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## The European Union summary report on trends and sources of zoonoses, zoonotic agents and food-borne outbreaks in 2015

European Food Safety Authority and  
European Centre for Disease Prevention and Control

### Abstract

This report of EFSA and the European Centre for Disease Prevention and Control presents the results of the zoonoses monitoring activities carried out in 2015 in 32 European countries (28 Member States (MS) and four non-MS). Campylobacteriosis was the most commonly reported zoonosis and the increasing European Union (EU) trend for confirmed human cases since 2008 continued. In food, the occurrence of *Campylobacter* remained high in broiler meat. The decreasing EU trend for confirmed human salmonellosis cases since 2008 continued, but the proportion of human *Salmonella* Enteritidis cases increased. Most MS met their *Salmonella* reduction targets for poultry. More *S. Enteritidis* isolates were reported and *S. Infantis* was confirmed as the most frequent serovar isolated from domestic fowl. In foodstuffs, the EU level *Salmonella* non-compliance for minced meat and meat preparations from poultry was low. Despite the significant increasing trend since 2008, the number of human listeriosis cases stabilised in 2015. In ready-to-eat foods, *Listeria monocytogenes* seldom exceeded the EU food safety limit. The decreasing EU trend for confirmed yersiniosis cases since 2008 continued. Positive findings for *Yersinia* were mainly reported in pig meat and products thereof. The number of confirmed shiga toxin-producing *Escherichia coli* (STEC) infections in humans was similar to 2014. In food, STEC was most frequently reported in meat from ruminants. A total of 4,362 food-borne outbreaks, including waterborne outbreaks, were reported. Bacteria were the most commonly detected causative agents, followed by bacterial toxins, viruses, other causative agents and parasites. The causative agent remained unknown in 33.5% of all outbreaks. As in previous years, *Salmonella* in eggs continued to represent the highest risk agent/food combination. The report further summarises trends and sources for tuberculosis due to *Mycobacterium bovis*, *Brucella*, *Trichinella*, *Echinococcus*, *Toxoplasma*, rabies, *Coxiella burnetii* (Q fever), West Nile virus and tularaemia.

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tested), and two MS reported positive findings in pigs (11.0% of the 2,050 samples tested). Positive units were also reported in other foods (bovine meat, raw cow's and raw goat's milk, and RTE salad) and in other animals (cattle, cats, dogs, deer, foxes, hares, marten, steinbock, Cantabrian chamois, wild boar and other wild animals).

According to the Scientific Opinion published by the BIOHAZ Panel in 2007 (EFSA, 2007a), it is well-documented that pigs can harbour human-pathogenic *Y. enterocolitica*, especially in the tonsils, with a very high prevalence, especially biotype 4 (serotype O:3). Reservoirs other than pigs may also play a role in the epidemiology of human yersiniosis. Evidence suggests that ruminants (e.g. cattle) may be reservoirs for biotype 2 (serotype O:9). The opinion further concluded that the majority of human pathogenic *Y. enterocolitica* strains in Europe belong to biotype 4 (serotype O:3), followed by biotype 2 (serotype O:9). Biotypes 1B, 3 and 5 are also pathogenic in humans, whereas biotype 1A is considered to be largely non-pathogenic. Therefore, it is important that information is provided on the biotype of each *Y. enterocolitica* isolate in order to assess its public health significance. It is recommended that biotyping, and preferably also serotyping, is increased in the future.

Information about biotype and/or serotype of the food isolates was provided for more than 70% (74.6%) of *Y. enterocolitica* isolates in food and for only 28.9% isolates in animals. The most common biotypes/serotypes were biotype 1A in food, and serotypes O:9 followed by O:3, O:8, O:5 and O:1,2,3 in animals. Hopefully, an increased focus on the reported *Yersinia* data and more sensitive methods will improve the detailed information on *Yersinia* in the future.

### 3.6. Tuberculosis due to *Mycobacterium bovis*

The Appendix A lists all summaries made for the production of this section, for humans and animals, including bovine tuberculosis summary tables and figures that were not included in this section because they did not trigger any marked observation. All tables and figures are available in downloadable files attached to this report.

#### 3.6.1. *Mycobacterium bovis* in humans M. Bovis en Humanos (TB de origen Bovis)

In 2015, 170 confirmed cases of tuberculosis due to *M. bovis* in humans were reported by 26 EU MS (Table 21). Eleven MS reported at least one confirmed case and 15 MS reported zero cases. The EU notification rate was 0.03 cases per 100,000 population, the same as in previous years. Most cases were reported in Germany, the United Kingdom and Spain, while the highest notification rate (0.11 cases per 100,000 population) was observed in Ireland. There was no clear association between a country's OTF status (OTF; Officially bovine tuberculosis free in cattle) and its notification rate in humans. The notification rate of human cases for both country group (OTF and non-OTF) was 0.03 per 100 000 population.

**Table 21:** Reported human cases of tuberculosis due to *M. bovis* and notification rates per 100,000 population in the EU/EEA, by country and year, 2011–2015

Country	2015		2014		2013		2012		2011			
	National coverage <sup>(a)</sup>	Data format <sup>(a)</sup>	Confirmed cases & rates									
			Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate		
Austria (OTF) <sup>(b)</sup>	Y	C	3	0.03	1	0.01	1	0.01	1	0.01	0	0.00
Belgium (OTF) <sup>(c)</sup>	Y	C	9	0.08	10	0.09	10	0.09	4	0.04	5	0.05
Bulgaria	Y	C	1	0.01	0	0.00	0	0.00	0	0.00	2	0.03
Croatia	Y	C	0	0.00	0	0.00	–	–	–	–	–	–
Cyprus	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Czech Republic (OTF)	Y	C	1	0.01	0	0.00	0	0.00	0	0.00	4	0.04
Denmark (OTF)	Y	C	0	0.00	1	0.02	0	0.00	0	0.00	1	0.02
Estonia (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Finland (OTF)	Y	C	0	0.00	0	0.00	1	0.02	0	0.00	0	0.00
France (OTF) <sup>(d)</sup>	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00

**No puede establecerse una clara asociación entre el estatus sanitario de un país (En Bovino como libre o no) y la tasa de notificación en humanos"**

Cabe interpretar que los esfuerzos para erradicar en lugar de controlar no cabe ampararlos bajo el fin social de una mejor Salud Pública.

Se puede interpretar que para la salud pública no hay beneficios en Europa

Country	2015		2014		2013		2012		2011			
	National coverage <sup>(a)</sup>	Data format <sup>(a)</sup>	Confirmed cases & rates									
			Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Germany (OTF)	Y	C	49	0.06	50	0.06	43	0.05	45	0.05	43	0.05
Greece	Y	C	–	–	–	–	–	–	–	–	–	–
Hungary (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Ireland	Y	C	5	0.11	3	0.07	6	0.13	4	0.09	6	0.13
Italy <sup>(e),(f)</sup>	Y	C	17	0.03	18	0.03	14	0.02	10	0.02	14	0.02
Latvia (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Lithuania (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Luxembourg (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Malta (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Netherlands (OTF)	Y	C	9	0.05	8	0.05	10	0.06	8	0.05	11	0.07
Poland (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Portugal <sup>(g)</sup>	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Romania	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	1	0.00
Slovakia (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Slovenia (OTF)	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
<b>Spain</b>	<b>Y</b>	<b>C</b>	<b>28</b>	<b>0.06</b>	<b>33</b>	<b>0.07</b>	<b>28</b>	<b>0.06</b>	<b>14</b>	<b>0.03</b>	<b>23</b>	<b>0.05</b>
<b>Sweden</b> (OTF)	Y	C	6	0.06	4	0.04	0	0.00	5	0.05	2	0.02
United Kingdom <sup>(h)</sup>	Y	C	42	0.06	39	0.06	30	0.05	41	0.06	40	0.06
<b>EU Total</b>	–	–	<b>170</b>	<b>0.03</b>	<b>167</b>	<b>0.03</b>	<b>143</b>	<b>0.03</b>	<b>132</b>	<b>0.03</b>	<b>152</b>	<b>0.03</b>
Iceland <sup>(i)</sup>	Y	C	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Norway (OTF)	Y	C	1	0.02	4	0.08	0	0.00	2	0.04	2	0.04
Switzerland (OTF) <sup>(j)</sup>	Y	C	6	0.07	2	0.02	2	0.02	5	0.06	13	0.17

(a): Y: yes; N: no; A: aggregated data; C: case-based data; –: no report.

(b): OTF: Officially bovine tuberculosis free (status regarding freedom from bovine tuberculosis, in cattle).

(c): There is an under estimation of the number of *M. bovis* in human cases in Belgium because the identification within the *M. tuberculosis* complex strains is not performed systematically by all the laboratories.

(d): Not reporting species of the *M. tuberculosis* –complex.

(e): In Italy, seven regions and 14 provinces are OTF.

(f): 36 cases, 80% of all reported human *M. bovis* cases from Italy to TESSy in 2010–2013 were without laboratory results but were still included in the table since reported as *M. bovis*.

(g): In Portugal, all administrative regions within the superior administrative unit of the Algarve are OTF.

(h): In the United Kingdom, Scotland and the Isle of Man are OTF (in cattle).

(i): In Iceland that has no special agreement concerning animal health (status) with the EU, the last outbreak of bovine tuberculosis was in 1959.

(j): Switzerland provided data directly to EFSA. The human data for Switzerland also include the ones from Liechtenstein (OTF).

As tuberculosis is a chronic disease with a long incubation period, it is not possible to assess travel-associated cases in the same way as diseases with acute onset. Instead, the distinction is made between individuals with the disease born in the reporting country (native infection) and those moving there at a later stage (foreign infection). In a few cases, the distinction is also made based on the nationality of the cases. On average, 60.6% of the cases reported in 2015 were native to the reporting country, 34.1% were foreign and 5.3% were of unknown origin. Among cases with known origin, there was a larger proportion (78.2%) of native cases in countries not free of bovine tuberculosis (non-OTF) than in countries that were officially *M. bovis*-free (OTF) (47.3%).

Treatment outcome after 12 months of treatment was reported for 151 (90.4%) of 167 human *M. bovis* cases reported in 2014. Successful treatment was reported for 91 cases (60.3%); while, 26 cases (17.2%) died during the treatment, 3 cases (2.0%) were lost to follow-up, 13 cases (8.6%) were still on treatment and treatment outcome was not evaluated for 18 cases (11.9%).

**"En promedio el 60 % de los casos reportados en 2015 eran nativos del país, un 34 % extranjeros y un 5 % de origen desconocido."**