SURVEILLANCE REPORT

Campylobacteriosis

Annual Epidemiological Report for 2018

Key facts

- Campylobacteriosis is the most frequently reported food- and waterborne disease in the EU/EEA.
- In 2018, 30 EU/EEA countries reported 250 384 confirmed cases of campylobacteriosis.
- The overall EU/EEA notification rate was 64.1 cases per 100 000 population.
- Human campylobacteriosis was most common in children under five years old.
- Campylobacteriosis shows clear seasonality, with a sharp peak of cases in the summer months and a smaller peak at the beginning of the year.

Introduction

Campylobacteriosis is an acute diarrhoeal enteritis mainly caused by one of the two species: *Campylobacter jejuni* or *C. coli*. The incubation period is typically two to five days after infection. The symptoms start with abdominal cramps followed by watery diarrhoea, which is often accompanied by fever, headaches and muscle aches. In about one-third of cases blood may appear in stools. The infection is usually self-limiting, lasting around a week, but may require hospital care in about 5–10% of cases. If the infection is severe or prolonged, antimicrobial treatment may be needed. The acute infection may lead to rare late-onset complications, such as reactive arthritis or Guillain-Barré syndrome (GBS), which is an acute neuromuscular paralysis. *Campylobacter* bacteria are common in animals (e.g. poultry, cattle, pigs and wild birds), which can serve as reservoirs without clinical symptoms. Human infection usually occurs via consumption of contaminated food (e.g. poultry meat) or drinking water from private wells. Swimming in natural waters has also been shown as a risk factor for infection.

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, refer to the Methods chapter of the 'Introduction to the ECDC Annual Epidemiological Report' [1].

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

A subset of the data used for this report is available through ECDC's online 'Surveillance Atlas of Infectious Diseases' [3].

Suggested citation: European Centre for Disease Prevention and Control. Campylobacteriosis. In: ECDC. Annual epidemiological report for 2018. Stockholm: ECDC; 2024.

Stockholm, April 2024

Epidemiology

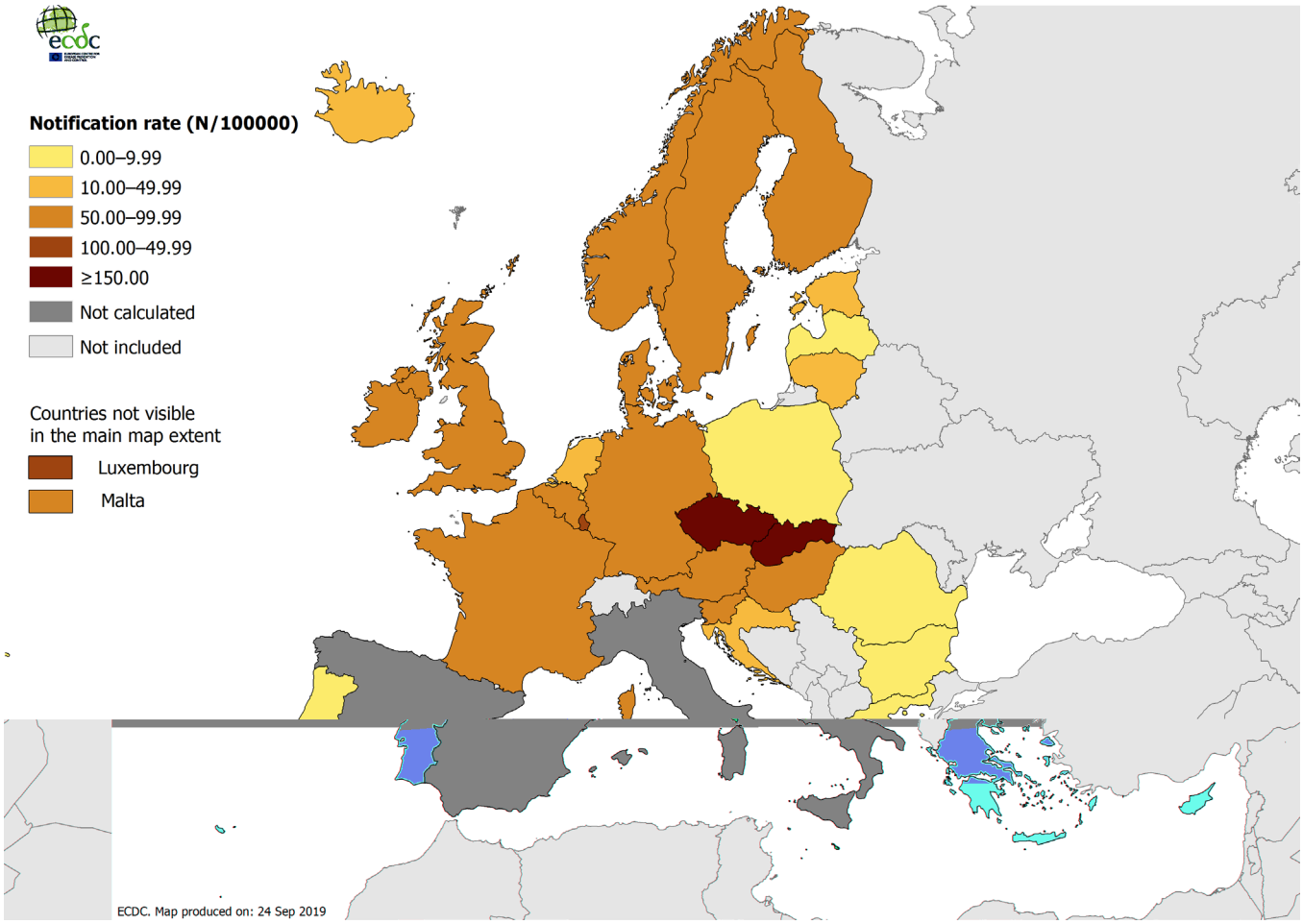
For the purposes of this report, only tables and figures are presented. Please refer to the most recent annual epidemiological report for campylobacteriosis for the most up-to-date information.

Table 1. Confirmed campylobacteriosis cases and rates per 100 000 population by country, 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	6 514	76.6	6 258	72.9	7 083	81.4	7 204	82.1	7 999	90.7	92.7	7 999
Belgium	8 098	NRC	9 066	80.7	10 055	88.9	8 649	76.2	8 086	70.9	70.2	8 086
Bulgaria	144	2.0	227	3.2	202	2.8	195	2.7	191	2.7	3.0	192
Croatia	1 647	38.8	1 393	33.0	1 524	36.4	1 686	40.6	1 965	47.9	50.2	1 971
Cyprus	40	4.7	29	3.4	21	2.5	20	2.3	26	3.0	3.0	26
Czech Republic	20 750	197.4	20 960	198.9	24 084	228.2	24 326	230.0	22 895	215.8	226.0	23 765
Denmark	3 773	67.0	4 327	76.5	4 712	82.6	4 255	74.0	4 559	78.9	79.7	4 559
Estonia	285	21.7	318	24.2	298	22.6	285	21.7	411	31.2	32.5	411
Finland	4 889	89.7	4 588	83.8	4 637	84.5	4 289	77.9	5 099	92.5	96.9	5 099
France	5 958	45.0	6 074	45.7	6 698	50.3	6 579	49.2	7 491	56.0	55.3	7 491
Germany	70 571	87.4	69 921	86.1	73 736	89.7	69 251	83.9	67 585	81.6	82.6	67 872
Greece	NDR	NRC	NDR	NRC	NDR	NRC	NDR	NRC	357	3.3	NRC	357
Hungary	8 444	85.5	8 342	84.6	8 556	87.0	7 807	79.7	7 117	72.8	77.2	7 366
Iceland	142	43.6	119	36.2	128	38.5	119	35.2	145	41.6	44.4	145
Ireland	2 593	55.9	2 453	52.4	2 511	53.1	2 779	58.1	3 044	63.0	63.7	3 044
Italy	1 252	NRC	1 014	NRC	1 057	NRC	1 060	NRC	1 356	NRC	NRC	1 356
Latvia	37	1.8	74	3.7	90	4.6	59	3.0	87	4.5	4.6	89
Liechtenstein	NDR	NRC	NDR	NRC	NDR	NRC	NDR	NRC	NDR	NRC	NRC	NDR
Lithuania	1 184	40.2	1 186	40.6	1 225	42.4	990	34.8	919	32.7	33.1	925
Luxembourg	873	158.8	254	45.1	518	89.9	613	103.8	625	103.8	106.0	625
Malta	288	67.1	248	56.4	212	47.1	231	50.2	333	70.0	72.8	354
Netherlands	4 159	47.5	3 778	43.0	3 383	38.3	2 890	32.5	3 091	34.6	NRC	3 091
Norway	3 386	66.3	2 318	44.9	2 317	44.5	3 883	73.8	3 668	69.3	70.2	3 669
Poland	650	1.7	653	1.7	773	2.0	874	2.3	719	1.9	2.0	726
Portugal	NDR	NRC	271	2.6	359	3.5	596	5.8	610	5.9	7.1	617
Romania	256	1.3	311	1.6	517	2.6	467	2.4	573	2.9	3.1	582
Slovakia	6 744	124.5	6 949	128.2	7 623	140.5	6 946	127.8	8 339	153.2	156.7	8 429
Slovenia	1 184	57.4	1 328	64.4	1 642	79.5	1 408	68.2	1 305	63.1	66.5	1 305
Spain	11 481	NRC	13 227	NRC	15 542	NRC	18 860	NRC	18 411	NRC	NRC	18 411
Sweden	8 288	85.9	9 180	94.2	11 021	111.9	10 608	106.1	8 132	80.4	82.6	8 132
United Kingdom	66 716	103.7	59 797	92.2	58 901	90.1	63 267	96.1	65 246	98.4	98.5	65 246
EU/EEA	**240 346**	**66.3**	**234 663**	**62.7**	**249 425**	**66.0**	**250 196**	**65.0**	**250 384**	**64.1**	**64.5**	**251 940**

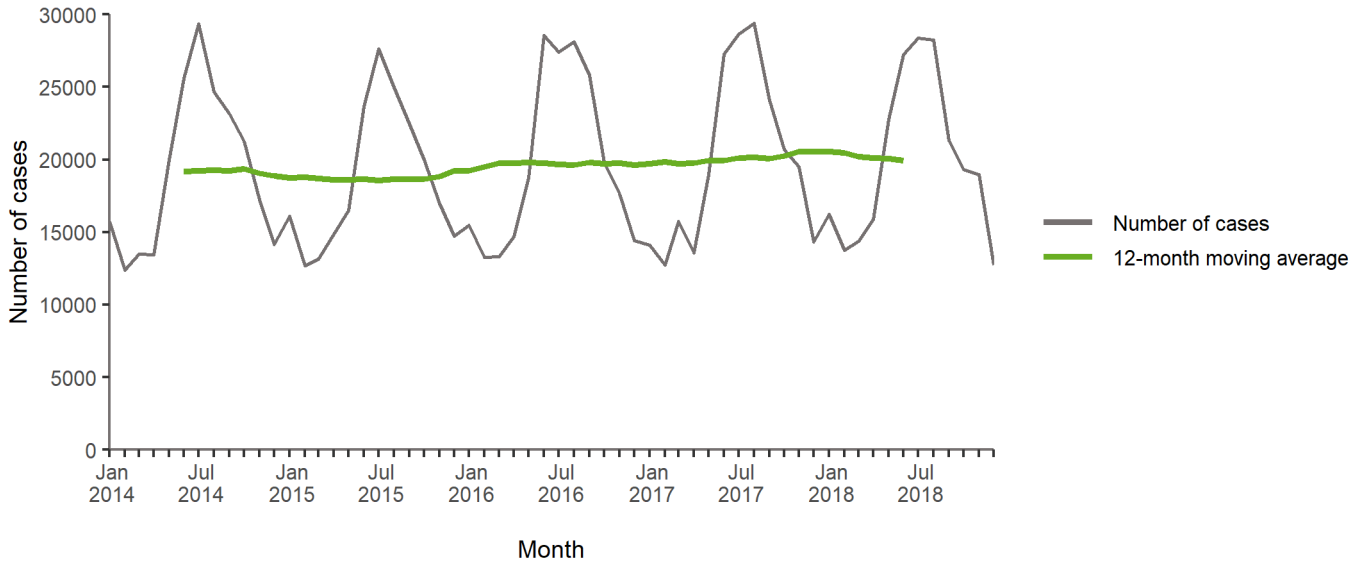
Source: Country reports
ASR: age-standardised rate; NDR: no data reported; NRC: no rate calculated.

Figure 1. Confirmed campylobacteriosis cases per 100 000 population by country, EU/EEA, 2018



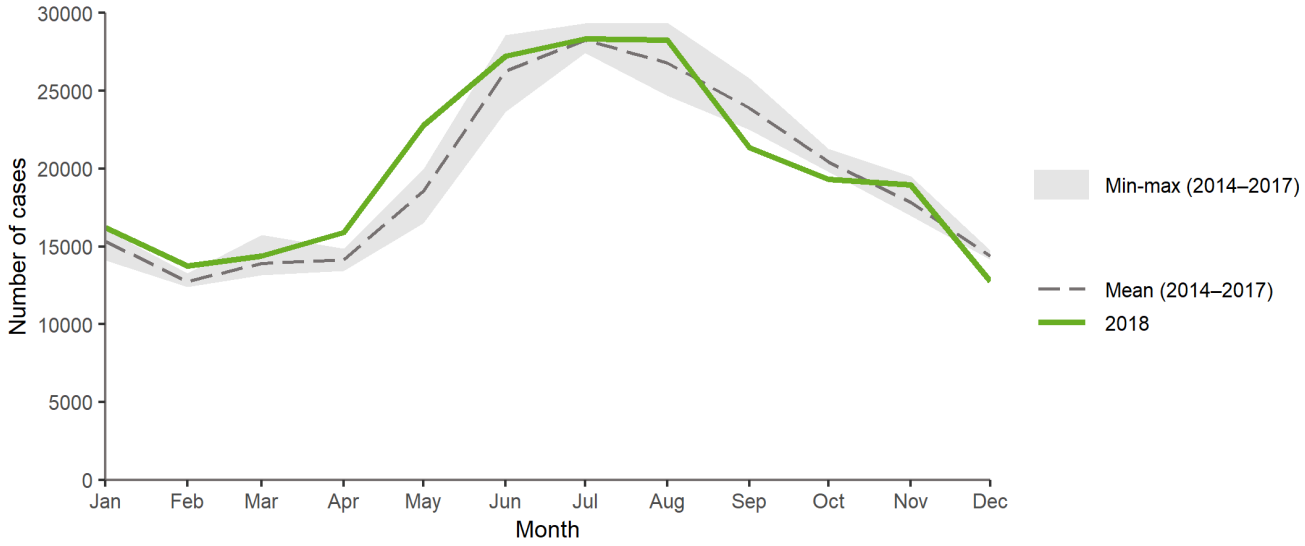
Source: Country reports from Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden and the United Kingdom. No rates were calculated for Italy and Spain.

Figure 2. Confirmed campylobacteriosis cases by month, EU/EEA, 2014–2018



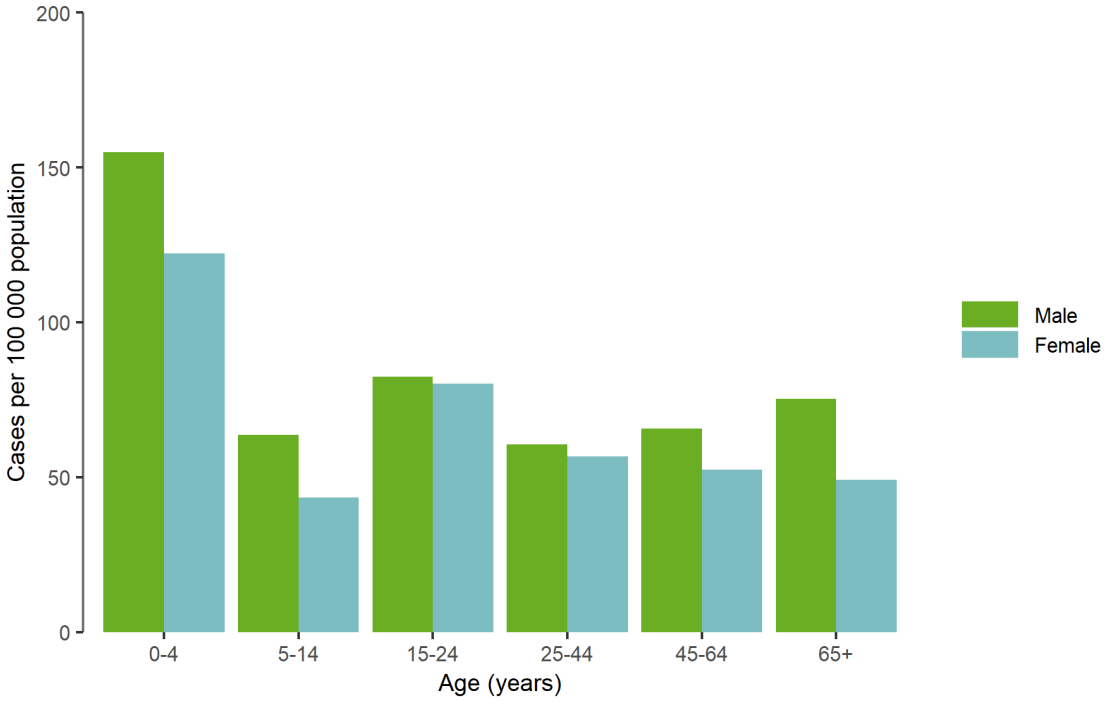
Source: Country reports from Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

Figure 3. Confirmed campylobacteriosis cases by month, EU/EEA, 2018 and 2014–2017



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

Figure 4. Confirmed campylobacteriosis cases per 100 000 population, by age and gender, EU/EEA, 2018



Public health implications

Campylobacteriosis is the most frequently reported food- and waterborne disease in the EU/EEA with high morbidity. The very high proportion of resistance to fluoroquinolones, which are critically important antimicrobials for treatment, may have implications for treatment of severe *Campylobacter* infections [4]. Handling, preparing and consuming broiler meat is estimated to account for 20–30% of all human cases [5]. Proper kitchen hygiene is required to avoid infection and cross-contamination between raw poultry meat and ready-to-eat/prepared food.

The elimination of *Campylobacter* in poultry production is challenging, requiring a combination of different strategies in the food chain to reduce the risk of infection in humans [6].

References

1. European Centre for Disease Prevention and Control (ECDC). Introduction to the Annual Epidemiological Report. Stockholm: ECDC; 2018. Available at: https://www.ecdc.europa.eu/en/surveillance-and-disease-data/annual-epidemiological-reports/introduction-annual
2. European Centre for Disease Prevention and Control (ECDC). Surveillance systems overview for 2018. Stockholm: ECDC; 2018. Available at: https://www.ecdc.europa.eu/sites/default/files/documents/surveillance-systems-overview-2018.xlsx
3. European Centre for Disease Prevention and Control (ECDC). Surveillance Atlas of Infectious Diseases. Stockholm: ECDC; 2018. Available at: http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=27&HealthTopic=9
4. European Food Safety Authority (EFSA), European Centre for Disease Prevention and Control (ECDC). The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2018/2019. EFSA Journal. 2021;19(4):6490. Available at: https://efsa.onlinelibrary.wiley.com/doi/10.2903/j.efsa.2021.6490
5. EFSA Panel on Biological Hazards (BIOHAZ), European Food Safety Authority. Scientific Opinion on *Campylobacter* in broiler meat production: control options and performance objectives and/or targets at different stages of the food chain. EFSA Journal. 2011;9(4):2105. Available at: http://efsa.europa.eu/efsajournal/pub/2105
6. Sibanda N, McKenna A, Richmond A, Ricke SC, Callaway T, Stratakos AC, et al. A Review of the Effect of Management Practices on *Campylobacter* Prevalence in Poultry Farms. Front Microbiol. 2018 Aug 24;9:2002.