

SURVEILLANCE REPORT

Annual Epidemiological Report for 2015

Congenital toxoplasmosis

Key facts

- In 2015, 273 confirmed cases of congenital toxoplasmosis were reported in the EU/EEA, with France accounting for 90% of all confirmed cases due to the active screening of pregnant women.
- The notification rate was 7.9 cases per 100 000 live births.
- No seasonal pattern was observed for this disease.

Methods

This report is based on data for 2015 retrieved from The European Surveillance System (TESSy) on 4 September 2017 and additional information from epidemic intelligence. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases. EU Member States and EEA countries contribute to the system by uploading their infectious disease surveillance data at regular intervals [1].

An overview of the national surveillance systems is available online [2].

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

Of 21 reporting countries, 16 used the current EU case definition as published in 2008 and 2012. One country used the 2002 EU case definition, which stipulates reporting of all (and not only congenital) toxoplasmosis cases. The remaining four countries used other/unknown case definitions [2]. In most reporting EU/EEA Member States, toxoplasmosis is subject to mandatory notification (17/21). Active surveillance for congenital toxoplasmosis was used in three of the 21 reporting countries [2].

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Epidemiology

In 2015, 273 confirmed cases of congenital toxoplasmosis were reported by 21 EU/EEA countries (Table 1, Figure 1). France accounted for 90.1% of all cases, followed by Poland (5.5%) and the United Kingdom (2.6%). Thirteen countries reported zero confirmed cases. The notification rate for the EU/EEA in 2015 was 7.9 confirmed congenital toxoplasmosis cases per 100 000 live births (Table 1, Figure 1). This represents a slight increase compared with 2014 when the notification rate was at 7.2 cases per 100 000 live births.

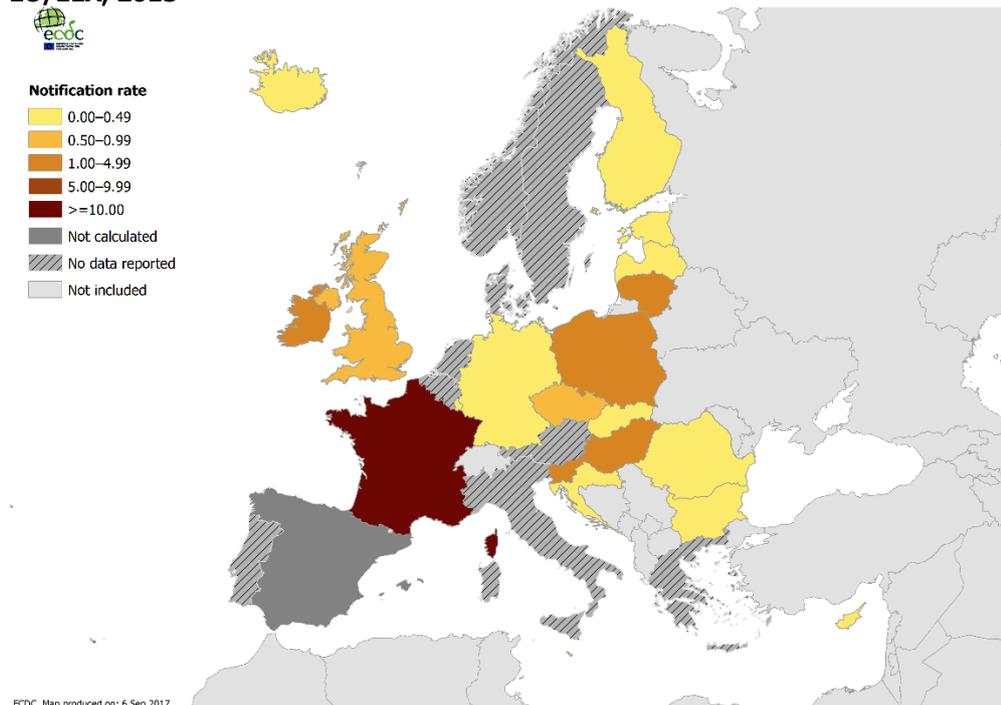
In 2015, gender was reported for 94% of the congenital toxoplasmosis cases, with a male-to-female ratio of 0.9:1.

Table 1. Confirmed congenital toxoplasmosis cases: numbers and rate per 100 000 live births, by country and year, EU/EEA, 2011–2015

Country	2011		2012		2013		2014		National coverage	2015			
	Confirmed cases		Confirmed cases		Confirmed cases		Confirmed cases			Reported cases	Confirmed cases		
	Number	Rate	Number	Rate	Number	Rate	Number	Rate			Number	Rate	ASR
Austria	.	.	.	.	.	.	.	.	.	.	.	.	.
Belgium	.	.	.	.	.	.	.	.	.	.	.	.	.
Bulgaria	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0	0.0	-
Croatia	.	.	.	.	0	0.0	0	0.0	Y	0	0	0.0	-
Cyprus	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0	0.0	-
Czech Republic	2	1.8	1	0.9	0	0.0	1	0.9	Y	1	1	0.9	-
Denmark	.	.	.	.	.	.	.	.	.	.	.	.	.
Estonia	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0	0.0	-
Finland	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0	0.0	-
France	186	22.6	104	12.7	179	22.0	216	26.4	Y	246	246	30.8	-
Germany	14	2.1	20	3.0	0	0.0	0	0.0	Y	15	0	0.0	-
Greece	.	.	.	.	.	.	.	.	.	.	.	.	.
Hungary	0	0.0	0	0.0	0	0.0	3	3.2	Y	1	1	1.1	-
Ireland	1	1.4	1	1.4	1	1.5	0	0.0	Y	1	1	1.5	-
Italy	.	.	.	.	.	.	.	.	.	.	.	.	.
Latvia	0	0.0	1	5.0	0	0.0	0	0.0	Y	0	0	0.0	-
Lithuania	0	0.0	1	3.3	1	3.3	0	0.0	Y	1	1	3.2	-
Luxembourg	0	0.0	1	16.6	0	0.0	0	0.0	Y	0	0	0.0	-
Malta	0	0.0	0	0.0	0	0.0	0	0.0	Y	0	0	0.0	-
Netherlands	.	.	.	.	.	.	.	.	.	.	.	.	.
Poland	3	0.8	10	2.6	18	4.9	20	5.3	Y	15	15	4.1	-
Portugal	.	.	.	.	.	.	.	.	.	.	.	.	.
Romania	0	0.0	0	0.0	0	0.0	1	0.5	Y	0	0	0.0	-
Slovakia	0	0.0	0	0.0	2	3.6	0	0.0	Y	0	0	0.0	-
Slovenia	0	0.0	0	0.0	0	0.0	0	0.0	Y	1	1	4.8	-
Spain	1	-	0	-	0	-	0	-	N	0	0	-	-
Sweden	.	.	.	.	.	.	.	.	.	.	.	.	.
United Kingdom	7	0.9	5	0.6	2	0.3	11	1.4	Y	7	7	0.9	-
EU	214	6.2	144	4.2	203	5.9	252	7.3	.	288	273	7.9	-
Iceland	.	.	.	.	0	0.0	0	0.0	Y	0	0	0.0	-
Liechtenstein	.	.	.	.	.	.	.	.	.	.	.	.	.
Norway	.	.	.	.	.	.	.	.	.	.	.	.	.
EU/EEA	214	6.2	144	4.2	203	5.9	252	7.2	.	288	273	7.9	-

Source: Country reports. Legend: Y = yes, . = no data reported, ASR: age-standardised rate, - = no notification rate calculated

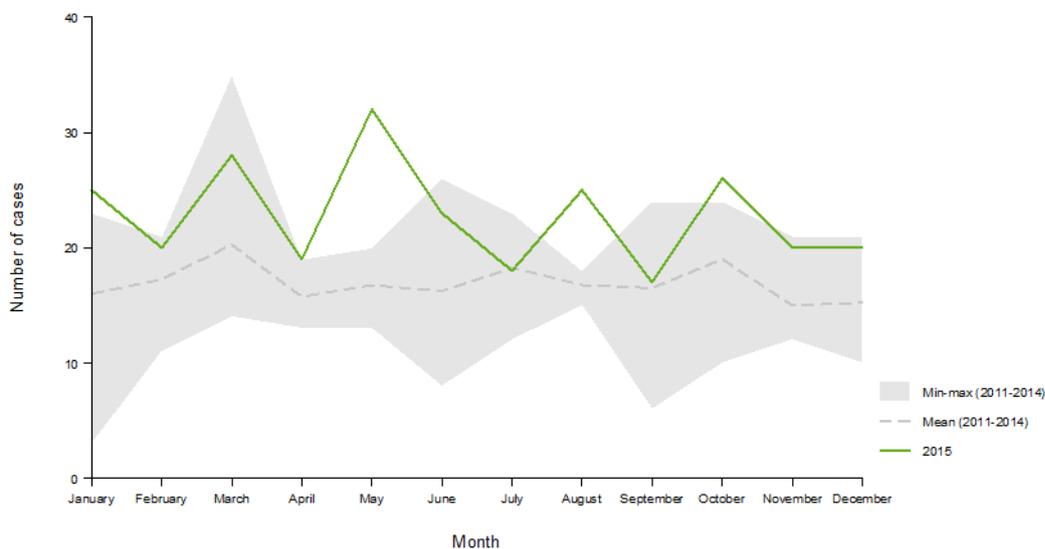
Figure 1. Confirmed congenital toxoplasmosis cases: rates per 100 000 live births, by country EU/EEA, 2015



Source: Country reports from Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, Poland, Romania, Slovakia, Slovenia, Spain and the United Kingdom.

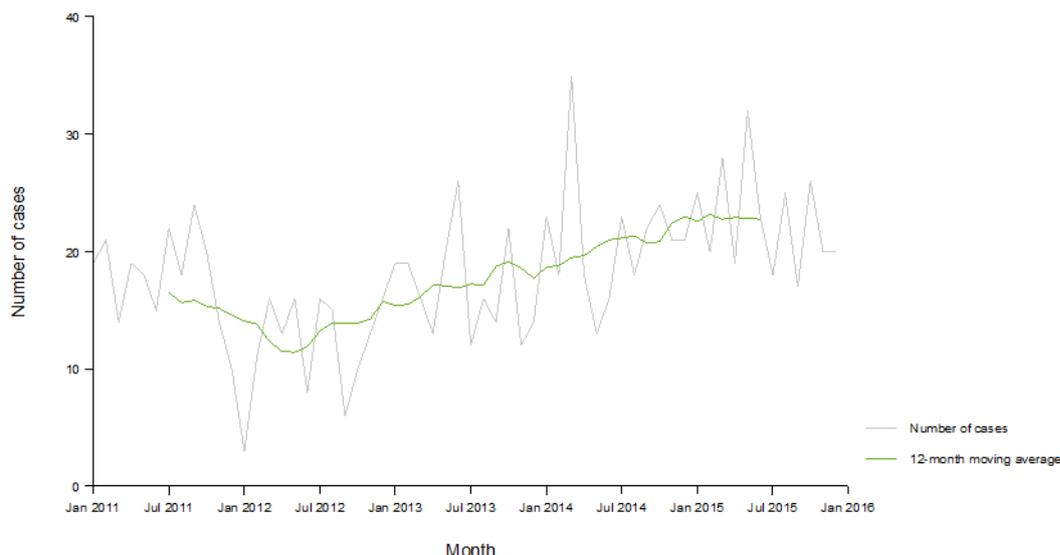
Reported cases of congenital toxoplasmosis in the EU/EAA in 2015 fluctuated over the year (Figure 2). No seasonality was observed over time.

Figure 2. Confirmed congenital toxoplasmosis cases by month, EU/EEA, 2015 compared with 2011–2014



Source: Country reports from Bulgaria, Cyprus, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Spain, the United Kingdom.

An increasing trend of reported congenital toxoplasmosis cases in the EU/EEA, mainly driven by an increase in France, has been observed since 2012 (Figure 3). The number of laboratories participating in the congenital toxoplasmosis surveillance system in France varies over time, which between 2011 and 2013 resulted in varying reporting completeness and underreporting. This most likely contributed to an apparent decrease during this period (N. Jourdan-Da Silva, Santé publique France, personal communication, 6 July 2017).

Figure 3. Distribution of confirmed congenital toxoplasmosis cases by month, EU/EEA, 2011–2015

Source: Country reports from Bulgaria, Cyprus, the Czech Republic, Estonia, Finland, France, Germany, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia, Spain, the United Kingdom.

Threats

No congenital toxoplasmosis threats were detected or reported to ECDC in 2015.

Discussion

Congenital toxoplasmosis in the EU/EEA shows an increasing trend since 2012, mainly due to France which accounted for up to 90% of all reported cases in this period. The increase is thought to be a surveillance artefact explained by varying reporting completeness of French laboratories. The French surveillance system includes the screening of pregnant women (with follow-up during pregnancy of those that are not immune in order to detect seroconversion) and laboratory reporting of congenital toxoplasmosis cases detected during this process [4]. This disease surveillance practice probably explains why France is reporting the highest rates of congenital toxoplasmosis among EU countries.

Very few EU/EEA countries have active screening for congenital toxoplasmosis (Table 2), and 11 EU/EEA countries do not report toxoplasmosis data at the EU/EEA level. Therefore, the actual prevalence of this disease in the EU/EEA cannot be estimated.

Table 2. Toxoplasmosis screening policies for pregnant women, overview, 2015

Country	No screening	Compulsory screening of all pregnant women	Voluntary screening of pregnant women	Comments
Austria		x		Serological screening starting with the first trimester (since 1974). Follow-up of seronegative women during pregnancy.
Belgium		x		Serological screening starting with the first trimester. No consensus on follow-ups for seronegative women during pregnancy.
Bulgaria			x	
Czech Republic			x	Serological screening only offered in some regions and gynaecological outpatient wards. Screening not covered by statutory health insurance.
Denmark	x			Active surveillance and screening between 1999 and 2007
Estonia	x			
France		x		Serological screening starting with the first trimester. Follow-up of seronegative women during pregnancy.
Germany			x	Screening not covered by statutory health insurance.
Hungary			x	
Iceland	x			Suspected cases tested on individual basis

Country	No screening	Compulsory screening of all pregnant women	Voluntary screening of pregnant women	Comments
Lithuania				
Malta	x			
Netherlands	x			
Norway	x			
Slovakia		x		Serological screening starting with the first trimester. Follow-up of seronegative women during pregnancy.
Slovenia		x		
Spain				
Sweden	x			Suspected cases or women at high risk tested on individual basis
United Kingdom	x			

The cost benefits of prenatal screening programmes have been questioned mainly because of the low prevalence of congenital toxoplasmosis in the EU/EEA and the lack of effective treatment [5]. However, considering recent epidemiological studies in non-reporting countries [6-11], changes in eating habits (e.g. the consumption of undercooked meat) [12], increased travel [13] and therapeutic developments [14], this infection warrants a better estimation in the EU/EEA due to possible severe outcomes in infected fetuses.

In addition, the epidemiology of toxoplasmosis in humans in Europe might change with the introduction of exotic genotypes through imported food which can cause severe disease in immunocompetent adults, as already reported by France [15,16].

Public health implications

Congenital toxoplasmosis should be monitored through a one-health approach. Diagnostic capabilities in the clinical and in the food sector should be regularly assessed against the changing epidemiology of the disease and circulating pathogen genotypes. Importantly, the random peaks of congenital disease should be better investigated to assess the severity of the disease, the importance of urban vs. rural settings, and the prevalent risk factors in a specific region.

Prevention options for congenital toxoplasmosis should be reinforced. Information offerings on toxoplasmosis for pregnant women should include information on disease risk exposure.

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