

SURVEILLANCE REPORT

Annual Epidemiological Report for 2016

Congenital syphilis

Key facts

- In 2016, 37 congenital syphilis cases were reported in 23 EU/EEA Member States, at a crude rate of 1.1 cases per 100 000 live births.
- The trend for reported congenital syphilis cases has remained stable in recent years, but some countries reported small increases compared with 2015.
- It is suspected that there may be some underreporting: seven countries did not contribute to the reporting of congenital syphilis, and a further 13 reported zero cases in 2016.
- The low rates of congenital syphilis and decreasing rates of reported syphilis among women suggest that most Member States have effective programmes for elimination of congenital syphilis. Better indicator data are needed to assess the effectiveness of antenatal screening programmes in all EU/EEA countries.

Methods

This report is based on data for 2016 retrieved from The European Surveillance System (TESSy) on 27 November 2017. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases.

For a detailed description of methods used to produce this report, please refer to the *Methods* chapter [1].

An overview of the national surveillance systems is available at the ECDC website [2].

A subset of the data used for this report is available through ECDC's online *Surveillance atlas of infectious diseases* [3].

In 2016, the majority of countries (18) reported congenital syphilis data using the standard EU case definitions [4]: ten countries reported using the 2012 EU case definitions, six used the 2008 definitions, and two used the 2002 definitions. The remaining five countries reported either using national case definitions (2) or did not specify the case definition in use (3).

All reporting countries have comprehensive surveillance systems for congenital syphilis. Reporting of congenital syphilis infection is compulsory in all countries except for the United Kingdom. Cases are analysed by date of diagnosis.

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Epidemiology

In 2016, 37 confirmed cases of congenital syphilis were reported in 10 EU countries. Thirteen countries reported zero cases. Bulgaria continued to report the largest number of cases, followed by Poland, Romania and Spain. The total number of reported congenital syphilis cases remained stable in 2016 compared with 2015 when 41 cases were reported (34 cases when excluding data from Greece and Italy which both reported cases in 2015 but did not report data in 2016). Bulgaria reported slightly more cases in 2016 compared with 2015: this was the first time since 2011 that cases reported by Bulgaria increased. The number of cases in each country was generally stable over the period (Table 1). The crude rate of reported congenital syphilis infection in the EU/EEA was 1.1 cases per 100 000 live births and remained stable compared with 2015 (1.0 per 100 000) (Figure 1). The highest rates were observed in Bulgaria (20.0 per 100 000).

Table 1. Confirmed cases and rates of congenital syphilis by country and year, EU/EEA, 2012–2016

Country	2012		2013		2014		2015		2016			
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Surveillance system	Number	Rate	
Austria												
Belgium												
Bulgaria	29	42	27	40.6	24	35.5	10	15.2	Co	13	20	
Croatia	0	0	0	0	0	0	0	0	Co	0	0	
Cyprus	0	0	0	0	0	0	0	0	Co	0	0	
Czech Republic	1	0.9	1	0.9	0	0	3	2.7	Co	1	0.9	
Denmark	0	0	1	1.8	1	1.8	0	0	Co	1	1.6	
Estonia	0	0	0	0	0	0	0	0	Co	0	0	
Finland												
France												
Germany	5	0.7	3	0.4	0	0	3	0.4	Co	2	0.3	
Greece	0	0	1	1.1	0	0	2	2.2	Co			
Hungary	0	0	2	2.2	1	1.1	0	0	Co	2	2.1	
Iceland	0	0	0	0	0	0	0	0	Co	0	0	
Ireland	0	0	0	0	0	0	0	0	Co	0	0	
Italy	5	0.9	7	1.4	4	0.8	5	1	Co			
Latvia	1	5	0	0	0	0	0	0	Co	0	0	
Liechtenstein												
Lithuania	1	3.3	2	6.7	1	3.3	3	9.5	Co	0	0	
Luxembourg	0	0	0	0	0	0	0	0	Co	0	0	
Malta	0	0	0	0	0	0	0	0	Co	0	0	
Netherlands												
Norway	0	0	0	0	0	0	0	0	Co	0	0	
Poland	7	1.8	16	4.3	8	2.1	4	1.1	Co	6	1.6	
Portugal	6	6.7	5	6	7	8.5	5	5.8	Co	2	2.3	
Romania	6	3	3	1.6	7	3.6	5	2.5	Co	4	2.1	
Slovakia	0	0	0	0	2	3.6	0	0	Co	0	0	
Slovenia	0	0	0	0	0	0	0	0	Co	0	0	
Spain	1	0.2	3	0.7	6	1.4	1	0.2	Co	4	1	
Sweden	1	0.9	0	0	0	0	0	0	Co	2	1.7	
United Kingdom	0	0	0	0	0	0	0	0	Co	0	0	
EU/EEA	63	1.6	71	1.8	61	1.5	41	1		37	1.1	

Source: Country reports

Legend: Co = comprehensive

Figure 1. Number of confirmed congenital syphilis cases per 100 000 live births; number of countries reporting congenital syphilis data, by year, EU/EEA, 2005–2016



Source: Country reports from Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Discussion

Overall, congenital syphilis rates in the EU/EEA have been decreasing since 2005. During this time, rates of syphilis among women have decreased consistently in the EU/EEA, contributing to the reduction of the risk of congenital transmission of syphilis. Although the available data suggest an improving situation, underreporting of congenital syphilis is likely in parts of the EU/EEA. In addition, indicators on the effectiveness of antenatal screening programmes and results from investigations around congenital syphilis cases diagnosed in Europe are not collected routinely at the European level. It is therefore difficult to understand the risk factors, both social and those relating to antenatal care service provision, which lead to continuing cases of a disease that results in very severe (yet preventable) consequences in infants.

By contrast, in the United States, increases in congenital syphilis diagnoses have been reported in the context of increasing rates of primary and secondary syphilis among women [5,6]. The United Kingdom has also recently reported an increase in cases of congenital syphilis among infants born to UK-born women who had negative syphilis serology early in pregnancy and were initially assessed as having no obvious risk factors [7]. These cases were detected in areas where rates of syphilis infections among women had increased and where the proportions of behaviourally bisexual men who have sex with men were relatively high. This resulted in increased opportunities for transmission across sexual networks [8]. These cases, however, were not captured through the EU/EEA surveillance system and hence are not included in the case numbers reported above.

Data on the performance of antenatal screening programmes in the EU/EEA are available through an ECDC survey performed in 2013. The survey results show that all participating EU/EEA countries (26/26) have implemented antenatal screening for syphilis. Most countries (22/24) test pregnant women for syphilis during the first trimester of pregnancy. Seven countries reported repeat testing during the third trimester of pregnancy as a general recommendation. Another three countries offer repeat testing for women in risk groups. The reported coverage of antenatal screening of syphilis was high: 14/18 countries reported a coverage of $\geq 95\%$, while three reported a

coverage of $\geq 90\%$. Access to antenatal screening for vulnerable groups is still an issue in a number of countries [9].

Public health implications

Validation of the elimination of congenital syphilis in Europe is underway through efforts by the World Health Organization following the establishment of an elimination target [10,11]. Better surveillance data, including more information on the circumstances around transmission of congenital syphilis, are essential in order to understand where antenatal screening programmes need to be improved. An updated European congenital syphilis case definition has been agreed upon by the European surveillance network and is currently undergoing the legislative process. A key change is the inclusion of stillbirths related to syphilis infections in pregnancy. This will ensure optimal sensitivity for cases, which is essential at this stage of the elimination process.

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