010, 59 cases of congenital syphilis cases were reported from 24 countries. Seven countries reported zero cases. The majority of the cases were reported from Poland, Portugal, Italy and Romania. Between 1990 and 2010, 1060 cases of congenital syphilis were reported from 24 countries, with varying degrees of completeness. The rate varied between 0.3 and 4.9 per 100 000 live births in the EU/EEA.

In 2010, 503 cases of LGV were reported from 16 countries. From 2000 to 2010, 1942 cases of LGV were reported from six countries: the United Kingdom, the Netherlands, Denmark, Belgium, Ireland and the Czech Republic. Of the cases with known mode of transmission, 98% were reported as MSM, and 82% of the cases with known HIV status were HIV positive (75% in 2010). Compared with 2009, the number of cases of LGV has almost doubled, mainly due to a large increase in cases reported by the United Kingdom.

There are marked differences in trends across the EU Member States. The overall trend in gonorrhoea and syphilis across the EU/EEA over the past decade appeared to be slightly decreasing and showed two patterns: 1) a decreasing trend in countries that previously reported very high rates, and, for the time being, a continuous decline or stabilisation; 2) continuous increases were observed in other countries over time. Chlamydia rates showed a continuously increasing trend, reflecting the increase in testing and screening practices in a number of countries. These trends must be interpreted with caution due to the heterogeneity in reporting and healthcare systems. A further limitation to the interpretation of the epidemiological situation of STI in EU/EEA is that many cases are either not diagnosed or not reported. In addition, cases from a number of countries cannot be included in trend analyses as the national STI surveillance systems are not comprehensive.

Enhanced surveillance of STI in Europe is essential to provide the information necessary to monitor the distribution of disease and evaluate the public health response to control the transmission of infections. In order to achieve this goal, countries in Europe need to ensure that surveillance data are of high quality and STI surveillance data are complemented by comprehensive case reports.

1 Introduction

Since 2009, the European Centre for Disease Prevention and Control (ECDC) has been coordinating the enhanced surveillance of sexually transmitted infections (STI) in Europe. The Centre strives to attain a high quality of standardised STI surveillance data from the 30 countries of the European Union (EU) and the European Economic Area (EEA) (hereafter referred to as EU/EEA). Until 2009, STI surveillance in the EU/EEA was coordinated by the European Surveillance of STI (ESSTI) project, funded by the European Commission (Directorate General for Health and Consumers), and carried out at the Health Protection Agency, United Kingdom. Upon the end of the ESSTI project, the evaluation and assessment team concluded that ESSTI's surveillance activities should be transferred to ECDC, while ESSTI's laboratory and training components should be outsourced. The main recommendations regarding future STI surveillance were as follows:

- All activities of the ESSTI network should be continued, including surveillance activities, laboratory and training activities, alert system, and dissemination of information through the internet.
- Surveillance (epidemiological and microbiological) activities should be extended to all EU/EFTA Member States that were not yet participating in the network.
- Member States should be encouraged to comply with the agreed set of variables to fulfil future surveillance objectives. If countries were unable to provide all data, this should be discussed with the contact points for STI surveillance.

A long-term surveillance strategy (2008–2013) for the European Union has been published by ECDC[1], outlining the future framework for strengthening surveillance at the EU level and in the EU Member States. General objectives for the surveillance of communicable diseases in the EU have been developed, together with a roadmap for the implementation of this strategy. The surveillance activities of ECDC should add value at all levels, through initiatives such as the application of EU case definitions, the integration of all dedicated surveillance networks into ECDC, and by better harmonising the reporting methods, systems and practices in use for surveillance. ECDC will regularly review the disease-specific surveillance objectives with Member States and strive to harmonise them as far as possible, while still acknowledging the specific characteristics of each disease. The regular review of the surveillance objectives aims to keep ECDC's surveillance activities as accurate and relevant as possible, while taking into account the public health needs associated with the geographical and political diversity of the EU Member States.

The European Surveillance System (TESSy) is designed to offer Member States a single entry point for data submission and retrieval for communicable diseases under EU surveillance, namely syphilis, congenital syphilis, gonorrhoea, chlamydia and lymphogranuloma venereum (LGV). Member States are expected to submit data related to all variables in the dataset, if available and relevant, as stipulated by Decision 2119/98/EC of the European Commission.

The heterogeneity in surveillance systems across Member States calls for a move towards making surveillance data comparable so that STI data can be shared across Europe in a meaningful way. Data collection in TESSy will help facilitate this objective.

This ECDC surveillance report on STI covers the years 1990 to 2010 and aims to describe basic trends and epidemiological features of the five STI under surveillance. The data are presented in five disease-specific chapters, focussing on key risk groups and the changes in trends over time.

1 Available from: http://ecdc.europa.eu/en/aboutus/Key%20Documents/08-13_KD_Surveillance_of_CD.pdf

2 Data collection and presentation

2 Data collection and presentation

2.1 Data reporting in TESSy for STI surveillance

The competent bodies for surveillance in EU/EEA countries have nominated national contact points for STI surveillance to work with ECDC on the reporting of STI data to TESSy. National data are uploaded directly to the database by the reporting country. TESSy includes a set of validation rules to automatically verify reported data. Data verification during the uploading process improves the quality of data and allows each country to test their datasets before submission.

STI data should be reported to TESSy annually. Alternatively, Member States can upload data more frequently if validated data are available. The deadline for uploading 2010 data was 30 June 2011.

An overview of national surveillance systems for STI in EU/EEA Member States is included in Annex 1. It is intended to aid the interpretation of national data.

Two types of data are collected for all five STI: case-based and aggregated data. TESSy aims to include case-based reports for each disease, but aggregated data are accepted until all Member States are in a position to comply with the EU standard of case-based reporting. The STI dataset consists of the the same variable dataset used for all diseases, but is combined with an STI-specific dataset. These STI-specific datasets are then fine-tuned according to the disease; chlamydia cases, for example, use a smaller number of variables. A complete list of variables used for STI data collection can be found in Annex 2.

2.2 Implementation of EU case definitions

As of 1 January 2009, the EU case definitions for syphilis, congenital syphilis, gonorrhoea and chlamydia should be used when reporting at the European level. However, ECDC acknowledges that the STI case definitions currently used in a number of countries differ from the new EU case definitions. If non-EU case definitions are used, this should be indicated when submitting data. Data that do not conform with the EU case definitions are still accepted until countries are able to submit data that conform to EU case definitions.

The full set of published case definitions is available online from: http://ec.europa.eu/health/ph_threats/com/docs/1589_2008_en.pdf.

The STI surveillance network agreed that the use of case definitions implies that only confirmed cases of gonorrhoea, syphilis, congenital syphilis, chlamydia and LGV should be reported to the EU level. The case definitions for STI are available in Annex 3.

2.3 Data collection 2010

In 2009, surveillance data for syphilis, congenital syphilis, gonorrhoea, chlamydia and LGV were for the first time collected as part of TESSy's enhanced surveillance protocol for STI (1990–2009 STI surveillance data). Data collection for 2010 STI data took place between 1 and 30 June 2011. Data presented in this report were retrieved from the database on 20 October 2011.

Data were collected in a case-based data format as described in the STI reporting protocol. If case-based data were not available, the aggregate format was preferred, broken down by 1) gender, 2) age group, and 3) transmission category. Countries were able to modify previously uploaded historical data during the 2010 data collection.

The description of the national source of data presented in Annex 1 is based on the compulsory variable 'datasource'. The source of data is described in each disease-specific chapter and provides a good overview of the heterogeneity among national reporting systems.

International comparisons are hampered by differences in surveillance systems as the quality and coverage of national surveillance systems are not consistent. Some countries have no national STI data available or have recently established or modified their national reporting systems. Interpretation and cross-country comparisons should be made with caution as the amount of under-diagnosis and under-reporting varies across countries.

2.4 Data analysis

STI surveillance data were uploaded, validated and approved by the countries, using the TESSy database. Individual datasets were validated immediately after they were uploaded. An analysis of the completeness of data and 'datasource' variables provides valuable insights in the origin of the data and the availability of data by country from 1990 to 2010. This information is also needed to interpret the actual data on STI. Information in the 'datasource' variable can be compared to other information from national surveillance systems for STI. Categories include: comprehensiveness of surveillance data, sentinel surveillance systems, reporting from clinics, laboratory-reported cases, compulsory systems, voluntary systems. Some countries have recently modified their surveillance systems, which led to the exclusion of incompatible historical data.

STI data are presented by 'date of diagnosis' or, if unavailable, by 'date of statistics' according to the

STI reporting protocol (2011). The date of consultation (clinical STI services) can be used as a proxy for date of diagnosis, date of notification, or date of specimen taken. When we compared the different entries across the database, there were only minor differences between these dates.

Absolute numbers are presented in the various tables in this report. Annual rates are calculated per 100 000 population for countries that have comprehensive surveillance systems. Country population denominators used to calculate rates are based on data from the Eurostat database (http://epp.eurostat.ec.europa.eu). Rates were not calculated for countries with sentinel surveillance systems. For congenital syphilis, annual rates are calculated per 100 000 live births (retrieved from the Eurostat database). Please note that rates presented in this report may differ from those reported in national bulletins due to the use of different population data.

For aggregate reporting, the age groups requested were: <15, 15–19, 20–24, 25–34, 35–44, ≥45; if data on age were unavailable or in an incompatible format, the country was excluded from the analysis.

2.5 Quality and completeness of reporting

The completeness of reporting is an important criterion for the quality and the interpretation of surveillance data. From 1990 to 2010, 3 214 440 cases of chlamydia were reported from 24 countries with varying degrees of completeness: 763 486 cases of gonorrhoea (28 countries), 345 409 cases of syphilis (29 countries), 1060 cases of congenital syphilis (24 countries) and 1942 cases of LGV (16 countries).

Liechtenstein did not provide any data on STI and was omitted from the tables presenting data by country.

Case classification (confirmed, unknown)

A few countries submitted cases with 'unknown' or 'probable' case classification, e.g. it is uncertain whether the cases were confirmed with laboratory results as described in the EU 2002 or 2008 case definitions. Cases were included when the confirmation was 'unknown' for all cases for a specific country. Cases were excluded when they were reported as 'probable' (except when all cases were reported as 'probable'), and only the 'confirmed' cases were included. This affected the use of submitted cases as follows:

- **Chlamydia.** All cases from Austria were included, including the 406 'probable' cases from 2006. All cases from Poland are included as case classification was 'unknown' for all cases between 2006 and 2010. Only confirmed cases were included for Slovakia, excluding 13 cases reported in 2007 as 'possible' or 'probable'.
- **Gonorrhoea.** All 'unknown' cases from Austria reported from 1996 to 2005 were included; 11 'probable' cases in 2007 were excluded for Austria. All cases from Bulgaria are included as case classification was 'unknown' for all cases from 1990 to 2010. All cases from Portugal were included, including the 535 'unknown' cases from 1990 to 2010. Only confirmed cases were included for Slovakia, excluding 20 cases reported in 2007 as 'possible' or 'probable'. For Spain, data from two different data sources were submitted: all cases from Spain's mandatory notification system classified as 'unknown' were included for the period 1990 to 2010; data from the Spanish sentinel laboratory system were not used in the tables for gonorrhoea in Spain.
- **Syphilis.** All 'unknown' cases from Austria reported from 1996 to 2005 were included. All cases from Bulgaria were included as case classification was 'unknown' for all cases from 1990 to 2010. All cases for Ireland, including those classified as 'unknown' from 2000 to 2006, were included. All cases reported as 'probable' in 2006 from Poland were included. All cases from Portugal were included, including the 397 'unknown' cases from 1990 to 2010. Only confirmed cases were included for Slovakia, excluding 39 cases reported in 2007 as 'possible' or 'probable'. For Spain, data from two different data sources were submitted: all cases from the mandatory notification system classified as 'unknown' were included for the period 1990 to 2010; data from the Spanish sentinel laboratory system were not used in the tables for syphilis in Spain.
- **Congenital syphilis.** All cases with 'unknown' classification from Bulgaria and Portugal were included.
- **LGV.** Only confirmed cases were provided.

Case-based and aggregate reports

For the STI data collection it was agreed to collect the data for the period 1990 to 1999 in an aggregate format; the 2000 to 2010 data, if available, were collected in case-based format with additional variables describing the epidemiological characteristics (Annex 2). The completeness of the data is affected by the use of these two formats as only limited information is provided in the aggregate format (gender, age, transmission category). The proportion of cases in case-based format differs between STI and over time (Table A) and is strongly influenced by countries that supply a large number of cases in aggregate format. More details are presented in the disease-specific chapters.

Table A: Number of cases reported for chlamydia, gonorrhoea and syphilis, and percentage of case-based data in 1990–2000, 2001–2010 and 2010, EU/EEA countries

	1990–2000		2001–2010		2010	
	Number of cases	Case based	Number of cases	Case based	Number of cases	Case based
Chlamydia	861 978	7.1	2 352 462	39.0	345 421	35.4
Gonorrhoea	409 579	0.9	319 967	15.9	31 983	28.0
Syphilis	127 208	2.3	202 349	32.4	17 884	55.6

Completeness of data

Annex 4 presents the completeness levels of data reporting for the total database (1990–2000, 2001–2010, 2000, 2010). It shows the completeness by variable and the minimum and maximum values in 2000 and 2010.

The completeness of reporting for 'age' and 'gender' over the whole time period was above 90% and received the highest score in the total database. The completeness for aggregated data was lower than for case-based data for age and gender. The other variables showed completeness levels that were considerably lower, partly due to the amount of aggregated reporting as most of the epidemiological variables are not included in the aggregated format.

The 'transmission' variable is important to distinguish between heterosexually acquired cases and homosexually acquired cases. Its completeness ranged from 20% for the syphilis database to 56% in the chlamydia data. In recent years the completeness has improved for gonorrhoea and syphilis (2001 to 2010).

Presentation of age categories

The grouping of ages has been described in the reporting protocol, and the STI data collection shows a heterogeneous situation with respect to the reporting of age in aggregated format. Countries have used different formats, even within a given disease. The heterogeneity in age categories makes the analysis more complex and also led to the exclusion of incompatible country data from the analysis. More details on the exclusion of data per STI is presented in the disease-specific chapters.

3 Chlamydia

Table B: Chlamydia: data source, type of data surveillance, surveillance period

Country	Data source	Type	Period	Legal	Coverage
Austria	AT-STISentinella	A	2007–2008	V	Se
	AT-STISentinella	C	2009–2010	V	Se
Belgium	BE-LABNET	C	2006–2010	V	Se
Bulgaria	BG-STI	A	2010–2010	C	Co
Cyprus	CY-NOTIFIED_DISEASES	C	2006–2010	C	Co
Czech Republic	-	-	-	-	-
Denmark	DK-LAB	A	1990–1999	C	Co
	DK-LAB	C	2000–2010	C	Co
Estonia	EE-HCV/CHLAMYDIA	A	1991–2007	C	Co
	EE-HCV/CHLAMYDIA	C	2008–2010	C	Co
Finland	FI-NIDR	C	2000–2010	C	Co
France	-	-	-	-	-
Germany	-	-	-	-	-
Greece	GR-NOTIFIABLE_DISEASES	A	2008–2010	V	Other*
Hungary	HU-STD SURVEILLANCE	A	2000–2010	C	Se
Iceland	IS-SUBJECT_TO_REGISTRATION	C	1997–2010	C	Co
Ireland	IE-AGGR_STI	A	1995–2010	C	Co
Italy	-	-	-	-	-
Latvia	LV-STI/SKIN_INFECTIONS	A	1993–2007	C	Co
	LV-BSN	C	2008–2010	C	Co
Lithuania	LT-COMMUNICABLE_DISEASES	A	2003–2007	C	Co
	LT-COMMUNICABLE_DISEASES	C	2008–2010	C	Co
Luxembourg	LU-SYSTEM1	C	2006–2010	C	Co
Malta	MT-DISEASE_SURVEILLANCE	C	2006–2010	C	Co
Netherlands	NL-STI	C	2004–2010	V	Se
Norway	NO-MSIS_CHLAMYDIA)	C	2006–2010	C	Co
Poland	PL-NATIONAL_SURVEILLANCE	A	2006–2010	C	Co
Portugal	-	-	–	-	-
Romania	RO-RNSSy	A	2004–2009	C	Co
	RO-RNSSy	C	2010–2010	C	Co
Slovakia	SK-EPIS	C	2006–2010	C	Co
Slovenia	SI-SPOSUR	C	2006–2010	C	Co
Spain	ES-MICROBIOLOGICAL	C	1990–2010	V	Se
Sweden	SE-EpiBas	A	1990–1996	C	Co
	SE-SMINET	C	1997–2010	C	Co
United Kingdom	UK-GUM	A	1990–2007	C	Co
	UK-GUM-COM**	A	2008–2010	Other	Co

Legend: type: aggregated (A); case-based (C); legal: voluntary reporting (V), compulsory reporting (C), unknown (Unk); coverage: sentinel system (Se), comprehensive (Co), other.
* Greece: in 2008 a new surveillance system was introduced which is designed to be comprehensive; at present it does not offer national coverage
** UK-GUM-COM: includes data from STI clinics (all ages) and community-based settings (covers only 15–24-year-olds).

3 Chlamydia

3.1 Key points

- Chlamydia is the most frequently reported STI in Europe, accounting for the majority of all reported STI.
- In 2010, 345 421 cases of chlamydia were reported in 24 EU/EEA Member States, an overall rate of 186 per 100 000 population. Chlamydia was reported more often in women than in men, with an overall rate of 203 per 100 000 in women and 145 per 100 000 in men. The true incidence of chlamydia is likely to be considerably higher than reported here.
- Three quarters (75%) of all chlamydia cases were reported in young people between 15 and 24 years of age, with the highest rates reported among women aged 15 to 19 years (1 917 cases per 100 000 persons).
- Overall trends over time in the various countries show a general increase, except for four countries. Among those countries that reported consistently between 2000 and 2010, the overall reporting rate has increased by 134%, from 143 per 100 000 population in 2000 to 334 per 100 000 in 2010. This is most likely due to increased case detection, improved diagnostics tools, improved surveillance systems and the introduction of chlamydia screening programmes in a number of countries. Decreasing or low rates may reflect changes in healthcare systems or the lack of accurate diagnostic tools or diagnostic capacity rather than a genuine low prevalence of chlamydia.

3.2 Source of data

For the period 1990 to 2010, chlamydia data were reported by 24 countries for at least one year. Bulgaria reported chlamydia data for the first time in 2010. Chlamydia data were not available from, or were not reported by, the Czech Republic, France, Germany, Italy, Liechtenstein and Portugal.

Table B specifies the source of the data, the type of data (aggregate and case based), coverage (either sentinel or comprehensive) and period of availability. Also shown are the existing heterogeneity in systems, recent changes in systems, and reporting periods. Due to the variations in the coverage, completeness and representativeness of these data, direct comparisons of absolute numbers and rates should be conducted with caution since the proportion of diagnosed cases that is actually reported differs substantially across countries.

Rates per 100 000 population were calculated for 18 countries with comprehensive or other systems. Countries with sentinel systems (Austria, Belgium, Spain, Hungary and the Netherlands) were excluded from the calculations.

Table 3.1a shows that six countries provided data on chlamydia for the period 1990 to 2010 (Denmark, Estonia from 1991 on, Latvia from 1993 on, Spain, Sweden and UK). An additional four countries provided data on chlamydia for the period 2000 to 2010 (Finland, Hungary, Ireland and Iceland); in total, 24 countries provided data for 2010. Due to a large amount of missing or incorrect information on 'date of diagnosis' for Sweden the 'date of statistics' was used to present chlamydia cases.

For the period 2000 to 2010, 31% of the data were provided in case-based format; in recent years three countries have changed their reporting system (Estonia, Latvia, Lithuania) so that 36% of the 2010 data were available in case-based format. This affects the amount of information available for analysis as the aggregate format only includes gender, age and transmission category.

The completeness level of the variables 'age' and 'gender' lies above 95%. Completeness of the variable 'transmission category' increased between 2001 and 2010 and is available for 55% of cases overall. 'HIV status' is reported by three countries only (1% completeness). 'Site of infection' is available for 12% of the reported cases in 2001 to 2010. The variable 'ClinicalServiceType' was reported for 12.7% of cases in 2010. Among countries reporting case-based data, this variable was reported for 35.6% of cases. Ten countries reported 'ClinicalServiceType' for more than 50% of their cases.

3.3 Case reports, 2010

Demographic variables

In 2010, 345 421 cases of chlamydia were reported by 24 countries, with 88% of all cases reported by four countries (Denmark, Norway, Sweden and the United Kingdom) (Table 3.1a). This resulted in an overall rate of 186 per 100 000 population for those countries in the EU/EEA with comprehensive surveillance of chlamydia (Table 3.3). The overall rate is strongly affected by countries with a large population and a relatively small number of reported chlamydia cases (e.g. Poland and Romania). When these two countries are excluded from the calculation, the overall rate of chlamydia increases to 282 per 100 000 population. The UK contributed 62% of all cases reported in 2010. This is due to the inclusion of data from a screening programme (targeting 15–24-year-olds) in England in 2008 which offered community-based test services outside of STI clinics. This resulted in a large increase of chlamydia diagnoses from 2008 onwards.

In 2010, rates greater than 200 cases per 100 000 were observed in Iceland (692 per 100 000 population),

Figure 3.1. Number of chlamydia cases per 100 000 population, 2010

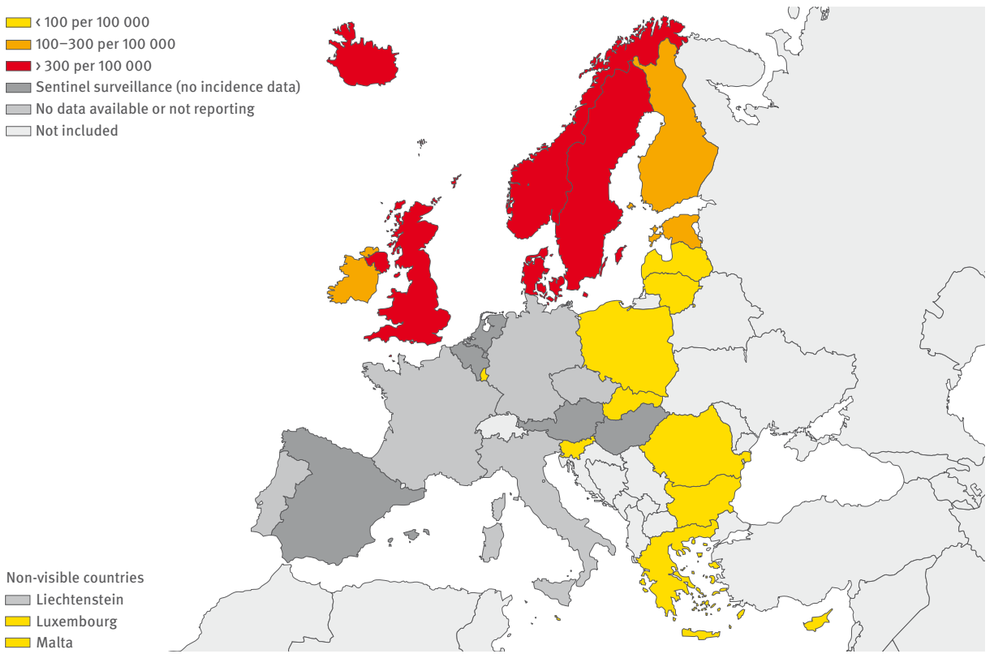
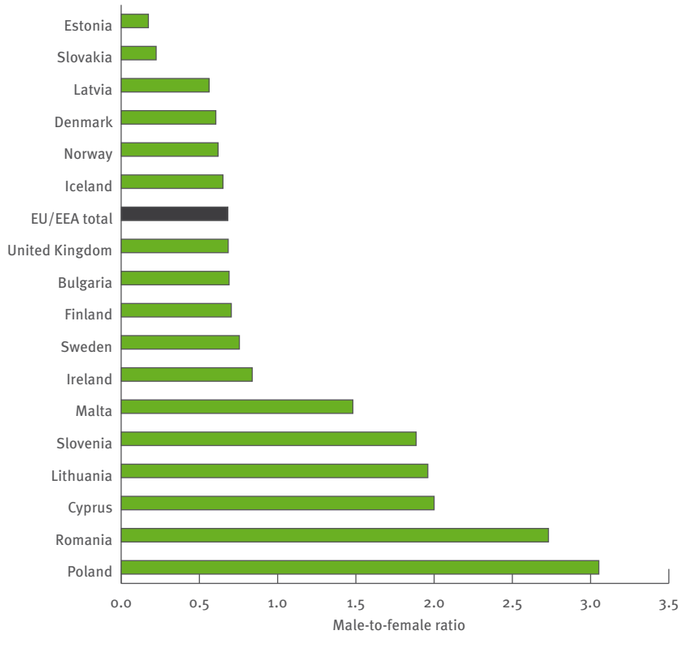


Figure 3.2. Distribution of male-to-female ratio in chlamydia cases, 18 EU/EEA countries, 2010



Denmark (505/100 000), Norway (464/100 000), Sweden (386/100 000), the United Kingdom (348/100 000) and Finland (240/100 000) (Table 3.3, Figure 3.1). Rates below 10 per 100 000 were reported by eight countries (Bulgaria, Cyprus, Greece, Luxembourg, Poland, Romania, Slovakia, and Slovenia). Malta and Latvia reported 31 and 43 cases per 100 000 population, respectively; Ireland and Estonia, 116 and 126, respectively.

Information on gender was missing in 0.3% (n=1208) of all cases in 2010. The male-to-female ratio in 2010 was 0.69, which means that there were 44% more cases reported in women (n=202 717) than in men (n=140 563). The overall rate in men was 145 per 100 000 and 203 per 100 000 in women (Table 3.4). The male-to-female ratios, based on the number of cases, were below or close to 1.0 in the majority of countries. Cyprus, Lithuania, Hungary, Poland, Romania and Slovenia reported male-to-female ratios based on a relatively low number of cases (1.5 to 3.0). In Estonia, the male-to-female ratio was 0.2, indicating five times more female than male cases. There was no clear overall trend in the male-to-female ratio among countries reporting gender information consistently between 2000 and 2010. However the male-to-female ratio for Latvia decreased drastically: from a high of 2.4 in 2005 to 0.6 in 2010. The overall ratio fluctuated between 0.81 and 0.66 during this time. It must be kept in mind that the number of cases and the male-to-female ratio are strongly influenced by testing and screening practices in the various countries (Table 3.2, Figure 3.2).

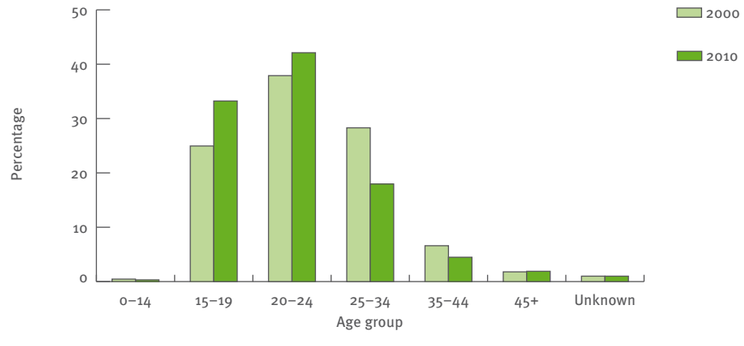
In 2010, information on age was not available for Ireland and Poland which together constitute 1.7% of the cases. Other countries have provided information in different age formats. Because of the data presentation and the incompatible age formats, the following data from were excluded: Austria (2007–2008), Estonia (1991–1997), Hungary (2007–2008), and Poland (2006–2010). Lithuania did not report information on age in 2003–2007.

Figure 3.3 presents the age distribution in percentage of all cases with information on age in 2000 and 2010 (Table 3.5). Between 2000 and 2010, the age category 20–24 years was consistently the largest, accounting for 38% of all cases in 2000 and 42% in 2010. The second largest group is the age group 15–19 years: 33% in 2010 and 25% in 2000. In 2010, three quarters (75%) of the 336 680 cases with known age were reported in young people between 15 and 24 years of age. The age distribution over the period 2000 to 2010 appears to have shifted towards the younger age groups. The 15–19 year age group saw the largest proportional increase. This increase was balanced by a decrease in cases among the 25–34 year age group (28% of cases in 2000, 18% of cases in 2010).

This pattern is also reflected in the age-specific incidence rates. The highest rates for 2010 are seen in the 20–24 year age group, with 862 cases per 100 000 reported by countries with comprehensive systems. Rates among 15–19 years olds are also very high at 774 per 100 000 population (Figure 3.4). The highest overall rates were reported among women aged 15 to 19 years (1 917 cases per 100 000 persons). Rates in all age groups have increased since 2000, with the largest increases seen among 15–19-year-olds (rate increased by 289%) and among 20–24-year-olds (increase by 208%). The smallest increases were among 35–44-year-olds and 25–34-year-olds (increased by 58% and 68%, respectively).

The shifts described above are most likely strongly influenced by changes in screening and testing practices targeted at young people. For instance, the UK reports data from STI services as well as from a screening programme in England (since 2008) which captures data from community-based test settings for 15–24-year-olds. When excluding the UK from the analysis, the age-specific incidence rates decline: the rate for 20–24-year-olds decreases to 266 per 100 000 population; the distribution of cases and overall trends, however, remain similar, with 40% of cases being among 20–24-year-olds and increasing rates among all age groups between 2000 and 2010, albeit at lower levels (largest increase among 15–19-year-olds: 157%). Between 2007 and 2010, age-specific rates stabilised and started decreasing (when

Figure 3.3. Chlamydia cases by age category, 2000 (seven countries) and 2010 (16 countries), EU/EEA



UK data are excluded). The largest decrease is seen in 15–19-year-olds, where the rate decreased from a high of 244 per 100 000 population in 2008 to 215 per 100 000 in 2010, a decrease of 12%. These decreases could, however, be partly an effect of delays in reporting and should be reviewed in the coming years.

Overall, the age distribution needs to be interpreted with caution as screening practices and testing strategies are often targeted at young people, not only in the UK but also in other countries.

Epidemiological variables

In 2010, information on transmission category was not available for 55% of chlamydia cases (n=191 072). The high proportion of missing data for transmission category is mainly due to the countries with the highest number of reported cases (Denmark, Norway and Finland) not reporting data on transmission. The United Kingdom reported transmission category data for 50% of its cases and is excluded from further analysis. Information was available for 51 070 cases (9 countries) and was indicated as heterosexual in 86%, as in MSM in 5% and as 'unknown' in 9% of the cases (Tables C and 3.6)

3.4 Trends 1990–2010

Between 1990 and 2010, 3 214 440 cases of chlamydia were reported from 24 countries with varying degrees of completeness over time. Rates are calculated for countries with comprehensive surveillance systems for chlamydia (Table 3.3).

Figure 3.5 shows an overall increasing trend in the number of reported chlamydia cases per 100 000 population in the EU/EEA. The overall rate increased from 100.9/100 000 in 1990 to 143.7 in 2000, but by 2010 this figure had more than doubled to 341.1 per 100 000 population – when calculated for countries that reported consistently between 2000 and 2010 (Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Sweden, and the United Kingdom).

An interpretation of the overall trend is difficult as there are diverging trends in different countries; also, trends are strongly influenced by changes in testing and screening practices and surveillance systems. However, the trend depicts a consistently higher rate in women than in men. Separate rates by gender are unreliable for 1990–1994 due to the high amount of missing gender information in Denmark and Sweden. The sharp increase in 2008 is mainly caused by the United Kingdom which introduced a new screening programme (targeting 15–24-year-olds) which captures data from community-based test settings as well as from STI services.

Four countries reported chlamydia cases consistently for the period 1990–2010: Denmark, Estonia, Sweden and the United Kingdom. Figure 3.6 shows the trends over time for eight countries that have reported since the early 1990s. The rate per 100 000 population peaked in Estonia in 1995–1996 and has decreased since then. The rate in Iceland was continuously high between 1997 and 2010, with an apparent peak in 2000–2002. Trends in most other countries have increased over time.

Between 2006 and 2010, the overall rate increased by 41%. Rates increased in Denmark (10%), Iceland (20%), Ireland (55%), Latvia (21%), Sweden (7%) and the United Kingdom (82%). Decreasing trends were reported by Finland, Estonia and Lithuania. No clear trends could be observed in Cyprus, Greece, Poland, Romania, Slovakia and Slovenia due to relatively low numbers or rates per 100 000 population.

3.5 Discussion

Completeness of reported data

Data on chlamydia for 2010 were not available from six countries. The completeness of the variables 'age' and 'gender' was above 95%. Completeness of the variable 'transmission category' has increased over time among countries reporting case-based data, but at 44% of cases (2010) needs to improve. The low completeness levels for this variable are mainly due to incomplete reporting

Figure 3.4. Age-specific rate of reported chlamydia cases per 100 000 population, 2000 (seven countries) and 2010 (16 countries), EU/EEA

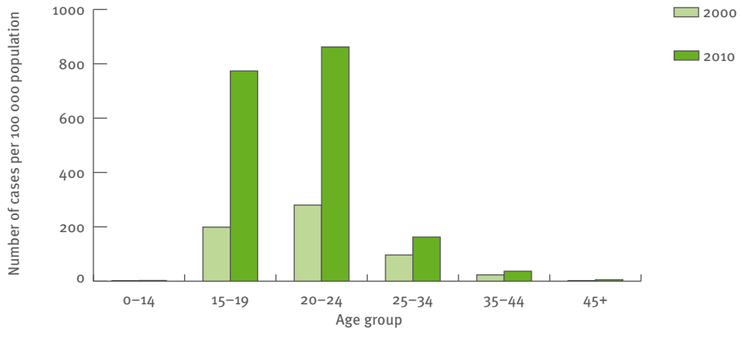
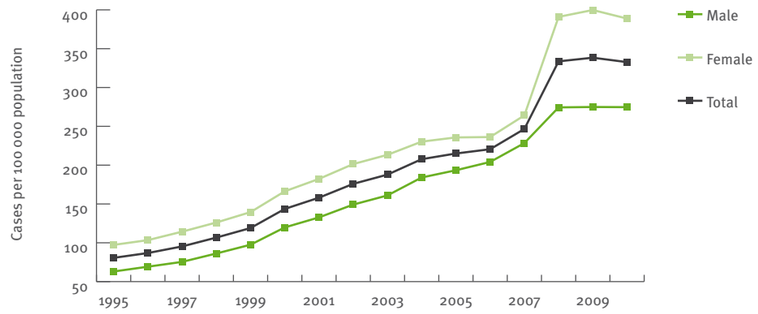


Table C: Number and percentage of chlamydia cases by transmission category and gender, 2010

	Number of cases	Reporting countries	MSM	Heterosexual		Unknown
				Male	Female	
Chlamydia	51 229	9	2 537 (5%)	18 517 (36%)	25 414 (50%)	4 579 (9%)

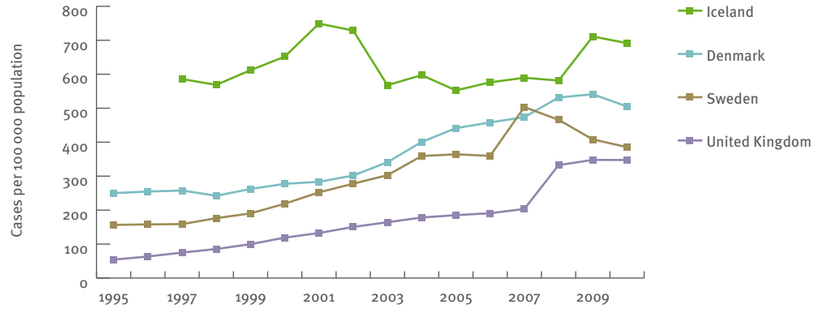
Note: 27 cases are reported as 'mother-to-child transmission'; cases with unknown gender and heterosexual transmission category are classified as 'unknown'. Data exclude cases from the United Kingdom as completeness was below 50%.

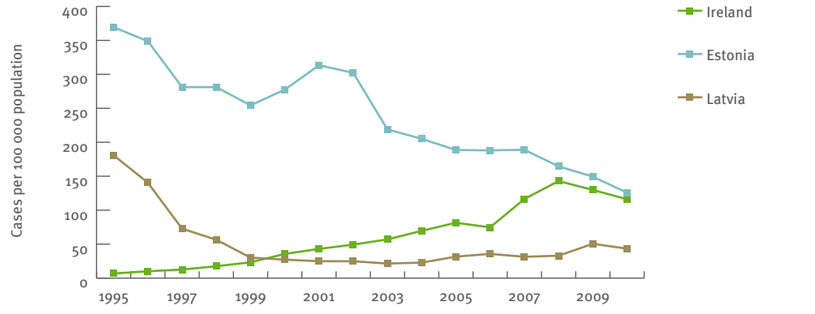
Figure 3.5. Trend in reported chlamydia cases per 100 000 population, EU/EEA, 1995–2010 (in eight EU/EEA countries with consistent reporting)



Note: In 2008, the UK introduced a new chlamydia surveillance scheme that collects data from community-based test settings (15–24-year-olds only) and STI clinics; prior to 2008, data were based on STI clinic diagnoses only.

Figure 3.6. Number of chlamydia cases per 100 000 population in selected EU/EEA Member States, 1995–2010





by those countries that report the largest number of cases. 'HIV status' was only reported by three countries, and the feasibility of collecting this information the chlamydia set of variables needs to be re-evaluated. The variable 'age' in aggregate reports was reported in various formats, particularly for the historical data. This complicates the analysis of the submitted data.

Case reports and trends

The distribution of chlamydia across countries appears to be very heterogeneous, with rates from below 1 to more than 500 cases per 100 000 population. Almost 90% of the cases are reported from only four countries. High rates of 200 or more are reported by countries in the western and northern parts of the EU/EEA. Rates in the central and eastern parts of the EU/EEA (including Lithuania and Latvia) are much lower (30 or less per 100 000). With the exception of five countries, more female than male cases are reported. Three quarters of all cases were reported in young people between 15 and 24 years of age. The interpretation of both gender and age distributions must proceed cautiously as the reported rates are strongly associated with current testing and screening practices which are often targeted at young people.

In recent years, trends in chlamydia cases have appeared to be stable or increasing in all countries, except three: Finland, Lithuania and Estonia.

The number of reported cases depends on a variety of factors that affect the interpretation of the epidemiological situation in the EU/EEA: The number of reported cases is strongly affected by national testing policies and practices; the asymptomatic nature of chlamydia, especially in women, makes the diagnosis difficult; and many diagnoses are either not made or not reported. Also, diagnoses from certain countries cannot be included in trend analyses as they do not conduct comprehensive surveillance for STI.

With respect to chlamydia, diagnostic tools have changed following the introduction of the more sensitive nucleic acid amplification tests (NAATs) in the 1990s. The increased use of NAATs has improved chlamydia case detection considerably and has resulted in an increased number of diagnoses. In some countries NAAT technology is not yet widely available and hampers chlamydia case detection and case management.

The overall increase of cases in the EU/EEA in the past decade is most likely due to a combination of effects: improved diagnostics tools, increased case detection, improved surveillance systems and the introduction of chlamydia screening programmes in a number of countries. Although only a few countries have implemented screening programmes, routine testing is ongoing in clinical services in many countries. This could account for the high rates being reported in the western and northern parts of the EU/EEA. On the other hand, the low or decreasing rates in eastern and central EU/EEA countries may be due to changes in healthcare systems (e.g. privatisation) and reporting routines so that the number of infections that remain undiagnosed or are underreported may have increased substantially. In addition, the low rates reported by a number of countries most probably reflect a lack of accurate diagnostic tools, incorrect diagnostics, or a shortage of reporting capacity rather than a genuinely low prevalence of chlamydia.

3.6 Tables

Table 3.1a: Chlamydia: number of cases by year of diagnosis, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	822	742	597	1085	**3246**
Belgium	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2060	2480	2601	2942	3310	**13393**
Bulgaria	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	49	**49**
Cyprus	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	6	0	1	4	3	**14**
Czech Republic	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Denmark	10672	13070	15235	12093	13869	13038	13369	13596	12831	13930	14786	15153	16205	18353	21628	23881	24866	25795	29116	29825	27950	**379261**
Estonia	.	405	194	1152	4230	5348	4971	3954	3917	3507	3806	4283	4114	2969	2771	2541	2528	2480	2200	2015	1737	**59122**
Finland	.	.	.	.	.	.	.	.	.	.	11729	12143	13666	12866	13378	12744	13878	13968	13873	13317	12825	**144387**
France	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Germany	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Greece	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Hungary	.	.	.	.	.	.	.	.	.	.	981	653	505	488	431	585	598	699	754	711	710	**7115**
Iceland	.	.	.	.	.	.	.	.	1581	1687	1819	2123	2088	1638	1736	1622	1728	1814	1834	2271	2197	**25687**
Ireland	.	.	.	.	.	245	364	462	646	869	1343	1649	1922	2258	2803	3353	3144	5023	6290	5777	5188	**41336**
Italy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Latvia	.	.	.	2626	3940	4520	3470	1780	1367	725	647	589	582	502	528	729	820	711	704	1127	1042	**26409**
Liechtenstein	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Lithuania	.	.	.	.	.	.	.	.	.	.	.	.	.	390	406	563	556	403	403	326	367	**3414**
Luxembourg	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	0	4	0	2	**7**
Malta	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	45	71	107	61	138	**422**
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5075	5937	7140	7821	9355	9788	11374	**56490**
Norway	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	21259	22847	23488	22754	22527	**112875**
Poland	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	612	627	695	908	539	**3381**
Portugal	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**.**
Romania	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	156	238	115	127	91	97	**829**
Slovakia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	61	78	105	228	186	**658**
Slovenia	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	144	201	127	136	176	**784**
Spain	245	143	85	99	151	131	73	120	101	80	92	97	97	115	120	148	139	223	402	846	947	**4444**
Sweden	26764	20986	17080	14963	13626	13785	13967	13864	15166	16682	19255	22447	24676	26794	32263	33035	32518	47081	41974	37775	36814	**521315**
United Kingdom	34015	35173	32707	30281	31755	31390	36844	43703	49888	58420	70021	78148	89131	97635	106384	111162	115257	123629	203475	214228	215501	**1808747**
EU/EEA total	**71696**	**69777**	**65301**	**61214**	**67571**	**68457**	**73058**	**79060**	**85465**	**95900**	**124479**	**137075**	**152986**	**164008**	**187528**	**196456**	**227598**	**256888**	**338448**	**346054**	**345421**	**3214440**

Note: Possible/probable cases for Slovakia are excluded. For Sweden, date of statistics is used.

Table 3.1b. Chlamydia: number of cases by year of statistics, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	822	742	597	1085	**3246**
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2060	2480	2601	2942	3310	**13393**
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	49	**49**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0	1	4	3	**14**
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Denmark	10672	13070	15235	12093	13869	13038	13369	13596	12831	13930	14786	15153	16205	18353	21628	23881	24866	25795	29116	29825	27950	**379261**
Estonia	-	405	194	1152	4230	5348	4971	3954	3917	3507	3806	4283	4114	2969	2771	2541	2528	2480	2200	2015	1737	**59122**
Finland	-	-	-	-	-	-	-	-	-	-	11729	12143	13666	12866	13378	12744	13878	13968	13873	13317	12825	**144387**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71	327	657	**1055**
Hungary	-	-	-	-	-	-	-	-	-	-	981	653	505	488	431	585	598	699	754	711	710	**7115**
Iceland	-	-	-	-	-	-	-	1581	1549	1687	1819	2123	2088	1638	1736	1622	1728	1814	1834	2271	2197	**25687**
Ireland	-	-	-	-	-	245	364	462	646	869	1343	1649	1922	2258	2803	3353	3144	5023	6290	5777	5188	**41336**
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Latvia	-	-	-	2626	3940	4520	3470	1780	1367	725	647	589	582	502	528	729	820	711	704	1127	1042	**26409**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	390	406	563	556	403	403	326	367	**3414**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	4	0	2	**7**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	45	71	107	61	138	**422**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5075	5937	7140	7821	9355	9788	11374	**56490**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21259	22847	23488	22754	22527	**112875**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	612	627	695	908	539	**3381**
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	156	238	115	127	91	97	**829**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61	78	105	228	186	**658**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144	201	127	136	176	**784**
Spain	245	143	85	99	151	131	73	120	101	80	92	87	97	115	120	148	139	223	402	846	947	**4444**
Sweden	26764	20986	17080	14963	13626	13785	13967	13864	15166	16682	19255	22247	24676	26794	32263	33035	32518	47081	41974	37775	36814	**521315**
United Kingdom	34015	35173	32707	30281	31755	31390	36844	43703	49888	58420	70021	78148	89131	97635	106384	111162	115257	123629	203475	214228	215501	**1808747**
EU/EEA total	**71696**	**69777**	**65301**	**61214**	**67571**	**68457**	**73058**	**79060**	**85465**	**95900**	**124479**	**137075**	**152986**	**164008**	**187528**	**196456**	**227598**	**256888**	**338448**	**346054**	**345421**	**3214440**

Note: Possible/probable cases for Slovakia are excluded.

Table 3.2. Chlamydia: number of cases by gender, 1990–2010

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	3214	10593	3191	9777	3277	10000	3502	10001	3477	9285	4000	9858	4374	10398
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1101	2816	1188	2319	1308	2498
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4538	7191
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	522	459
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	580	972	566	931	638	1010	674	1097
Ireland	-	-	-	-	-	-	-	-	-	-	118	127	166	198	218	244	287	359	398	471	662	679
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	-	-	-	-	-	1224	1402	1369	2571	1542	2978	1625	1845	905	875	708	659	429	296	431	216
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	79	166	44	98	36	47	44	54	48	103	35	95	13	60	22	98	16	85	7	73	14	78
Sweden	-	-	-	-	6373	10703	5865	9095	5467	8159	5520	8265	5683	8284	5717	8325	6466	9118	7063	9784	8285	11082
United Kingdom	15493	18522	15987	19186	15073	17634	14090	16191	14273	17482	13572	17818	15655	21189	18014	25689	21121	28767	24563	33857	29941	40080
EU/EEA total	**15572**	**18688**	**16031**	**19284**	**21482**	**28384**	**21223**	**26742**	**24371**	**38908**	**23978**	**39060**	**26419**	**41576**	**28958**	**46204**	**33742**	**52020**	**38286**	**57668**	**50749**	**73778**

Note: For Sweden, date of statistics is used.

Table 3.2. Chlamydia: number of cases by gender, 1990–2010 (continued)

Country	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		Cumulative total		Unk./ Missing	Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Austria	-	-	-	-	-	-	-	-	-	-	-	-	392	430	388	354	315	282	631	454	1726	1520	-	**3246**
Belgium	-	-	-	-	-	-	-	-	-	-	542	1508	680	1786	809	1780	1020	1910	1133	2163	4184	9147	62	**13393**
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	29	20	29	-	**49**
Cyprus	-	-	-	-	-	-	-	-	-	-	4	2	-	-	1	-	-	4	2	1	7	7	-	**14**
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Denmark	4408	10731	5202	10985	5941	12390	7662	13943	8680	15168	9200	15650	9660	16106	10745	18338	11317	18493	10526	17401	108376	219117	51768	**379261**
Estonia	1782	2501	1353	2761	640	2329	604	2167	473	2068	408	2121	438	2098	336	1870	365	1638	250	1436	10246	28622	20254	**59122**
Finland	4636	7507	5198	8468	4977	7889	5322	8056	5053	7691	5621	8257	5673	8295	5656	8217	5482	7835	5298	7527	57454	86933	-	**144387**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39	1	51	48	81	336	171	385	499	**1055**
Hungary	391	262	302	203	266	222	255	176	348	237	375	223	438	261	500	254	490	221	487	223	4374	2741	-	**7115**
Iceland	774	1277	707	1325	614	962	645	1019	612	949	648	1024	679	1069	703	1079	892	1367	841	1293	9573	15374	740	**25687**
Ireland	765	872	880	1018	993	1234	1264	1492	1518	1763	1454	1659	2042	2877	2481	3540	2301	3386	2320	2769	17867	22688	781	**41336**
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Latvia	395	194	395	187	352	150	364	164	516	213	533	287	454	262	404	346	524	618	351	625	12521	13888	-	**26409**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	177	226	173	153	243	124	593	503	2318	**3414**
Luxembourg	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	2	3	2	2	**7**
Malta	-	-	-	-	-	-	-	-	4	1	21	22	47	21	64	38	38	28	77	52	251	162	9	**422**
Netherlands	-	-	-	-	-	-	2633	2441	3047	2889	3588	3551	3918	3901	4880	4473	5115	4671	5908	5463	29089	27389	12	**56478**
Norway	-	-	-	-	-	-	-	-	-	-	8181	12932	8674	14003	9031	14346	8578	14088	8587	13868	43051	69237	587	**112875**
Poland	-	-	-	-	-	-	-	-	-	-	473	139	462	165	490	205	544	364	406	133	2375	1006	-	**3381**
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Romania	-	-	-	-	-	-	1	4	127	29	184	54	89	26	91	36	67	24	71	26	630	199	-	**829**
Slovakia	-	-	-	-	-	-	-	-	-	-	25	36	20	58	38	67	86	142	34	152	203	455	-	**658**
Slovenia	-	-	-	-	-	-	-	-	8	1	91	55	141	57	89	31	103	31	115	61	547	236	1	**784**
Spain	9	78	17	80	27	86	39	81	44	101	37	102	55	168	163	238	365	480	427	517	1541	2888	15	**4444**
Sweden	9646	12757	10645	14078	11599	15462	14062	18162	14102	18684	14127	18404	19677	26188	18614	24163	16334	21433	15496	20511	200741	272657	47917	**521315**
United Kingdom	33461	44687	38730	50401	43266	54369	48695	57689	52148	59014	56336	58921	60953	62676	81592	120536	84414	128403	87259	127551	784636	1020662	3449	**1808747**
EU/EEA total	**56267**	**80866**	**63429**	**89506**	**68675**	**95093**	**81546**	**105394**	**86680**	**108808**	**101849**	**124947**	**114492**	**140447**	**137293**	**200138**	**138574**	**205619**	**140563**	**202717**	**1290179**	**1795847**	**128414**	**3214428**

Note: Date of statistics used for Sweden.

Table 3.3. Chlamydia: number of cases per 100 000 population, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0	0.1	0.5	0.4
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	207.8	254	295.1	233.4	266.9	250	254.6	257.7	242.3	262.2	277.4	283.3	301.9	340.9	400.7	441.3	458.2	473.6	531.7	541.1	505
Estonia	-	25.8	12.5	76.2	286.4	369.3	348.8	281.2	281.2	254.3	277.4	313.3	302.2	218.9	205.1	188.6	188.1	188.9	164.5	149.4	125.8
Finland	-	-	-	-	-	-	-	-	-	-	226.8	234.4	263.1	247.1	256.3	243.4	264.1	264.7	261.7	250	239.7
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	2.9	5.8
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	585.8	568.7	611.9	651.9	749.2	728.6	567.8	597.4	552.5	576.2	589.6	581.4	711.1	691.7
Ireland	-	-	-	-	-	6.8	10.1	12.6	17.5	23.3	35.6	43	49.3	57	69.6	81.5	74.7	116.5	142.9	129.8	116.1
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	-	-	101.6	155.1	180.8	140.5	72.8	56.5	30.2	27.2	24.9	24.8	21.5	22.8	31.6	35.7	31.4	33	50.5	43.4
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	11.3	11.8	16.4	16.3	11.9	12	9.7	11
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0.4	0	0.4
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	10.6	17.2	26.3	16.2	31.2
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	458.1	488.1	495.8	474.1	463.7
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	1.6	1.8	2.4	1.4
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.7	1.1	0.5	0.6	0.4	0.5
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	1.4	1.9	4.2	3.4
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	7.3	9.8	6	6.6	8.6
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	313.9	244.3	197.6	172.1	155.8	156.4	158	158.8	176.3	190.3	218.8	252.3	277.7	302.8	359.3	364.3	359.6	503.3	465.9	408.1	385.5
United Kingdom	59.5	61.3	56.9	52.5	55	54.2	63.4	75	85.4	99.7	119.1	132.5	150.5	164.3	178.2	185.2	190.8	203.4	332.5	347.8	347.5
Total	**100.9**	**95.9**	**89.5**	**80.8**	**89**	**85.9**	**91.6**	**98.7**	**106.8**	**119.2**	**143.7**	**158.2**	**176.1**	**181.1**	**161.8**	**164.5**	**131.8**	**148.2**	**183.3**	**186.3**	**186**

Note: Rates are only calculated for countries with comprehensive surveillance. For Sweden, date of statistics is used.

Table 3.4. Chlamydia: Number of cases per 100 000 population by gender, 1990–2010

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	125.4	402.3	124.0	370.0	126.4	376.1	134.4	374.5	132.9	346.6	152.4	366.7	166.1	385.7
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	171.2	375.4	186.7	312.1	206.7	337.9
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179.9	271.5
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	428.9	721.9	414.8	684.9	462.0	733.9	482.6	787.0
Ireland	-	-	-	-	-	-	-	-	-	-	6.6	7.0	9.2	10.9	12.0	13.3	15.6	19.3	21.5	25.1	35.3	35.7
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	-	-	-	-	-	102.1	101.1	116.5	188.3	133.6	221.2	142.7	138.6	80.3	66.4	63.5	50.5	38.8	22.9	39.3	16.8
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	-	-	149.2	244.7	136.6	206.8	126.5	184.4	126.7	185.3	130.2	185.3	130.8	186.0	147.9	203.7	161.4	218.5	189.2	247.3
United Kingdom	55.8	63.0	57.4	65.1	53.9	59.6	50.3	54.6	50.8	58.8	48.2	59.8	55.4	71.0	63.6	85.9	74.3	96.0	86.1	112.6	104.6	132.9
Total	**55.8**	**63.0**	**57.4**	**65.1**	**66.6**	**83.5**	**63.2**	**75.3**	**67.3**	**101.8**	**63.0**	**97.3**	**69.2**	**103.4**	**75.4**	**114.3**	**86.2**	**126.1**	**97.5**	**139.5**	**119.8**	**166.3**

Note: Rates are only calculated for countries with comprehensive surveillance. For Sweden, date of statistics is used.

Table 3.4. Chlamydia: Number of cases per 100 000 population by gender, 1990–2010 (continued)

Country	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	0.7
Cyprus	-	-	-	-	-	-	-	-	-	-	1.1	0.5	0.0	0.0	0.3	0.0	0.0	1.0	0.5	0.2
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	166.7	396.7	196.0	404.7	223.1	455.3	287.0	511.2	324.2	554.8	342.5	570.8	358.2	585.6	396.1	663.7	414.2	665.4	383.7	623.4
Estonia	282.7	339.6	215.6	376.3	102.4	318.6	97.0	297.4	76.2	284.5	65.9	292.4	70.8	289.7	54.4	258.5	59.1	226.5	40.5	198.7
Finland	183.3	283.1	204.8	318.7	195.6	296.4	208.5	302.1	197.2	287.6	218.5	307.7	219.6	308.0	217.8	303.9	209.9	288.6	201.8	276.1
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	0.0	0.9	0.8	1.4	5.9
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	545.6	902.5	492.9	925.8	425.5	667.2	443.6	701.9	415.8	648.2	428.6	688.7	433.7	707.5	436.9	698.1	550.4	869.0	525.8	819.9
Ireland	40.1	45.2	45.4	51.9	50.4	61.9	63.1	73.7	74.1	85.5	69.1	78.8	94.6	133.5	112.9	160.6	103.9	151.5	104.7	123.0
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	36.3	15.2	36.6	14.8	32.8	11.9	34.1	13.1	48.5	17.1	50.4	23.2	43.2	21.3	38.6	28.3	50.2	50.7	33.8	51.6
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.3	12.6	11.1	8.5	15.7	7.0
Luxembourg	-	-	-	-	-	-	-	-	-	-	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8
Malta	-	-	-	-	-	-	-	-	2.0	0.5	10.5	10.8	23.2	10.2	31.4	18.4	18.5	13.5	37.5	25.1
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	355.4	553.1	372.9	594.5	382.7	603.4	358.2	586.0	353.8	570.4
Poland	-	-	-	-	-	-	-	-	-	-	2.6	0.7	2.5	0.8	2.7	1.0	3.0	1.8	2.2	0.7
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	-	-	-	-	-	-	0.0	0.0	1.2	0.3	1.7	0.5	0.8	0.2	0.9	0.3	0.6	0.2	0.7	0.2
Slovakia	-	-	-	-	-	-	-	-	-	-	1.0	1.3	0.8	2.1	1.4	2.4	3.3	5.1	1.3	5.5
Slovenia	-	-	-	-	-	-	-	-	0.8	0.1	9.3	5.4	14.3	5.6	9.0	3.0	10.3	3.0	11.3	5.9
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	219.6	284.1	241.5	312.8	262.0	342.6	316.2	401.0	315.7	411.1	314.9	403.5	435.0	570.6	407.9	523.1	354.8	460.7	333.3	437.2
United Kingdom	116.3	147.8	134.0	166.2	149.0	178.8	166.8	189.1	177.5	192.5	190.4	191.2	204.5	202.3	271.6	386.9	278.9	409.8	286.2	404.7
Total	**132.7**	**182.3**	**149.2**	**201.4**	**161.0**	**213.3**	**147.5**	**184.4**	**152.2**	**184.9**	**123.2**	**144.5**	**138.6**	**162.5**	**150.9**	**213.2**	**151.1**	**218.0**	**144.8**	**203.4**

Note: Rates are only calculated for countries with comprehensive surveillance. For Sweden, date of statistics is used.

Table 3.5. Chlamydia: number of cases by age category, 2000–2010

Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total number by age category											
0–14	548	652	669	718	844	858	978	1074	1093	1053	1068
15–19	29883	33857	39020	43078	50024	52299	59427	69934	110097	114854	111887
20–24	45380	50487	57262	62243	70964	74527	85904	94872	132238	140042	141782
25–34	33886	36265	38833	40118	45137	46517	55638	59312	63235	61839	60461
35–44	7907	8747	9465	9669	10820	11335	13412	14128	14953	15095	15089
45+	2147	2285	2433	2542	3065	3346	4203	4802	5456	5902	6393
NA	4860	4944	5366	5920	6664	7383	7440	10980	11537	6365	7272
Total	**124611**	**137237**	**153048**	**164288**	**187518**	**196265**	**227002**	**255102**	**338609**	**345150**	**343952**
Proportion by age category											
0–14	0.4	0.5	0.4	0.4	0.5	0.4	0.4	0.4	0.3	0.3	0.3
15–19	24.0	24.7	25.5	26.2	26.7	26.6	26.2	27.4	32.5	33.3	32.5
20–24	36.4	36.8	37.4	37.9	37.8	38.0	37.8	37.2	39.1	40.6	41.2
25–34	27.2	26.4	25.4	24.4	24.1	23.7	24.5	23.3	18.7	17.9	17.6
35–44	6.3	6.4	6.2	5.9	5.8	5.8	5.9	5.5	4.4	4.4	4.4
45+	1.7	1.7	1.6	1.5	1.6	1.7	1.9	1.9	1.6	1.7	1.9
NA	3.9	3.6	3.5	3.6	3.6	3.8	3.3	4.3	3.4	1.8	2.1

Note: NA includes data for countries which reported incorrect age groups. For Sweden, date of statistics is used.

Table 3.6. Chlamydia: number of cases by transmission category and gender, 2000–2010

Country	Transm.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	HETERO F	-	-	-	-	-	-	-	-	-	226	-
	HETERO M	-	-	-	-	-	-	-	-	-	271	-
	MSM	-	-	-	-	-	-	-	-	-	6	-
	UNK	-	-	-	-	-	-	-	822	742	94	1085
Belgium	NA	-	-	-	-	-	-	2050	2466	2589	2930	3296
Bulgaria	NA	-	-	-	-	-	-	-	-	-	-	49
Cyprus	NA	-	-	-	-	-	-	6	-	1	4	3
Czech Republic		-	-	-	-	-	-	-	-	-	-	-
Denmark	NA	14772	15139	16187	18331	21605	23848	24850	25766	29083	29810	27927
Estonia	HETERO F	-	-	-	-	-	-	-	-	-	-	19
	HETERO M	-	-	-	-	-	-	-	-	-	-	2
	UNK	3806	4283	4114	2969	2771	2541	2529	2536	2206	2003	1665
Finland	NA	11729	12143	13666	12866	13378	12744	13878	13968	13873	13317	12825
France		-	-	-	-	-	-	-	-	-	-	-
Germany		-	-	-	-	-	-	-	-	-	-	-
Greece	HETERO F	-	-	-	-	-	-	-	-	1	48	336
	HETERO M	-	-	-	-	-	-	-	-	34	43	48
	MSM	-	-	-	-	-	-	-	-	4	8	11
	UNK	-	-	-	-	-	-	-	-	1	-	22
Hungary	NA	981	653	505	488	431	585	598	699	754	711	710
Iceland	NA	1771	2051	2032	1576	1664	1561	1672	1748	1782	2259	2134
Ireland	NA	1341	1637	1898	2227	2756	3281	3113	4919	6021	5687	5089
Latvia	HETERO F	-	-	-	-	-	-	-	1	192	359	488
	HETERO M	-	-	-	-	-	-	-	1	276	376	253
	MSM	-	-	-	-	-	-	-	-	3	9	2
	O	-	-	-	-	-	-	-	-	2	3	2
	UNK	647	589	582	502	528	729	820	714	277	395	231
Lithuania	HETERO F	-	-	-	-	-	-	-	-	195	124	110
	HETERO M	-	-	-	-	-	-	-	-	169	160	238
	MSM	-	-	-	-	-	-	-	-	5	-	-
	O	-	-	-	-	-	-	-	-	2	2	1
	UNK	-	-	-	-	-	-	-	-	32	40	18
Luxembourg	NA	-	-	-	-	-	-	1	-	2	-	2
Malta	HETERO F	-	-	-	-	-	1	21	21	36	27	52
	HETERO M	-	-	-	-	-	4	19	39	55	27	55
	MSM	-	-	-	-	-	-	1	8	9	6	21
	UNK	-	-	-	-	-	-	2	-	2	6	1
Netherlands	HETERO F	-	-	-	-	2441	2889	3551	3901	4473	4671	5463
	HETERO M	-	-	-	-	1865	2234	2630	2819	3319	3494	3908
	MSM	-	-	-	-	752	803	951	1095	1556	1613	1996
	O	-	-	-	-	1	1	1	2	2	2	3
	UNK	-	-	-	-	16	10	7	4	5	8	4
Norway	NA	-	-	-	-	-	-	21113	22677	23377	22666	22455
Poland	NA	-	-	-	-	-	-	612	627	695	908	539
Portugal		-	-	-	-	-	-	-	-	-	-	-
Romania	HETERO F	-	-	-	-	-	17	-	26	30	24	25
	HETERO M	-	-	-	-	-	60	-	89	46	66	70
	MSM	-	-	-	-	-	-	-	-	-	1	-
	O	-	-	-	-	-	79	-	-	12	-	-
	UNK	-	-	-	-	5	-	238	-	39	-	2
Slovakia	NA	-	-	-	-	-	-	61	78	105	228	186
Slovenia	HETERO F	-	-	-	-	-	1	32	39	19	24	48
	HETERO M	-	-	-	-	-	8	71	79	49	94	102
	MSM	-	-	-	-	-	-	6	35	14	5	2
	UNK	-	-	-	-	-	-	37	45	38	11	24
Spain	NA	92	87	97	113	120	145	139	223	401	845	944
Sweden	HETERO F	10400	12130	13514	15054	17719	17908	17372	24584	22468	19835	18873
	HETERO M	7641	9008	10037	11107	13347	13307	13006	18206	17110	14758	13841
	MSM	145	168	219	224	345	297	310	410	390	428	505
	MTCT	-	-	1	-	-	-	-	-	2	22	27
	O	77	40	33	38	45	120	182	234	184	205	149
	UNK	1104	1057	919	638	768	1154	1661	2431	2623	2519	2612
United Kingdom	HETERO F	40080	44687	50401	54369	57689	59014	58921	62676	71588	53570	55084
	HETERO M	29917	33422	38696	43214	48648	52077	56268	60881	64991	45149	46610
	MSM	24	39	34	52	47	71	68	72	90	4189	5073
	UNK	-	-	-	-	-	-	-	-	66806	111320	108734

Note: Cases with transmission = 'Hetero' and 'unknown gender' have been classified as NA. For Sweden, date of statistics is used.

4 Gonorrhoea

Table D: Gonorrhoea: data source, type of data surveillance, surveillance period

Country	Data source	Type	Period	Legal	Coverage
Austria	AT-STISentinella	A	1996–2005	V	Se
	AT-STISentinella	C	2006–2010	V	Se
Belgium	BE-LABNET	C	2006–2010	V	Se
Bulgaria	BG-STI	A	1990–2010	C	Co
Cyprus	CY-NOTIFIED_DISEASES	C	2006–2010	C	Co
Czech Republic	CZ-STD	A	1990–1998	C	Co
	CZ-STD	C	1999–2010	C	Co
Denmark	DK-LAB	A	1990–1999	C	Co
	DK-STI_CLINICAL	C	2000–2010	C	Co
Estonia	EE-GONOCOCC	A	1990–2007	C	Co
	EE-GONOCOCC	C	2008–2010	C	Co
Finland	FI-NIDR	C	2000–2010	C	Co
France	FR-STI	C	2004–2010	V	Se
Germany	-	-	-	-	-
Greece	GR-NOTIFIABLE_DISEASES	A	1990–2010	C	Other
Hungary	HU-STD SURVEILLANCE	A	1990–2010	C	Se
Iceland	IS-SUBJECT_TO_REGISTRATION	C	1997–2010	C	Co
Ireland	IE-AGGR_STI	A	1995–2010	C	Co
Italy*	IT-NRS	C	1998–2010	C	Other*
Latvia	LV-STI/SKIN_INFECTIONS	A	1990–2007	C	Co
	LV-BSN	C	2008–2010	C	Co
Lithuania	LT-COMMUNICABLE_DISEASES	A	2003–2007	C	Co
	LT-COMMUNICABLE_DISEASES	C	2008–2010	C	Co
Luxembourg	LU-SYSTEM1	C	2007–2010	C	Co
Malta	MT-DISEASE_SURVEILLANCE	C	2006–2010	C	Co
Netherlands	NL-STI	C	2004–2010	V	Se
Norway	NO-MSIS_B	C	2006–2010	C	Co
Poland	PL-NATIONAL_SURVEILLANCE	A	2006–2006	C	Co
	PL-NATIONAL_SURVEILLANCE	A	2007–2010	C	Co
Portugal	PT-GONOCOCCAL	C	1990–2010	C	Co
Romania	RO-RNSSy	A	1990–2009	C	Co
	RO-RNSSy	C	2010–2010	C	Co
Slovakia	SK-EPIS	C	2006–2010	C	Co
Slovenia	SI-SPOSUR	C	2006–2010	C	Co
Spain	ES-STATUTORY_DISEASES_STI_AGGR	A	1990–2010	C	Co
Sweden	SE-EpiBas	A	1990–1996	C	Co
	SE-SMINET	C	1997–2010	C	Co
United Kingdom	UK-GUM	A	1990–2010	C	Co
	UK-LAB	A	2010–2010	Other	Co

Legend: type: aggregated (A); case-based (C); legal: voluntary reporting (V), compulsory reporting (C), unknown (Unk); coverage: sentinel system (Se), comprehensive (Co), other.
* Italy: all physicians are required to report to the national register but less than 10% comply – no comprehensive system

4 Gonorrhoea

4.1 Key points

- In 2010, 32 028 gonorrhoea cases were reported from 28 EU/EEA Member States (data were not available from Germany and Liechtenstein) with an overall rate of 10.4 per 100 000 population. Gonorrhoea was reported three times more often in men than in women, with an overall rate of 17.1 per 100 000 in men and 6.4 per 100 000 in women.
- More than a quarter of all gonorrhoea cases in 2010 (26%) were reported in MSM.
- Over the last three years, increasing rates were observed in Cyprus, Finland, Ireland, Portugal, Norway and Sweden. Decreasing or stable rates were reported by all other countries.
- The overall trend in gonorrhoea across the EU/EEA over the past decade appears to be decreasing and shows two patterns: 1) a decreasing trend in a number of countries which previously reported very high rates, with either a continuous decline or stabilisation; 2) in other countries, continuous increases were observed over time. These trends must be interpreted with caution due to the heterogeneity in reporting and healthcare systems.

4.2 Source of data

Gonorrhoea data for 2010 were available from all countries except Germany and Liechtenstein. Table D specifies the source of the data, the type of data (aggregate and case based), coverage (either sentinel or comprehensive) and period of availability. Rates per 100 000 population were calculated for 22 countries with comprehensive or other systems. Countries with sentinel systems (Austria, Belgium, Cyprus, Hungary, Italy, the Netherlands) were excluded from the calculations.

Also shown in the table are the existing heterogeneity in systems, recent changes in systems, and reporting periods. Due to the variations in the coverage, completeness and representativeness of these data, direct comparisons of absolute numbers and rates should be conducted with caution since the proportion of diagnosed cases that is actually reported differs substantially across countries.

Table 4.1a shows that 12 countries submitted data on gonorrhoea for the period 1990–2010, e.g. Bulgaria, the Czech Republic, Denmark, Estonia, Greece, Hungary, Latvia, Portugal, Romania, Spain, Sweden and the United Kingdom. An additional four countries provided data on gonorrhoea for 2000–2010: Finland, Iceland, Ireland and Italy.

For the period 2000–2010, 15% of the data were provided in case-based format. The percentage of cases reported as case-based data has increased over recent years; in 2010, 28% of data was reported as case-based data. The following countries reported aggregated data: Bulgaria, Greece, Hungary, Ireland, Poland, Spain and the United Kingdom. This affects the amount of information available for analysis considerably as the aggregate format only includes gender, age and transmission category.

The completeness levels of the variables 'age' and 'gender' for 2010 data were 91% and 94%, respectively. Completeness of the epidemiological variables has improved: for the variable 'transmission category', information was available from 15 countries for a total of 72% of the cases. 'HIV status' was reported by eight countries in 2010, amounting to 13% of all cases. Seventeen countries reported 'site of infection' data in 2010, covering a total of 17% of all cases.

4.3 Case reports, 2010

Demographic variables

In 2010, 32 028 gonorrhoea cases were reported from 28 countries, with 58% of all cases being reported by one country, the UK (Table 4.1A). This resulted in an overall rate of 10.4 per 100 000 population for those countries in the EU/EEA that conduct comprehensive surveillance on gonorrhoea (Table 4.3). The overall rate is strongly affected by countries with a large population and a relatively low rate of gonorrhoea cases such as Poland.

Information on gender was missing in 6.4% (n=2045) of all cases in 2010; this was mainly due to missing information from Spain (1944 cases). The male-to-female ratio in 2010 was 2.5, which means that more than twice as many cases were reported in men (n=21 714) than in women (n=8 222) (Table 4.2). The overall rate in men was 17.1 per 100 000 and 6.4 per 100 000 in women (Table 4.4).

In 2010, the highest rates (>10/100 000 population) were observed in the UK (27.7 per 100 000), Latvia (15.3), Ireland (13.7) and Malta (11.4). The lowest rates (≤ 1.5/100 000) were observed in Bulgaria, Portugal, Poland and Luxembourg (Table 4.3; Figure 4.1).

The majority of countries reported male-to-female ratios of 2.6 or more when based on absolute number of cases. If calculated without the UK, the overall male-to-female ratio was 3.5. The male-to-female ratio ranged from 0.6 in Estonia to 21 in Slovenia. Only two countries reported a ratio below 1, Austria and Estonia (Figure 4.2). Greece reported an exceptionally high male-to-female ratio of 43.3. A possible explanation for the high male-to-female ratio reported by Greece could be that women prefer

Figure 4.1. **Number of gonorrhoea cases per 100 000 population, EU/EEA, 2010**

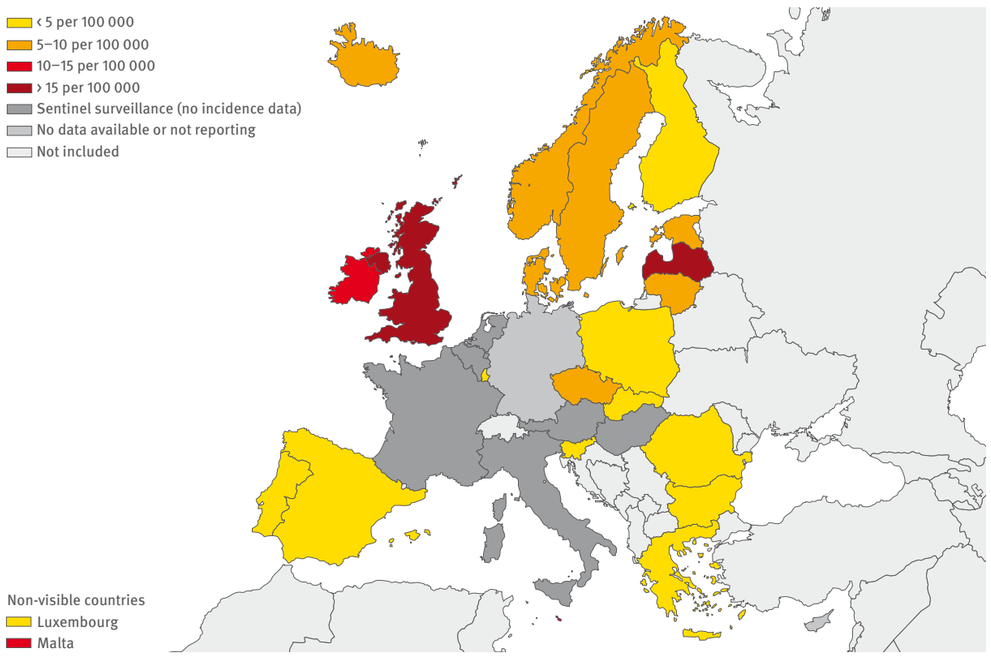
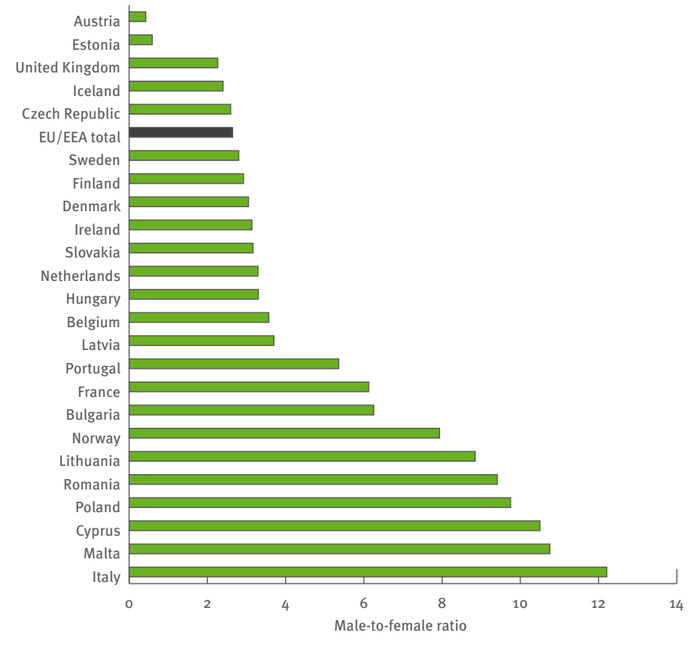


Figure 4.2. **Male-to-female ratio in reported gonorrhoea cases by country, 2010, EU/EEA countries**



Note: Not included are Greece and Slovenia, with a male-to-female ratio of 43.3 and 21, respectively.

to consult private physicians who often do not notify diagnoses despite the fact that reporting is mandatory. Countries that supply information on gender and also reported consistently in 2000–2010 had a fairly stable male-to-female ratio between 2.4 and 2.8.

In 2010, information on age was available for 26 countries, but in different formats. Due to incompatibilities in data presentation and age formats, data from the following countries were excluded: Estonia (1990–1997), Denmark (1990–1999), Hungary (2007–2008), Poland (2006–2010) and Romania (2006). Information on age was not available for Ireland and Spain (8% of all cases).

Figure 4.3 presents the age distribution in percentage of all cases with information on age in 2000 and 2010. The age group 25–34 years was the largest, representing 30% to 33% of all cases. The second largest group was the 20–24-year-olds.

Age-specific rates of reported cases are highest among 20–24-year-olds (31 per 100 000 population). Rates have decreased for all age groups since 2000 except for those over 45 years of age. The largest drops have been seen among 15–19- and 20–24-year-olds (Figure 4.4). Since 2008, age-specific rates have started increasing again among 20–24-, 25–34- and 35–44-year-olds.

In 2010, information on country of birth (or country of nationality when country of birth was not available) was available for 15 countries (Austria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Iceland, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Romania, and Slovenia), which together reported 20% of all cases (n=6 551). Of those cases, 76% were born in (or had the same nationality as) the reporting country, 15% came from another country, and 9% were of unknown nationality. The probable country of infection was reported consistently by 13 countries, with an average of 15% of the cases acquired in another country. This percentage varies from 0 in Lithuania and Slovakia to over 30% in Finland, Norway, Luxembourg and Sweden. The probable country of infection was not reported for 89% of cases in 2010.

Epidemiological variables

In 2010, information on transmission category was available for 15 countries (Austria, the Czech Republic, Denmark, Estonia, France, Greece, Latvia, Lithuania,

Figure 4.3. **Gonorrhoea cases by age category for 2000 (11 countries) and 2010 (18 countries), EU/EEA**

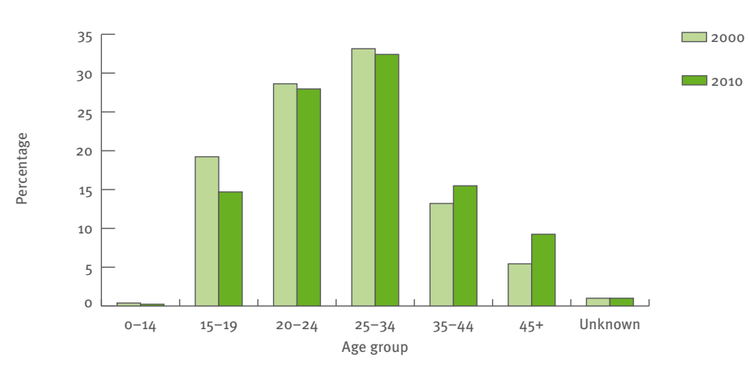


Figure 4.4. **Age-specific rates of reported cases of gonorrhoea for 2000 (11 countries) and 2010 (18 countries), EU/EEA**

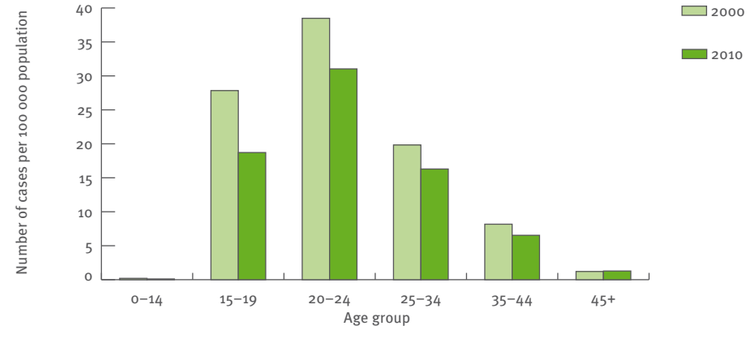


Table E: Number and percentage of gonorrhoea cases by transmission category and gender, EU/EEA, 2010

	Number of cases	Reporting countries	MSM	Heterosexual		Unknown
				Male	Female	
Gonorrhoea	25465	15	7433 (29%)	9177 (36%)	6456 (25%)	2396 (9%)

Note: Cases with unknown gender and heterosexual transmission category were classified as 'unknown'.

Figure 4.5. Percentage of gonorrhoea cases diagnosed in men who have sex with men, 2010

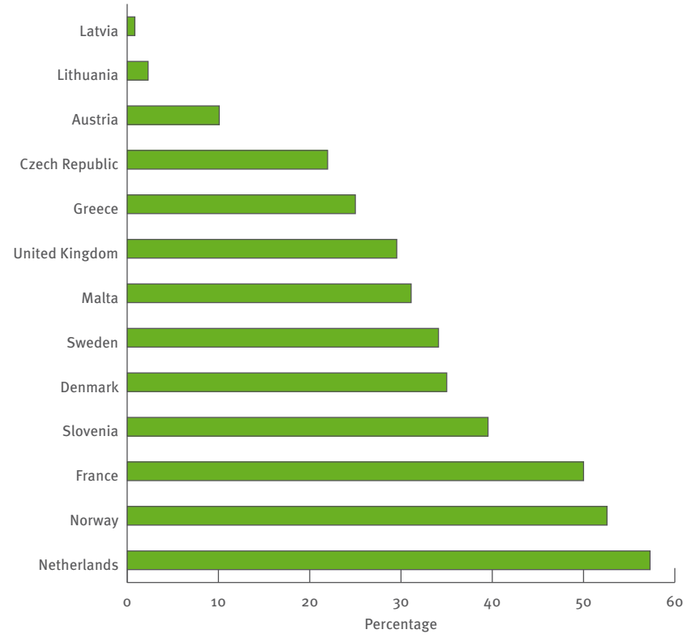
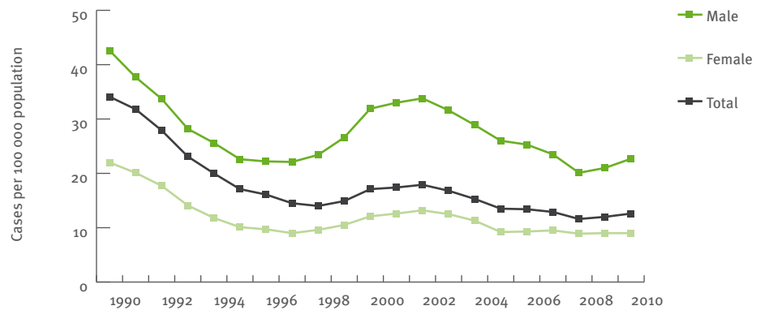


Figure 4.6. Trend in number of reported gonorrhoea cases per 100 000 population, EU/EEA, 1990–2010 (in 14 countries with consistent reporting)



Malta, Netherlands, Norway, Romania, Slovenia, Sweden and United Kingdom) providing 80% of the gonorrhoea cases (n=25465) (Table 4.6). The transmission category was unknown for 9% of cases, was indicated as heterosexual in 61% and as in MSM in 29% of the cases (Table E). Cases diagnosed in MSM represent 34% (n=7432) of all male cases diagnosed in 2010.

The percentage of all cases diagnosed in MSM (Figure 4.5) ranges from 10% or below in Austria, Latvia and Lithuania to over 45% in the Netherlands (57%), Norway (52%) and France (49%). Romania reported that all cases were transmitted heterosexually.

In 2010, information on HIV status was provided by eight countries (Austria, the Czech Republic, Denmark, France, Latvia, Malta, the Netherlands and Norway), representing 13% of the gonorrhoea cases (4 201 cases). Of these cases, 668 cases (12%) were HIV positive (either known or newly diagnosed), 62% were HIV negative, and no further information was available for 26%.

4.4 Trends in 1990–2010

Between 1990 and 2010, 763486 cases of gonorrhoea were reported from 28 countries with varying degrees of completeness over time. Rates were calculated for 21 countries that maintain comprehensive surveillance systems for gonorrhoea (Table 4.3).

Figure 4.6 shows an overall declining trend in the number of reported cases per 100000 population in the EU/EEA and for male and female populations when calculated for the 14 countries that have consistently reported in 2000–2010.

The rate declined from 34.1 per 100000 in 1990 to 17.1 in 2000. In 2000–2010, the rate decreased by an overall 26% to 12.6 per 100000 in 2010 when calculated for countries that reported consistently over time. In the periods 2000–2003 and 2008–2010, there were small increases in rates, mainly due to higher rates among men.

Table F: Relative change in notification rates between 2006–2010 and 2000–2010 (in 14 countries with consistent reporting in 2000–2010)

Country	2006–2010	2000–2010
Increase		
Greece	65	211
Denmark	14	200
Portugal	60	100
Ireland	34	78
Spain	27	62
Sweden	23	34
Mixed		
Iceland	-45	58
Finland	9	-8
Decrease		
Czech Republic	-33	-13
United Kingdom	-4	-22
Latvia	-53	-51
Bulgaria	-29	-79
Estonia	-61	-87
Romania	-65	-90

The overall trend however masks diverging trends in different countries and is strongly influenced by a number of countries that reported a high number of cases in the early 1990s, like Bulgaria, the Czech Republic, Estonia and Latvia (Figure 4.7).

The three graphs in Figure 4.7 show the number of reported cases per 100000 population for several countries. Five countries (Bulgaria, the Czech Republic, Estonia, Latvia, and Romania) reported very high rates in the early 1990s and since then rates have decreased significantly. However, the rate in Latvia remains fairly high. In the other countries the number of cases per 100000 population appeared to have stabilised or increased in the period from 2000 to 2010.

Table F specifies the relative change in notification rates in 2000–2010 and 2006–2010. The overall rates in 2000–2010 increased in six countries, namely Iceland, Denmark, Portugal, Greece, Spain and Ireland. Decreases were observed in Romania, Estonia, Bulgaria, Latvia, the UK, the Czech Republic and Finland.

Trends over the five-year period 2006–2010 (with more complete reporting) showed marked differences across countries, with an overall decrease of 5%. Decreasing trends were reported in 10 countries (Bulgaria, the Czech Republic, Estonia, Iceland, Latvia, Lithuania, Luxembourg, Poland, Romania and the UK), ranging from a 4% decrease (UK) to a decrease of more than 50% (Latvia, Romania and Estonia). Increases were reported by Cyprus, Denmark, Finland, Greece, Ireland, Malta, Norway, Portugal, Slovakia, Slovenia, Spain and Sweden. The increase in cases reported by Greece is linked to the improved participation of hospitals/laboratories in the national surveillance system.

Compared with 2009, the overall rate in 2010 remained stable. A few countries have reported notable increases, like Ireland (41%) and Sweden (36%), but those were offset by strong decreases in Iceland (-61%), Bulgaria (-40%), Portugal (-27%), Romania (-24%), Latvia (-20%), Denmark (-15%) and Estonia (-13%).

As rates cannot be calculated for countries with sentinel surveillance systems, the relative change was calculated for the absolute reported number of gonorrhoea cases in 2006–2010. The number of cases of gonorrhoea increased in 14 countries and decreased in another 14 countries (Figure 4.8). Decreases of more than 30% were observed in Romania, Estonia, Latvia, Iceland and the Czech Republic. Increases of more than 70% were observed in Norway, Slovakia, Austria, France and Cyprus. An overall increase of 3.5% was reported across the EU/EEA.

Figure 4.7a. Number of gonorrhoea cases per 100 000 population in selected EU/EEA Member States, 1990–2010

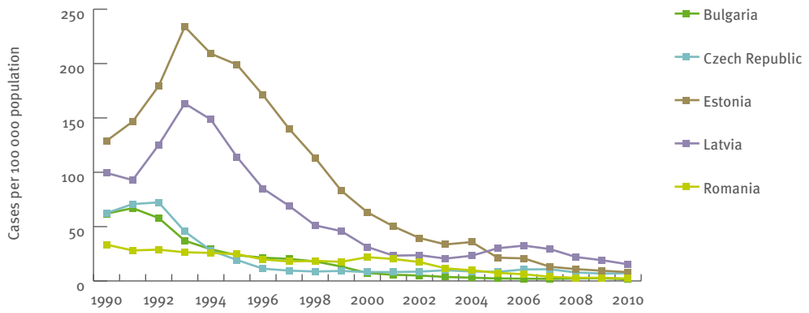


Figure 4.7b. Number of gonorrhoea cases per 100 000 population in selected EU/EEA Member States, 2000–2010

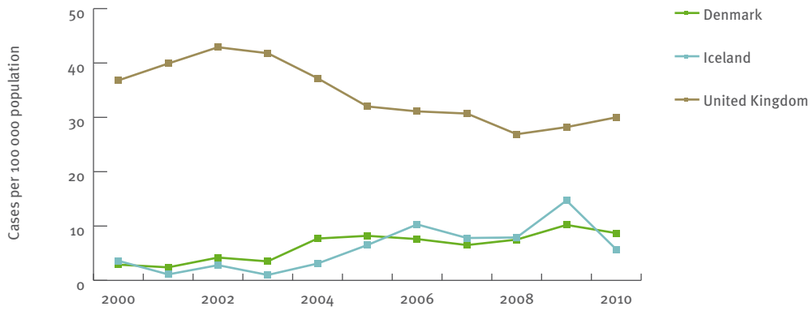


Figure 4.7c. Number of gonorrhoea cases per 100 000 population in selected EU/EEA Member States, 2000–2010

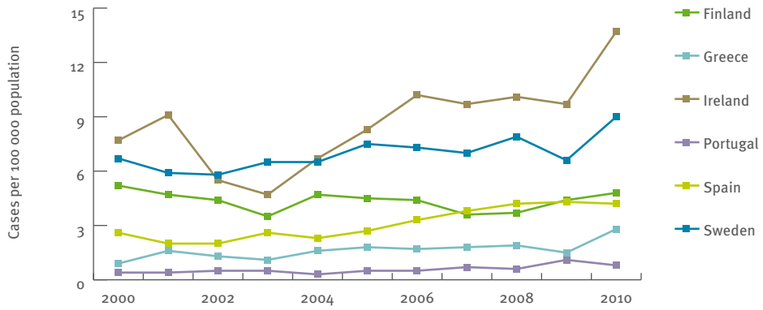
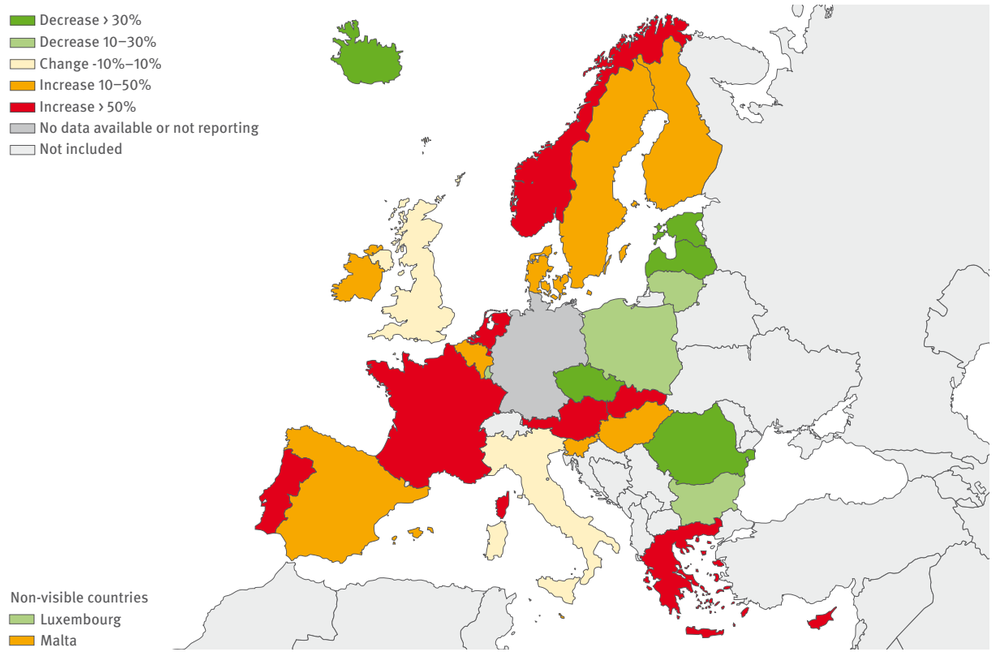


Figure 4.8. Relative change in the number of reported gonorrhoea cases, EU/EEA, 2006–2010



4.5. Discussion

Completeness of data reported

Two countries could not provide data on gonorrhoea. The completeness levels of the variables 'age' and 'gender' were above 90%. Completeness of the variable 'transmission category' increased between 2000 and 2010. In 2010, the UK started reporting transmission category for its cases and this increased the overall completeness to 72%. 'site of infection' was only available for 8% of the reported cases in 2001–2010. The variable 'age' in aggregate reports was reported in many different formats, hampering the presentation of submitted data.

Case reports and trends

The distribution of gonorrhoea varied considerably across countries, with rates ranging from below 1 case per 100 000 population to 28 cases. Almost 60% of the cases were reported by one county. There is no distinct geographical pattern across the EU/EAA: low rates (‹5 per 100 000) were reported in the south (Greece, Spain, Portugal), central and eastern Europa (Bulgaria, Romania, Poland, Slovenia) but also in Finland; intermediate rates (‹15) were found in the Scandinavian countries (Denmark, Norway, Sweden), Iceland, Ireland, Estonia, Lithuania, Malta and the Czech Republic. The highest rates were recorded in Latvia and the United Kingdom.

In all except one country, more male than female cases were reported, and 44% of cases were reported in 15–24-year-olds. The proportion of gonorrhoea cases reported in MSM varied across the EU/EEA, with high proportions reported mainly in the western and northern parts of the EU/EEA (France, Netherlands, Denmark, Norway, Sweden, UK) but also in Slovenia, Greece, the Czech Republic and Malta.

The interpretation of these findings is hampered by incompleteness of reporting and a lack of information in some countries. The high male-to-female ratio reported in many countries may indicate a possible underreporting of cases in MSM in countries where data on transmission category are available. Data from the other countries suggests that homosexually acquired cases are not indentified, not reported as such, or that many male cases were acquired through contact with sex workers. This needs to be carefully reviewed in collaboration with the respective Member States.

The overall trend in gonorrhoea across the reporting countries in EU/EEA in the past decades shows two distinct patterns: 1) a decreasing trend in a number of countries which reported very high notification rates of gonorrhoea in the 1990s, e.g. Bulgaria, Estonia, Latvia, the Czech Republic, and Romania; 2) up until 1999, a decreasing trend was observed in the remaining countries; by the early 2000s, overall number and rates were again on the rise. The previously high rates in eastern

4.6 Tables

Table 4.1a. Gonorrhoea: number of cases by year of diagnosis, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	595	440	379	434	414	539	985	902	848	660	171	131	263	143	339	**7243**
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	535	585	718	711	775	**3324**
Bulgaria	5431	5811	4975	3146	2460	1994	1791	1690	1491	1096	599	461	395	288	235	181	165	149	178	191	116	**32843**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	5	2	7	23	**45**
Czech Republic	6463	7283	7455	4700	2905	1993	1163	982	873	954	838	855	870	980	914	852	1075	1129	805	718	748	**44555**
Denmark	1990	1331	936	580	394	289	178	189	211	334	154	130	227	186	416	445	414	352	409	563	482	**10210**
Estonia	2025	2299	2790	3535	3089	2882	2437	1969	1577	1146	867	686	538	455	484	288	280	174	146	127	109	**27903**
Finland	-	-	-	-	-	-	-	-	-	-	271	241	226	184	247	235	231	192	198	237	255	**2517**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99	153	196	217	236	394	463	**1758**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Greece	108	117	143	137	133	117	96	91	147	124	98	177	144	119	177	197	190	201	208	164	312	**3200**
Hungary	4862	4396	3614	2617	2351	2161	1967	1604	1388	1247	1183	1033	929	898	742	851	916	1041	892	872	1170	**36734**
Iceland	-	-	-	-	-	-	-	5	6	6	10	3	8	3	9	19	31	24	25	47	18	**214**
Ireland	-	-	-	-	-	91	83	98	125	175	290	349	214	186	270	342	431	417	444	433	614	**4562**
Italy	-	-	-	-	-	-	-	-	290	261	237	345	278	287	349	370	258	152	154	213	251	**3445**
Latvia	2653	2466	3309	4223	3774	2853	2099	1690	1237	1101	745	551	555	481	537	694	746	669	487	433	357	**31660**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	503	482	433	437	471	533	391	315	**3565**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	18	6	3	**32**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	53	49	63	47	**244**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1656	1603	1778	1830	1969	2426	2815	**14077**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	236	238	301	269	411	**1455**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	395	330	285	402	301	**1713**
Portugal	246	227	167	147	80	67	69	59	38	64	45	38	54	52	28	52	53	74	67	114	89	**1830**
Romania	7751	6507	6558	6009	5872	5605	4477	4045	4166	3951	4907	4529	3806	2526	2119	1612	1348	815	631	622	479	**78335**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	81	152	171	126	**596**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	39	43	30	44	**190**
Spain	13702	11428	9059	7275	6168	4599	3951	2352	2169	1467	1048	805	833	1069	981	1155	1423	1698	1897	1954	1944	**76977**
Sweden	834	621	475	368	307	246	211	244	341	425	590	529	505	595	570	691	677	642	724	614	842	**11051**
United Kingdom	18868	18039	13458	10684	10283	10141	12533	13005	13145	16388	21627	23525	25375	24850	22234	19190	18801	18631	16451	17400	18580	**363208**
EU/EEA total	**64933**	**60525**	**52939**	**43421**	**37816**	**33038**	**31650**	**28463**	**27583**	**29173**	**33923**	**34796**	**35942**	**34564**	**33397**	**30023**	**30931**	**30341**	**28285**	**29715**	**32028**	**763486**

Table 4.1b. Gonorrhoea: number of cases by year of statistics, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	595	440	379	434	414	539	985	902	848	660	171	131	263	143	339	**7243**
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	535	585	718	734	752	**3324**
Bulgaria	5431	5811	4975	3146	2460	1994	1791	1690	1491	1096	599	461	395	288	235	181	165	149	178	191	116	**32843**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	5	2	7	23	**45**
Czech Republic	6463	7283	7455	4700	2905	1993	1163	982	899	944	847	846	873	997	885	856	1087	1108	809	716	744	**44555**
Denmark	1990	1331	936	580	394	289	178	189	211	334	154	130	227	186	416	445	414	352	409	563	482	**10210**
Estonia	2025	2299	2790	3535	3089	2882	2437	1969	1577	1146	867	686	538	455	484	288	280	176	146	126	108	**27903**
Finland	-	-	-	-	-	-	-	-	-	-	271	241	226	184	247	235	231	192	198	237	255	**2517**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	99	153	196	217	236	394	463	**1758**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Greece	108	117	143	137	133	117	96	91	147	124	98	177	144	119	177	197	190	201	208	164	312	**3200**
Hungary	4862	4396	3614	2617	2351	2161	1967	1604	1388	1247	1183	1033	929	898	742	851	916	1041	892	872	1170	**36734**
Iceland	-	-	-	-	-	-	-	5	6	6	10	3	8	3	9	19	31	24	25	47	18	**214**
Ireland	-	-	-	-	-	91	83	98	125	175	290	349	214	186	270	342	431	417	444	433	614	**4562**
Italy	-	-	-	-	-	-	-	-	290	261	237	345	278	287	349	370	258	152	154	213	251	**3445**
Latvia	2653	2466	3309	4223	3774	2853	2099	1690	1237	1101	745	551	555	481	537	694	746	670	500	433	343	**31660**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	503	482	433	437	471	533	391	315	**3565**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	18	6	3	**32**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	52	50	62	47	**244**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1656	1603	1778	1830	1969	2426	2815	**14077**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	236	238	301	269	411	**1455**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	395	330	285	402	301	**1713**
Portugal	246	227	167	147	80	67	69	59	38	64	45	38	54	52	28	52	53	74	67	114	89	**1830**
Romania	7751	6507	6558	6009	5872	5605	4477	4045	4166	3951	4907	4529	3806	2526	2119	1612	1348	815	631	622	479	**78335**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	66	81	152	172	125	**596**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34	42	40	30	44	**190**
Spain	13702	11428	9059	7275	6168	4599	3951	2352	2169	1467	1048	805	833	1069	981	1155	1423	1698	1897	1954	1944	**76977**
Sweden	834	621	475	368	307	246	211	251	357	424	598	527	521	582	579	679	657	642	722	610	840	**11051**
United Kingdom	18868	18039	13458	10684	10283	10141	12533	13005	13145	16388	21627	23525	25375	24850	22234	19190	18801	18631	16451	17400	18580	**363208**
EU/EEA total	**64933**	**60525**	**52939**	**43421**	**37816**	**33038**	**31650**	**28470**	**27625**	**29162**	**33940**	**34785**	**35961**	**34568**	**33377**	**30015**	**30924**	**30325**	**28298**	**29731**	**31983**	**763486**

Note: Probable cases for Austria/Slovakia are excluded. Microbiological data from Spain are excluded.

Table 4.2. Gonorrhoea: number of cases by gender, 1990–2010

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	292	156	198	93	191	88	222	89	206	87
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	3931	2532	4334	2949	4483	2972	2842	1858	1814	1091	1304	689	778	385	694	288	602	297	668	276	608	239
Denmark	1133	857	807	524	588	348	371	209	291	103	221	68	142	36	154	35	187	24	291	43	136	18
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	926	651	694	452	528	339
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	211	60
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	46	1	34	2	113	2	93	3	59	-	66	-	55	-	61	2	116	5	114	2	93	5
Hungary	3496	1366	3204	1192	2635	979	1902	715	1745	606	1607	554	1440	527	1190	414	1078	310	952	295	855	328
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	4	2	3	3	5	5
Ireland	-	-	-	-	-	-	-	-	-	-	82	9	70	13	85	13	95	30	135	40	228	62
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	265	23	249	12	221	10
Latvia	1443	1210	1346	1120	1863	1446	2430	1793	2219	1555	1627	1226	1246	853	1091	599	880	357	777	324	520	225
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	189	57	182	45	141	26	128	19	72	8	57	10	60	9	47	12	35	3	45	19	37	8
Romania	5849	1902	4848	1659	4772	1786	4444	1565	4467	1405	4311	1294	3455	1022	3166	879	3340	826	3166	785	3921	986
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	434	183	353	121	272	96	224	83	201	45	173	38	202	48	295	62	363	61	515	83
United Kingdom	12019	6849	11419	6620	8589	4869	6994	3690	6816	3467	6680	3461	8302	4231	8811	4194	8806	4339	11158	5230	14987	6640
EU/EEA total	**28106**	**14774**	**26608**	**14294**	**23537**	**12549**	**19476**	**9948**	**17707**	**8318**	**16156**	**7356**	**16013**	**7270**	**15702**	**6579**	**16820**	**7017**	**18837**	**7631**	**23071**	**9095**

Note: Probable cases for Austria/Slovakia are excluded. Microbiological data from Spain are excluded.

Table 4.2. Gonorrhoea: number of cases by gender, 1990–2010 (continued)

Country	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		Cumulative total		Unk./ Missing	Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Austria	297	116	593	253	588	189	556	181	433	140	42	129	34	97	48	215	31	112	101	238	3832	2183	1228	**7243**
Belgium	-	-	-	-	-	-	-	-	-	-	417	115	433	147	557	160	579	151	582	163	2568	736	20	**3324**
Bulgaria	-	-	-	-	202	86	187	48	152	29	135	30	137	12	143	35	167	24	100	16	1223	280	31340	**32843**
Cyprus	-	-	-	-	-	-	-	-	-	-	8	-	4	1	2	-	6	1	21	2	41	4	-	**45**
Czech Republic	612	234	621	252	679	318	576	309	593	263	774	313	783	325	605	204	519	197	537	207	28357	16198	-	**44555**
Denmark	107	23	190	37	166	20	363	53	391	54	342	72	290	62	323	86	431	132	363	119	7287	2923	-	**10210**
Estonia	371	315	283	255	235	220	221	263	114	174	90	190	65	111	54	92	54	72	40	68	3675	3202	21026	**27903**
Finland	195	46	175	51	156	28	197	50	191	44	171	60	156	36	158	40	179	58	190	65	1979	538	-	**2517**
France	-	-	-	-	-	-	97	2	148	5	186	10	196	21	212	24	337	57	398	65	1574	184	-	**1758**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	**0**
Greece	169	8	140	4	115	4	174	3	192	5	186	4	198	3	203	5	161	3	260	6	2648	67	485	**3200**
Hungary	756	277	696	233	685	213	539	203	614	237	713	203	790	251	647	245	669	203	898	272	27111	9623	-	**36734**
Iceland	1	2	5	1	1	-	3	6	14	5	21	10	19	5	14	11	24	23	12	5	129	80	5	**214**
Ireland	265	82	90	122	146	38	234	30	303	32	380	48	355	56	360	73	340	88	455	145	3623	881	58	**4562**
Italy	327	11	265	10	268	13	322	24	347	20	232	25	136	15	135	19	192	20	232	19	3191	221	33	**3445**
Latvia	400	151	402	153	368	113	415	122	522	172	552	194	522	148	361	139	322	111	270	73	19576	12084	-	**31660**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	**0**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	452	81	317	74	283	32	1052	187	2326	**3565**
Luxembourg	-	-	-	-	-	-	-	-	-	-	4	-	1	-	12	4	4	1	3	-	24	5	3	**32**
Malta	-	-	-	-	-	-	-	-	-	-	27	6	43	9	42	8	45	16	43	4	200	43	1	**244**
Netherlands	-	-	-	-	-	-	1300	356	1270	333	1401	377	1405	424	1512	456	1887	539	2158	655	10933	3140	4	**14077**
Norway	-	-	-	-	-	-	-	-	-	-	205	31	208	30	260	41	235	34	365	46	1273	182	-	**1455**
Poland	-	-	-	-	-	-	-	-	-	-	351	44	295	35	257	28	358	44	273	28	1534	179	-	**1713**
Portugal	29	9	42	12	43	9	19	9	48	4	49	4	65	9	56	11	99	15	75	14	1518	312	-	**1830**
Romania	3611	918	3087	719	2085	441	1671	448	1341	271	1114	234	696	119	553	78	549	73	433	46	60879	17456	-	**78335**
Slovakia	-	-	-	-	-	-	-	-	-	-	53	13	60	21	121	31	131	41	95	30	460	136	-	**596**
Slovenia	-	-	-	-	-	-	-	-	-	-	32	2	37	5	39	1	25	5	42	2	175	15	-	**190**
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	76977	**76977**
Sweden	443	84	431	90	462	120	501	78	569	110	521	136	519	123	585	137	468	141	619	221	8150	2060	841	**11051**
United Kingdom	16376	7149	17604	7771	17175	7675	15484	6750	13720	5470	13334	5467	12701	5930	10860	5591	11698	5672	12866	5681	246399	116746	63	**363208**
EU/EEA total	**23959**	**9425**	**24624**	**9963**	**23374**	**9487**	**22859**	**8935**	**20962**	**7368**	**21340**	**7717**	**20148**	**7995**	**18571**	**7815**	**19827**	**7907**	**21714**	**8222**	**439411**	**189665**	**134410**	**763486**

Note: Probable cases for Austria/Slovakia are excluded. Microbiological data from Spain are excluded.

Table 4.3. Gonorrhoea: number of cases per 100 000 population, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	61.9	67	57.9	37.1	29.1	23.7	21.4	20.3	18	13.3	7.3	5.7	5	3.7	3	2.3	2.1	1.9	2.3	2.5	1.5
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	62.4	70.7	72.3	45.5	28.1	19.3	11.3	9.5	8.7	9.2	8.2	8.2	8.6	9.8	8.7	8.4	10.6	10.8	7.8	6.8	7.1
Denmark	38.8	25.9	18.1	11.2	7.6	5.5	3.4	3.6	4	6.3	2.9	2.4	4.2	3.5	7.7	8.2	7.6	6.5	7.5	10.2	8.7
Estonia	128.9	146.6	179.4	233.9	209.1	199	171	140	113.2	83.1	63.2	50.2	39.5	33.6	35.8	21.4	20.8	13.1	10.9	9.4	8.1
Finland	-	-	-	-	-	-	-	-	-	-	5.2	4.7	4.4	3.5	4.7	4.5	4.4	3.6	3.7	4.4	4.8
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	1.1	1.1	1.4	1.3	1.3	1.1	0.9	0.8	1.4	1.1	0.9	1.6	1.3	1.1	1.6	1.8	1.7	1.8	1.9	1.5	2.8
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	1.9	2.2	2.2	3.6	1.1	2.8	1	3.1	6.5	10.3	7.8	7.9	14.7	5.7
Ireland	-	-	-	-	-	2.5	2.3	2.7	3.4	4.7	7.7	9.1	5.5	4.7	6.7	8.3	10.2	9.7	10.1	9.7	13.7
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	99.4	92.8	125.2	163.3	148.5	114.1	85	69.1	51.1	45.9	31.3	23.3	23.7	20.6	23.2	30.1	32.5	29.4	22	19.1	15.3
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	14.5	14	12.6	12.8	13.9	15.8	11.7	9.5
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0.9	0.2	3.7	1.2	0.6
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1	12.8	12.2	15	11.4
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.1	5.1	6.4	5.6	8.5
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0.9	0.7	1.1	0.8
Portugal	2.5	2.3	1.7	1.5	0.8	0.7	0.7	0.6	0.4	0.6	0.4	0.4	0.5	0.5	0.3	0.5	0.5	0.7	0.6	1.1	0.8
Romania	33.4	28.1	28.8	26.4	25.8	24.7	19.8	17.9	18.5	17.6	21.9	20.2	17.4	11.6	9.8	7.4	6.2	3.8	2.9	2.9	2.2
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	1.5	2.8	3.2	2.3
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	2.1	2	1.5	2.1
Spain	35.3	29.4	23.2	18.6	15.7	11.7	10	6	5.5	3.7	2.6	2	2	2.6	2.3	2.7	3.3	3.8	4.2	4.3	4.2
Sweden	9.8	7.2	5.5	4.2	3.5	2.8	2.4	2.8	4	4.8	6.7	5.9	5.8	6.5	6.5	7.5	7.3	7	7.9	6.6	9
United Kingdom	33	31.5	23.4	18.5	17.8	17.5	21.6	22.3	22.5	28	36.8	39.9	42.9	41.8	37.2	32	31.1	30.7	26.9	28.2	30
Total	**34.1**	**31.8**	**27.9**	**23.1**	**20**	**17.1**	**16.1**	**14.5**	**14**	**14.9**	**17.1**	**17.4**	**17.9**	**16.8**	**15.3**	**13.5**	**10.9**	**10.6**	**9.6**	**9.9**	**10.4**

Table 4.4. Gonorrhoea: number of cases per 100 000 population by gender, 1990–2010

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	78.1	47.5	86.7	55.6	89.6	56	56.7	35	36.1	20.5	26	13	15.5	7.3	13.8	5.4	12	5.6	13.3	5.2	12.2	4.5
Denmark	44.8	32.9	31.8	20.1	23.1	13.3	14.5	8	11.4	3.9	8.6	2.6	5.5	1.4	5.9	1.3	7.1	0.9	11.1	1.6	5.2	0.7
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	144	86.8	109.1	60.8	83.5	45.9
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8.4	2.3
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	0.9	0	0.7	0	2.2	0	1.8	0.1	1.1	0	1.3	0	1	0	1.1	0	2.2	0.1	2.1	0	1.7	0.1
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.2	1.5	2.9	1.5	2.2	2.2	3.6	3.6
Ireland	-	-	-	-	-	-	-	-	-	-	4.6	0.5	3.9	0.7	4.7	0.7	5.2	1.6	7.3	2.1	12.1	3.3
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	116.3	84.8	108.9	78.8	151.6	102.2	202.7	129.3	188.8	113.9	140.9	91.1	109.4	64.1	96.8	45.4	78.9	27.3	70.3	25	47.4	17.5
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	3.9	1.1	3.8	0.9	2.9	0.5	2.7	0.4	1.5	0.2	1.2	0.2	1.2	0.2	1	0.2	0.7	0.1	0.9	0.4	0.8	0.2
Romania	51.1	16.2	42.4	14.1	42.6	15.4	39.7	13.5	40	12.1	38.7	11.2	31.1	8.8	28.6	7.6	30.3	7.2	28.8	6.8	35.7	8.6
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	10.2	4.2	8.3	2.8	6.3	2.2	5.2	1.9	4.6	1	4	0.8	4.6	1.1	6.7	1.4	8.3	1.4	11.8	1.9
United Kingdom	43.3	23.3	41	22.5	30.7	16.5	25	12.4	24.3	11.7	23.7	11.6	29.4	14.2	31.1	14	31	14.5	39.1	17.4	52.3	22
Total	**42.6**	**22**	**37.7**	**20.1**	**33.7**	**17.7**	**28.2**	**14.1**	**25.6**	**11.8**	**22.6**	**10.1**	**22.2**	**9.7**	**22.1**	**9**	**23.4**	**9.6**	**26.6**	**10.5**	**31.9**	**12.1**

Note: Rates are only calculated for countries with comprehensive surveillance.

Table 4.4. Gonorrhoea: number of cases per 100 000 population by gender, 1990–2010 (continued)

Country	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	5.3	2.1	4.9	1.2	4	0.7	3.6	0.8	3.7	0.3	3.9	0.9	4.5	0.6	2.7	0.4
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	12.2	4.4	12.5	4.8	13.7	6.1	11.6	5.9	11.9	5	15.5	6	15.6	6.2	11.9	3.9	10.1	3.7	10.4	3.9
Denmark	4	0.9	7.2	1.4	6.2	0.7	13.6	1.9	14.6	2	12.7	2.6	10.8	2.3	11.9	3.1	15.8	4.7	13.2	4.3
Estonia	58.8	42.8	45.1	34.8	37.6	30.1	35.5	36.1	18.4	23.9	14.5	26.2	10.5	15.3	8.7	12.7	8.7	10	6.5	9.4
Finland	7.7	1.7	6.9	1.9	6.1	1.1	7.7	1.9	7.5	1.6	6.6	2.2	6	1.3	6.1	1.5	6.9	2.1	7.2	2.4
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	3.1	0.1	2.6	0.1	2.1	0.1	3.2	0.1	3.5	0.1	3.4	0.1	3.6	0.1	3.7	0.1	2.9	0.1	4.6	0.1
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	0.7	1.4	3.5	0.7	0.7	0	2.1	4.1	9.5	3.4	13.9	6.7	12.1	3.3	8.7	7.1	14.8	14.6	7.5	3.2
Ireland	13.9	4.3	4.6	6.2	7.4	1.9	11.7	1.5	14.8	1.6	18.1	2.3	16.5	2.6	16.4	3.3	15.4	3.9	20.5	6.4
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	36.7	11.8	37.2	12.1	34.3	9	38.8	9.8	49.1	13.8	52.2	15.7	49.7	12	34.5	11.4	30.9	9.1	26	6
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28.8	4.5	20.3	4.1	18.3	1.8
Luxembourg	-	-	-	-	-	-	-	-	-	-	1.7	0	0.4	0	5	1.6	1.6	0.4	1.2	0
Malta	-	-	-	-	-	-	-	-	-	-	13.4	2.9	21.2	4.4	20.6	3.9	21.9	7.7	20.9	1.9
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	8.9	1.3	8.9	1.3	11	1.7	9.8	1.4	15	1.9
Poland	-	-	-	-	-	-	-	-	-	-	1.9	0.2	1.6	0.2	1.4	0.1	1.9	0.2	1.5	0.1
Portugal	0.6	0.2	0.8	0.2	0.9	0.2	0.4	0.2	0.9	0.1	1	0.1	1.3	0.2	1.1	0.2	1.9	0.3	1.5	0.3
Romania	32.9	8	28.9	6.4	19.6	4	15.8	4	12.7	2.4	10.6	2.1	6.6	1.1	5.3	0.7	5.2	0.7	4.1	0.4
Slovakia	-	-	-	-	-	-	-	-	-	-	2	0.5	2.3	0.8	4.6	1.1	5	1.5	3.6	1.1
Slovenia	-	-	-	-	-	-	-	-	-	-	3.3	0.2	3.7	0.5	4	0.1	2.5	0.5	4.1	0.2
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	10.1	1.9	9.8	2	10.4	2.7	11.3	1.7	12.7	2.4	11.6	3	11.5	2.7	12.8	3	10.2	3	13.3	4.7
United Kingdom	56.9	23.6	60.9	25.6	59.2	25.2	53	22.1	46.7	17.8	45.1	17.7	42.6	19.1	36.2	17.9	38.7	18.1	42.2	18
Total	**33**	**12.6**	**33.8**	**13.2**	**30.2**	**12**	**27.6**	**10.8**	**24.9**	**8.7**	**18.7**	**6.7**	**17.4**	**6.8**	**15.4**	**6.4**	**16**	**6.5**	**17.1**	**6.4**

Note: Rates are only calculated for countries with comprehensive surveillance.

Table 4.5. Gonorrhoea: number of cases by age category, 2000–2010

Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total number by age category											
0–14	118	134	165	118	90	96	68	82	71	78	66
15–19	5950	6175	6346	6077	5702	4629	4327	4639	4368	4425	4252
20–24	8859	9277	9517	9101	8482	7472	7145	7300	6816	7478	8091
25–34	10257	10185	10309	9496	9241	8450	8355	7766	7354	8228	9379
35–44	4087	4396	4630	4486	4590	4335	4376	3922	3565	4001	4481
45+	1682	1886	1922	1870	2003	1897	2066	2002	1973	2461	2674
NA	905	913	847	1148	1198	1133	2996	2762	2065	903	1084
Total	**31858**	**32966**	**33736**	**32296**	**31306**	**28012**	**29333**	**28473**	**26212**	**27574**	**30027**
Proportion by age category											
0–14	0.4	0.4	0.5	0.4	0.3	0.3	0.2	0.3	0.3	0.3	0.2
15–19	18.7	18.7	18.8	18.8	18.2	16.5	14.8	16.3	16.7	16.0	14.2
20–24	27.8	28.1	28.2	28.2	27.1	26.7	24.4	25.6	26.0	27.1	26.9
25–34	32.2	30.9	30.6	29.4	29.5	30.2	28.5	27.3	28.1	29.8	31.2
35–44	12.8	13.3	13.7	13.9	14.7	15.5	14.9	13.8	13.6	14.5	14.9
45+	5.3	5.7	5.7	5.8	6.4	6.8	7.0	7.0	7.5	8.9	8.9
NA	2.8	2.8	2.5	3.6	3.8	4.0	10.2	9.7	7.9	3.3	3.6

Note: NA includes data for countries which reported incorrect age-groups.

Table 4.6. Gonorrhoea: number of cases by transmission category and gender, 2000–2010

Country	Transm.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	HETERO F	-	-	-	-	-	-	129	-	215	112	238
	HETERO M	-	-	-	-	-	-	30	-	26	23	65
	MSM	-	-	-	-	-	-	10	-	12	6	34
	UNK	293	413	846	777	737	573	2	131	10	2	2
Belgium	NA	-	-	-	-	-	-	532	580	717	730	745
Bulgaria	NA	-	-	-	288	235	181	165	149	178	191	116
Cyprus	HETERO M	-	-	-	-	-	-	-	-	2	2	-
	UNK	-	-	-	-	-	-	8	5	-	5	23
Czech Republic	HETERO F	208	201	228	300	291	255	297	310	194	183	199
	HETERO M	471	461	514	510	433	398	563	550	430	331	364
	MSM	49	76	65	114	96	167	183	200	145	169	159
	O	3	2	2	3	-	1	3	5	3	1	2
	UNK	116	106	64	70	65	35	41	43	37	32	20
Denmark	HETERO F	18	23	37	20	51	50	72	61	84	122	110
	HETERO M	77	39	99	89	129	143	152	142	174	235	174
	MSM	53	59	83	69	200	204	147	126	117	158	153
	UNK	6	9	8	8	36	48	43	23	34	48	45
Estonia	HETERO F	-	-	-	-	-	-	-	-	-	-	3
	HETERO M	-	-	-	-	-	-	-	-	-	-	5
	MTCT	-	-	-	-	-	-	-	-	-	1	-
	UNK	867	686	538	455	484	288	280	176	146	125	100
Finland	NA	271	241	226	184	247	235	231	192	198	237	255
France	HETERO F	-	-	-	-	2	5	10	21	23	57	63
	HETERO M	-	-	-	-	28	44	51	65	61	122	163
	MSM	-	-	-	-	68	104	132	128	149	214	227
	O	-	-	-	-	-	-	-	-	1	-	2
	UNK	-	-	-	-	1	-	3	3	2	1	8
Greece	HETERO F	-	-	-	-	-	-	-	-	5	3	6
	HETERO M	-	-	-	-	-	-	-	-	130	119	155
	MSM	-	-	-	-	-	-	-	-	45	39	53
	UNK	98	177	144	119	177	197	190	201	28	3	52
Hungary	NA	1183	1033	929	898	742	851	916	1041	892	872	1170
Iceland	HETERO F	-	-	-	-	-	-	7	2	2	-	-
	HETERO M	-	-	1	-	-	-	12	6	4	-	-
	MSM	-	-	-	-	-	-	-	1	1	-	-
	UNK	10	3	5	1	9	19	12	15	18	47	17
Ireland	NA	290	347	212	184	264	335	428	411	433	428	600
Italy	NA	231	338	275	281	346	367	257	151	154	212	251
Latvia	HETERO F	-	-	-	-	-	-	-	1	83	78	56
	HETERO M	-	-	-	-	-	-	-	-	214	218	181
	MSM	-	-	-	-	-	-	-	-	1	6	2
	UNK	745	551	555	481	537	694	746	669	202	131	104
Lithuania	HETERO F	-	-	-	-	-	-	-	-	77	68	30
	HETERO M	-	-	-	-	-	-	-	-	435	282	265
	MSM	-	-	-	-	-	-	-	-	9	1	7
	O	-	-	-	-	-	-	-	-	2	4	3
	UNK	-	-	-	-	-	-	-	-	10	36	10
Luxembourg	NA	-	-	-	-	-	-	4	1	16	5	3
Malta	HETERO F	-	-	-	-	-	-	6	8	7	11	4
	HETERO M	-	-	-	-	-	-	6	31	29	30	27
	MSM	-	-	-	-	-	-	20	11	7	12	14
	O	-	-	-	-	-	-	-	1	1	2	-
	UNK	-	-	-	-	-	-	1	1	6	6	2
Netherlands	HETERO F	-	-	-	-	356	333	377	424	456	539	655
	HETERO M	-	-	-	-	511	418	432	436	417	483	545
	MSM	-	-	-	-	786	848	966	964	1095	1402	1612
	O	-	-	-	-	-	-	-	1	1	-	2
	UNK	-	-	-	-	3	4	3	5	-	2	1
Norway	HETERO F	-	-	-	-	-	-	31	30	41	34	45
	HETERO M	-	-	-	-	-	-	126	130	162	135	148
	MSM	-	-	-	-	-	-	68	77	98	95	215
	MTCT	-	-	-	-	-	-	-	-	-	1	-
	O	-	-	-	-	-	-	-	-	-	-	1
	UNK	-	-	-	-	-	-	11	1	-	4	2
Poland	NA	-	-	-	-	-	-	395	330	285	402	301
Portugal	MTCT	-	-	-	-	-	-	-	-	-	1	-
	UNK	45	38	54	52	28	52	53	74	67	113	89
Romania	HETERO F	-	-	-	-	-	193	-	119	63	73	46
	HETERO M	-	-	-	-	-	1079	-	694	423	547	433
	MSM	-	-	-	-	-	4	-	2	1	1	-
	O	-	-	-	-	-	336	-	-	54	1	-
	UNK	4907	4529	3806	2526	2119	-	1348	-	90	-	-
Slovakia	NA	-	-	-	-	-	-	66	81	152	172	125
Slovenia	HETERO F	-	-	-	-	-	-	2	4	1	5	2
	HETERO M	-	-	-	-	-	-	19	9	27	16	24
	MSM	-	-	-	-	-	-	12	25	10	7	17
	UNK	-	-	-	-	-	-	1	4	2	2	1
Sweden	HETERO F	82	84	89	120	78	107	117	111	128	139	211
	HETERO M	263	258	234	250	225	232	268	275	312	273	323
	MSM	245	174	194	204	267	322	190	198	242	171	279
	MTCT	-	-	-	-	-	-	-	-	-	1	3
	O	-	1	-	1	2	2	2	8	6	2	2
	UNK	8	10	4	7	7	16	80	50	34	23	22
United Kingdom	HETERO F	6640	7149	7771	7675	6750	5470	5467	5930	5591	4173	4788
	HETERO M	11927	12743	14075	13354	11615	9456	8919	9046	7890	5602	6305
	MSM	3060	3633	3529	3821	3869	4264	4415	3655	2970	3744	4661
	UNK	-	-	-	-	-	-	-	-	-	3851	2793

Note: Cases with transmission = 'Hetero' and 'unknown gender' have been classified as NA.

5 Syphilis

Table G: Syphilis: data source, type of data surveillance, surveillance period

Country	Data source	Type	Period	Legal	Coverage
Austria	AT-STISentinella	A	1996–2005	V	Se
	AT-STISentinella	C	2006–2010	V	Se
Belgium	BE-LABNET	C	2006–2010	V	Se
Bulgaria	BG-STI	A	1990–2010	C	Co
Cyprus	CY-NOTIFIED_DISEASES	C	2006–2010	C	Co
Czech Republic	CZ-STD	A	1990–1998	C	Co
	CZ-STD	C	1999–2010	C	Co
Denmark	DK-LAB	A	1990–1999	C	Co
	DK-STI_CLINICAL	C	2000–2010	C	Co
Estonia	EE-PERTUSSIS/SHIGELLOSIS/ SYPHILIS	A	1990–2007	C	Co
	EE-PERTUSSIS/SHIGELLOSIS/ SYPHILIS	C	2008–2010	C	Co
Finland	FI-NIDR	C	2000–2010	C	Co
France	FR-STI	C	2000–2010	V	Se
Germany	DE-SURVNET@RKI-7.3	C	2001–2010	C	Co
Greece*	GR-NOTIFIABLE_DISEASES	A	2003–2010	C	Other*
Hungary	HU-STD SURVEILLANCE	A	1990–2010	C	Se
Iceland	IS-SUBJECT_TO_REGISTRATION	C	2000–2010	C	Co
Ireland	IE-SYPHILIS	C	2000–2010	C	Co
Italy**	IT-NRS	C	1998–2010	C	Other**
Latvia	LV-STI/SKIN_INFECTIONS	A	1990–2007	C	Co
	LV-BSN	C	2008–2010	C	Co
Lithuania	LT-COMMUNICABLE_DISEASES	A	2003–2007	C	Co
	LT-COMMUNICABLE_DISEASES	C	2008–2010	C	Co
Luxembourg	LU-SYSTEM1	C	2006–2010	C	Co
Malta	MT-DISEASE_SURVEILLANCE	C	2006–2010	C	Co
Netherlands	NL-STI	C	2004–2010	V	Se
Norway	NO-MSIS_B	C	2006–2010	C	Co
Poland	PL-NATIONAL_SURVEILLANCE	A	2006–2010	C	Co
Portugal	PT-SYPHILIS	C	1990–2010	C	Co
Romania	RO-RNSSy	A	1990–2009	C	Co
	RO-RNSSy	C	2010–2010	C	Co
Slovakia	SK-EPIS	C	2006–2010	C	Co
Slovenia	SI-SPOSUR	C	2006–2010	C	Co
Spain	ES-STATUTORY_DISEASES_STI_ AGGR	A	1990–2010	C	Co
Sweden	SE-EpiBas	A	1990–1996	C	Co
	SE-SMINET	C	1997–2010	C	Co
United Kingdom	UK-GUM	A	1990–2010	C	Co
	UK-LAB	A	2010–2010	Other	Co

Legend: type: aggregated (A); case-based (C); legal: voluntary reporting (V), compulsory reporting (C); coverage; sentinel system (Se), comprehensive (Co, Other)
* Greece: in 2008 a new surveillance system was introduced which is designed to be comprehensive; at present it does not offer national coverage
** Italy: all physicians are required to report to the national register but less than 10% comply – no comprehensive system

5 Syphilis

5.1 Key points

- In 2010, 17 884 syphilis cases were reported from 29 EU/EEA Member States (data were not available from Liechtenstein), an overall rate of 4.4 per 100 000 population. Syphilis was reported three times more often in men than in women, with an overall rate of 6.6 per 100 000 in men and 1.8 in women.
- One sixth of all syphilis cases in 2010 (17%) were reported in young people between 15 and 24 years of age; the majority of cases were reported in people older than 25 years.
- Half (55%) of syphilis cases with information on transmission category were reported in MSM.
- There were marked differences in trends across the EU Member States. The overall rate has decreased from 8.4 per 100 000 in 2000 to 4.4 in 2010. This is mainly due to a substantial decrease of cases in a number of countries that have reported very high rates of syphilis in the past decade. Declining trends may be due to changes in healthcare systems, diagnostic capacity and reporting rather than true changes in incidence. In other countries, dramatic increases were noted. The male-to-female ratio indicates that this increase may be connected to the recent increase of syphilis among MSM.

5.2 Source of data

Syphilis data were available from all countries except Liechtenstein. Table G specifies the source of the data, the type of data (aggregate and case based), the coverage (sentinel or comprehensive), the legal requirements (voluntarily or compulsory) and the period of availability. It shows the existing heterogeneity in systems as well as recent changes in systems and reporting periods. Due to variations in the coverage, completeness and representativeness of data, direct comparisons of absolute numbers and rates must be done with caution since the proportion of diagnosed cases that are actually reported differs substantially from country to country.

Rates per 100 000 population can be calculated for 22 countries with comprehensive or other systems; countries with sentinel systems (Austria, Belgium, Cyprus, France, Hungary, Italy, Netherlands) were excluded.

Table G shows that 11 countries provided data on syphilis for the period 1990 to 2010 (Bulgaria, the Czech Republic, Denmark, Estonia, Hungary, Latvia, Portugal, Romania, Spain, Sweden and the United Kingdom). An additional seven countries supplied data on syphilis for 2000–2010 (Austria from 1996; Finland, France, Germany from 2001; Iceland, Ireland and Italy from 1998). All 29 countries provided data covering 2006 to 2010. Due to missing data for 'date of diagnosis' from Italy, the 'date of statistics' was used the present syphilis data.

For the period 2000–2010, 30.6% of the data were provided in case-based format. In recent years, five countries changed their reporting systems (Austria, Estonia, Latvia, Lithuania and Romania) so that 55.7% of the 2010 data are available in case-based format. Only six countries still report syphilis data in aggregated format. This affects the amount of information available for analysis as the aggregate format only includes gender, age and transmission category.

The completeness levels of the variables 'age' and 'gender' between 2001 and 2010 were above 80%. Completeness of the variable 'transmission category' increased in 2001–2010 and was supplied by 17 countries

Figure 5.1. Percentage and number of syphilis cases by stage of infection, as reported by 13 EU/EEA countries, 2010

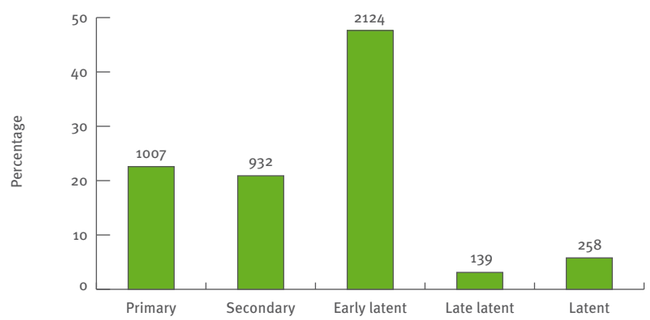


Figure 5.2. Number of syphilis cases per 100 000 population, EU/EEA, 2010

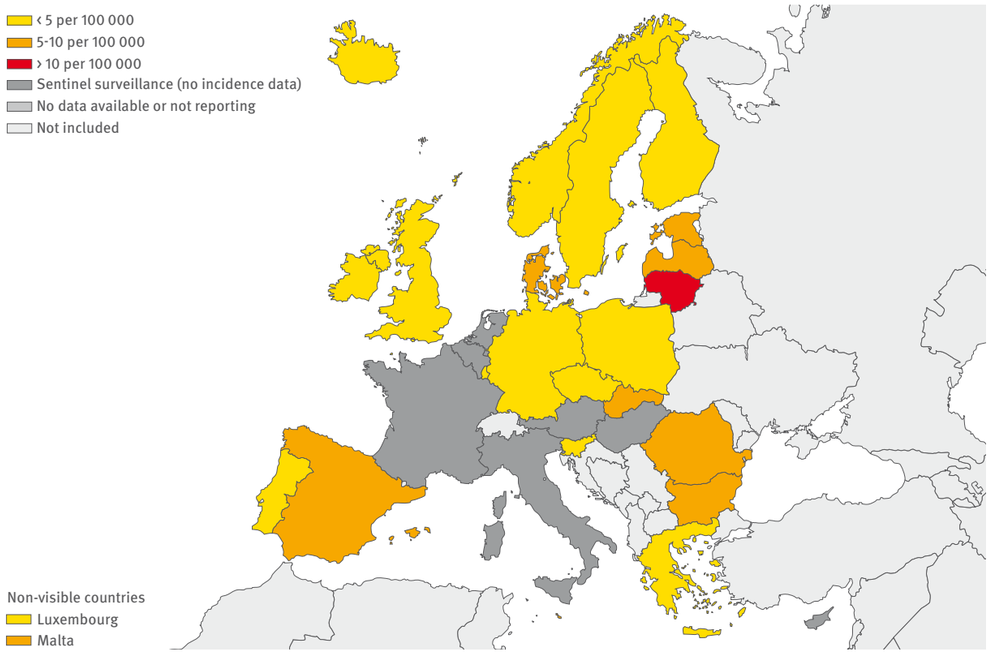


Figure 5.3. Male-to-female ratio in syphilis cases, EU/EEA, 2010

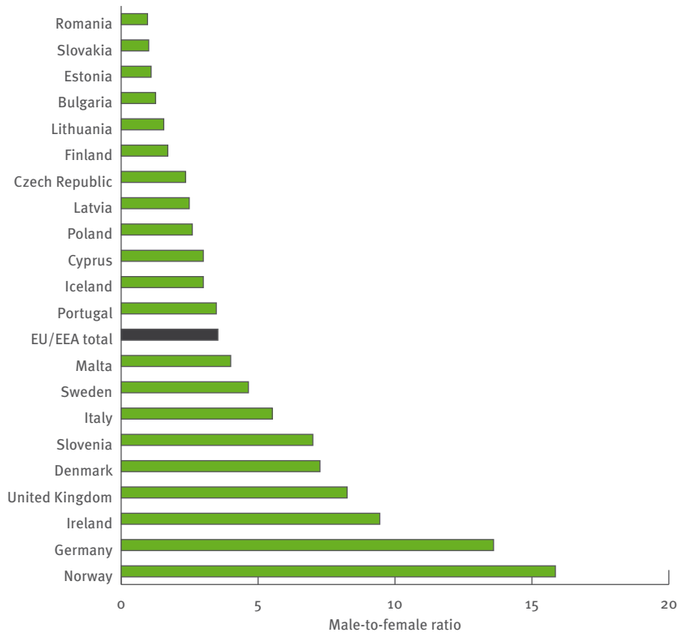
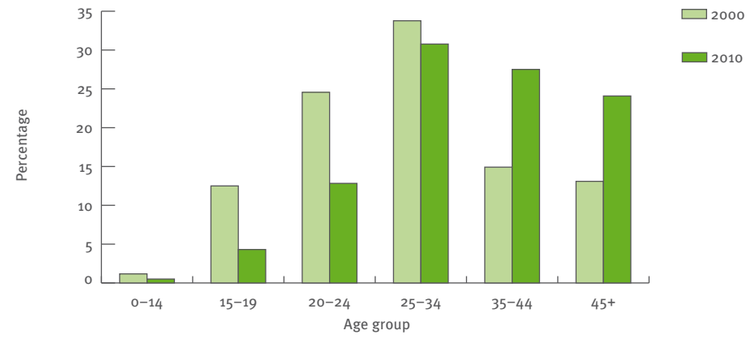


Figure 5.4. Syphilis cases by age category for 2000 (11 countries) and 2010 (20 countries), EU/EEA



for 32% of all cases reported between 2001 and 2010. 'HIV status' was reported by ten countries and provides information on 6% of the reported cases in 2001–2010.

Details on the stage of infection with respect to syphilis were provided by 14 countries and represent 26% of all reported cases of syphilis in 2010.

It was agreed to collect the stage of infection in two different formats: a broad (infectious or non-infectious) and a detailed format (primary, secondary, early latent, etc). Only one country used the broad format (Luxembourg) in 2010; 13 countries used the detailed format (Austria, the Czech Republic, Estonia, France, Ireland, Latvia, Lithuania, Malta, Netherlands, Norway, Romania, Slovenia, and Slovakia). The distribution of syphilis cases by stage of infection is presented in Figure 5.1. The majority of cases were reported as primary, early latent, or secondary infection.

5.3 Case reports, 2010

Demographic variables

In 2010, 17 884 syphilis cases were reported from 29 countries, with 59% of all cases coming from four countries (Germany, the United Kingdom, Spain and Romania) (Table 5.1a), which computes to an overall rate of 4.4 per 100 000 population (Table 5.3). In 2010, the highest rate was observed in Lithuania (10.4 per 100 000 population), followed by Romania (8.3/100 000) and Denmark (7.5/100 000). Rates below 2.5 per 100 000 population were observed in Norway, Poland, Greece, Ireland, Sweden, Slovenia, Portugal, Iceland, and Italy (Figure 5.2) (Table 5.3).

Information on gender was missing in 17% (n=2 978) of all cases in 2010, mainly due to missing information from Spain (n=2 909 cases). The male-to-female ratio in 2010 was 3.7. In other words: three times as many cases were reported in men (n=11 800) than in women (n=3 147). The overall rate in men was 6.6/100 000 and 1.8/100 000 in women.

There were marked differences in the male-to-female ratios, based on the number of cases and across countries (Figure 5.3.). Ratios above 10 were reported by France, Norway, Germany and the Netherlands. Luxembourg reported 12 male and no female cases. Austria was the only country to report a male-to-female ratio. Romania, Estonia, Bulgaria and Slovakia reported an almost equal number of syphilis cases in men and women (Table 5.2). The male-to-female ratio has increased over time in most countries that supply information on gender and have a record of consistently reporting in 2000–2010. The overall ratio increased from 1.4 in 2000 to 3.7 in 2010.

In 2010, information on age was available for 28 countries. Information on age was not available for Spain, which reported 17% of the cases. Because of data presentation and incompatible age formats, the data from three countries were excluded: Hungary (2007–2008), Poland (2006–2010) and Romania (2005).

Figure 5.4 shows the age distribution in percentage of all cases with information on age in 2000 and 2010, showing a shift towards the older age groups over time. Of all reported cases in 2010, the age category 25–34 and 35–44 years were the largest, with 31% and 28%, respectively. Only 13% of cases were diagnosed in the 20–24-year age group. In 2010, 82% of all cases were 25 years or older (compared to 62% in 2000) whereas only 17% were reported in the 15–24-years age category (37% in 2000). Between 2000 and 2010, age-specific rates decreased drastically among those below 35 years of age, but increased among older persons, particularly for 35–44-year-olds. Age-specific rates are now highest among 25–34-year-olds (Figure 5.5).

In 2010, information on country of birth (or country of nationality when country of birth was not available) was available for 15 countries (Austria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Ireland, Lithuania, Luxembourg, the Netherlands, Norway, Romania and Slovenia), making up 37% of the reported cases (n=6 706). In 75% of those cases, the country of birth was identical with the reporting country,

9% of the cases were born abroad, and for the 16% there was no information available. The quality of the data reported for probable country of infection varied across countries. The proportion of cases born in the reporting country varied widely across countries. In a number of countries, all cases were reported to have been born in the country of report (e.g. Romania, Lithuania, Estonia), while other countries reported more than 20% of cases being born abroad (Austria, Cyprus, Finland, Luxembourg and Ireland).

Figure 5.5. Age-specific rate of reported cases of syphilis for 2000 (11 countries) and 2010 (20 countries), EU/EEA

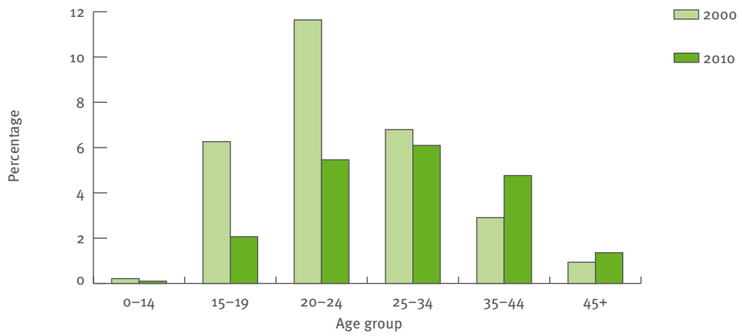


Figure 5.6. Percentage of syphilis cases diagnosed in men who have sex with men, 15 countries, 2010

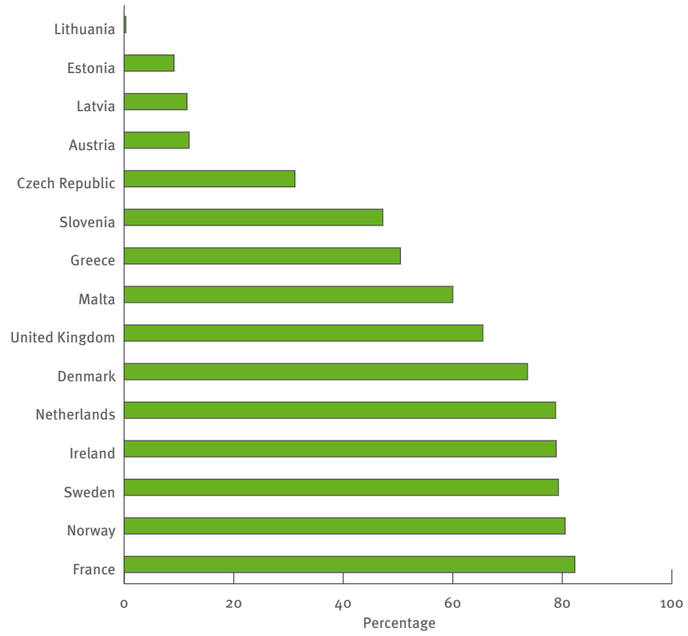


Table H: Number and percentage of syphilis cases by transmission category and gender, 2010

	Number of cases	Reporting countries	MSM	Heterosexual		Unknown
				Male	Female	
Syphilis	6398	16	3509 (55%)	1366 (21%)	823 (13%)	685 (11%)

Epidemiological variables

In 2010, information on transmission category was available for 16 countries (Austria, the Czech Republic, Denmark, Estonia, France, Greece, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Slovenia, Sweden, the United Kingdom; Romania was excluded because of inconsistent reporting), representing 36% of the syphilis cases (n=6398). Of those cases, transmission category was indicated as follows: unknown (11%), heterosexual (34%) and in MSM (55%) (Table H).

The percentage of cases diagnosed in MSM ranges from below 10% (Latvia, Estonia and Lithuania) to more than 70% in Denmark, France, Ireland, Netherlands and Norway; the middle range is occupied by Austria, Luxembourg, and the Czech Republic (10%–40%); and Slovenia, Greece, Malta, the United Kingdom, and Sweden (40%–60%), (Figure 5.6). Cases diagnosed in MSM represent 30% (n=3509) of all male cases diagnosed in 2010.

In 2010, information on HIV status was provided by nine countries (Austria, the Czech Republic, Denmark, France, Ireland, Latvia, Malta, the Netherlands, and Norway), representing 14% of syphilis cases (n=2585). Of these, 25% were HIV positive (either known or newly diagnosed), 57% were HIV negative, with information unknown for 19%.

5.4 Trends in 1990–2010

Between 1990 and 2010, 345409 cases of syphilis were reported from 29 countries with varying degrees of completeness over time (Table 5.1a). Rates were calculated for 24 countries with comprehensive surveillance systems for syphilis (Table 5.3). Figure 5.7 shows an overall declining trend in the number of reported cases per 100000 population in those EU/EEA Member States that consistently reported between 2000 and 2010. The trend is similar for men and women separately. The overall rate increased between 1990 and 1998 and then started to decrease. Between 2001 and 2010, the rate in countries that reported consistently decreased from 7.2 to 4.8 per 100000. The interpretation of the overall trend is difficult as it is the result of diverging trends in different countries and strongly influenced by a number of countries that reported a high number of cases in the 1990s.

Table I: Proportional increase or decrease between 2000–2010 and 2006–2010 (for countries with consistent reporting in 2000–2010)

Country	2006–2010	2000–2010
Increase	**% of change**	**% of change**
Denmark	436	2400
Spain	62	250
Czech Republic	529	144
Sweden	17	91
Mixed		
United Kingdom	-19	422
Ireland	-34	75
Iceland	23	-50
Finland	54	-3
Portugal	42	0
Decrease		
Bulgaria	-3	-69
Romania	-68	-81
Latvia	-74	-87
Estonia	-46	-88

*Rates were calculated for 2000–2008.

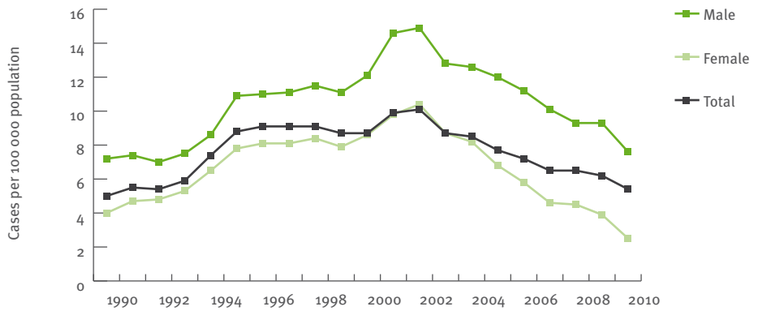
Ten countries with comprehensive surveillance systems reported consistently in 1990–2010. Figure 5.8 shows two graphs with trends over time. Countries with very high rates of cases per 100000 population in the 1990s were Bulgaria, Estonia, Latvia and Romania. Trends peaked in 1995–1997 at rates of more than 100 per 100000 population (Latvia) and 70 to 80 per 100000 (Estonia). Trends have decreased significantly since then, but the rates remain the highest in the EU. Different trends were observed in other countries: Denmark, Sweden, the United Kingdom and Spain show similar trends: declining or stable rates until 1999–2000, followed by a substantial increase. In 2000–2010, rates increased substantially in several countries: the Czech Republic, Denmark, Ireland, Spain, Sweden and the United Kingdom (Table I; Figure 5.8).

Rates in 2006–2010 (with more complete reporting) showed different trends across countries: the Czech Republic, Denmark, Finland, Greece, Malta, Slovakia, Slovenia and Spain reported increases in rates per 100000 population, with the highest increases in the Czech Republic, Denmark, Slovakia, Slovenia and Malta. The increase in the number of cases reported by Greece is linked to improved participation of hospitals/laboratories in the national surveillance system. A decrease of more than 30% was reported in Estonia, Ireland, Latvia and Romania.

Compared with 2009, the overall rate in 2010 showed a further drop despite the fact that several countries reported remarkable increases. The overall drop is largely due to the continued decrease in reported cases by Romania. Countries reporting an increase of 30% or more include Denmark, Malta, Norway and Cyprus. Decreases of 30% or more were reported by Latvia, the Czech Republic and Romania. The observed overall decrease may reflect changes in healthcare systems and underreporting in some Member States rather than representing an actual decrease in rates.

As rates could not be calculated for countries with sentinel surveillance systems, the relative increase or decrease was also calculated for the absolute reported number of syphilis cases in 2006–2010 by country. This showed that syphilis increased in 18 countries and decreased in 11 countries (Figure 5.9). The largest decrease was observed in Estonia, Latvia and Romania. The highest increase (by more than 100%) was observed in the Czech Republic, Denmark, Slovakia, Slovenia, Austria and Malta. The overall decrease of reported cases across the EU/EEA was 13%.

Figure 5.7. Trend in number of reported syphilis cases per 100 000 population, EU/EEA, 1990–2010



Note: Female and total rates are similar in certain years as countries not reporting data on gender are included in the total rate but not in the male/female rates (e.g. 2001, 2002)

Figure 5.8. Syphilis cases per 100 000 population in selected EU/EEA Member States, 1990–2010

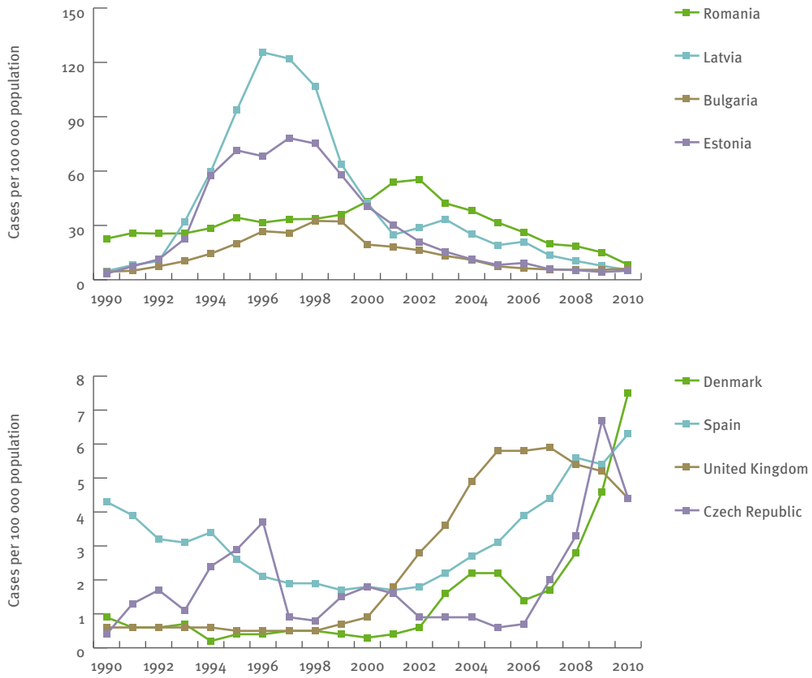
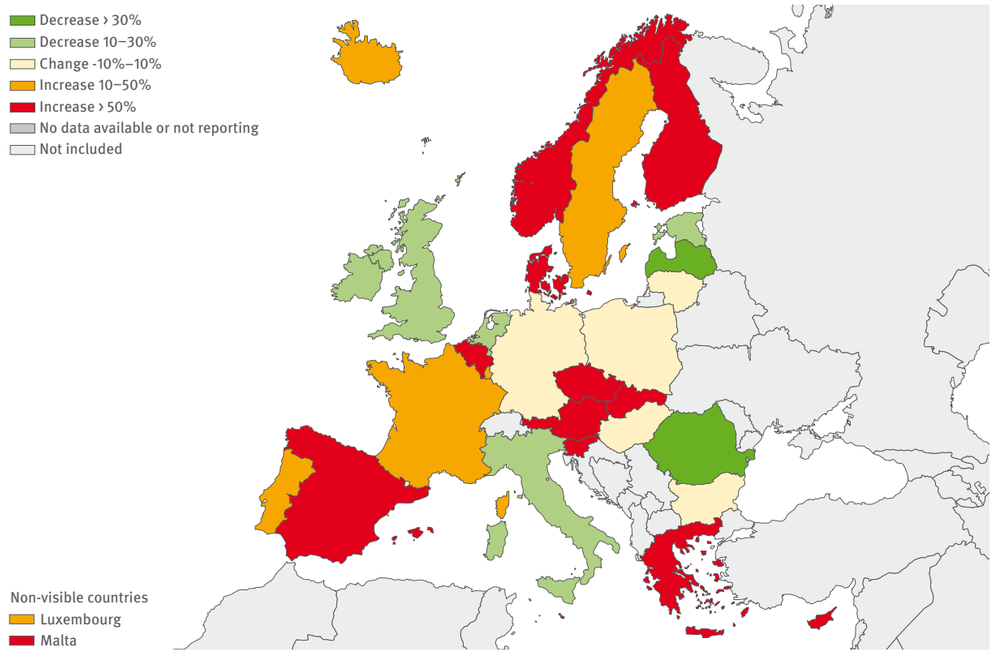


Figure 5.9. Relative increase or decrease in the number of reported syphilis cases, EU/EEA, 2006–2010



5.5 Discussion

Completeness of reported data

All countries (except Liechtenstein) could provide data on syphilis. The completeness levels of the variables 'age' and 'gender' were above 80%, which is the lowest when compared to gonorrhoea and chlamydia. Completeness of the variable 'transmission category' increased in 2000–2010 but is still missing for 68% of cases. The variable 'age' in aggregate reports was reported in a variety of formats, hampering the presentation of provided data, particularly historical data. The variables on 'stage of infection' were provided for only 26% of cases.

Case reports and trends

The distribution of syphilis varied across countries, with rates from below 1 to 15 per 100 000 population. The overall declining rate seemed to be strongly influenced by the substantial decrease of cases in four countries (Estonia, Latvia, Romania, and Bulgaria) that reported very high rates of syphilis in the past decade. These decreases may reflect changes in healthcare systems or reporting systems rather than an actual decrease in prevalence of disease. The opposite might be the case: dramatic increases occurred between 2000 and 2010 in the Czech Republic, Denmark, Germany, Ireland, Spain, Sweden and the United Kingdom; based on the male-to-female ratio, this may be due to increases in cases among men.

Only Austria reported more cases in women than men. This can be explained by the nature of the Austrian sentinel surveillance system that focuses more on sex workers than on any other risk population. Less than a fifth of all syphilis cases were reported in young people between 15 and 24 years of age. This is the smallest proportion reported among all STI.

The proportion of syphilis cases reported in MSM varies across the EU/EEA, with high proportions mainly reported in western and northern countries (France, Netherlands, Denmark, Norway, Ireland) but also in Slovenia and the Czech Republic, suggesting that syphilis is largely transmitted among MSM in EU/EEA. However, the interpretation of these findings is hampered by the incompleteness of reporting and lack of information from other countries. The high male-to-female ratio reported in many countries may indicate a possible underreporting of cases in MSM in countries where data on transmission category is not available. Data in the other countries may suggest that homosexually acquired cases may not be identified and reported as such or that many male cases could have been acquired through contact with sex workers. This needs to be reviewed in more detail in close collaboration with respective Member States.

The overall trend in syphilis across the EU/EEA in the past decades appears to show two patterns: 1) a decreasing trend in four countries which reported very high rates

5.6 Tables

Table 5.1a. Syphilis: number of cases by year of diagnosis, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	207	201	205	184	237	320	420	352	312	267	25	58	61	62	59	**2970**
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288	403	480	486	502	**2159**
Bulgaria	385	436	635	871	1215	1695	2244	2157	2694	2649	1588	1482	1289	1034	861	572	490	440	419	420	460	**24036**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	10	14	15	20	**72**
Czech Republic	40	135	172	116	247	297	386	92	84	153	189	161	91	96	97	58	75	205	342	697	459	**4192**
Denmark	46	32	31	34	10	19	19	25	25	19	14	23	34	84	119	117	77	92	151	255	413	**1639**
Estonia	53	116	176	342	852	1034	972	1099	1048	799	556	413	286	210	152	111	125	78	71	57	67	**8617**
Finland	-	-	-	-	-	-	-	-	-	-	199	150	122	129	108	140	127	185	211	194	200	**1765**
France	-	-	-	-	-	-	-	-	-	-	37	207	417	448	403	341	478	599	563	534	600	**4627**
Germany	-	-	-	-	-	-	-	-	-	-	-	1689	2390	2926	3353	3233	3161	3277	3187	2730	3028	**28974**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	116	103	139	141	197	155	259	241	**1351**
Hungary	122	148	204	142	235	239	213	298	306	256	362	430	377	353	455	541	559	393	549	489	504	**7175**
Iceland	-	-	-	-	-	-	-	-	-	-	9	8	7	2	4	3	4	1	2	0	5	**45**
Ireland	-	-	-	-	-	-	-	-	-	-	46	233	202	113	112	106	133	62	119	96	94	**1316**
Italy	-	-	-	-	-	-	-	-	370	315	345	450	788	1082	1339	1395	935	1001	923	916	640	**10499**
Latvia	127	215	272	830	1519	2342	3099	2986	2582	1532	1013	589	673	777	583	440	483	305	236	175	122	**20900**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	456	341	295	336	275	326	326	345	**2700**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	14	12	13	13	**62**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	11	19	16	25	**84**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	845	751	806	657	792	711	695	**5257**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	61	56	76	118	**378**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	933	847	929	1255	914	**4878**
Portugal	171	187	166	187	187	198	203	233	173	252	174	133	129	146	109	103	124	112	98	150	179	**3414**
Romania	5278	5994	5806	5832	6483	7781	7155	7552	7574	8076	9731	12075	12063	9197	8268	6850	5661	4245	4006	3252	1792	**144671**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	89	152	228	294	333	**1096**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	31	63	47	40	**197**
Spain	1685	1509	1255	1200	1343	1010	825	763	772	675	706	700	734	917	1152	1344	1711	1936	2545	2496	2909	**28187**
Sweden	162	121	77	96	67	69	52	51	43	40	98	78	131	186	186	102	167	237	166	182	196	**2507**
United Kingdom	367	367	355	350	323	271	282	292	281	414	548	1083	1662	2159	2924	3481	3486	3561	3309	3215	2911	**31641**
EU/EEA total	**8436**	**9260**	**9149**	**10000**	**12481**	**14955**	**15657**	**15749**	**16157**	**15364**	**15852**	**20224**	**21815**	**20783**	**21826**	**20389**	**20533**	**19445**	**20032**	**19418**	**17884**	**345409**

Table 5.1b. Syphilis: number of cases by year of statistics, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	207	201	205	184	237	320	420	352	312	267	25	58	61	62	59	**2970**
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	288	403	480	486	502	**2159**
Bulgaria	385	436	635	871	1215	1695	2244	2157	2694	2649	1588	1482	1289	1034	861	572	490	440	419	420	460	**24036**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	10	14	15	20	**72**
Czech Republic	40	135	172	116	247	297	386	92	80	152	182	171	90	91	101	59	77	203	329	702	470	**4192**
Denmark	46	32	31	34	10	19	19	25	25	19	14	23	34	84	119	117	77	92	151	255	413	**1639**
Estonia	53	116	176	342	852	1034	972	1099	1048	799	556	413	286	210	152	111	125	75	71	59	68	**8617**
Finland	-	-	-	-	-	-	-	-	-	-	199	150	122	129	108	140	127	185	211	194	200	**1765**
France	-	-	-	-	-	-	-	-	-	-	37	207	417	448	403	341	478	599	563	534	600	**4627**
Germany	-	-	-	-	-	-	-	-	-	-	-	1689	2389	2923	3355	3232	3160	3277	3188	2733	3028	**28974**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	116	103	139	141	197	155	259	241	**1351**
Hungary	122	148	204	142	235	239	213	298	306	256	362	430	377	353	455	541	559	393	549	489	504	**7175**
Iceland	-	-	-	-	-	-	-	-	-	-	9	8	7	2	4	3	4	1	2	0	5	**45**
Ireland	-	-	-	-	-	-	-	-	-	-	46	233	202	113	112	106	133	62	119	96	94	**1316**
Italy	-	-	-	-	-	-	-	-	370	315	345	450	788	1082	1339	1395	935	1001	923	916	640	**10499**
Latvia	127	215	272	830	1519	2342	3099	2986	2582	1532	1013	589	673	777	583	440	483	301	233	171	133	**20900**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	456	341	295	336	275	326	326	345	**2700**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	14	12	13	13	**62**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	12	16	19	25	**84**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	845	751	806	657	792	711	695	**5257**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	61	56	76	118	**378**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	933	847	929	1255	914	**4878**
Portugal	171	187	166	187	187	198	203	233	173	252	174	133	129	146	109	103	124	112	98	150	179	**3414**
Romania	5278	5994	5806	5832	6483	7781	7155	7552	7574	8076	9731	12075	12063	9197	8268	6850	5661	4245	4006	3229	1815	**144671**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	89	152	225	299	331	**1096**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	28	65	49	40	**197**
Spain	1685	1509	1255	1200	1343	1010	825	763	772	675	706	700	734	917	1152	1344	1711	1936	2545	2496	2909	**28187**
Sweden	162	121	77	96	67	69	52	47	42	38	99	78	127	177	189	105	172	239	171	181	198	**2507**
United Kingdom	367	367	355	350	323	271	282	292	281	414	548	1083	1662	2159	2924	3481	3486	3561	3309	3215	2911	**31641**
EU/EEA total	**8436**	**9260**	**9149**	**10000**	**12481**	**14955**	**15657**	**15745**	**16152**	**15361**	**15846**	**20234**	**21809**	**20766**	**21835**	**20392**	**20537**	**19436**	**20018**	**19410**	**17930**	**345409**

Note: Probable cases for Austria/Slovakia are excluded. Microbiological data from Spain are excluded.

Table 5.2. Syphilis: number of cases by gender, 1990–2010

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	114	68	92	75	101	79	67	63	99	78
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	20	20	65	70	93	79	57	59	120	127	148	149	202	184	52	40	48	36	98	55	119	70
Denmark	41	5	21	11	19	12	28	6	8	2	14	5	13	6	16	9	19	6	15	4	10	4
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	524	524	377	422	240	316
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	127	72
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36	1
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	83	39	94	54	123	81	85	57	117	118	138	101	111	102	153	145	176	130	155	101	220	142
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5
Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	8
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	275	91	242	67	247	79
Latvia	63	64	100	115	129	143	418	412	782	737	1229	1113	1702	1397	1599	1387	1314	1268	824	708	519	494
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	108	63	115	72	95	71	127	60	106	81	108	90	109	94	142	91	100	73	144	108	103	71
Romania	3308	1970	3571	2423	3383	2423	3326	2506	3652	2831	4532	3249	4088	3067	4334	3218	4453	3121	4697	3379	5592	4139
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	80	38	52	25	60	36	44	23	42	27	31	21	33	18	29	14	25	14	74	24
United Kingdom	242	125	248	119	241	114	238	112	204	119	178	93	182	100	183	109	176	105	283	131	383	165
EU/EEA total	**3865**	**2286**	**4294**	**2902**	**4135**	**2948**	**4339**	**3248**	**5033**	**4038**	**6389**	**4827**	**6552**	**5039**	**6604**	**5092**	**7215**	**5447**	**6927**	**5052**	**7807**	**5668**

Table 5.2. Syphilis: number of cases by gender, 1990–2010 (continued)

Country	2001		2002		2003		2004		2005		2006		2007		2008		2009		2009		Cumulative total		Unk./ Missing	Total
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Austria	128	100	167	119	121	128	116	100	121	61	17	8	16	42	23	38	8	54	13	46	1203	1059	708	**2970**
Belgium	-	-	-	-	-	-	-	-	-	-	239	49	335	65	397	80	404	81	398	103	1773	378	8	**2159**
Bulgaria	-	-	-	-	509	525	427	434	278	294	272	218	244	196	251	168	256	164	256	204	2493	2203	19340	**24036**
Cyprus	-	-	-	-	-	-	-	-	-	-	7	6	7	3	7	7	6	9	15	5	42	30	-	**72**
Czech Republic	93	68	51	40	47	49	56	41	39	19	58	17	154	51	287	55	496	201	322	137	2625	1567	-	**4192**
Denmark	17	6	31	3	80	4	113	6	103	14	73	4	86	6	142	9	242	13	363	50	1454	185	-	**1639**
Estonia	190	223	110	176	59	151	39	113	36	75	46	79	27	51	30	41	33	24	35	32	1746	2227	4644	**8617**
Finland	84	66	67	55	67	62	55	53	83	57	65	62	120	65	135	76	143	51	126	74	1072	693	-	**1765**
France	196	11	402	14	430	18	384	19	317	24	447	31	564	34	528	35	502	32	564	35	4370	254	3	**4627**
Germany	1378	264	2047	313	2636	269	3026	315	2895	335	2833	326	3010	265	2949	235	2561	164	2815	207	26150	2693	131	**28974**
Greece	-	-	-	-	90	26	76	27	109	30	106	35	162	35	123	32	226	33	209	32	1101	250	-	**1351**
Hungary	264	166	222	155	228	125	288	167	349	192	381	178	260	133	368	181	347	142	369	135	4531	2644	-	**7175**
Iceland	8	-	4	2	1	1	3	-	3	-	2	2	1	-	-	-	-	-	3	1	26	11	8	**45**
Ireland	214	19	155	47	81	32	86	26	85	21	112	21	43	19	98	17	85	9	85	9	1081	228	7	**1316**
Italy	334	107	663	116	892	168	1090	227	1101	264	731	194	783	206	714	205	689	210	541	98	8302	2032	165	**10499**
Latvia	311	278	351	322	406	371	271	312	241	199	256	227	150	155	121	115	98	77	87	35	10971	9929	-	**20900**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	**0**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	184	142	189	137	210	135	583	414	1703	**2700**
Luxembourg	-	-	-	-	-	-	-	-	-	-	7	3	10	3	11	1	12	1	12	-	52	8	2	**62**
Malta	-	-	-	-	-	-	-	-	-	-	10	3	7	4	14	5	15	1	20	5	66	18	-	**84**
Netherlands	-	-	-	-	-	-	738	105	654	96	705	97	577	64	703	62	618	57	595	56	4590	537	130	**5257**
Norway	-	-	-	-	-	-	-	-	-	-	65	2	60	1	51	5	72	4	111	7	359	19	-	**378**
Poland	-	-	-	-	-	-	-	-	-	-	665	268	634	213	708	221	951	304	660	254	3618	1260	-	**4878**
Portugal	64	69	68	61	89	57	62	47	71	32	92	32	77	35	67	31	128	22	139	40	2114	1300	-	**3414**
Romania	6883	5192	6583	5480	4816	4381	4244	4024	3525	3325	2936	2725	2191	2054	1896	2110	1589	1663	879	913	80478	64193	-	**144671**
Slovakia	-	-	-	-	-	-	-	-	-	-	48	41	80	72	127	101	152	142	167	166	574	522	-	**1096**
Slovenia	-	-	-	-	-	-	-	-	-	-	13	3	26	5	59	4	43	4	35	5	176	21	-	**197**
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	28187	**28187**
Sweden	71	7	107	24	162	24	154	32	82	20	120	43	196	39	122	43	135	44	158	34	1777	550	180	**2507**
United Kingdom	877	206	1407	255	1828	331	2460	464	2950	531	3016	470	3115	446	2905	404	2831	375	2583	313	26530	5087	24	**31641**
EU/EEA total	**11112**	**6782**	**12435**	**7182**	**12542**	**6722**	**13688**	**6512**	**13042**	**5589**	**13322**	**5144**	**12935**	**4262**	**13020**	**4423**	**12831**	**4018**	**11770**	**3131**	**189857**	**100312**	**55240**	**345409**

Table 5.3. Syphilis: number of cases per 100 000 population, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	4.4	5	7.4	10.3	14.4	20.1	26.8	25.9	32.5	32.2	19.4	18.2	16.3	13.2	11	7.4	6.3	5.7	5.5	5.5	6.1
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	0.4	1.3	1.7	1.1	2.4	2.9	3.7	0.9	0.8	1.5	1.8	1.6	0.9	0.9	0.9	0.6	0.7	2	3.3	6.7	4.4
Denmark	0.9	0.6	0.6	0.7	0.2	0.4	0.4	0.5	0.5	0.4	0.3	0.4	0.6	1.6	2.2	2.2	1.4	1.7	2.8	4.6	7.5
Estonia	3.4	7.4	11.3	22.6	57.7	71.4	68.2	78.2	75.2	57.9	40.5	30.2	21	15.5	11.3	8.2	9.3	5.8	5.3	4.3	5
Finland	-	-	-	-	-	-	-	-	-	-	3.8	2.9	2.3	2.5	2.1	2.7	2.4	3.5	4	3.6	3.7
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	2.1	2.9	3.5	4.1	3.9	3.8	4	3.9	3.3	3.7
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	0.9	1.3	1.3	1.8	1.4	2.3	2.1
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-	-	3.2	2.8	2.4	0.7	1.4	1	1.3	0.3	0.6	-	1.6
Ireland	-	-	-	-	-	-	-	-	-	-	1.2	6.1	5.2	2.9	2.8	2.6	3.2	1.4	2.7	2.2	2.1
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	4.8	8.1	10.3	32.1	59.8	93.7	125.5	122.1	106.7	63.9	42.5	24.9	28.7	33.3	25.1	19.1	21	13.4	10.4	7.7	5.4
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	13.2	9.9	8.6	9.9	8.1	9.7	9.7	10.4
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2.1	2.9	2.5	2.6	2.6
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	2.7	4.6	3.9	6.1
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.3	1.2	1.6	2.4
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.4	2.2	2.4	3.3	2.4
Portugal	1.7	1.9	1.7	1.9	1.9	2	2	2.3	1.7	2.5	1.7	1.3	1.2	1.4	1	1	1.2	1.1	0.9	1.4	1.7
Romania	22.7	25.8	25.5	25.6	28.5	34.3	31.6	33.4	33.6	35.9	43.3	53.8	55.3	42.2	38.1	31.6	26.2	19.7	18.6	15.1	8.3
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	2.8	4.2	5.4	6.1
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	1.5	3.1	2.3	2
Spain	4.3	3.9	3.2	3.1	3.4	2.6	2.1	1.9	1.9	1.7	1.8	1.7	1.8	2.2	2.7	3.1	3.9	4.4	5.6	5.4	6.3
Sweden	1.9	1.4	0.9	1.1	0.8	0.8	0.6	0.6	0.5	0.5	1.1	0.9	1.5	2.1	2.1	1.1	1.8	2.6	1.8	2	2.1
United Kingdom	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.7	0.9	1.8	2.8	3.6	4.9	5.8	5.8	5.9	5.4	5.2	4.7
Total	**5**	**5.5**	**5.4**	**5.9**	**7.4**	**8.8**	**9.1**	**9.1**	**9.1**	**8.7**	**8.4**	**7.2**	**7.6**	**6.7**	**6.7**	**6.1**	**5.3**	**4.9**	**5**	**4.9**	**4.4**

Note: Rates are only calculated for countries with comprehensive surveillance.

Table 5.4. Syphilis: number of cases per 100 000 population by gender, 1990–2010

Country	1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	0.4	0.4	1.3	1.3	1.9	1.5	1.1	1.1	2.4	2.4	2.9	2.8	4	3.5	1	0.8	1	0.7	2	1	2.4	1.3
Denmark	1.6	0.2	0.8	0.4	0.7	0.5	1.1	0.2	0.3	0.1	0.5	0.2	0.5	0.2	0.6	0.3	0.7	0.2	0.6	0.1	0.4	0.1
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	81.5	69.9	59.3	56.8	37.9	42.7
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2.7
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	3.6
Ireland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	0.4
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	5.1	4.5	8.1	8.1	10.5	10.1	34.9	29.7	66.5	54	106.5	82.7	149.5	105	141.9	105.2	117.8	97.1	74.5	54.7	47.3	38.4
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	2.2	1.2	2.4	1.4	2	1.4	2.6	1.2	2.2	1.6	2.2	1.7	2.3	1.8	2.9	1.7	2.1	1.4	2.9	2.1	2.1	1.3
Romania	28.9	16.8	31.2	20.6	30.2	20.9	29.7	21.6	32.7	24.4	40.7	28.1	36.8	26.6	39.2	27.9	40.4	27.1	42.7	29.4	50.9	36.1
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	-	-	1.9	0.9	1.2	0.6	1.4	0.8	1	0.5	1	0.6	0.7	0.5	0.8	0.4	0.7	0.3	0.6	0.3	1.7	0.5
United Kingdom	0.9	0.4	0.9	0.4	0.9	0.4	0.8	0.4	0.7	0.4	0.6	0.3	0.6	0.3	0.6	0.4	0.6	0.4	1	0.4	1.3	0.5
Total	**7.2**	**4**	**7.4**	**4.7**	**7**	**4.8**	**7.5**	**5.3**	**8.6**	**6.5**	**10.9**	**7.8**	**11**	**8.1**	**11.1**	**8.1**	**11.5**	**8.4**	**11.1**	**7.9**	**11.5**	**8.1**

Note: Rates are only calculated for countries with comprehensive surveillance.

Table 5.4. Syphilis: number of cases per 100 000 population by gender, 1990–2010 (continued)

Country	2001		2002		2003		2004		2005		2006		2007		2008		2009		2010	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	13.3	13	11.3	10.8	7.4	7.4	7.3	5.5	6.6	5	6.8	4.3	7	4.2	7	5.2
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	1.9	1.3	1	0.8	0.9	0.9	1.1	0.8	0.8	0.4	1.2	0.3	3.1	1	5.6	1	9.7	3.8	6.2	2.6
Denmark	0.6	0.2	1.2	0.1	3	0.1	4.2	0.2	3.8	0.5	2.7	0.1	3.2	0.2	5.2	0.3	8.9	0.5	13.2	1.8
Estonia	30.1	30.3	17.5	24	9.4	20.7	6.3	15.5	5.8	10.3	7.4	10.9	4.4	7	4.9	5.7	5.3	3.3	5.7	4.4
Finland	3.3	2.5	2.6	2.1	2.6	2.3	2.2	2	3.2	2.1	2.5	2.3	4.6	2.4	5.2	2.8	5.5	1.9	4.8	2.7
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	3.4	0.6	5.1	0.7	6.5	0.6	7.5	0.7	7.2	0.8	7	0.8	7.5	0.6	7.3	0.6	6.4	0.4	7	0.5
Greece	-	-	-	-	1.7	0.5	1.4	0.5	2	0.5	1.9	0.6	2.9	0.6	2.2	0.6	4.1	0.6	3.7	0.6
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	5.6	0	2.8	1.4	0.7	0.7	2.1	0	2	0	1.3	1.3	0.6	0	-	-	-	-	1.9	0.6
Ireland	11.2	1	8	2.4	4.1	1.6	4.3	1.3	4.1	1	5.3	1	2	0.9	4.5	0.8	3.8	0.4	3.8	0.4
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	28.6	21.8	32.5	25.4	37.8	29.5	25.4	24.9	22.7	16	24.2	18.3	14.3	12.6	11.6	9.4	9.4	6.3	8.4	2.9
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11.7	7.9	12.1	7.7	13.6	7.6
Luxembourg	-	-	-	-	-	-	-	-	-	-	3	1.3	4.2	1.2	4.6	0.4	4.9	0.4	4.8	0
Malta	-	-	-	-	-	-	-	-	-	-	5	1.5	3.5	1.9	6.9	2.4	7.3	0.5	9.7	2.4
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	2.8	0.1	2.6	0	2.2	0.2	3	0.2	4.6	0.3
Poland	-	-	-	-	-	-	-	-	-	-	3.6	1.4	3.4	1.1	3.8	1.1	5.2	1.5	3.6	1.3
Portugal	1.3	1.3	1.4	1.1	1.8	1.1	1.2	0.9	1.4	0.6	1.8	0.6	1.5	0.6	1.3	0.6	2.5	0.4	2.7	0.7
Romania	62.8	45.3	61.7	49.1	45.3	39.3	40.1	36.2	33.4	30	27.9	24.6	20.8	18.6	18.1	19.1	15.2	15.1	8.4	8.3
Slovakia	-	-	-	-	-	-	-	-	-	-	1.8	1.5	3.1	2.6	4.8	3.6	5.8	5.1	6.3	6
Slovenia	-	-	-	-	-	-	-	-	-	-	1.3	0.3	2.6	0.5	6	0.4	4.3	0.4	3.5	0.5
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sweden	1.6	0.2	2.4	0.5	3.7	0.5	3.5	0.7	1.8	0.4	2.7	0.9	4.3	0.8	2.7	0.9	2.9	0.9	3.4	0.7
United Kingdom	3	0.7	4.9	0.8	6.3	1.1	8.4	1.5	10	1.7	10.2	1.5	10.5	1.4	9.7	1.3	9.4	1.2	8.5	1
Total	**9.9**	**5.9**	**10.6**	**6.3**	**9.6**	**5.3**	**9.8**	**5**	**9.3**	**4.2**	**7.8**	**3.2**	**7.5**	**2.6**	**7.3**	**2.6**	**7.3**	**2.3**	**6.6**	**1.8**

Note: Rates are only calculated for countries with comprehensive surveillance.

Table 5.5. Syphilis: number of cases by age category, 2000–2010

Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Total number by age category											
0–14	152	140	137	87	85	20	13	93	38	43	70
15–19	1628	1790	1817	1544	1412	318	309	738	686	664	597
20–24	3199	4036	3991	3055	2889	1118	1064	1819	1912	1970	1778
25–34	4399	5832	6442	5955	6169	3154	3122	4564	4397	4735	4265
35–44	1943	2834	3651	3879	4539	3305	3475	4147	4264	4133	3812
45+	1705	2454	2608	2723	3221	2190	2376	3005	3227	3424	3338
NA	239	401	519	1135	1170	8078	6964	2700	2538	1528	1054
Total	**13265**	**17487**	**19165**	**18378**	**19485**	**18183**	**17323**	**17066**	**17062**	**16497**	**14914**
Proportion by age category											
0–14	1.1	0.8	0.7	0.5	0.4	0.1	0.1	0.5	0.2	0.3	0.5
15–19	12.3	10.2	9.5	8.4	7.2	1.7	1.8	4.3	4.0	4.0	4.0
20–24	24.1	23.1	20.8	16.6	14.8	6.1	6.1	10.7	11.2	11.9	11.9
25–34	33.2	33.4	33.6	32.4	31.7	17.3	18.0	26.7	25.8	28.7	28.6
35–44	14.6	16.2	19.1	21.1	23.3	18.2	20.1	24.3	25.0	25.1	25.6
45+	12.9	14.0	13.6	14.8	16.5	12.0	13.7	17.6	18.9	20.8	22.4
NA	1.8	2.3	2.7	6.2	6.0	44.4	40.2	15.8	14.9	9.3	7.1

Note: NA includes data for countries which reported incorrect age groups.

Table 5.6. Syphilis: number of cases by transmission category and gender, 2000–2010

Country	Transm.	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	HETERO F	-	-	-	-	-	-	8	-	38	54	46
	HETERO M	-	-	-	-	-	-	6	-	5	4	6
	MSM	-	-	-	-	-	-	10	-	13	4	7
	UNK	177	228	286	249	216	182	1	58	5	-	-
Belgium	NA	-	-	-	-	-	-	288	400	477	485	501
Bulgaria	NA	-	-	-	1034	861	572	490	440	419	420	460
Cyprus	HETERO F	-	-	-	-	-	-	-	-	4	5	-
	HETERO M	-	-	-	-	-	-	-	-	4	2	-
	MSM	-	-	-	-	-	-	-	-	1	-	-
	UNK	-	-	-	-	-	-	13	10	5	8	20
Czech Republic	HETERO F	58	60	37	48	39	18	16	47	51	193	135
	HETERO M	86	66	41	32	36	20	28	57	107	241	173
	MSM	6	5	3	14	19	17	29	94	176	242	140
	O	-	1	-	-	-	-	-	3	-	1	1
	UNK	39	29	10	2	3	3	2	4	8	20	10
Denmark	HETERO F	3	5	3	4	5	12	4	6	9	13	49
	HETERO M	6	4	7	10	24	18	8	10	18	30	58
	MSM	3	13	24	68	86	78	62	75	120	208	299
	UNK	2	1	-	2	4	9	3	1	4	4	7
Estonia	HETERO F	-	-	-	-	-	-	-	-	-	-	7
	HETERO M	-	-	-	-	-	-	-	-	-	-	3
	MSM	-	-	-	-	-	-	-	-	-	-	1
	UNK	556	413	286	210	152	111	125	78	71	57	56
Finland	NA	199	150	122	129	108	140	127	185	211	194	200
France	HETERO F	1	11	14	18	19	24	30	34	34	31	35
	HETERO M	6	26	52	54	43	44	49	80	85	46	69
	MSM	30	170	348	370	338	269	391	480	437	452	489
	O	-	-	-	-	-	-	1	1	1	1	1
	UNK	-	-	2	6	3	4	7	4	6	4	6
Germany	NA	-	1642	2360	2905	3341	3230	3159	3275	3184	2725	3022
Greece	HETERO F	-	-	-	-	-	-	-	-	32	33	32
	HETERO M	-	-	-	-	-	-	-	-	70	77	80
	MSM	-	-	-	-	-	-	-	-	47	98	114
	UNK	-	-	-	116	103	139	141	197	6	51	15
Hungary	NA	362	430	377	353	455	541	559	393	549	489	504
Iceland	HETERO F	2	-	2	-	-	-	-	-	-	-	-
	HETERO M	1	3	3	-	1	-	-	-	-	-	-
	MSM	-	-	-	-	2	1	-	-	-	-	-
	UNK	3	5	1	2	-	2	4	1	-	-	4
Ireland	HETERO F	8	19	47	31	25	20	20	19	16	7	8
	HETERO M	4	26	38	22	24	21	27	13	25	11	11
	MSM	33	184	115	58	61	60	82	30	70	66	73
	O	-	-	-	1	1	1	-	-	-	-	-
	UNK	-	4	2	1	1	4	4	-	4	11	2
Italy	NA	326	441	779	1060	1317	1365	925	989	919	899	639
Latvia	HETERO F	-	-	-	-	-	-	-	-	48	66	30
	HETERO M	-	-	-	-	-	-	-	1	54	73	55
	MSM	-	-	-	-	-	-	-	-	2	5	11
	O	-	-	-	-	-	-	-	-	1	3	-
	UNK	1013	589	673	777	583	440	483	304	131	28	26
Lithuania	HETERO F	-	-	-	-	-	-	-	-	111	118	125
	HETERO M	-	-	-	-	-	-	-	-	151	163	202
	MSM	-	-	-	-	-	-	-	-	2	-	1
	O	-	-	-	-	-	-	-	-	6	5	7
	UNK	-	-	-	-	-	-	-	-	56	40	10
Luxembourg	MSM	-	-	-	-	-	-	-	-	-	-	2
	UNK	-	-	-	-	-	-	10	13	12	13	10
Malta	HETERO F	-	-	-	-	-	-	3	4	5	1	4
	HETERO M	-	-	-	-	-	-	5	3	5	10	4
	MSM	-	-	-	-	-	-	4	4	6	4	13
	O	-	-	-	-	-	-	-	-	3	-	-
	UNK	-	-	-	-	-	-	1	-	-	1	4
Netherlands	HETERO F	-	-	-	-	105	96	97	64	62	57	56
	HETERO M	-	-	-	-	113	110	101	80	82	86	79
	MSM	-	-	-	-	617	542	598	496	619	530	516
	O	-	-	-	-	2	1	-	-	-	-	4
	UNK	-	-	-	-	8	2	6	1	2	2	-
Norway	HETERO F	-	-	-	-	-	-	2	1	5	4	7
	HETERO M	-	-	-	-	-	-	9	7	8	3	16
	MSM	-	-	-	-	-	-	56	54	43	69	95
Poland	NA	-	-	-	-	-	-	933	847	929	1255	914
Portugal	NA	174	133	129	146	109	103	124	112	98	150	179
Romania	HETERO F	-	-	-	-	-	3290	-	2037	2097	1663	720
	HETERO M	-	-	-	-	-	3482	-	2159	1863	1582	664
	MSM	-	-	-	-	-	26	-	17	6	5	-
	MTCT	-	-	-	-	-	38	-	32	-	-	-
	O	-	-	-	-	-	-	-	-	7	-	-
	UNK	9731	12075	12063	9197	8268	14	5661	-	33	2	408
Slovakia	NA	-	-	-	-	-	-	89	152	228	294	333
Slovenia	HETERO F	-	-	-	-	-	-	3	4	3	3	5
	HETERO M	-	-	-	-	-	-	5	11	16	19	14
	MSM	-	-	-	-	-	-	5	13	30	14	17
	UNK	-	-	-	-	-	-	3	3	14	11	4
Sweden	HETERO F	19	6	20	20	21	16	23	29	1	24	11
	HETERO M	27	16	24	40	42	15	26	43	1	32	16
	MSM	42	49	74	104	99	55	62	108	-	74	111
	O	-	1	2	-	3	-	4	1	-	6	2
	UNK	10	6	11	22	21	16	48	54	163	43	52
United Kingdom	HETERO F	165	206	255	331	464	531	470	446	404	257	273
	HETERO M	333	763	1220	1623	2165	2536	2563	2596	2411	695	580
	MSM	50	114	187	205	295	414	453	519	494	1745	1620
	UNK	-	-	-	-	-	-	-	-	-	518	438

Note: cases with transmission=Hetero and unknown gender have been classified as NA.

6 Congenital syphilis

Table J: Congenital syphilis: data source, type of data surveillance, surveillance period

Country	Data source	Type	Period	Legal	Coverage
Austria	-	-	-	-	-
Belgium	-	-	-	-	-
Bulgaria	BG-STI	A	2005–2009	C	Co
Cyprus	CY-NOTIFIED_DISEASES	A	2009–2010	C	Co
Czech Republic	CZ-STD	A	1990–1998		
	CZ-STD	C	1999–2010		
Denmark	DK-LAB	C	1991–1999	C	Co
Estonia	EE-CONSYPH	C	1998–2010	C	Co
	EE-CONSYPH	A	2004–2009	C	Co
Finland	-	-	-	-	-
France	-	-	-	-	-
Germany	DE-SURVNET@RKI-7.3	C	2001–2009	C	Co
Greece	GR-NOTIFIABLE_DISEASES	C	2008–2010	C	Co
Hungary	HU-STD SURVEILLANCE	A	1990–2007	C	Se
	HU-STD SURVEILLANCE	C	2008–2010	C	Se
Iceland	IS-SUBJECT_TO_REGISTRATION	A	2009–2011	C	Co
Ireland	IE-SYPHILIS	C	2000–2010	C	Co
Italy	IT-NRS	C	1998–2010	C	Other
Latvia	LV-STI/SKIN_INFECTIONS	A	1990–2007	C	Co
	LV-BSN	C	2008–2010	C	Co
Lithuania	LT-COMMUNICABLE_DISEASES	A	2003–2007	C	Co
	LT-COMMUNICABLE_DISEASES	C	2008–2010	C	Co
Luxembourg	LU-SYSTEM1	A	2009–2010	C	Co
Malta	MT-DISEASE_SURVEILLANCE	A	2008–2010	C	Co
Netherlands	-	-	-	-	-
Norway	NO-MSIS_B	A	2008–2010		
Poland	PL-NATIONAL_SURVEILLANCE	A	2008–2010	C	Co
Portugal	PT-CONGENITAL_SYPHILIS	C	1999–2010	C	Co
Romania	RO-RNSSy	C	2008–2010	C	Co
Slovakia	SK-EPIS	C	2008–2010	C	Co
Slovenia	SI-SPOSUR	A	2006–2010	C	Co
Spain	ES-STATUTORY_DISEASES	C	1997–2010	C	Co
Sweden	SE-EpiBas	A	1990–1996	C	Co
	SE-SMINET	C	1997–2010	C	Co
United Kingdom	UK-GUM	A	1990–2010	C	Co

Legend: type: aggregated (A); case-based (C); legal: voluntary reporting (V), compulsory reporting (C); coverage; sentinel system (Se), comprehensive (Co, Other)

6 Congenital syphilis

6.1 Key points

- In 2010, 59 congenital syphilis cases were reported from 21 EU/EEA Member States, an overall rate of 2.5 per 100 000 live births.
- The trend of reported congenital syphilis cases has remained stable over the years, however it is suspected that there is considerable under-reporting. Nine countries did not report congenital syphilis and a further seven reported zero cases in 2010.

6.2 Facts and figures

Congenital syphilis data were available from 24 countries. Congenital syphilis is not a reportable disease in four countries: Austria, Finland, Liechtenstein and the Netherlands. In Belgium, syphilis, including congenital syphilis, is a reportable disease; however, underreporting exists and databases do not clearly identify congenital cases.

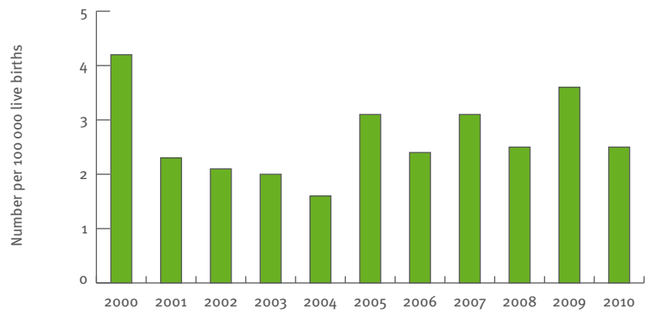
Table J specifies the source of the data, the type of data (aggregate and case-based), the coverage (either sentinel or comprehensive) and the period of availability. It shows the existing heterogeneity in systems, recent changes in systems, and reporting periods. It also shows that only four countries submitted data on congenital syphilis for the period from 1990 and 2010 (the Czech Republic, Denmark, Latvia and United Kingdom); a variable number of countries submit data for 2006–10. Rates per 100 000 live births have been calculated.

In 2010, 59 cases of congenital syphilis cases were reported from 21 countries: seven countries reported zero cases and 14 countries reported 59 cases, all of which were confirmed. The majority of the cases were reported from Poland (18 cases) and Portugal (11 cases), Italy (8 cases) and Romania (6 cases). The number of cases reported in 2010 decreased by 40% compared with 2009. This is mainly because Bulgaria, which reported 30% of all cases in 2009, did not report congenital syphilis in 2010.

Between 1990 and 2010, 1060 cases of congenital syphilis were reported by 24 countries with varying degrees of completeness over time (Table 6.1a). Rates were calculated per 100 000 live births (Table 6.2) (Figure 6.1) and trends appear to have stabilised since 2000, albeit with large differences across countries. In 2010, the overall rate was 2.5 per 100 000 live births, with the highest rates observed in Portugal (10.9 per 100 000), Estonia (6.3), Lithuania (5.6) and Poland (4.4). Latvia reported high rates of congenital syphilis in 1995–2003 (Table 6.2).

It should be noted that nine countries did not report congenital syphilis cases in 2010 and it is very likely that many diagnoses were not reported so that actual prevalence rates are underestimated. The availability of an antenatal screening programme for syphilis in pregnant women will heavily affect the number of prevented congenital cases; however, data on the effectiveness of these national screening programmes are lacking at the moment.

Figure 6.1. Number of reported congenital syphilis cases per 100 000 live births, EU/EEA, 2000–2010 (24 countries)



6.3 Tables

Table 6.1a. Congenital syphilis: number of cases by year of diagnosis, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	19	37	23	30	-	**131**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	**0**
Czech Republic	1	0	0	1	2	2	5	0	1	5	2	1	1	2	2	0	0	3	0	0	1	**30**
Denmark	0	2	1	1	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0	-	-	**10**
Estonia	-	-	-	-	-	-	-	-	2	5	3	5	1	2	0	0	0	1	0	0	1	**20**
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Germany	-	-	-	-	-	-	-	-	-	-	-	7	7	5	5	4	5	3	0	3	0	**39**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	2	**3**
Hungary	0	0	0	0	3	0	3	4	4	4	3	2	5	9	4	4	2	3	1	1	1	**53**
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Ireland	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	1	**1**
Italy	-	-	-	-	-	-	-	-	1	6	4	1	5	2	6	8	10	9	1	12	8	**73**
Latvia	1	1	1	0	2	15	25	22	15	9	8	5	6	7	1	3	0	0	1	3	-	**125**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0	3	2	1	2	4	2	**18**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	**0**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	12	18	**30**
Portugal	-	-	-	-	-	-	-	-	-	46	48	38	24	19	16	21	14	21	14	13	11	**285**
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	7	6	**22**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	2	**7**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	**0**
Spain	-	-	-	-	-	-	-	1	2	0	3	1	3	0	5	10	9	11	10	11	5	**71**
Sweden	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	1	2	1	**9**
United Kingdom	5	5	1	3	36	18	2	2	2	2	10	2	7	3	8	14	6	4	3	0	0	**133**
EU/EEA total	**7**	**8**	**3**	**5**	**43**	**35**	**36**	**31**	**27**	**80**	**81**	**63**	**59**	**53**	**49**	**90**	**68**	**94**	**68**	**101**	**59**	**1060**

Table 6.1b. Congenital syphilis: number of cases by year of statistics, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	22	19	37	23	30	-	**131**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	**0**
Czech Republic	1	0	0	1	2	2	5	0	1	5	2	1	1	1	3	0	0	4	0	0	1	**30**
Denmark	0	2	1	1	0	0	1	2	0	3	0	0	0	0	0	0	0	0	0	-	-	**10**
Estonia	-	-	-	-	-	-	-	-	2	5	3	5	1	2	0	0	0	1	0	0	1	**20**
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Germany	-	-	-	-	-	-	-	-	-	-	-	7	7	5	5	4	5	3	0	3	0	**39**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0	2	**3**
Hungary	0	0	0	0	3	0	3	4	4	4	3	2	5	9	4	4	2	3	1	1	1	**53**
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Ireland	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	1	**1**
Italy	-	-	-	-	-	-	-	-	1	6	4	1	5	2	6	8	10	9	1	12	8	**73**
Latvia	1	1	1	0	2	15	25	22	15	9	8	5	6	7	1	3	0	0	1	2	1	**125**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	4	0	3	2	1	2	4	2	**18**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	**0**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	12	18	**30**
Portugal	-	-	-	-	-	-	-	-	-	46	48	38	24	19	16	21	14	21	14	13	11	**285**
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	7	6	**22**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	1	**7**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	**0**
Spain	-	-	-	-	-	-	-	1	2	0	3	1	3	0	5	10	9	11	10	11	5	**71**
Sweden	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	1	0	0	1	3	1	**9**
United Kingdom	5	5	1	3	36	18	2	2	2	2	10	2	7	3	8	14	6	4	3	0	0	**133**
EU/EEA total	**7**	**8**	**3**	**5**	**43**	**35**	**36**	**31**	**27**	**80**	**81**	**63**	**59**	**52**	**49**	**91**	**67**	**94**	**68**	**102**	**59**	**1060**

Table 6.2: Congenital syphilis: number of cases per 100 000 live births, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	25.7	49.1	29.6	37.1	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Czech Republic	0.8	0	0	0.8	1.9	2.1	5.5	0	1.1	5.6	2.2	1.1	1.1	2.1	2	0	0.9	2.6	0	0	0.9
Denmark	-	3.1	1.5	1.5	0	0	1.5	3	0	4.5	-	-	-	-	-	-	-	-	-	-	-
Estonia	-	-	-	-	-	-	-	-	16.4	40.2	23	39.6	7.7	15.3	0	0	0	6.3	0	0	6.3
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Germany	-	-	-	-	-	-	-	-	-	-	-	1	1	0.7	0.7	0.6	0.7	0.4	0	0.5	0
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0	1.7
Hungary	0	0	0	0	2.6	0	2.8	4	4.1	4.2	3.1	2.1	5.2	9.5	4.2	4.1	2	3.1	1	1	1.1
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Ireland	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	1.4
Italy	-	-	-	-	-	-	-	-	0.2	1.1	0.7	0.2	0.9	0.4	1.1	1.4	1.8	1.6	0.2	2.1	1.4
Latvia	2.6	2.9	3.2	0	8.2	69.5	126.4	116.8	81.5	46.4	39.5	25.4	29.9	33.3	4.9	14	0	0	4.2	13.8	-
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	13.1	0	9.8	6.4	3.1	5.7	10.9	5.6
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2.9	4.4
Portugal	-	-	-	-	-	-	-	-	-	39.7	40	33.7	21	16.9	14.6	19.2	13.3	20.5	13.4	13.1	10.9
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.1	3.1	2.8
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	4.9	3.3
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0
Spain	-	-	-	-	-	-	-	0.3	0.5	0	0.8	0.2	0.7	0	1.1	2.1	1.9	2.2	1.9	2.2	1
Sweden	0	0	0	0	0	0	0	0	0	0	0	1.1	0	0	2	1	0	0.9	0.9	1.8	0.9
United Kingdom	0.6	0.6	0.1	0.4	4.8	2.5	0.3	0.3	0.3	0.3	1.5	0.3	1	0.4	1.1	1.9	0.8	0.5	0.4	0	0
EU/EEA total	**0.7**	**0.9**	**0.3**	**0.5**	**4.3**	**4.1**	**3.5**	**2.4**	**1.5**	**4.9**	**4.1**	**2.3**	**2.2**	**2.3**	**1.7**	**3.1**	**2.4**	**3.1**	**2.5**	**3.5**	**2.5**

7 Lymphogranuloma venereum

Table K: Data source, type and period of LGV surveillance data available

Country	Data source	Type	Period	Legal	Coverage
Belgium	BE-STD	C	2008–2010	V	Se
Czech Republic	CZ-STD	C	1990–2010		
Denmark	DK-LAB	C	2006–2008	V	Se
Ireland	IE-AGGR_STI	A	1995–2009	C	Co
	IE-LGV	C	2010–2010	C	Co
Netherlands	NL-STI	C	2004–2010	V	Se
United Kingdom	UK-ENHANCED	C	2004–2010	V	Co

Legend: type: aggregated (A); case-based (C); legal: voluntary reporting (V), compulsory reporting (C); coverage: sentinel system (Se); comprehensive (Co, Other)
Coverage: sentinel system (Se); comprehensive (Co, Other).

Figure 7.1. Number of reported LGV cases in four countries, 2004–2010

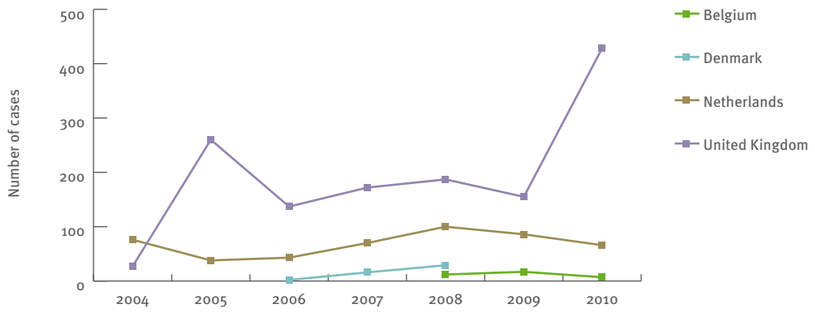
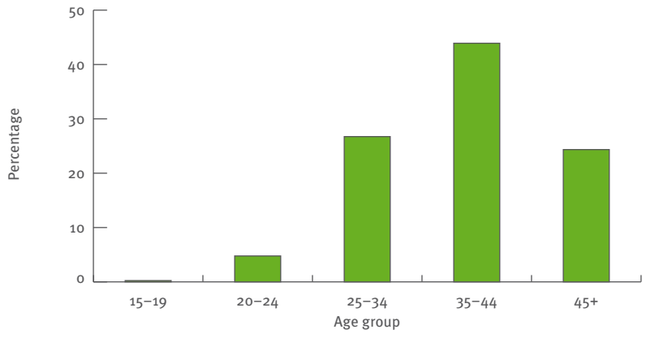


Figure 7.2. LGV cases by age category (proportion of total), six countries, 2004–2010, EU/EEA



7 Lymphogranuloma venereum

7.1 Key points

- In 2010, 503 cases of lymphogranuloma venereum (LGV) were reported from five countries.
- The number of reported cases has increased by 95% in 2010 compared with 2009. This is due to a large increase in cases reported by the United Kingdom.
- It is likely that there is considerable underreporting of LGV, and a number of countries (including France and Sweden) reported no cases.

7.2 Facts and figures

Sixteen countries supplied data on lymphogranuloma venereum (LGV) in 2004–2010, but only six reported cases of LGV (Belgium, the Czech Republic, Denmark, Ireland, Netherlands and the United Kingdom). Cyprus, Estonia, Finland, Hungary, Latvia, Luxembourg, Malta, Poland, Slovenia, and Sweden reported zero cases for LGV. No information is available for the remaining countries (Table 7.1a).

Table K specifies the source of the data, the type of data (aggregate and case-based), the coverage (either sentinel or comprehensive) and the period of availability for the six countries which actually reported LGV cases. It shows the existing heterogeneity in systems, recent changes in systems, and reporting periods. Rates per 100 000 population were not calculated for LGV. In 2010, the United Kingdom, which accounts for the majority of reported cases, started using case-based data.

In 2010, 503 cases of LGV were reported from five countries (2009: 258 cases). Between 2000 and 2010, 1942 cases of LGV were reported from six countries: the United Kingdom (1367 cases), the Netherlands (479), Denmark (47), Belgium (36), Ireland (13), and the Czech Republic (1) (Figure 7.1).

Among cases with known information on mode of transmission, 98% were diagnosed in MSM. Age was reported for 1931 cases, showing the highest proportion in those aged 35–44 years (Figure 7.2). In 2010, information on HIV status was available for 495 cases (98%), indicating that 82% were reported as HIV positive, 17% as HIV negative, and 2% as unknown. In 2004–2010, information on HIV status was available for 1931 cases (>99%), indicating that 74% were reported as HIV positive, 18% as HIV negative, and 8% as unknown. In 2010, the United Kingdom reported 428 cases, 2.8 times as many cases as in 2009 (155 cases). This increase, which was not mirrored by other reporting Member States, has led to a doubling of the number of reported cases in the EU/EEA.

It should be noted that many countries do not report LGV and that diagnosis of LGV is complicated by confirmation through genotyping. Therefore it is very likely that the actual prevalence is greatly underestimated.

The emergence of rectal LGV among MSM in western Europe and other parts of the world was first described in 2003 in the Netherlands[2]. The agent, Chlamydia trachomatis serotype L2, causes severe anorectal infections, mainly proctitis, tenesmus, constipation, and anal discharge. The majority of LGV patients are co-infected with HIV, reported large numbers of partners, and had unprotected anal intercourse. After the initial reports more cases were reported from a number of countries, e.g. Belgium, Germany, France, Italy, Portugal, Spain, Sweden, the United Kingdom, the USA and Canada[3]. Enhanced surveillance systems and strengthened case ascertainment have been initiated in the Netherlands, France and the United Kingdom. The increase in cases reported in 2010 in the UK was associated with increased risk-taking behaviour among HIV-positive MSM involving sex parties, sex-on-premises venues, and meeting partners through the internet. Infection control has included an initiative to raise awareness to LGV at relevant sexual and social venues and internet sites[4].

2 Nieuwenhuis RF, Ossewaarde JM, Götz HM, Dees J, Thio HB, Thomeer MG et al. Resurgence of lymphogranuloma venereum in Western Europe: an outbreak of Chlamydia trachomatis serovar L2 proctitis in The Netherlands among men who have sex with men. Clin Infect Dis 2004; 39 (7):996-1003.

3 Van de Laar M. The emergence of LGV in Western Europe: what do we know, what can we do? Euro Surveill 2006;11 (9):146-8. Available online: http://www.eurosurveillance.org/em/v11n09/1109-221.asp

4 Hughes G, Alexander S, Simms I, Conti S, Powers C, Ison C. Exponential growth of Lymphogranuloma venereum diagnoses in the UK: investigation of the largest documented outbreak among men who have sex with men. 19th International Society for Sexually Transmitted Disease Research, Quebec City, Canada, 10 to 13 July 2011.

7.3 Tables

Table 7.1a. LGV: number of cases by year of diagnosis, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	17	7	**36**
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	**0**
Czech Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	1	**1**
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	16	29	-	-	**47**
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Finland	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	**0**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Ireland	-	-	-	-	-	0	0	5	1	2	0	0	1	0	0	1	0	2	0	0	1	**13**
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	**0**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	38	43	70	100	86	66	**479**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	**0**
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	**0**
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	260	137	172	187	155	428	**1366**
EU/EEA total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**2**	**0**	**0**	**1**	**0**	**103**	**299**	**182**	**260**	**328**	**258**	**503**	**1942**

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Table 7.1b. LGV: number of cases by year of statistics, 1990–2010

Country	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	Total
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	17	7	**36**
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	**0**
Czech Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	1	**1**
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	16	29	-	-	**47**
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Finland	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	**0**
France	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Germany	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Iceland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Ireland	-	-	-	-	-	0	0	5	1	2	0	0	1	0	0	1	0	2	0	0	1	0	**13**
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
Liechtenstein	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	0	**0**
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	**0**
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	76	38	43	70	100	86	66	479	**479**
Norway	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	**0**
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	**0**
Spain	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**-**
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	260	137	172	187	155	428	1366	**1366**
EU/EEA total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**1**	**2**	**0**	**0**	**1**	**0**	**103**	**299**	**182**	**260**	**328**	**258**	**503**	**1942**	**1942**

8 Discussion and conclusion

8 Discussion and conclusion

This report is an update of the first ECDC STI surveillance report published in 2010. It presents EU-wide data on four STI and congenital syphilis for 1990–2010 as reported by individual Member States and their STI surveillance systems (e.g. laboratory reporting systems, sentinel surveillance systems, comprehensive surveillance systems). The heterogeneity in reporting makes it a challenge to interpret the distribution of STI or analyse STI trends. To navigate the heterogeneity of reported data, a thorough knowledge of the intricacies of the individual surveillance systems is required. However, despite this heterogeneity, a set of common features can be described, which allows for the careful interpretation of surveillance data.

With an overall rate of 186 per 100 000 population in 2010, chlamydia is the most frequently reported STI in Europe, accounting for the majority of all STI reports. Chlamydia was reported more often in women than in men, with an overall rate of 216 per 100 000 in women and 154 per 100 000 in men. Gonorrhoea was reported nearly three times more often in men than in women, with an overall rate of 17.1 per 100 000 in men and 6.4 in women. Syphilis was reported three times more often in men (6.6) than in women (1.8). Syphilis appeared to be the most completely reported disease among the five STI under EU surveillance, with long-standing surveillance based on serology in most European countries, including the central and eastern countries. The genuine incidence of STI is likely to be higher than reported here, as many diagnoses are either not made or not reported. For example, the detection and reporting of chlamydia cases appears to be incomplete in several countries.

A number of countries have implemented sentinel surveillance systems to monitor trends in clinical testing services rather than having mandatory notification systems. The interpretation of those data is affected by the populations targeted by these clinical testing services and they differ across countries. Gonorrhoea surveillance appears to have a relatively good coverage but the trend to move from culture to nucleic acid amplification testing (NAAT) and polymerase chain reaction (PCR) testing will affect the ability to perform susceptibility testing. Increased use of NAAT will most likely also affect the number of detected gonorrhoea cases due to increased sensitivity. This has to be monitored carefully in the coming years with respect to the implementation of the European Gonococcal Antimicrobial Susceptibility Surveillance Programme[5].

Chlamydia trends appear to be on the increase in all but four countries. Between 2000 and 2010, the overall reporting rate more than doubled. This is most likely due to increased case detection, improved diagnostics tools, improved surveillance systems, and the introduction of chlamydia screening programmes in a number of countries. Decreasing or low rates may reflect the lack of accurate diagnostic tools or diagnostic capacity in a number of countries rather than an actual low prevalence of chlamydia. The overall trends in gonorrhoea and syphilis across the EU/EEA over the past decade appear to be decreasing. Both diseases show a notable decreasing trend in countries which previously had reported very high rates, although in other countries dramatic increases in reported cases were observed. These declines, particularly for syphilis, are probably due to changes in healthcare systems, diagnostic capacity and reporting rather than true changes in the incidence. However, remarkable increases were noted in other countries and – based on the information from the male-to-female ratio – this is most likely due to recent increases of syphilis among MSM.

With respect to the distribution of STI, it appears that the three STI affect different sub-populations as characterised by age, gender and sexual orientation. Only one sixth of all syphilis cases were reported in young people, as compared with 43% in gonorrhoea and 76% in chlamydia, reflecting not only the prevalence in these age categories but also testing and screening practices

5 European Centre for Disease Prevention and Control. Gonococcal antimicrobial susceptibility surveillance in Europe, 2009. Stockholm: ECDC, 2011

Table L: Comparison of indicators: chlamydia, gonorrhoea and syphilis, EU/EEA, 2010

Indicators 2010	Chlamydia	Gonorrhoea	Syphilis
Rate per 100 000 population*	186.0	10.4	4.4
Number of countries reporting	24	28	29
Trends from 2006–2010	+41%	-5%	-17%
Male-to-female ratio in reported cases**	0.7	2.5	3.7
Percentage in young people of 15–24 years**	76%	43%	17%
Rate for 20–24-year-olds per 100 000 population*	862.0	31.0	5.5
Percentage in MSM**	5%	23%	55%

* Calculated for countries with comprehensive surveillance systems
** Based on countries with known information regarding the indicators

for chlamydia. Half of all syphilis cases were reported in MSM (of those cases with information on transmission category), as compared to a 25% in gonorrhoea and 5% in chlamydia, indicating higher prevalence rates in MSM for syphilis. This finding is consistent with other evidence on increasing trends of syphilis and other STI among MSM in recent years[6], namely that MSM play a disproportionate role in transmission of syphilis and LGV in Europe. It highlights the importance for obtaining reliable epidemiological information to inform prevention measures. The male-to-female ratio may be used to interpret the contribution of different populations to the spread of STI. Information on sexual preference may be missing due to incomplete reporting or because MSM cannot or wish not to disclose their sexual orientation.

The epidemic of rectal LGV among MSM in western Europe, with the majority of LGV patients co-infected with HIV, was reported in a number of countries. However, in the 2000–2010 data collection only six countries have submitted available data, with no reports from Germany, France, Italy, Portugal, Spain and Sweden, hampering the monitoring of the ongoing LGV epidemic in Europe. Enhanced surveillance systems and strengthened case ascertainment have been initiated in a number of countries, like the Netherlands, France, and the United Kingdom. In 2010, the United Kingdom reported a large increase in the number of LGV cases.

The data on congenital syphilis are difficult to interpret as they show a high diversity. ECDC intends to investigate the reporting of congenital syphilis in relation to existing antenatal screening programmes for pregnant women in EU/EEA countries in order to improve the interpretation of data. Hence, a study on the effectiveness of antenatal screening programmes for syphilis, HIV and hepatitis B will be carried out in 2012.

In conclusion, sexually transmitted diseases in Europe show diverging trends. Each STI seems to affect distinct sub-populations at risk. Overall EU-wide comparison should be done cautiously and acknowledge the heterogeneity in healthcare and reporting systems.

Chlamydia remains the most prevalent STI, with high rates in the western and northern parts of the EU. With respect to gonorrhoea and syphilis, different trends exist across countries, reflecting different populations at risk as well as changes in healthcare and reporting systems. On the whole, the data suggest a rapidly increasing trend for chlamydia and slightly decreasing trends for gonorrhoea and syphilis, although syphilis displays diverging trends across countries.

Enhanced surveillance of STI in Europe is essential to provide the information that is necessary to monitor the distribution of disease and evaluate the public health response in order to control the transmission of infections. In order to achieve this aim, countries in Europe need to work towards providing high-quality surveillance data, including STI surveillance data with complete case reports.

6 EJ Savage, G Hughes, C Ison, et al. Syphilis and gonorrhoea in men who have sex with men: a European overview Eurosurveillance, Volume 14, Issue 47, 2009. Available online from: http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19417

Annexes

Annex 1. Description of national STI surveillance systems

Austria

One system providing data to TESSy: AT-STISentinella which is a case-based, voluntary, sentinel laboratory system using EU-2008 case definitions. This system does not provide national coverage. Diseases under surveillance: Chlamydia, gonorrhoea, syphilis

Case reporting

Mandatory universal (since 1945)

- Diseases covered: syphilis and gonorrhoea
- Coverage: In theory, it is obligatory for all physicians in all settings, private and public, to report (only if there is risk of onward transmission).
- Laboratory confirmation: not required
- Variables: date of diagnosis

Voluntary

- Diseases covered: syphilis and gonorrhoea

Aggregate

- Diseases covered: syphilis and gonorrhoea
- Aggregate data for Austria reported from district level

Laboratory test reporting

Voluntary universal

- Diseases covered: gonorrhoea, syphilis, chlamydia
- Aggregate reporting for chlamydia; case-based reporting for gonorrhoea and syphilis
- Variables: number of positive results (just for chlamydia)
- Reports from the national reference centre for syphilis and gonorrhoea: data not representative for Austria (from one centre which mostly examines sex workers)
- Chlamydia is reported by one centre so the data are not representative for Austria

Belgium

Two surveillance systems reporting data to TESSy:

- BE-LABNET: voluntary, sentinel laboratory system reporting case-based data for chlamydia, gonorrhoea and syphilis with national coverage.
- BE-STD: voluntary, sentinel clinician system reporting case-based data for LGV. Coverage not known.

Case reporting

Mandatory universal (since 1946)

- Diseases covered: syphilis and gonorrhoea (congenital syphilis)
- Coverage: unknown. In theory, it is obligatory for all physicians in all settings, private and public, to report
- Laboratory confirmation: not required
- Individual-level reporting
- Variables: place of residence, gender, age, sexual orientation (Flemish community only), syphilis stage

Sentinel (since 2000)

- 50 sites distributed throughout the country report. Participation is voluntary by gynaecologists, dermatologists, GPs, urologists, STI clinics, student clinics and family planning centres
- Diseases covered: syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, PID, urethritis, cervicitis, genital ulcer
- Coverage: unknown
- Laboratory confirmation required for syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, PID
- Variables: age, sex, nationality, place or residence, level of education, reason for testing, symptoms, sexual orientation, number of partners in last six months, CSW, drug use, contact with CSW, site of infection, HIV status

Laboratory test reporting

Sentinel (since 2001)

- Voluntary participation by private and hospital microbiology laboratories
- Diseases covered: syphilis, gonorrhoea and chlamydia
- Coverage: 110 laboratories currently participate representing 61% of all recognised laboratories
- Individual-level reporting
- Cannot be linked to case reports
- Variables: place of residence, gender, age, test used
- Gonorrhoea AMR testing is undertaken for all isolates

Bulgaria

Bulgaria reports STI cases through the BG-STI data source. This comprehensive system collects aggregated data on gonorrhoea, syphilis and congenital syphilis from hospitals and 'other' sources. Reporting is compulsory and EU-2002 case definitions are applied. Geographical coverage is not reported.

Case reporting

Mandatory universal

Sentinel

Laboratory test reporting

Mandatory universal

Voluntary universal

Cyprus

One surveillance system provides data to TESSy: CY-NOTIFIED_DISEASES. This system is a mandatory, comprehensive, case-based surveillance system, based on clinician reporting which has national coverage. The system reports data on chlamydia, gonorrhoea and syphilis and applies EU-2008 case definitions.

Case reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea (since 1984) and chlamydia (since 2005)
- Coverage: In theory, it is obligatory for all physicians in all settings, private and public, to report. It is estimated that 26–50% of all cases diagnosed are reported in this system. (76–99% of cases diagnosed in the five STI/DV clinics in Cyprus are estimated to be reported. There is no data available on the actual proportion of doctors who report.)
- Laboratory confirmation: required
- Individual-level reporting
- Variables: place of residence, clinic/physician type, date of onset, date of diagnosis, place of diagnosis, gender, age, probable route of transmission, site of infection, nationality/country of birth

Sentinel (since 2004)

- This is a convenience-based sample of 40 physicians (26 gynaecologists and 14 dermatologists) from all geographical areas of Cyprus. Participation is voluntary in the private sector but all STI clinics of the public sector must report
- Diseases covered: syphilis, gonorrhoea, chlamydia, genital herpes, genital warts
- Coverage: It is estimated that overall 26-50% of cases diagnosed are reported in this system
- Laboratory confirmation is only required for chlamydia
- Variables: place of residence, clinic/physician type, date of diagnosis, place of diagnosis, gender, age, probable route of transmission, site of infection

Laboratory test reporting

Sentinel (since 2004)

- It is obligatory for public labs to participate in this surveillance. It is voluntary for private labs and it is estimated that 26-50% participate
- Diseases covered: syphilis, gonorrhoea and chlamydia
- Coverage: It is estimated that 26–50% of all positive test results for STI in the country are reported in this system
- Individual-level reporting
- Can be linked to case reports
- Variables: place of residence, clinic/physician type, date of diagnosis, place of diagnosis, gender, age, nationality/country of birth
- Gonorrhoea AMR testing is undertaken for all isolates

Czech Republic

- The CZ-STD data source is used for reporting of data on gonorrhoea, LGV, syphilis and congenital syphilis. The surveillance system for syphilis and gonorrhoea is reported as being case-based, comprehensive, compulsory and based on reporting by clinicians, laboratories, hospitals and ‘other’ sources. National case definitions are used.
- The characteristics of the surveillance systems for congenital syphilis and LGV are the same as for syphilis and gonorrhoea and are reported through identical IT tools.

Laboratory test reporting

Mandatory universal

- Laboratory test results are mandatorily reported via clinical case reports as the basic information of notification

Denmark

Two system are used to report data to TESSy:

- DK-LAB: comprehensive, case-based, compulsory laboratory surveillance system for chlamydia and LGV (LGV part of data source is incomplete). National case definitions are used.
- DK-STI_CLINICAL: comprehensive, case-based, compulsory clinician-based surveillance system for gonorrhoea, syphilis and congenital syphilis. National case definitions are used. Both systems have national coverage.

Case reporting

Mandatory universal (since 1865)

- Diseases covered: syphilis, gonorrhoea, (congenital syphilis)
- Coverage: unknown. In theory, it is obligatory for all physicians in all settings, private and public, to report
- Laboratory confirmation is required for syphilis (but some cases are notified without lab reports, e.g. partners traced after clinical diagnosis)
- Individual-level reporting
- Variables: place of diagnosis, date of diagnosis, age, gender, country of birth/nationality, sexual orientation, HIV status, site of infection, mode of transmission, anatomical site of infection, type of healthcare provider

Sentinel

- None

Laboratory test reporting

Mandatory universal

- Diseases covered: gonorrhoea, chlamydia, syphilis
- Coverage: >99% of all positive tests for chlamydia, >98% for gonorrhoea and >99% for syphilis are reported
- Individual-level reporting
- Laboratory and clinical reports can be linked in about 95% of cases of syphilis and gonorrhoea. There is no clinical reporting for chlamydia
- Variables: place of diagnosis, date of diagnosis, age, gender, anatomical site of infection, lab test used, type of healthcare provider
- Gonorrhoea AMR testing is undertaken for all isolates

Estonia

Data are reported to TESSy through four data sources:

- EE-CONSYPH for reporting of congenital syphilis
- EE-GONOCOCC for reporting of gonorrhoea
- EE-HCV/CHLAMYDIA for reporting of chlamydia
- EE-PERTUSSIS/SHIGELLOSIS/SYPHILIS for reporting of syphilis

The systems are all comprehensive, case-based, compulsory, and provide national coverage. Data are reported by hospitals, clinicians, laboratories and other sources. Estonia uses EU-2008 case definitions.

Case reporting

Mandatory Universal (since 1950)

- Disease covered: syphilis, congenital syphilis, gonorrhoea, chlamydia, genital herpes
- Coverage: Theoretically it is obligatory for all physicians in all settings, private and public, to report
- Estimated that 51–75% of all physicians report
- Estimated that 76–99% of syphilis cases, 51–75% of gonorrhoea cases, 26–50% of chlamydia cases, 10–25% of genital herpes are reported
- Laboratory confirmation: required
- Individual-level reporting
- Variables: age, gender, date of onset, date of diagnosis, place of diagnosis, syphilis stage (ICD 10)

Sentinel

- None

Laboratory test reporting

Mandatory universal (since 2004)

- It is obligatory for laboratories to participate in this surveillance
- Diseases covered: syphilis, gonorrhoea, chlamydia, genital herpes
- Coverage: unknown
- Individual-level reporting
- Can be linked to case reports but not always
- Variables: age, gender, place of residence (county level), date of test result

Finland

The data source NIDR is used to report cases of chlamydia, gonorrhoea, LGV, syphilis (including congenital syphilis) to TESSy. The system is case-based and comprehensive. Data are collected from clinicians and laboratories; reporting is compulsory. Geographical coverage and case definitions in use are not reported. No features are reported for congenital syphilis.

Case reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea, LGV
- Coverage: >95%
- Laboratory confirmation: required
- Individual-level reporting
- Variables: place of residence, gender, age, symptoms, sexual orientation, source country

Sentinel

- Six STI clinics, two gynaecological clinics, three healthcare centres and two student healthcare centres participate in this surveillance system
- Diseases covered: syphilis, HIV, gonorrhoea, chlamydia, LGV, genital herpes, genital warts
- Laboratory confirmation is required for chlamydia, syphilis, gonorrhoea, LGV
- Individual-level reporting
- Variables: age, gender, symptoms, history of STI, number of partners during the last 12 months, sexual orientation, source country

Laboratory test reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea, LGV and chlamydia
- Coverage: >95 %
- Individual-level reporting
- Gonorrhoea; LGV and syphilis can be linked to case reports
- Variables: age, gender, date of diagnosis, place of diagnosis, sample type, lab test used
- Gonorrhoea AMR testing is undertaken for all isolates

France

The data source FR-STI is used to report cases of gonorrhoea and syphilis to TESSy. The system is case-based and sentinel. Data are collected from clinicians and reporting is voluntary. Surveillance is national but the coverage rate is unknown. National case definitions are used, based on clinical and laboratory criteria. To date, no features are reported to TESSy for congenital syphilis, chlamydia and LGV, but the latter two are routinely monitored.

Case reporting

Mandatory universal (until 2000)

- Mandatory notification for four STI (gonorrhoea, syphilis, LGV and chancroid) was stopped in 2000 due to very low completeness levels.

Voluntary sentinel (since 2000 for syphilis, 2004 for gonorrhoea)

- Diseases covered: syphilis, gonorrhoea
- Coverage: unknown. Sentinel network of clinicians mainly from STI clinics, less often from hospitals, private practitioners
- Laboratory confirmation: required
- Individual-level reporting
- Common variables: place of diagnosis, date of diagnosis, age, gender, place of residence, country of birth, country of residence, sexual orientation, history of STI, HIV status, date of HIV test, reason for IST consultation, clinical symptoms, concurrent STI, condom use, no and gender of partners in last 12 months; for syphilis: lab test used, syphilis stage; for gonorrhoea: history of gonorrhoea in last 12 months, site of infection, country of acquisition, treatment, partner status (casual, stable, CSW), drug/alcohol use

Voluntary sentinel (since 2004)

- Diseases covered: LGV
- Coverage: unknown. Sentinel network of clinicians and of public or private laboratories
- Laboratory confirmation is required (genotyping of anorectal chlamydial infections)
- Individual-level reporting
- Variables: place of diagnosis, date of diagnosis, age, gender, place of residence, country of birth, country of residence, sexual orientation, history of STI, HIV status, date of HIV test, reason for IST consultation, clinical symptoms, concurrent STI, condom use, number and gender of partners in last 12 months; for syphilis: lab test used, syphilis stage; for gonorrhoea: history of gonorrhoea in last 12 months, site of infection, country of acquisition, treatment, partner status (casual, stable, CSW), drug/alcohol use

Laboratory test reporting

Mandatory universal

- None

Voluntary sentinel (since 1986 for gonorrhoea, 1989 for chlamydia, 2004 for LGV)

- Diseases covered: gonorrhoea (RENAGO), chlamydia (RENACHLA) and LGV
- Coverage: unknown. Sentinel network of public or private laboratories (~200 laboratories for RENAGO, ~80 laboratories for RENACHLA, ~30 laboratories for LGV network)
- Individual-level reporting. Cannot be linked to cases reported for gonorrhoea and for chlamydia.
- Common variables: place of diagnosis, date of diagnosis, gender, age, site of infection, clinical symptoms, reason for testing, concurrent STI, lab test used, category of clinic and of physician; for LGV: HIV status, sexual orientation, partner status (casual, stable, CSW), country of acquisition, number of partners in the last month. Antimicrobial resistance of RENAGO's strains tested in the reference lab is the basis for participation to EuroGASP.

Germany

The data source DE-SURVNET@RKI-7.3 reports data for syphilis and congenital syphilis from Germany. The system is a comprehensive and compulsory system with national coverage providing case-based data. Data are reported by clinicians and laboratories. National case definitions are used. There are no data sources reporting data for chlamydia and gonorrhoea.

Case reporting

Mandatory universal

- New system introduced in 2001. Cases are linked to laboratory reports.
- Diseases covered: syphilis
- Coverage: 75–99% of syphilis cases are reported. In theory, it is obligatory for all physicians in all settings, private and public, to report.
- Laboratory confirmation: required
- Individual-level reporting
- Variables: place of residence, gender, age, lab results, clinical symptoms, date of infection, CSW, contact with CSW, sexual orientation, history of STI, country of origin, site of infection.

Sentinel

- System introduced in 2003. A combination of local health offices, hospital based STI clinics and private practitioners report. LHOs and STI clinics were selected based on convenience sample. Private practitioners were selected randomly in a process stratified by speciality and location.
- Diseases covered: syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, PID, urethritis, cervicitis.
- Coverage: unknown.
- Laboratory confirmation is required for syphilis, gonorrhoea and chlamydia.
- Variables: Date of consultation, age, sex, country of origin, place or residence, sexual orientation, CSW, contact with CSW, drug habits, history of STI, HIV status, reason for testing, site of infection, number of partners in six months, gender of partners, condom use, education, financial situation, nationality, country of birth, migration status.

Laboratory test reporting

Mandatory universal

- Diseases covered: syphilis
- Individual-level reporting
- Can be linked to case reports – see above
- Variables: See universal case variables above

Greece

Greece uses one data source for reporting STI data to TESSy, the GR-NOTIFIABLE_DISEASES system developed by the Hellenic Centre for Disease Control and Prevention (KEELPNO). KEELPNO is responsible under law for epidemiological surveillance in Greece. The new surveillance system for STI, established in 2009, actively collects data (case based and aggregated) on cases of chlamydia, gonorrhoea, syphilis, congenital syphilis and LGV. Data are collected from clinicians/laboratories/hospitals, in the public and private sector. Reporting is compulsory for all diseases mentioned above except chlamydia. However, actions are undertaken to include chlamydia in the mandatory surveillance system. EU-2008 case definitions are used. The new system is intended to be comprehensive but does not yet provide national coverage. Thus significant underreporting may exist. Therefore coverage is described as 'other'.

Case reporting

Mandatory universal (since 1950)

- Diseases covered: syphilis, gonorrhoea, congenital syphilis and LGV.
- Data presented in this report are subject to change if new evidence is provided by reporting centres. Due to the introduction of the new surveillance system, no time trends can be calculated at this point. The increase in the reported number of chlamydia and syphilis cases is mainly attributed to the inclusion of data from reporting centres. Data on gonorrhoea presented in this report were provided by the National Reference Centre for N. gonorrhoea.
- Coverage: In theory, reporting is obligatory for all physicians/laboratories/hospitals in all settings, private and public. Active surveillance was implemented in 2009 in order to increase case detection and reporting. Currently the system does not provide national coverage. Therefore, coverage is described as 'other'.
- Laboratory confirmation: required.
- Variables (case based): age, gender, date of onset, date of diagnosis, date of notification, reporting centre, clinical service type, country of birth, possible country of infection, HIV status, reason for testing, transmission category, clinical symptoms, laboratory results, sex worker, contact with sex worker, site of infection, syphilis stage.
- Variable (aggregated): age, gender, transmission category.

Sentinel

- None

Laboratory test reporting

Mandatory universal (since 1987)

- Diseases covered: syphilis and gonorrhoea
- Antimicrobial susceptibility testing of Neisseria gonorrhoeae and gonorrhea AMR surveillance is performed by the National Reference Center for N. gonorrhoeae, Laboratory of Bacteriology, Hellenic Pasteur Institute (NRCNG).

Hungary

Data are reported through the data source HU-STD SURVEILLANCE. This covers chlamydia, LGV, gonorrhoea, syphilis and congenital syphilis. This sentinel system reports aggregated data for all STI except congenital syphilis (case based). Data are reported by clinicians and reporting is compulsory. The system has national coverage and uses EU-2008 case definitions.

Case reporting

Mandatory universal (since 1945)

Sentinel

Laboratory test reporting

Mandatory universal

Voluntary universal

Iceland

Iceland reports STI data to TESSy through one data source: IS-SUBJECT_TO_REGISTRATION. The system is compulsory, comprehensive and provides national coverage. Case-based data are reported to the system by hospitals, laboratories and clinicians. The system applies EU-2008 case definitions for all diseases under surveillance (chlamydia, gonorrhoea and syphilis).

Case reporting

Mandatory universal (since 1999)

- Diseases covered: syphilis, gonorrhoea, chlamydia and genital warts
- Coverage: In theory, it is obligatory for all physicians in all settings, private and public, to report. It is estimated that 76–99% of diagnosed syphilis and gonorrhoea cases are reported in this system
- Laboratory confirmation is required for syphilis, gonorrhoea and chlamydia
- Individual-level reporting for syphilis, gonorrhoea and chlamydia
- Aggregate reporting for genital warts and urethritis
- Variables: place of residence, clinic/physician type, date of onset, date of diagnosis, place of diagnosis, gender, age, probable route of transmission, site of infection, nationality/country of birth, IDU, reason for testing, country where infection contracted, sexual orientation

Sentinel

- None

Laboratory test reporting

Mandatory universal (since 1999)

- It is obligatory for public labs to participate in surveillance
- Diseases covered: syphilis, gonorrhoea and chlamydia
- Coverage: It is estimated that all positive test results for STI in the country are reported in this system.
- Individual-level reporting
- Can be linked to case reports
- Variables: place of residence, clinic/physician type, date of diagnosis, place of diagnosis, gender, age, reason for testing, site of infection, all clinical data submitted to the laboratory by the clinician
- Gonorrhoea AMR testing is undertaken for all isolates

Ireland

Three data sources are used for reporting of STI data from Ireland; the IE-AGGR_STI and IE-SYPHILIS systems use EU-2002 case definitions. A national case definition is used for the IE-LGV system.

- IE-AGGR_STI: The system is used to report aggregated data on chlamydia, gonorrhoea and LGV (1995–2008). The system is comprehensive, compulsory, provides national coverage and collects data reported by clinicians, laboratories and hospitals.
- IE-SYPHILIS: The system is used to report case-based data on syphilis and congenital syphilis. The system is comprehensive, compulsory, provides national coverage and collects data reported by clinicians, laboratories and hospitals.
- IE-LGV: The system is used to report case-based data on LGV since 2009. The system is comprehensive, compulsory, provides national coverage and collects data reported by clinicians, laboratories and hospitals.

Case reporting

Mandatory universal (since 1981)

- Diseases covered: syphilis, congenital syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, urethritis, chancroid, granuloma inguinale, infectious hepatitis B, LGV, trichomoniasis
- Coverage: national
- Laboratory confirmation: not required
- Aggregate reporting except for LGV, syphilis and congenital syphilis which are case based
- Variables: disease, quarter of notification, age group, gender, geographical area

Enhanced

- Diseases covered: syphilis and congenital syphilis (since 2000); LGV (since 2009)
- Coverage: national
- Laboratory confirmation is required for both syphilis and LGV
- Variables: date of birth, age, gender, country of birth, country of residence, place of residence, source of referral, syphilis stage, place of diagnosis, date of diagnosis, re-infection or not, testing history, treatment history, diagnosis and treatment abroad, concurrent STI, history STI, HIV status, sexual orientation, country of infection, number of sexual contacts in prior 12 months, gender of partners, mode of acquisition

Laboratory test reporting

Mandatory universal (since 2004)

- Diseases covered: syphilis, congenital syphilis, gonorrhoea, chlamydia, genital herpes, chancroid, granuloma inguinale, infectious hepatitis B, LGV, trichomoniasis
- Coverage: National
- Aggregate reporting except for syphilis and congenital syphilis, which are case based
- Variables: see ‘case reporting’

Italy

Italy reports STI data to TESSy through IT-NRS data source: The system is comprehensive, compulsory, provides national coverage and provides case-based data for gonorrhoea and syphilis. Data are reported by hospitals and clinicians. The case definitions applied were not reported.

Case reporting

Mandatory universal (since 1956)

- Diseases covered: syphilis and gonorrhoea
- Coverage: unknown. In theory, it is obligatory for all physicians in all settings, private and public, to report
- Laboratory confirmation is required for syphilis, gonorrhoea
- Individual-level reporting
- Variables: place of residence, age group, gender, country of birth

Sentinel (since 1991)

- 12 public STI clinics participate in this system. It is a non-random sample
- Diseases covered: syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, urethritis, PID, LGV
- Coverage: estimated 50% of all syphilis and gonorrhoea cases
- Laboratory confirmation is required for syphilis, gonorrhoea and chlamydia
- Variables: clinic/physician type, date of diagnosis, place of diagnosis, site of infection, sexual orientation, country of infection, nationality, age, gender, place of residence, history of STI, HIV status, date of previous HIV test, number of partners in last six months, condom use in last six months, drug use lifetime

Laboratory test reporting

Mandatory universal

- None

Voluntary sentinel (since 2009)

- 13 large public laboratories located in major cities report to this system
- Diseases covered: gonorrhoea, chlamydia, trichomonas vaginalis
- Individual-level reporting
- Variables collected: age, gender, nationality, site of infection, symptoms, pregnancy, use of condoms, number of partners in last six months, stable partner previous three months, date of diagnosis

Latvia

The data source LV-BSN is used to report cases of chlamydia, gonorrhoea, syphilis and congenital syphilis to TESSy. The system is case-based and comprehensive, compulsory and has national coverage. Data are collected from clinicians and laboratories. The current EU case definitions are used.

Case reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea, chlamydia, LGV and genital HSV
- Coverage: obligatory for all physicians in all settings, private and public
- Laboratory confirmation is required for syphilis, gonorrhoea, chlamydia
- Individual-level reporting
- Variables: reporting centre, place of residence, age, gender, date of onset, date of diagnosis, date of notification, laboratory results and method of testing, transmission, contact with sex worker, sex worker, drug use, syphilis stage, etc.

Sentinel

- None

Laboratory test reporting

Mandatory universal (since 2008)

- Disease covered: syphilis, gonorrhoea, chlamydia and genital HSV
- Individual-level reporting only for positive results according to EU case definitions
- Variables: age, gender, place of residence, date of test result, method, etc.

Lithuania

The data source LT-COMMUNICABLE_DISEASES is used to report cases of chlamydia, gonorrhoea, syphilis and congenital syphilis to TESSy. LGV has been included in reporting since July 2011. The system is comprehensive and provides national coverage. Case-based data are reported by clinicians and reporting is compulsory. EU-2008 case definitions are used.

Case reporting

Mandatory universal (2003)

- Diseases covered: syphilis, gonorrhoea, chlamydia and LGV (since 2011), congenital syphilis
- Coverage: it is obligatory for all physicians in all settings, private and public, to report
- Laboratory confirmation is required
- Individual-level reporting
- Variables: place of residence (county level), probable site of infection, date of onset, date of diagnosis, date of notification, place of diagnosis, reason for testing, gender, age, education, probable route of transmission, contact with CSW in the last six months, number of partners in the last 12 months, condom use

Sentinel

- None

Laboratory test reporting

Mandatory universal

- None

Voluntary universal

- None

Luxembourg

Luxembourg reports STI data through two data sources:

- LU-CHLAMYDIA: Sentinel, voluntary system reported case-based data from laboratories and hospitals. The system does not have national coverage. The case definitions in use are not reported.
- LU-SYSTEM1: Comprehensive, case-based, compulsory notification system. Data are reported by clinicians. Geographical coverage is not reported. No case definitions are applied.

Malta

Malta reports STI data through the MT-DISEASE_SURVEILLANCE data source. The system is used for reporting case-based data for chlamydia, LGV, gonorrhoea, syphilis and congenital syphilis. Data are reported by clinicians, laboratories and hospitals (also by other sources for chlamydia, gonorrhoea and syphilis). The system is compulsory and comprehensive and applies EU-2008 case definitions. Geographical coverage is not reported.

Case reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea and chlamydia (congenital syphilis)
- Coverage: unknown. In theory, it is obligatory for all physicians in all settings, private and public, to report. 1/1 STI/DV clinic reports.
- Laboratory confirmation: required
- Individual-level reporting
- Variables: place of residence, clinic/physician type, date of diagnosis, place of diagnosis, gender, age

Sentinel

- None

Laboratory test reporting

Mandatory universal

- All laboratories participate in this surveillance.
- Diseases covered: syphilis, gonorrhoea and chlamydia
- Coverage: It is estimated that 76–99% of all positive test results for STI in the country are reported in this system.
- Individual-level reporting
- Can be linked to case reports but not always
- Variables: sex, age, mode of transmission, clinic/physician type, site of infection, date report is issued

Netherlands

STI are reported through the NL-STI data source. The reports cover chlamydia, gonorrhoea, syphilis and LGV. This sentinel surveillance system covers all STI centres in the country, which has national coverage, but is selective for the more high-risk population by triage according to a fixed set of criteria (i.e. young age, MSM, risk behaviour, having STI symptoms, notification, and ethnic origin from countries with generalised HIV epidemics). All clients are tested for chlamydia, gonorrhoea, syphilis, HIV; other tests are done on indication. The surveillance system collects case-based data regarding the diagnosis, with national case definitions applied (laboratory confirmation), as well as demographic and behavioural data.

Case reporting

Sentinel (since 2006)

- Reporting by eight STI regions representing all 36 municipal health services
- Diseases covered: syphilis, gonorrhoea, chlamydia, HIV, hepatitis B and C, genital herpes, genital warts, Trichomoniasis, non-specific urethritis, LGV
- Coverage: national
- Laboratory confirmation is required for syphilis, gonorrhoea, chlamydia, LGV, HIV and hepatitis.
- Variables: place of diagnosis, date of diagnosis, sex, age, place of residence, ethnic origin (by country of birth or parent's country of birth, reason for testing, sexual orientation, history of STI, CSW, contact with CSW, IDU, HIV status, date of HIV test, number of partners in last six months, condom use at last sexual contact, lab test, site of infection, AMR

Laboratory test reporting

Mandatory

- None

Sentinel

- None

Norway

- The data source MSIS is used to report cases of chlamydia, gonorrhoea, syphilis and congenital syphilis to TESSy. The system is case-based and comprehensive. Data are collected from clinicians (gonorrhoea and syphilis) and laboratories (chlamydia, gonorrhoea, and syphilis) and reporting is compulsory.
- NO-MSIS_B: this data source provides data for gonorrhoea, syphilis and congenital syphilis. For gonorrhoea and syphilis, the system is reported as being comprehensive and case-based, collecting reports from clinicians, laboratories and hospitals. Notification is compulsory. For congenital syphilis, features of the data source are not reported.
- NO-MSIS_CHLAMYDIA: the data source is used to report data on chlamydia. The system is comprehensive, compulsory and collects case-based data from laboratories (since 2005).

Case reporting

Mandatory universal (since 1922):

- Diseases covered: syphilis and gonorrhoea
- Coverage: >95%
- EU-case definitions 2008 are used
- Individual-level reporting
- Variables: place of residence, date of onset, date of diagnosis, place of diagnosis, gender, age, nationality/country of birth, clinic type, a/symptomatic, reason for testing, site of infection, route of transmission, place/country of infection, relation to source partner

Sentinel

- None

Laboratory test reporting

Mandatory universal

- Diseases covered: chlamydia, syphilis, and gonorrhoea
- Coverage: >95%
- Individual-level reporting for all three STI (chlamydia since 2005)
- Case definition chlamydia: one or more positive tests for chlamydia within a period of 60 days
- Aggregate data on total number of tests per year for chlamydia
- Variables: chlamydia: birth year, sex, municipality of living, data of diagnosis, reporting laboratory; gonorrhoea/syphilis: age, gender, date of sending the report, reporting laboratory, unique ID number on reporting form
- Gonorrhoea AMR testing (PPNG, kinolon) is undertaken for all isolates

Sentinel

- None

Poland

Poland report STI data through the data source PL-NATIONAL_SURVEILLANCE. This comprehensive system is used for reporting of chlamydia, gonorrhoea, syphilis and congenital syphilis. Cases are reported by clinicians and laboratories. Reporting is compulsory. Case definitions in use and geographical coverage are not reported. The system is reported as being case-based, however only aggregate data are reported to TESSy.

Case reporting

Mandatory universal

- Date introduced: 1961, modified in 2000, new regulations expected in 2007
- All doctors (in theory), mainly STI units (in practice) report
- Diseases covered: syphilis, gonorrhoea
- Coverage: estimated at 70–80%
- Laboratory confirmation required
- Individual-level reporting
- Variables: gender, birth date, place of residence, clinical symptoms, laboratory test results, date of possible infection, place of possible infection, possible contact, history of STI

Sentinel

- Date introduced: 2003, a network of local STI clinics (16 in the country) with central unit (Centre of Diagnostics and Treatment of STI, Warsaw Medical University); system of reporting to local health offices and, in parallel, to the central unit in Warsaw
- Mainly local STI units (also selected private practitioners) report
- Diseases covered: syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, urethritis
- Coverage: estimated at 60–70%
- Laboratory confirmation required for syphilis, gonorrhoea and chlamydia
- Both individual and aggregate reporting
- Variables: date of consultation, gender, birth date, place of residence, clinical symptoms, laboratory test results, date of possible infection, place of possible infection, possible contact, gender of partner/s, history of STI, HIV status, nationality, condom use, drug use

Laboratory test reporting

Mandatory universal

- Date introduced: 1961, modified in 2000, new regulations expected in 2007
- All laboratories (in theory); in practice, mostly laboratories specialising in infectious disease diagnostics report
- Diseases covered: syphilis
- Coverage: about 80%
- Individual-level reporting
- Can be linked to case reports
- Variables: see above

Portugal

Portugal reports STI data to TESSy through three data sources:

- PT-GONOCOCCAL: used to report data on gonorrhoea
- PT-SYPHILIS: used to report data on syphilis
- PT-CONGENITAL_SYPHILIS: used to report data on congenital syphilis

All three systems are comprehensive, compulsory and have national coverage. Case-based data are reported by clinicians. National case definitions are applied.

Case reporting

Mandatory universal (since 1950)

- Diseases covered: syphilis, gonorrhoea, congenital syphilis
- Coverage: unknown. In theory, it is obligatory for all physicians in all settings, private and public, to report.
- Laboratory confirmation: required
- Individual-level reporting
- Variables: place of residence, date of onset, date of reporting, gender, age (birth date), probable route of transmission.

Sentinel (since 2002)

- GEIDST
- Diseases covered: syphilis, gonorrhoea, chlamydia and genital herpes (HPV, trichomoniasis, urethritis, chancroid, molluscum, pediculosis, HBV, HCV)
- Coverage: unknown
- Laboratory confirmation is required for syphilis, gonorrhoea and chlamydia
- Individual-level reporting
- Variables: place of residence, date of diagnosis, gender, age (birth date), school level, country of birth/nationality, clinic type, reason for testing, site of infection, concurrent STI, HIV status, sexual orientation, number of partners in six months, drug use, CSW.

Laboratory test reporting

- None
- Gonorrhoea AMR testing is undertaken for all isolates in reference lab.

Romania

The data source RO-RNSSy is used to report data on STI from Romania. The system reports aggregate data on chlamydia, gonorrhoea, syphilis and congenital syphilis. The system is comprehensive, compulsory and has national coverage. Data are reported by hospitals using EU-2008 case definitions.

Case reporting

Mandatory universal

- The legislation for compulsory STI (gonorrhoea and syphilis) reporting started in March 1953 and was updated in 1971. Since 1 January 2005 the reporting of cases is compulsory according to regulation 1060/25.08.2004. Only laboratory-confirmed cases are reported.
- Testing for syphilis is compulsory in order to attain a marriage certificate, enrol in university or army, to begin employment, and any time a clinician suspects syphilis.
- Syphilis cases are confirmed only by specialists in dermatovenereology and the reporting is mandatory universal with national coverage. There are no sentinel systems.
- Identical variables for chlamydia, gonorrhoea and syphilis cases
- Variables: place of residence, place of infection, date of diagnosis, gender, age (birth date), school level, marital status, country of birth/nationality, diagnosis, site of infection, passive or active investigation, notification of the source infection, sexual orientation, number of contacts, risk behaviours (drug use, CSW), history of STI, testing of source and contacts, month of statistics

Laboratory test reporting

Mandatory universal

- All positive cases of chlamydia and syphilis are reported to the district public heath directorate.

Slovakia

Slovakia uses one data source to report STI to TESSy: SK-EPIS: a system that covers reporting of syphilis, congenital syphilis, gonorrhoea, chlamydia and LGV. Collects case-based data from hospitals, laboratories and clinicians, has national coverage and is compulsory. EU-2008 case definitions are used.

Case reporting

Mandatory universal (since 1945)

- Diseases covered: syphilis, gonorrhoea (since 1945), LGV (since 1960), chlamydia (since 2006).
- Coverage: reporting is obligatory for all physicians in all settings. It is estimated that 90% of syphilis cases and 70–80% of gonorrhoea cases are reported in this system
- Laboratory confirmation: required
- Individual-level reporting
- Variables: date of birth, gender, permanent address, place of diagnosis, citizenship, country of birth, profession, marital status, sexual partners, history of STI, date of onset, date of diagnosis, site of infection, date of notification, laboratory test results

Sentinel

- None

Laboratory test reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea and chlamydia (since 2006)
- Coverage: it is estimated that about 70% of all positive test results for STI are reported in this system
- Individual-level reporting
- Can be linked to case reports
- Gonorrhoea AMR testing is undertaken for all isolates

Slovenia

The data source SI-SPOSUR is used to report cases of chlamydia, LGV, gonorrhoea, syphilis and congenital syphilis to TESSy. The system is comprehensive, compulsory and provides national coverage. Case-based data are reported by clinicians. EU-2008 case definitions are applied.

Case reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea (since 1948), chlamydia, genital herpes, genital warts (since 1995).
- Coverage: In theory, it is obligatory for all physicians in all settings, private and public, to report. All 11 STI/DV clinics report. It is estimated that overall 76-99% of syphilis cases diagnosed are reported in this system. (There is no data available on the actual proportion of doctors who report).
- Laboratory confirmation is required for syphilis, gonorrhoea and chlamydia.
- Individual-level reporting
- Variables: Soundex code, date of birth, gender, administrative unit (i.e. region), citizenship, country of birth, profession, marital status, previous STI, year of last diagnosis if yes, number of sexual partners last three months (male and female), number of sexual partners (of foreign nationality) last three months – male and female (citizenship of partners; sex in which countries), paid for sex last three months (number of male and female partners), date of diagnosis, date of notification, clinic/physician type (i.e. speciality, place of notification)

Sentinel

- None

Laboratory test reporting

- None

Gonorrhoea AMR testing is undertaken for all isolates.

Spain

Spain has two data sources reporting STI data to TESSy: ES-MICROBIOLOGICAL is a sentinel laboratory, case-based, voluntary system for chlamydia, gonorrhoea and syphilis (syphilis until 2008) and uses EU-2008 case definitions. ES-STATUTORY_DISEASES is a comprehensive, compulsory, clinician-based system reporting aggregate data for gonorrhoea and syphilis and case-based data for congenital syphilis. National case definitions are used and it provides national (country-wide) coverage.

Case reporting

Mandatory universal (since 1982)

- Diseases covered: syphilis, gonorrhoea
- Coverage: reporting is compulsory for all physicians in all settings, private and public. Underreporting is unknown.
- Laboratory confirmation: not required
- Aggregate reporting; variables: number of cases, province, region and year of diagnosis.

Mandatory universal (since 1997)

- Diseases covered: congenital syphilis
- Coverage: reporting is compulsory for all physicians in all settings, private and public. Underreporting is unknown.
- Laboratory confirmation: required
- Individual-level reporting; variables: sex, age, date of diagnosis, outcome, date of death, HIV status of the mother, province and region of notification, other variables.

Sentinel

- STI sentinel is implemented in July 2005: 14 centres of diagnosis and treatment in 13 cities
- Disease covered: syphilis, gonorrhoea
- Coverage: around 20% of all syphilis cases and 30% of all gonorrhoea cases declared to the mandatory system (period 2006–2008).
- Laboratory confirmation is required
- Individual-level reporting
- Variables: clinic type, reason for testing, site of infection, date of diagnosis, place of diagnosis, age, gender, country of birth/nationality, concurrent STI, HIV status, history of STI, country where infection contracted, transmission route, CSW contact, number of partners in 12 months, sexual contact with HIV-positive partner

Laboratory test reporting

Sentinel reporting

- Sistema de Información Microbiológica (SIM) since 1989
- Diseases covered: syphilis (until 2008), gonorrhoea, chlamydia, genital herpes
- Individual-level reporting; variables: sex, age, specimen type, site of infection

Sweden

Sweden uses the data source SMINET to report STI to TESSy. The comprehensive system collects case-based data on chlamydia, gonorrhoea, syphilis and congenital syphilis from laboratories; the system is compulsory and provides national coverage. EU-2008 case definitions are used.

Case reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea (since 1912) and chlamydia (since 1988), congenital syphilis
- Coverage: >90 %
- Laboratory confirmation: required
- Individual-level reporting
- Variables: place of residence, date of onset, date of diagnosis, place of diagnosis, gender, age, nationality/country of birth, clinic type, a/symptomatic, reason for testing, site of infection, imported, country, route of transmission.

Sentinel

- None

Laboratory test reporting

Mandatory universal

- Diseases covered: syphilis, gonorrhoea and chlamydia (since 2004)
- Coverage: It is estimated that >95% of all positive test results for STI in the country are reported in this system.
- Aggregate total test data for gonorrhoea and chlamydia
- Variables: clinic/physician type, gender, age
- Cannot be linked to case reports
- Gonorrhoea AMR testing is undertaken for all isolates

United Kingdom

The UK uses four data sources to report STI to TESSy: UK-GUM to report chlamydia, gonorrhoea, syphilis and congenital syphilis, UK-LAB to report gonorrhoea and syphilis, UK-GUM-COM to report chlamydia, and UK-ENHANCED to report LGV. These sources report confirmed diagnoses and provide aggregated data. UK-GUM collects data on diagnoses made in all genitourinary medicine (GUM, also known as STI) clinics across the UK and reporting is mandatory. GUM clinics have comprehensive coverage but some STI may be diagnosed in other settings. UK-GUM-COM is comprehensive and collects data on all diagnoses of chlamydia made in GUM clinics and community-based test settings across the UK. UK-GUM-COM data are provided by GUM clinics, community-based testing sites and laboratories but reporting is only part-mandatory. UK-LGV collects enhanced surveillance data on all LGV diagnoses made in the UK. Reporting is comprehensive and voluntary. Data are provided by the UK LGV reference laboratories and physicians.

Case reporting

Mandatory universal (since 1917) – UK-GUM

- Diseases covered: Any condition diagnosed in a GUM clinic including syphilis, congenital syphilis, gonorrhoea, chlamydia, genital herpes, genital warts, trichomonas
- Coverage: comprehensive for GUM clinics but some STI may be diagnosed in other settings. All syphilis and most gonorrhoea diagnoses are confirmed by GUM clinics whereas most chlamydia diagnoses are made in community-based test settings
- Laboratory confirmation: required
- Data format: aggregated
- Variables: local geographic area, gender, age group, sexual orientation

Voluntary universal

- Diseases covered: chlamydia, LGV
- Coverage: comprehensive
- Laboratory confirmation: required
- Data format: aggregated
- Variables: Local geographic area, gender, age group plus extensive enhanced variable collection for LGV

Sentinel

- None

Laboratory test reporting

Mandatory universal

- None

Voluntary universal

- Diseases covered: chlamydia
- Coverage: comprehensive
- Laboratory confirmation: required
- Data format: aggregated
- Variables: local geographic area, gender, age group

Annex 2. Enhanced set of variables for STI surveillance

Variable name	Syphilis	Gonorrhoea	Chlamydia	LGV	Congenital syphilis
Common set of variables					
1. RecordID	√	√	√	√	√
2. RecordType	√	√	√	√	√
3. RecordTypeVersion	√	√	√	√	√
4. Subject	√	√	√	√	√
5. Status	√	√	√	√	√
6. Data source	√	√	√	√	√
7. Age	√	√	√	√	√
8. Gender	√	√	√	√	√
9. Outcome	N/A	N/A	N/A	N/A	√
10. DateofOnset	√	√	√	√	√
11. DateOfDiagnosis	√	√	√	√	√
12. DateOfNotification	√	√	√	√	√
13. DateUsedForStatistics	√	√	√	√	√
14. ReportingCountry	√	√	√	√	√
15. Classification	√	√	√	√	√
16. ClinicalCriteria	N/A	N/A	N/A	N/A	N/A
17. LaboratoryResult	√	√	√	√	√
18. EpiLinked	N/A	N/A	N/A	N/A	N/A
Disease-specific variables					
19. ClinicalServiceType	√	√	√	√	
20. CountryOfBirth	√	√		√	√
21. CountryOfNationality	√	√		√	
22. ProbableCountryOfInfection	√	√		√	
23. Transmission	√	√	√	√	
24. HIVStatus	√	√	√	√	
25. SexWorker	√	√		√	
26. ContactSW	√	√		√	
27. SiteOfInfection	√	√	√	√	
28. StagesSYPH	√				
29. StagesSYPHdetailed	√				
30. CountryOfBirthOfMother					√
31. CountryOfNationalityOfMother					√
32. AgeMonth					√

N/A = Not applicable

Annex 3. Case definitions for STI

Source: Commission Decision of 28/IV/2008 amending Decision 2002/253/EC laying down case definitions for reporting communicable diseases to the Community network under Decision No 2119/98/EC of the European Parliament and of the Council

Chlamydial infection

(*Chlamydia trachomatis* including *lymphogranuloma venereum* (LGV))

Clinical criteria

Any person with at least one of the following clinical forms:

Chlamydial infection non-LGV

At least one of the following six:

- Urethritis
- Epididymitis
- Acute salpingitis
- Acute endometritis
- Cervicitis
- Proctitis

In newborn children at least one of the following two:

- Conjunctivitis
- Pneumonia

Lymphogranuloma venereum (LGV)

At least one of the following five:

- Urethritis
- Genital ulcer
- Inguinal lymphadenopathy
- Cervicitis
- Proctitis

Laboratory criteria

Chlamydial infection non-LGV

At least one of the following three:

- Isolation of *Chlamydia trachomatis* from a specimen of the anogenital tract or from the conjunctiva
- Demonstration of *Chlamydia trachomatis* by DFA test in a clinical specimen
- Detection of *Chlamydia trachomatis* nucleic acid in a clinical specimen

LGV

At least one of the following two:

- Isolation of *Chlamydia trachomatis* from a specimen of the anogenital tract or from the conjunctiva
- Detection of *Chlamydia trachomatis* nucleic acid in a clinical specimen

AND

- Identification of serovar (genovar) L1, L2 or L3

Epidemiological criteria

An epidemiological link by human to human transmission (sexual contact or vertical transmission).

Case classification

- Possible case: NA
- Probable case: Any person meeting the clinical criteria and with an epidemiological link
- Confirmed case: Any person meeting the laboratory criteria

Gonorrhoea

(*Neisseria gonorrhoeae*)

Clinical criteria

Any person with at least one of the following eight:

- Urethritis
- Acute salpingitis
- Pelvic inflammatory disease
- Cervicitis
- Epididymitis
- Proctitis
- Pharyngitis
- Arthritis

OR

- Any newborn child with conjunctivitis

Laboratory criteria

At least one of the following four:

- Isolation of *Neisseria gonorrhoeae* from a clinical specimen
- Detection of *Neisseria gonorrhoeae* nucleic acid in a clinical specimen
- Demonstration of *Neisseria gonorrhoeae* by a non-amplified nucleic acid probe test in a clinical specimen
- Microscopic detection of intracellular gram negative diploccocci in an urethral male specimen

Epidemiological criteria

An epidemiological link by human to human transmission (sexual contact or vertical transmission)

Case classification

- Possible case: NA
- Probable case: Any person meeting the clinical criteria and with an epidemiological link
- Confirmed case: Any person meeting the laboratory criteria

Syphilis

(*Treponema pallidum*)

Clinical criteria

Primary syphilis

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

Secondary syphilis

Any person with at least one of the following three:

- Diffuse maculo-papular rash often involving palms and soles
- Generalised lymphadenopathy
- Condyloma lata
- Enanthema
- Allopetia diffusa

Early latent syphilis (< 1 year)

A history of symptoms compatible with those of the earlier stages of syphilis within the previous 12 months

Late latent syphilis (> 1 year)

Any person meeting laboratory criteria (specific serological tests)

Laboratory criteria

At least one of the following four laboratory tests:

- Demonstration of *Treponema pallidum* in lesion exudates or tissues by dark-field microscopic examination
- Demonstration of *Treponema pallidum* in lesion exudates or tissues by DFA test
- Demonstration of Treponema in lesion exudates or tissues by PCR
- Detection of *Treponema pallidum* antibodies by screening test (TPHA, TPPA or EIA)

AND

- additionally detection of Tp-IgM antibodies (by IgM-ELISA, IgM immunoblot or 19S-IgM-FTA-abs) – confirmed by a second IgM assay

Epidemiological criteria

- Primary/secondary syphilis: An epidemiological link by human to human (sexual contact)
- Early latent syphilis (< 1 year): An epidemiological link by human to human (sexual contact) within the 12 previous months

Case classification

- Possible case: NA
- Probable case: Any person meeting the clinical criteria and with an epidemiological link
- Confirmed case: Any person meeting the laboratory criteria for case confirmation

Syphilis, congenital and neonatal

(*Treponema pallidum*)

Clinical criteria

Any infant < 2 years of age with at least one of the following ten:

- Hepatospenomegaly
- Mucocutaneous lesions
- Condyloma lata
- Persistent rhinitis
- Jaundice
- Pseudoparalysis (due to periostitis and osteochondritis)
- Central nervous involvement
- Anaemia
- Nephrotic syndrome
- Malnutrition

Laboratory criteria

Laboratory criteria for case confirmation

At least one of the following three:

- Demonstration of *Treponema pallidum* by dark field microscopy in the umbilical cord, the placenta, a nasal discharge or skin lesion material
- Demonstration of *Treponema pallidum* by DFA-TP in the umbilical cord, the placenta, a nasal discharge or skin lesion material
- Detection of *Treponema pallidum*-specific IgM (FTA-abs, EIA)

AND

- a reactive non-treponemal test (VDRL, RPR) in the child's serum

Laboratory criteria for a probable case

At least one of the following three:

- Reactive VDRL-CSF test result
- Reactive non-treponemal and treponemal serologic tests in the mother's serum
- Infant's non-treponemal antibody titre is fourfold or greater than the antibody titre in the mother's serum

Epidemiological criteria

Any infant with an epidemiological link by human to human transmission (vertical transmission)

Case classification

- Possible case: NA
- Probable case: Any infant or child meeting the clinical criteria and with at least one of the following two:
  - An epidemiological link
  - Meeting the laboratory criteria for a probable case
- Confirmed case: Any infant meeting the laboratory criteria for case confirmation

Annex 4. Completeness of reporting

	Completeness (%)			2000			2010		
	Total	1990-2000	2001-2010	Countries	Min	Max	Countries	Min	Max
Chlamydia									
Age	93.5	84.1	96.9	9	82.4	100.0	22	76.9	100.0
Gender	96.0	86.1	99.6	10	66.7	100.0	24	66.7	100.0
Classification	99.9	100.0	99.9	10	100.0	100.0	23	100.0	100.0
ClinicalServiceType	10.1	2.1	13.0	2	63.0	99.6	10	59.7	100.0
Transmission	55.5	39.0	61.6	2	94.3	100.0	10	1.2	100.0
HIVStatus	0.9	0.0	1.3	0	0.0	100.0	3	0.5	95.3
SiteOfInfection	9.6	1.8	12.5	2	95.7	97.4	9	97.7	100.0
Gonorrhoea									
Age	80.6	73.6	90.2	13	81.8	100.0	26	33.3	100.0
Gender	82.4	73.7	94.5	15	66.7	100.0	27	66.7	100.0
ClinicalServiceType	3.0	0.0	7.1	2	10.0	99.4	11	57.1	100.0
CountryOfBirth	4.3	0.5	9.6	3	93.4	100.0	11	61.1	100.0
CountryOfNationality	1.1	0.1	2.6	2	97.8	100.0	10	61.1	100.0
ProbableCountryOfInfection	2.4	0.4	5.2	3	81.5	94.5	13	0.9	100.0
Transmission	43.4	20.3	75.4	4	86.3	100.0	15	7.4	100.0
HIVStatus	3.1	0.4	6.8	2	81.1	81.8	8	0.3	99.7
SexWorker	2.6	0.0	6.0	2	2.0	97.4	6	1.6	99.6
ContactSW	2.3	0.0	5.5	1	87.7	87.7	8	4.5	99.5
SiteOfInfection	3.2	0.0	7.6	0	0.0	99.5	9	84.1	100.0
Syphilis									
Age	76.4	70.5	80.5	14	80.0	100.0	28	84.6	100.0
Gender	84.0	76.7	89.2	15	66.7	100.0	28	80.0	100.0
ClinicalServiceType	3.3	0.0	5.7	2	97.8	100.0	11	65.5	100.0
CountryOfBirth	10.4	0.4	17.4	4	83.9	100.0	12	38.5	100.0
CountryOfNationality	1.7	0.1	2.9	2	99.0	100.0	8	38.5	100.0
ProbableCountryOfInfection	8.4	0.2	14.1	4	22.2	86.7	14	1.5	100.0
Transmission	19.5	1.8	32.0	7	33.3	100.0	17	15.4	100.0
HIVStatus	3.7	0.2	6.1	4	56.1	94.6	9	9.8	100.0
SexWorker	2.3	0.0	4.0	3	3.2	92.9	7	1.3	100.0
ContactSW	2.0	0.0	3.5	2	6.5	57.1	8	1.6	96.8
StageSYPH	0.1	0.0	0.1	1	2.2	2.2	1	68.9	68.9
StageSYPHdetailed	5.1	0.3	8.6	4	33.3	100.0	13	47.8	100.0

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