SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

September 2019

Period covered: 1 August 2018–31 July 2019

Introduction

The monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for 1 August 2018 to 31 July 2019.

Routine disease data are submitted on a monthly basis by 30 European Union/European Economic Area (EU/EEA) countries for measles and 28 EU/EEA countries for rubella (France and Belgium do not submit data). TESSy data on measles and rubella are published each month in the ECDC Surveillance Atlas of Infectious Diseases [1], an interactive tool providing access to additional tables and graphs not included in the report. A monthly measles infographic is also published online [2].

ECDC also monitors European measles and rubella outbreaks through epidemic intelligence and publishes recent updates in the Communicable Disease Threats Report (CDTR) [3] on the same day as the monitoring report. Additionally, ECDC conducts assessments as significant outbreaks or public health events develop. The last ECDC rapid risk assessment on the risk of measles transmission in the EU/EEA was published in May 2019 [4].

Measles

Measles in July 2019

Twenty-eight countries reported measles data for July 2019, of which 839 cases were reported by 20 countries, and eight countries reported no cases (Figure 1).

Overall, case numbers continued to decrease compared with the previous two months. France and Italy had the highest case counts with 305 and 152 cases respectively (Table 1).

Notable decreases were reported in France, Italy, Bulgaria and Poland.

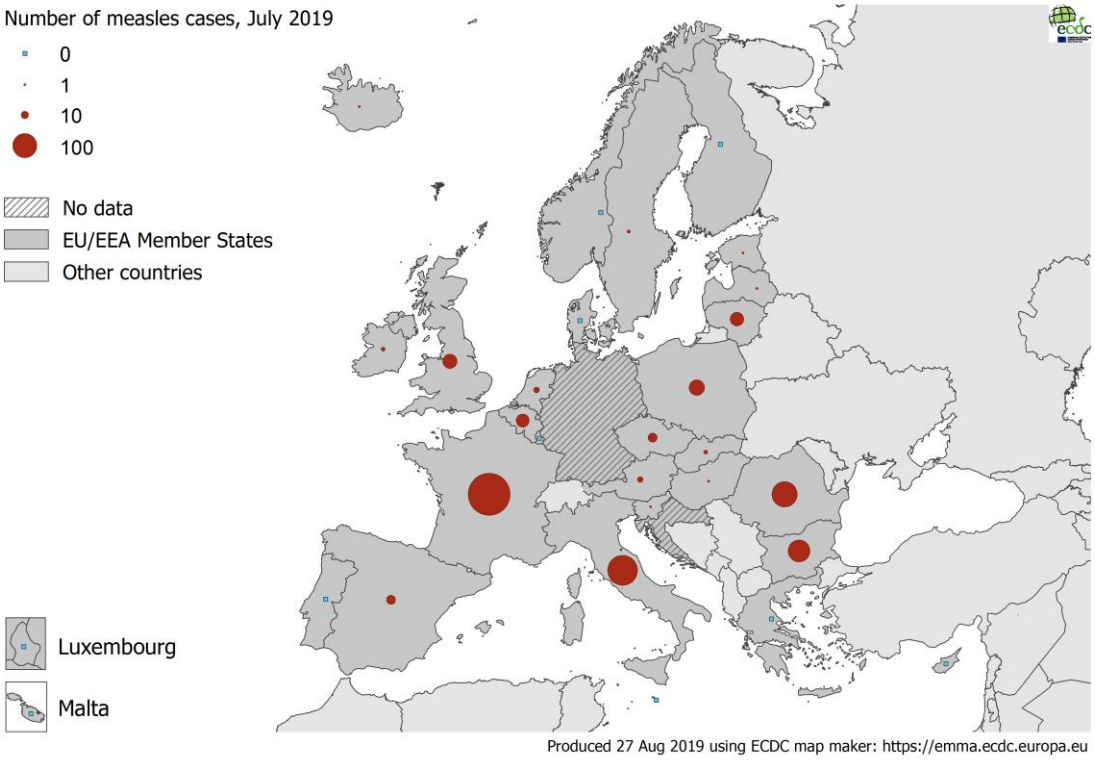
- France reported 305 cases in July, compared with 462 in June and 550 in May
- Italy reported 152 cases in July, compared with 215 in June and 236 in May
- Bulgaria reported 84 cases in July, compared with 236 in June and 281 in May
- Poland reported 40 cases in July, compared with 120 in June and 236 in May.

Germany and Croatia did not report measles data for July 2019. Belgium and Poland reported aggregate data, while all other countries reported case-based data. Cases classified as 'discarded' are not included in the figures presented in the report.

Suggested citation: European Centre for Disease Prevention and Control. Monthly measles and rubella monitoring report – September 2019. Stockholm: ECDC; 2019

Where available, links to recent updates published by national public health authorities in the EU/EEA can be found in the CDTR [3].

Figure 1. Number of measles cases by country, EU/EEA, July 2019 (n=839)



Measles cases from August 2018–July 2019

From 1 August 2018–31 July 2019, 30 EU/EEA Member States reported 13 113 cases of measles, 10 327 (79%) of which were laboratory-confirmed. No countries reported zero cases during the 12-month period. The highest number of cases were reported by France (2 560), Italy (1 845), Poland (1 580) and Romania (1 453), accounting for 20%, 14%, 12% and 11% of all cases, respectively (Table 1).

Notification rates per million population above the EU/EEA average of 25.3 were reported by Lithuania (282.3), Bulgaria (158.3), Slovakia (97.2), Romania (74.4), Malta (63.1), Czech Republic (59.9), Luxembourg (44.9), Poland (41.6), Belgium (39.2), France (38.2) and Italy (30.5; Figure 2).

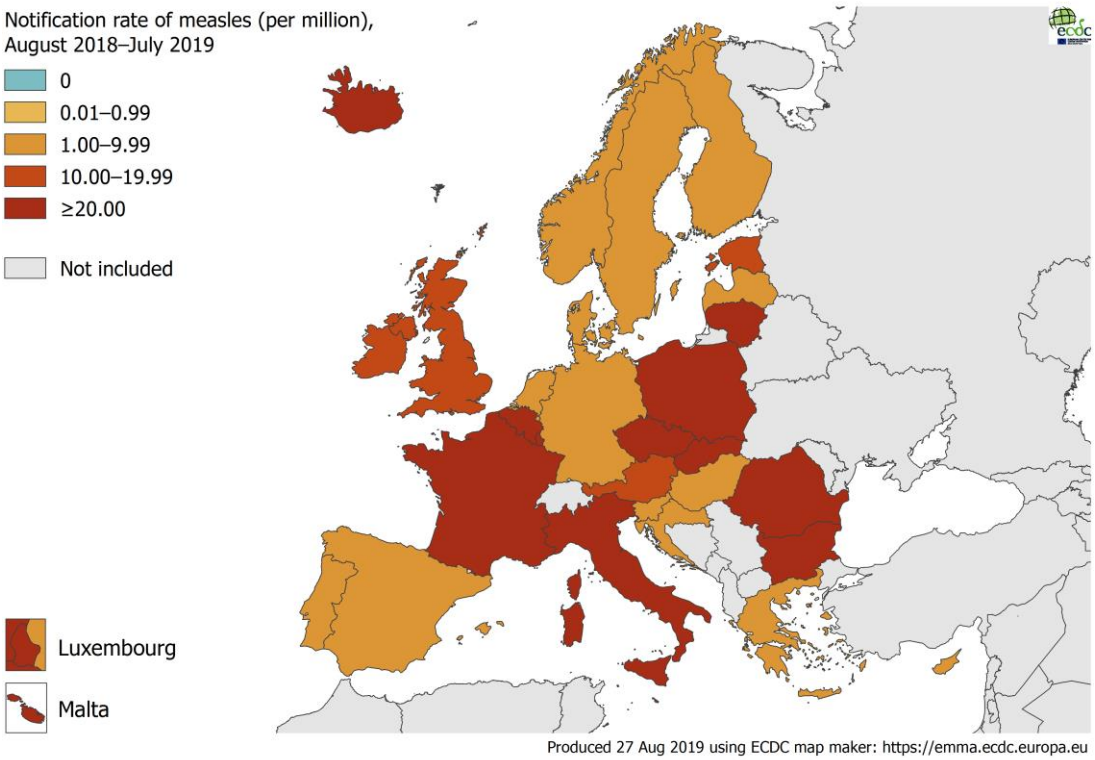
The number of measles cases reported to TESSy may be an underestimation in certain countries. This may apply in particular to Romania. The sustained outbreak in the country has caused delays in case-based reporting to TESSy and the most up-to-date data are available from the Romanian National Institute of Public Health [5].

Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 August 2018–31 July 2019

Country	2018 Aug	2018 Sep	2018 Oct	2018 Nov	2018 Dec	2019 Jan	2019 Feb	2019 Mar	2019 Apr	2019 May	2019 Jun	2019 Jul	Total cases	Cases per million	Total lab-positive cases
Austria	3	6	0	4	1	25	33	1	27	38	8	5	151	17.1	140
Belgium	11	14	4	6	6	21	88	68	35	99	65	30	447	39.2	338
Bulgaria	0	0	0	0	0	0	51	185	279	281	236	84	1 116	158.3	1 009
Croatia	1	0	0	0	0	0	1	0	0	4	6	.	12	2.9	12
Cyprus	0	0	0	0	0	0	1	0	1	3	1	0	6	6.9	5
Czech Republic	7	4	7	16	19	58	151	199	90	51	20	14	636	59.9	555
Denmark	2	2	0	0	1	2	5	4	2	1	1	0	20	3.5	20
Estonia	0	0	0	0	0	3	6	2	0	6	7	1	25	18.9	25
Finland	3	0	0	1	7	3	3	0	2	0	0	0	19	3.5	19
France	29	38	76	61	54	122	207	317	339	550	462	305	2 560	38.2	1 568
Germany	29	24	13	10	10	102	71	129	70	50	20	.	528	6.4	418
Greece	18	4	2	0	1	0	3	7	12	6	0	0	53	4.9	30
Hungary	0	0	0	0	1	2	5	4	2	9	0	1	24	2.5	24
Iceland	0	0	0	0	0	0	1	6	0	0	0	1	8	23.0	8
Ireland	17	2	1	1	0	2	18	23	6	10	2	3	85	17.6	51
Italy	79	57	82	58	76	180	173	229	308	236	215	152	1 845	30.5	1 514
Latvia	1	0	0	1	2	0	0	0	1	0	0	1	6	3.1	6
Lithuania	1	0	0	8	20	12	73	250	221	116	60	32	793	282.3	793
Luxembourg	2	0	0	1	0	0	0	15	7	1	1	0	27	44.9	27
Malta	0	0	0	0	0	0	0	3	13	11	3	0	30	63.1	30
Netherlands	4	0	0	0	2	4	4	10	2	12	14	5	57	3.3	53
Norway	3	0	0	0	0	0	1	7	3	3	1	0	18	3.4	15
Poland	19	9	21	79	114	164	239	287	252	236	120	40	1 580	41.6	1 057
Portugal	3	3	2	24	12	2	2	2	0	2	1	0	53	5.2	50
Romania	92	72	65	81	130	261	75	188	108	148	123	110	1 453	74.4	1 120
Slovakia	87	28	16	38	50	43	37	70	105	43	9	3	529	97.2	438
Slovenia	0	0	1	0	0	0	0	0	6	8	3	1	19	9.2	19
Spain	7	4	4	1	6	11	11	23	67	74	26	14	248	5.3	222
Sweden	2	4	1	0	3	0	1	4	6	4	2	2	29	2.9	26
United Kingdom	54	16	21	26	11	81	78	108	116	116	74	35	736	11.1	735
EU/EEA	**474**	**287**	**316**	**416**	**526**	**1 098**	**1 338**	**2 141**	**2 080**	**2 118**	**1 480**	**839**	**13 113**	**25.3**	**10 327**

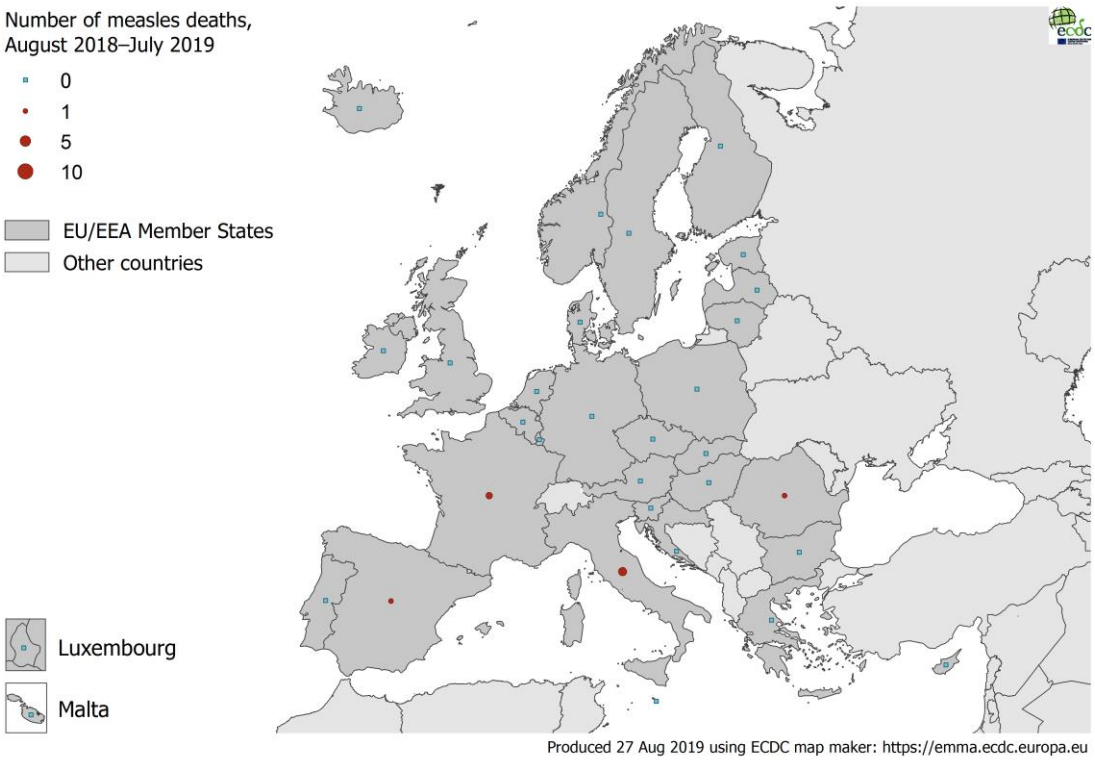
Source: TESSy, data extracted on 27 August 2019
.: data not reported.

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 August 2018–31 July 2019



Seven deaths attributable to measles were reported to TESSy during the 12-month period in Italy (3), France (2), Romania (1) and Spain (1); (Figure 3).

Figure 3. Number of measles deaths by country, EU/EEA, 1 August 2018–31 July 2019 (n=7)



Importation status was reported by 30 countries and known for 9 974 cases (76%), 904 (9%) of which were imported and 316 (3%) of which were import-related.[1]

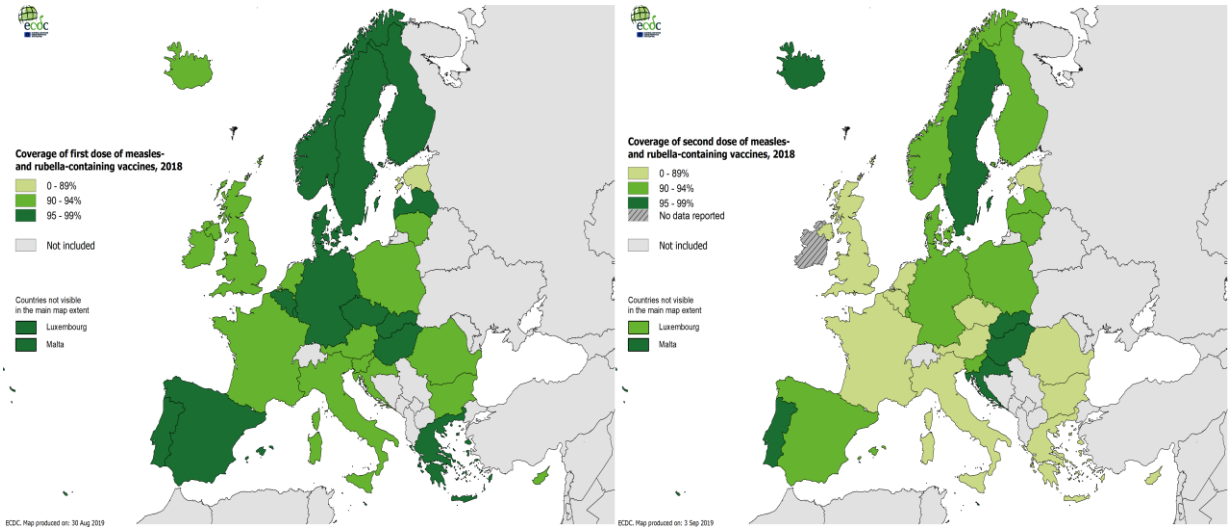
Of the 12 470 cases with known age, 3 613 (29%) were children under five years and 6 853 (55%) were aged 15 years or older. The highest notification rates were observed in infants under one year (282.9 cases per million) and aged 1–4 years (103.8 cases per million).

A total of 4 843 cases (37%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (1 942 of 3 990 cases; 49%). Of 7 627 cases (58% of all cases) with known age and vaccination status, 5 264 (69%) were unvaccinated, 1 433 (19%) were vaccinated with one dose of a measles-containing vaccine, 758 (10%) were vaccinated with two or more doses and 172 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among infants under one year (983 of 1 441 cases; 68%). Infants under one year are particularly vulnerable to measles complications and are best protected by herd immunity as the first dose of a measles-containing vaccine is given after 12 months of age in most EU/EEA countries [6]. Among 2 172 cases aged 1–4 years (the target group of the first, and in certain countries second dose [6]), 1 052 (48%) were unvaccinated, 400 (18%) were vaccinated with one dose of measles-containing vaccine, 14 (1%) were vaccinated with two or more doses and 8 (<1%) were vaccinated with an unknown number of doses.

Measles continues to spread across Europe because vaccination coverage in many countries is suboptimal. Sustained coverage of at least 95% for two doses of a measles-containing vaccine at all subnational levels is recommended [7]. However, the latest WHO-UNICEF estimates of national immunisation coverage show that only five EU/EEA countries (Hungary, Malta, Portugal, Slovakia and Sweden) reported at least 95% vaccination coverage for both the first [8] and second [9] doses in 2018 (Figure 4). If the elimination goal is to be reached, many countries need to make sustained improvements in the coverage of their routine childhood immunisation programmes and also close immunity gaps in adolescents and adults who have missed vaccination opportunities in the past [4].

Figure 4. Vaccination coverage for first (left) dose of a measles- and rubella-containing vaccine and second (right) dose of measles-containing vaccine, EU/EEA, 2018



[1] Cases were classified as imported if there was virological and/or epidemiological evidence of exposure outside the region or country 7–18 days prior to rash onset, while cases were classified as import-related if they were locally acquired infections caused by imported virus, as supported by epidemiological and/or virological evidence

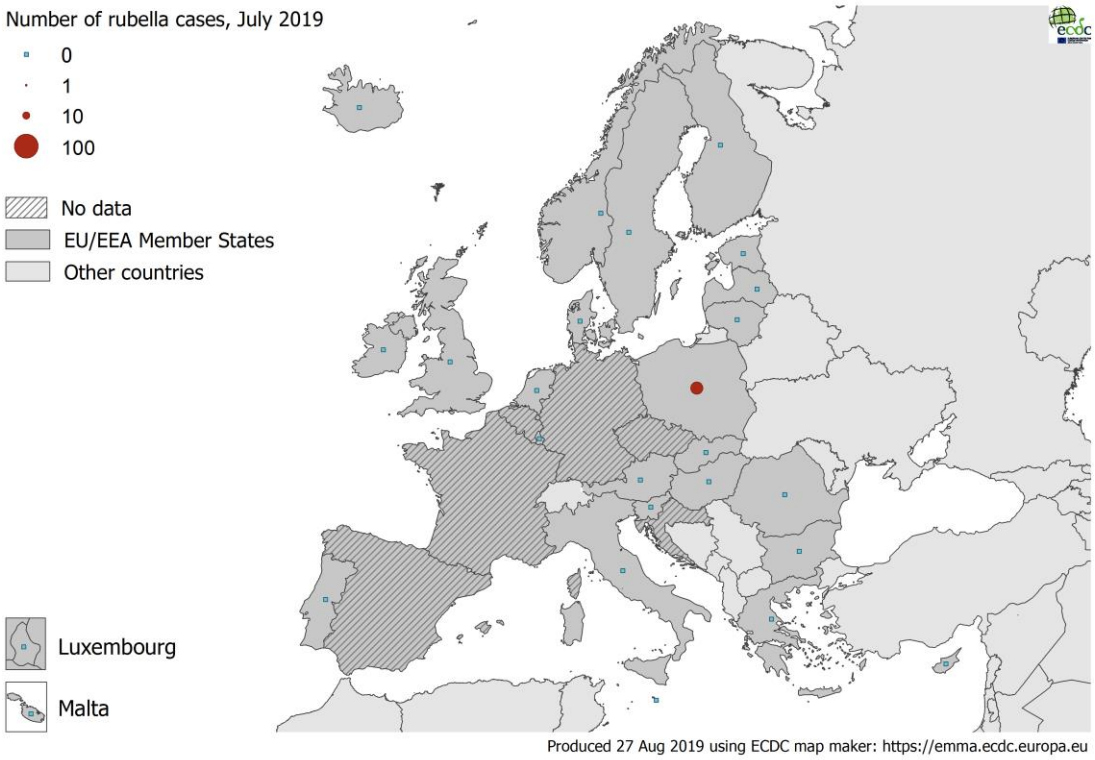
Rubella

Rubella in July 2019

Twenty-four countries reported rubella data for July 2019, with 28 cases reported by one country (Poland) and 23 countries reporting no cases. Czech Republic, Germany, Spain and Croatia did not report rubella data for July 2019 (Figure 5). Poland reported aggregate data, while all other countries reported case-based data. Cases classified as 'discarded' are not included in the figures presented in the report.

Overall, case numbers changed little compared with the previous month. All cases were reported by Poland (Table 2).

Figure 5. Number of rubella cases by country, EU/EEA, July 2019 (n=28)



Rubella cases from August 2018–July 2019

From 1 August 2018–31 July 2019, 11 EU/EEA Member States reported 451 cases of rubella, 47 (10%) of which were laboratory-confirmed. Seventeen countries reported no cases during the 12-month period. The highest number of cases were reported by Poland (351), Germany (50), Italy (20) and Spain (12), accounting for 78%, 11%, 4% and 3% of all cases, respectively (Table 2). Notification rates per million population above the EU/EEA average (1.0) were reported by Poland (9.2) and Latvia (1.6; Figure 6).

Data from Poland should be interpreted with caution, as only three of 351 cases (1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 100 (28%) cases in children aged 1–4 years, 97 (28%) cases in children aged 5–9 years and 52 (15%) cases in infants under one year.

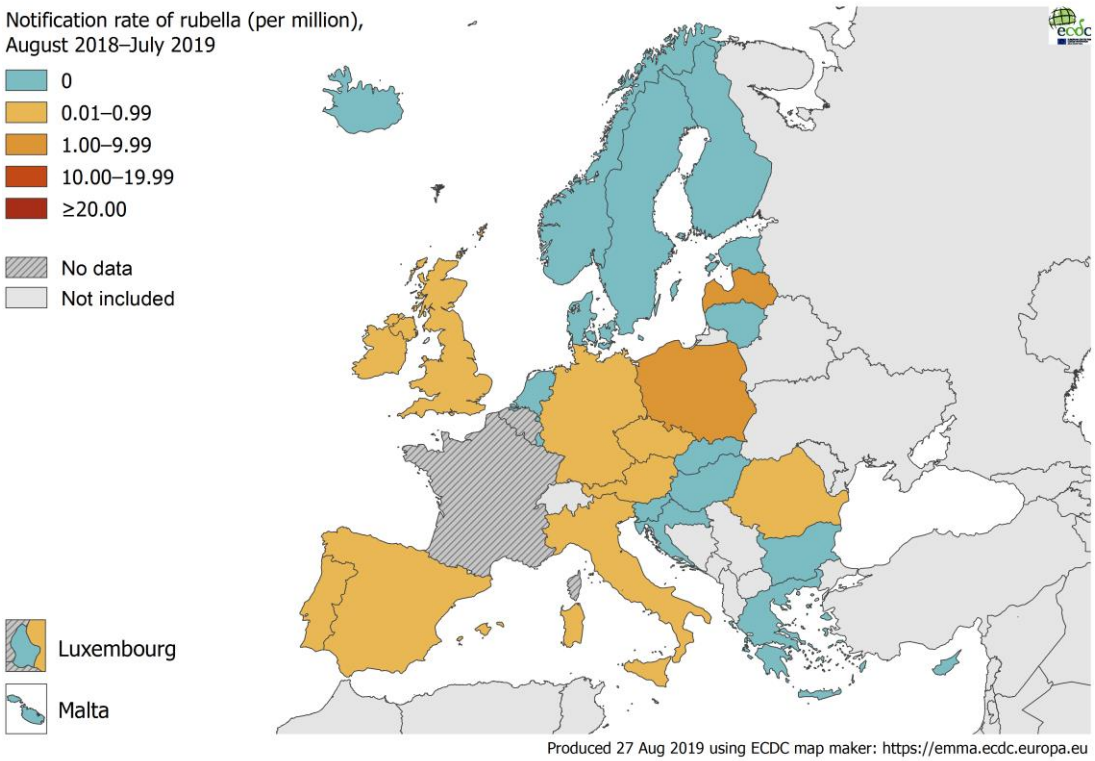
No deaths attributable to rubella were reported to TESSy during the 12-month period.

Table 2. Number of rubella cases by month and notification rate per million population by country, EU/EEA, 1 August 2018–31 July 2019

Country	2018 Aug	2018 Sep	2018 Oct	2018 Nov	2018 Dec	2019 Jan	2019 Feb	2019 Mar	2019 Apr	2019 May	2019 Jun	2019 Jul	Total cases	Cases per million	Total lab-positive cases
Austria	0	0	0	0	0	0	1	0	0	0	1	0	2	0.2	1
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	.	0	0.0	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Czech Republic	1	0	0	0	0	0	0	0	0	0	0	.	1	0.1	0
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Estonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Finland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Germany	4	6	6	1	4	4	3	7	5	5	5	.	50	0.6	18
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Ireland	0	0	0	0	0	0	0	1	2	0	0	0	3	0.6	0
Italy	1	2	0	2	0	2	2	2	0	4	5	0	20	0.3	8
Latvia	0	0	0	0	0	1	1	0	0	1	0	0	3	1.6	1
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Norway	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Poland	36	22	27	26	24	43	22	36	29	37	21	28	351	9.2	3
Portugal	1	1	0	0	0	1	0	0	0	0	0	0	3	0.3	2
Romania	2	0	1	0	1	0	0	0	0	0	0	0	4	0.2	3
Slovakia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Spain	0	0	0	0	9	3	0	0	0	0	0	.	12	0.3	9
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	0	1	0	0	0	0	1	0	0	0	0	0	2	0.0	2
EU/EEA	**45**	**32**	**34**	**29**	**38**	**54**	**30**	**46**	**36**	**47**	**32**	**28**	**451**	**1.0**	**47**

Source: TESSy, data extracted on 27 August 2019
.: data not reported.
The national surveillance system for rubella in Denmark currently only captures rubella infections during pregnancy; therefore the true incidence of rubella in the Danish population is underestimated.

Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 August 2018–31 July 2019



The latest WHO-UNICEF estimates of national immunisation coverage [10] show that 15 EU/EEA countries reported at least 95% vaccination coverage for the first dose of a rubella-containing vaccine in 2018 (Figure 4). Sustained vaccination coverage of at least 95% for at least one dose of a rubella-containing vaccine at all subnational levels is recommended to achieve elimination [7].

References

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Notes

TESSy collects a 'date used for statistics', which is a date chosen by the country for reporting purposes. This date may indicate onset of disease, date of diagnosis, date of notification or date of laboratory confirmation, depending on reporting practices in the respective countries. All data presented in this reported are based on the 'date used for statistics'. In addition, when reporting data on measles, rubella and other vaccine-preventable diseases to TESSy, countries may update previously reported data. This means that the date of retrieval can influence the data presented in this report, as later retrievals of data relating to the same period may result in slightly different numbers. The data for this report were retrieved on 27 August 2019.