

Leptospirosis

Annual Epidemiological Report for 2018

Key facts

- For 2018, 25 EU/EEA countries reported 802 confirmed cases of leptospirosis.
- The notification rate was 0.16 confirmed cases per 100 000 population in the EU/EEA.
- There was no obvious long-term trend as the notification rate fluctuated between 0.13 and 0.21 cases per 100 000 population, in the period from 2014–2018.
- Human leptospirosis was more common in adults, and notification rates were higher for males than females in all age groups.
- Leptospirosis cases show a strong seasonality, with higher rates in summer and autumn.

Introduction

Leptospirosis is a widespread zoonotic disease caused by spirochetes bacteria of the genus *Leptospira*, which live in the kidneys of their natural hosts, such as rodents. Humans are infected by contact with the carrier's urine or urine-contaminated environment [1]. Clinical presentation ranges from mild flu-like illness to severe disease with possible fatal outcome.

Methods

This report is based on data for 2018 retrieved from The European Surveillance System (TESSy) on 17 September 2019. TESSy is a system for the collection, analysis and dissemination of data on communicable diseases.

For a detailed description of the methods used to produce this report, please refer to the 'Methods' chapter in the 'Introduction to the Annual Epidemiological Report' [2].

An overview of the national surveillance systems is available online [3].

A subset of the data used for this report is available through ECDC's online *Surveillance Atlas of Infectious Diseases* [4].

Epidemiology

For the purpose of this report, only tables and figures have been presented. Please refer to the more recent annual epidemiological reports (such as 2020 and 2019) for the most up-to-date information regarding leptospirosis.

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Table 1. Distribution of confirmed leptospirosis cases and rates per 100 000 population by country and year, EU/EEA, 2014–2018

Country	2014		2015		2016		2017		2018			
	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Confirmed cases	Rate	ASR	Reported cases
Austria	9	0.11	12	0.14	14	0.16	68	0.78	24	0.27	0.28	24
Belgium	21	-	16	0.14	19	0.17	17	0.15	20	0.18	-	26
Bulgaria	31	0.43	14	0.19	9	0.13	5	0.07	15	0.21	0.20	15
Croatia	105	2.47	36	0.85	11	0.26	24	0.58	7	0.17	0.16	10
Cyprus	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0
Czechia	35	0.33	17	0.16	18	0.17	21	0.20	10	0.09	0.10	10
Denmark	7	0.12	8	0.14	15	0.26	22	0.38	19	0.33	0.34	19
Estonia	2	0.15	2	0.15	3	0.23	5	0.38	6	0.45	0.45	6
Finland	2	0.04	2	0.04	1	0.02	0	0.00	0	0.00	0.00	0
France	96	0.15	58	0.09	79	0.12	134	0.20	129	0.19	0.19	596
Germany	123	0.15	87	0.11	91	0.11	129	0.16	117	0.14	0.15	117
Greece	36	0.33	35	0.32	19	0.18	24	0.22	18	0.17	0.16	18
Hungary	31	0.31	10	0.10	15	0.15	14	0.14	19	0.19	0.19	19
Iceland	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0
Ireland	22	0.47	16	0.34	26	0.55	19	0.40	19	0.39	0.42	19
Italy	42	0.07	38	0.06	54	0.09	32	0.05	41	0.07	0.06	41
Latvia	7	0.35	2	0.10	5	0.25	8	0.41	4	0.21	0.20	4
Liechtenstein	.	.	.	.	.	.	.	.	.	.	.	.
Lithuania	3	0.10	10	0.34	18	0.62	16	0.56	3	0.11	0.10	3
Luxembourg	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0.00	0
Malta	0	0.00	2	0.45	1	0.22	2	0.43	2	0.42	0.42	2
Netherlands	100	0.59	86	0.51	95	0.56	77	0.45	45	0.26	0.27	45
Norway	.	.	.	.	.	.	.	.	.	.	.	.
Poland	10	0.03	4	0.01	4	0.01	2	0.01	7	0.02	0.02	7
Portugal	65	0.62	44	0.42	101	0.98	117	1.13	69	0.67	0.64	75
Romania	92	0.46	37	0.19	65	0.33	44	0.22	51	0.26	0.25	58
Slovakia	12	0.22	7	0.13	10	0.18	7	0.13	3	0.06	0.06	3
Slovenia	31	1.50	11	0.53	17	0.82	24	1.16	18	0.87	0.84	18
Spain	0	-	3	-	16	-	19	-	65	-	-	69
Sweden	6	0.06	3	0.03	1	0.01	4	0.04	3	0.03	0.03	3
United Kingdom	78	0.12	67	0.10	76	0.12	98	0.15	88	0.13	0.14	88
EU/EEA	966	0.21	627	0.13	783	0.17	932	0.20	802	0.16	0.15	1295

Source: Country reports
ASR: age-standardised rate
.: no data reported
-: no rate calculated

Figure 1. Distribution of confirmed leptospirosis cases per 100 000 population by country, EU/EEA, 2018

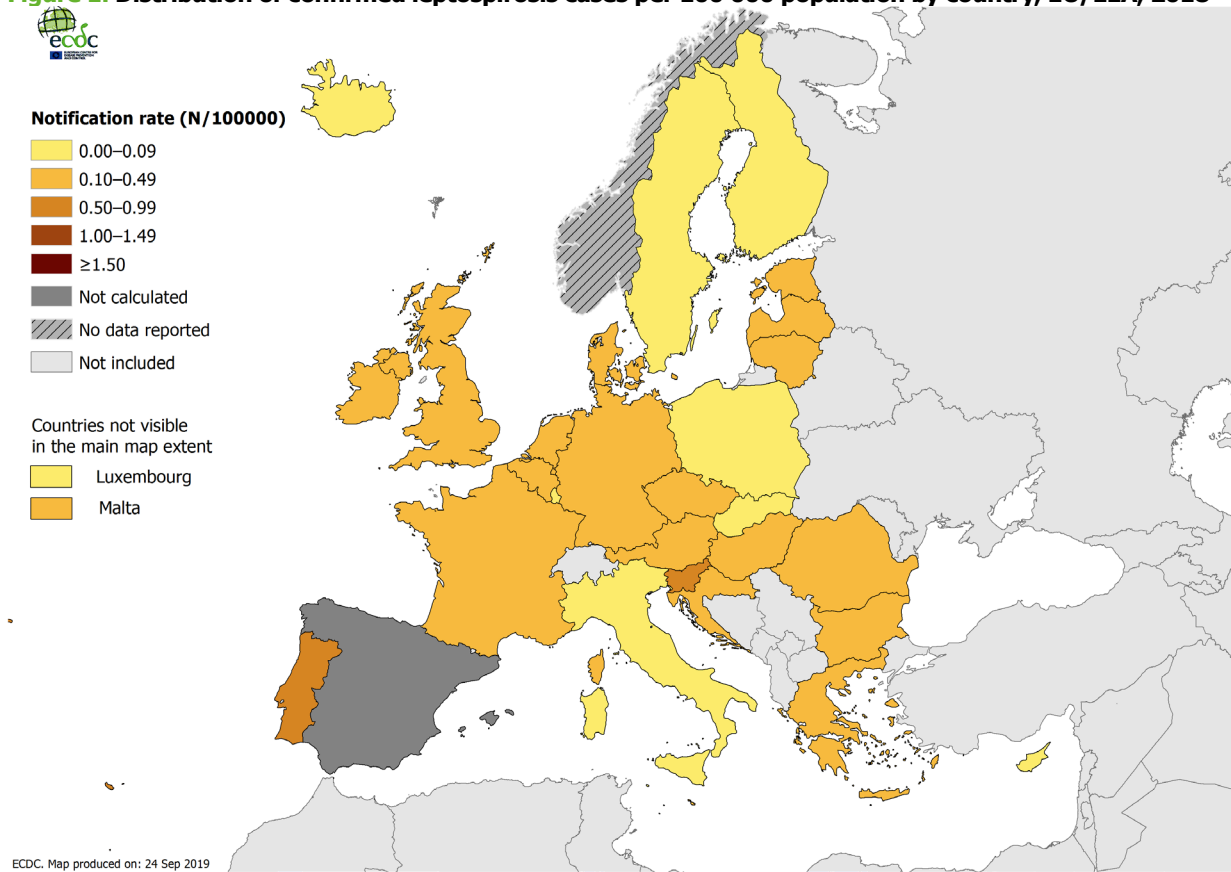
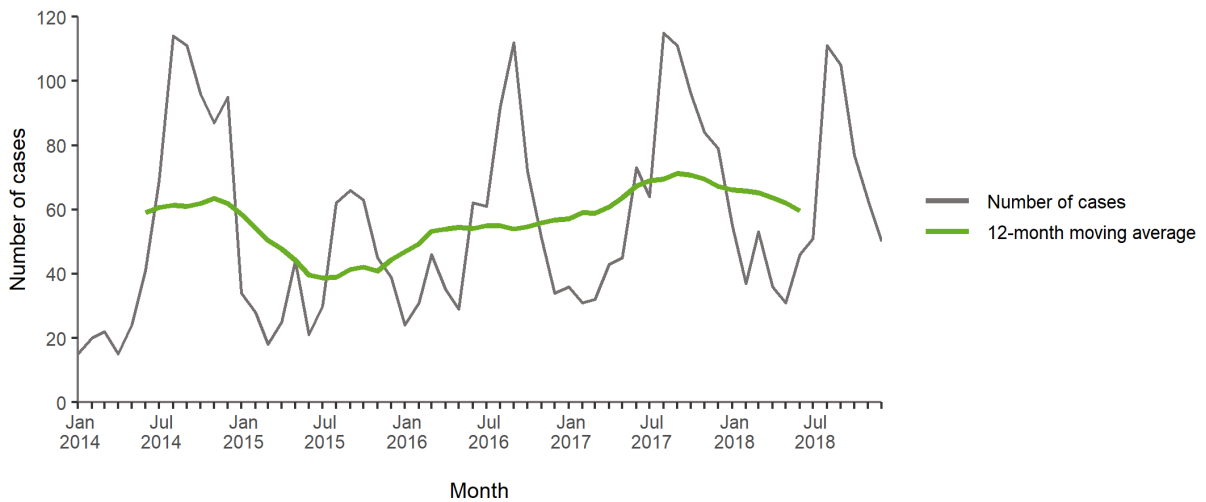
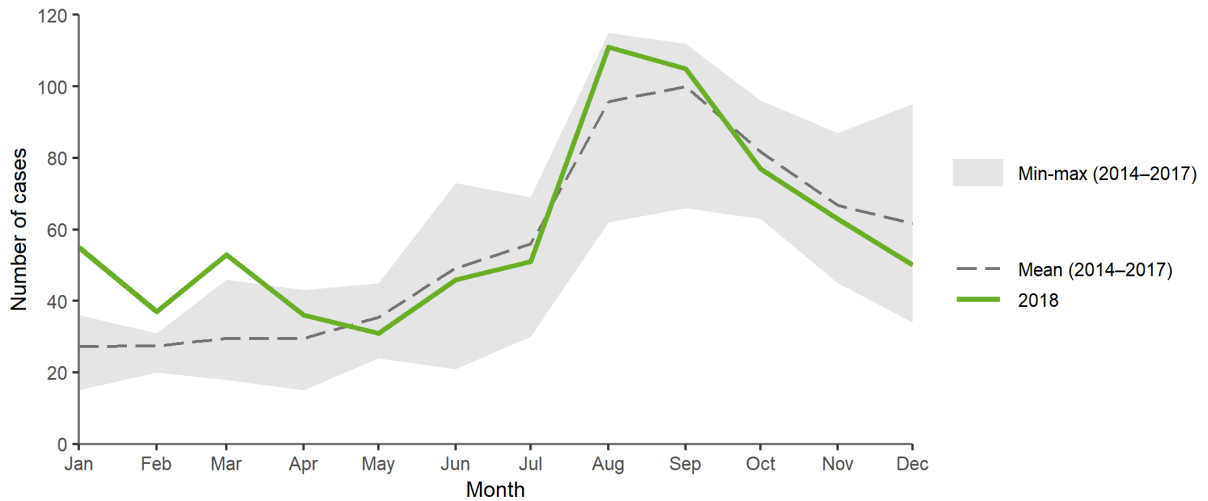


Figure 2. Distribution of confirmed leptospirosis cases by month, EU/EEA, 2014–2018



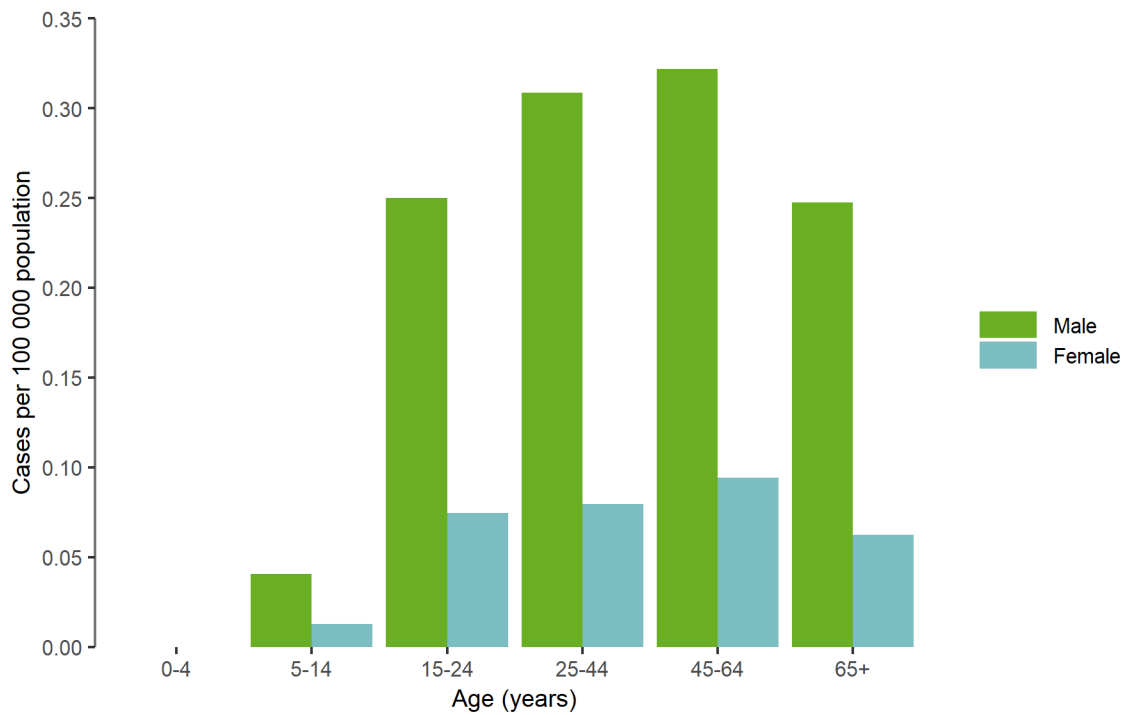
Source: Country reports from Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Figure 3. Distribution of confirmed leptospirosis cases by month, EU/EEA, 2018 and 2014–2017



Source: Country reports from Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Figure 4. Distribution of confirmed leptospirosis cases per 100 000 population, by age and gender, EU/EEA, 2018



Public health implications

Prevention of leptospirosis needs to take into account its complex and dynamic epidemiology, including environmental aspects (e.g. climate), presence of carriers (e.g. rodents), and human behaviours [1].

Prevention of leptospirosis in human starts by reducing the risk of exposure by avoiding contact with water contaminated with animal urine either by not wading or swimming in contaminated water, or wearing protective clothes for those with an occupational risk of exposure to contaminated water.

Treatment and/or vaccination of animal carriers (e.g. dogs) and control of rodents can also help reduce the risk of leptospirosis in humans [1].

Early diagnosis and adequate treatment of cases have been shown to decrease both morbidity and mortality of leptospirosis [1].

References

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3. European Centre for Disease Prevention and Control. Surveillance systems overview for 2018.
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4. European Centre for Disease Prevention Control. Surveillance Atlas of Infectious Diseases - Leptospirosis data. ECDC.
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