

Monthly measles and rubella monitoring report

August 2019

Period covered: 1 July 2018–30 June 2019

Introduction

The monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for 1 July 2018–30 June 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. In addition, a monthly measles infographic is 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 June 2019

Twenty-eight countries reported measles data for June 2019, with 1 433 cases reported by 24 countries and four countries reporting no cases. Finland and Norway did not report measles data for June 2019 (Figure 1). Belgium and Poland reported aggregated 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 continued to decrease compared with the previous two months. France, Bulgaria, Italy and Poland had the highest case counts with 469, 236, 213 and 123 cases respectively (Table 1).

Notable decreases were reported in France, Bulgaria, Poland, Lithuania and Spain.

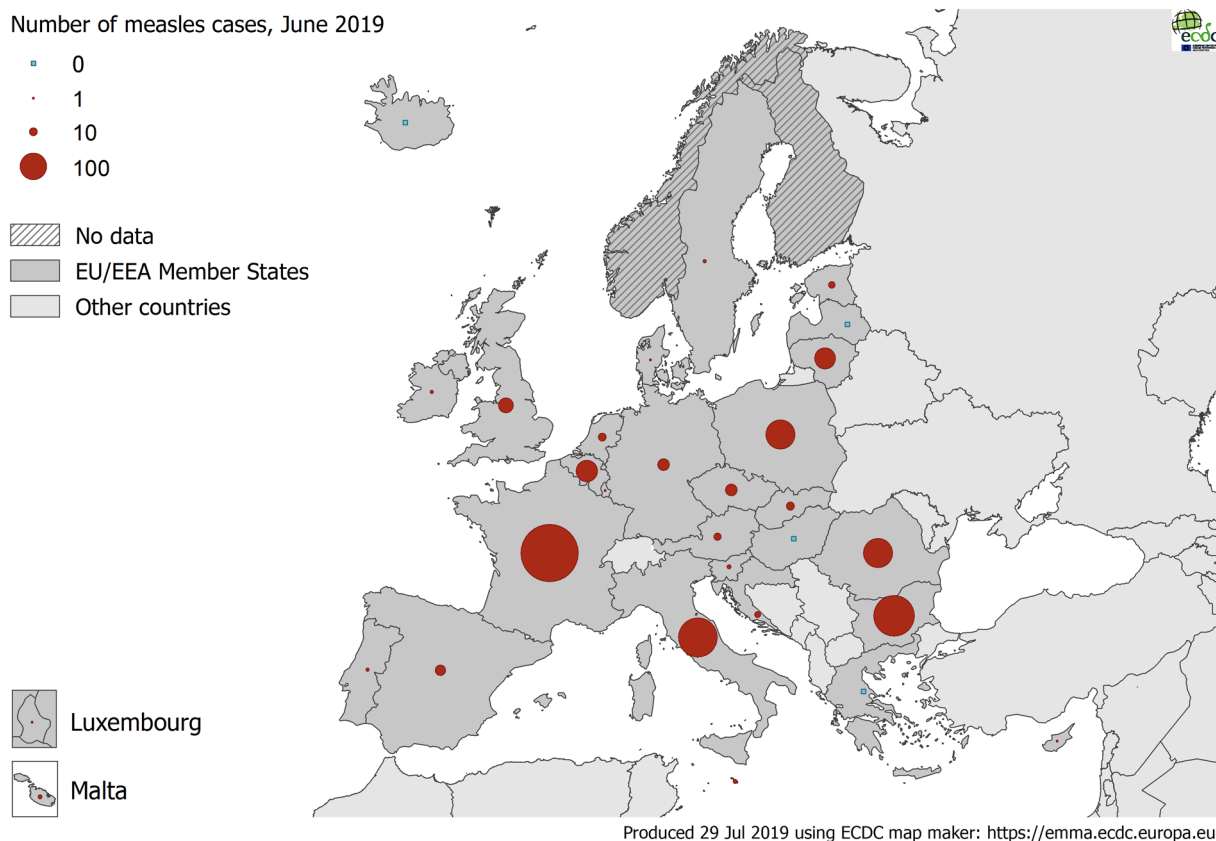
- France reported 469 cases in June, compared with 568 in May and 340 in April.
- Bulgaria reported 236 cases in June, compared with 281 in May and 279 in April.
- Poland reported 123 cases in June, compared with 197 in May and 220 in April.
- Lithuania reported 60 cases in June, compared with 116 in May and 221 in April.
- Spain reported 16 cases in June, compared with 76 in May and 67 in April.

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

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

Stockholm, August 2019

© European Centre for Disease Prevention and Control, 2019. Reproduction is authorised, provided the source is acknowledged.

Figure 1. Number of measles cases by country, EU/EEA, June 2019 (n=1 433)

Measles from July 2018–June 2019

From 1 July 2018–30 June 2019, 30 EU/EEA Member States reported 13 102 cases of measles, 10 129 (77%) of which were laboratory-confirmed. The highest number of cases were reported by France (2 367), Italy (1 831), Romania (1 628) and Poland (1 445), accounting for 18%, 14%, 12% and 11% of all cases respectively (Table 1). Notification rates per million population above the EU/EEA average (25.3) were reported by Lithuania (271.3), Bulgaria (147.4), Slovakia (143.8), Romania (83.4), Malta (73.6), Czech Republic (59.0), Luxembourg (44.9), Poland (38.0), Belgium (37.4), France (35.4) and Italy (30.3; 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 July 2018–30 June 2019

Country	2018						2019						Total cases	Cases per million	Total lab-confirmed cases
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
Austria	1	3	6	0	4	1	25	33	1	27	38	8	147	16.7	136
Belgium	3	11	14	4	6	6	21	88	70	36	101	66	426	37.4	311
Bulgaria	7	0	0	0	0	0	0	51	185	279	281	236	1 039	147.4	940
Croatia	3	1	0	0	0	0	0	1	0	0	4	5	14	3.4	14
Cyprus	0	0	0	0	0	0	0	1	0	1	3	1	6	6.9	5
Czech Republic	4	7	4	7	16	19	58	151	199	90	51	20	626	59.0	545
Denmark	0	2	2	0	0	1	2	5	4	2	1	1	20	3.5	20
Estonia	0	0	0	0	0	0	3	6	2	0	6	7	24	18.2	24
Finland	0	3	0	0	1	7	3	3	0	2	0	.	19	3.5	19
France	81	29	38	76	61	54	123	208	320	340	568	469	2 367	35.4	1 366
Germany	54	29	24	13	10	10	102	71	129	70	50	20	582	7.0	462
Greece	38	18	4	2	0	1	0	3	7	12	6	0	91	8.5	46
Hungary	0	0	0	0	0	1	2	5	4	2	9	0	23	2.4	23
Iceland	0	0	0	0	0	0	0	1	6	0	0	0	7	20.1	7
Ireland	5	17	2	1	1	0	2	18	23	6	10	2	87	18.0	54
Italy	147	79	57	82	58	76	180	172	230	308	229	213	1 831	30.3	1 494
Latvia	1	1	0	0	1	2	0	0	0	1	0	0	6	3.1	6
Lithuania	1	1	0	0	8	20	12	73	250	221	116	60	762	271.3	762
Luxembourg	0	2	0	0	1	0	0	0	15	7	1	1	27	44.9	27
Malta	5	0	0	0	0	0	0	0	3	13	11	3	35	73.6	35
Netherlands	1	4	0	0	0	2	4	4	10	2	11	10	48	2.8	47
Norway	0	3	0	0	0	0	0	1	7	3	3	.	17	3.2	14
Poland	13	19	9	21	79	114	123	246	281	220	197	123	1 445	38.0	948
Portugal	1	3	3	2	24	12	2	2	2	0	2	2	55	5.3	51
Romania	285	92	72	65	81	130	261	75	188	108	148	123	1 628	83.4	1 220
Slovakia	257	87	28	16	38	50	43	37	70	105	43	9	783	143.8	594
Slovenia	0	0	0	1	0	0	0	0	0	6	8	3	18	8.7	18
Spain	14	7	4	4	1	6	11	11	23	67	76	16	240	5.1	216
Sweden	3	2	4	1	0	3	0	1	4	6	4	2	30	3.0	27
United Kingdom	82	54	16	21	26	11	80	77	106	112	81	33	699	10.6	698
EU/EEA	1 006	474	287	316	416	526	1 057	1 344	2 139	2 046	2 058	1 433	13 102	25.3	10 129

Source: TESSy, data extracted on 29 July 2019.

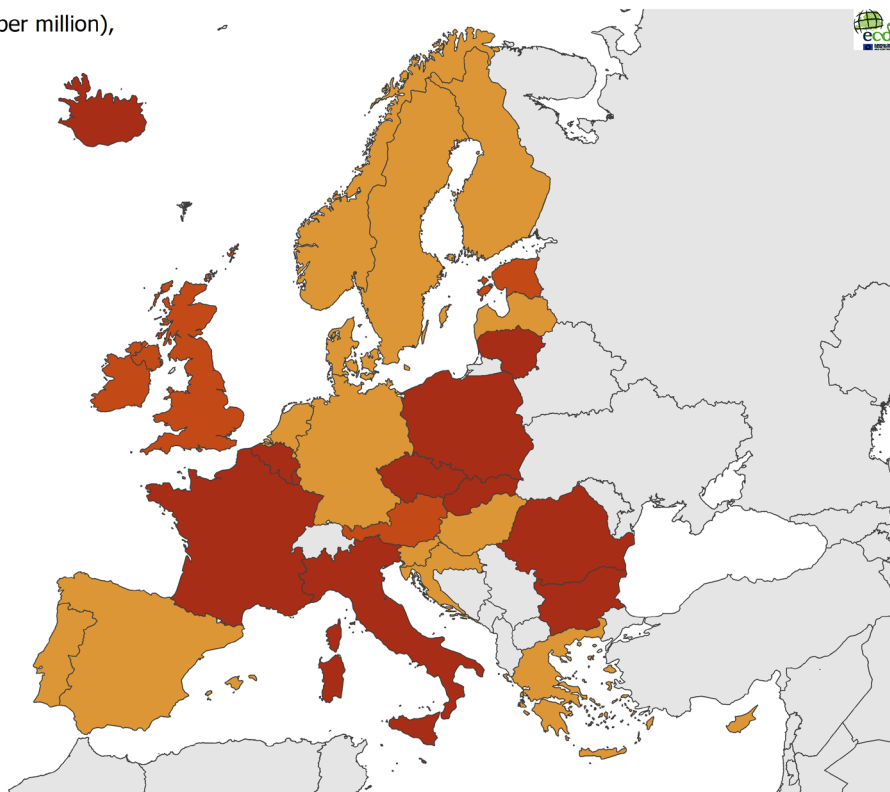
..: data not reported.

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 July 2018–30 June 2019

Notification rate of measles (per million),
July 2018–June 2019

- 0
- 0.01–0.99
- 1.00–9.99
- 10.00–19.99
- ≥20.00
- Not included

- Luxembourg
- Malta



Produced 29 Jul 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

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

Figure 3. Number of measles deaths by country, EU/EEA, 1 July 2018–30 June 2019 (n=5)

Number of measles deaths,
July 2018–June 2019

- 0
- 1
- 5
- 10
- EU/EEA Member States
- Other countries

- Luxembourg
- Malta



Produced 29 Jul 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

Importation status was reported by 30 countries and known for 9 600 cases (73%), 836 (9%) of which were imported and 289 (3%) of which were import-related.¹

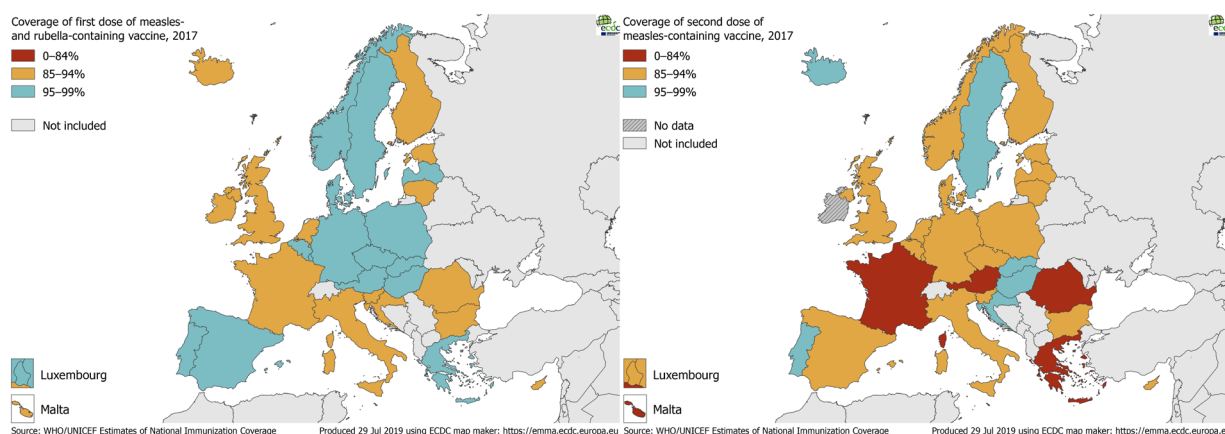
Of the 12 030 cases with known age, 3 616 (30%) were children under five years and 6 387 (53%) were aged 15 years or older. The highest notification rates were observed in infants under one year (283.8 cases per million) and children aged 1–4 years (103.7 cases per million).

A total of 2 498 cases (19%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (1 305 of 3 597 cases; 36%). Of the 9 532 cases (73% of all cases) with known age and vaccination status, 6 652 (70%) were unvaccinated, 1 729 (18%) were vaccinated with one dose of measles-containing vaccine, 987 (10%) were vaccinated with two or more doses and 164 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among infants under one year (1 259 of 1 446 cases; 87%). Infants under one year are particularly vulnerable to measles complications and are best protected by herd immunity as the first dose of measles-containing vaccine is given after 12 months of age in most EU/EEA countries [6]. Among 2 170 cases aged 1–4 years, the target group of the first, and in certain countries second, dose [6], 1 395 (64%) were unvaccinated, 506 (23%) were vaccinated with one dose of measles-containing vaccine, 28 (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 measles-containing vaccine at all subnational levels is recommended [7], but the latest WHO-UNICEF estimates of national immunisation coverage show that only four EU/EEA countries (Hungary, Portugal, Slovakia and Sweden) reported at least 95% vaccination coverage for both the first [8] and second [9] doses in 2017 (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 measles- and rubella-containing vaccine and second (right) dose of measles-containing vaccine, EU/EEA, 2017



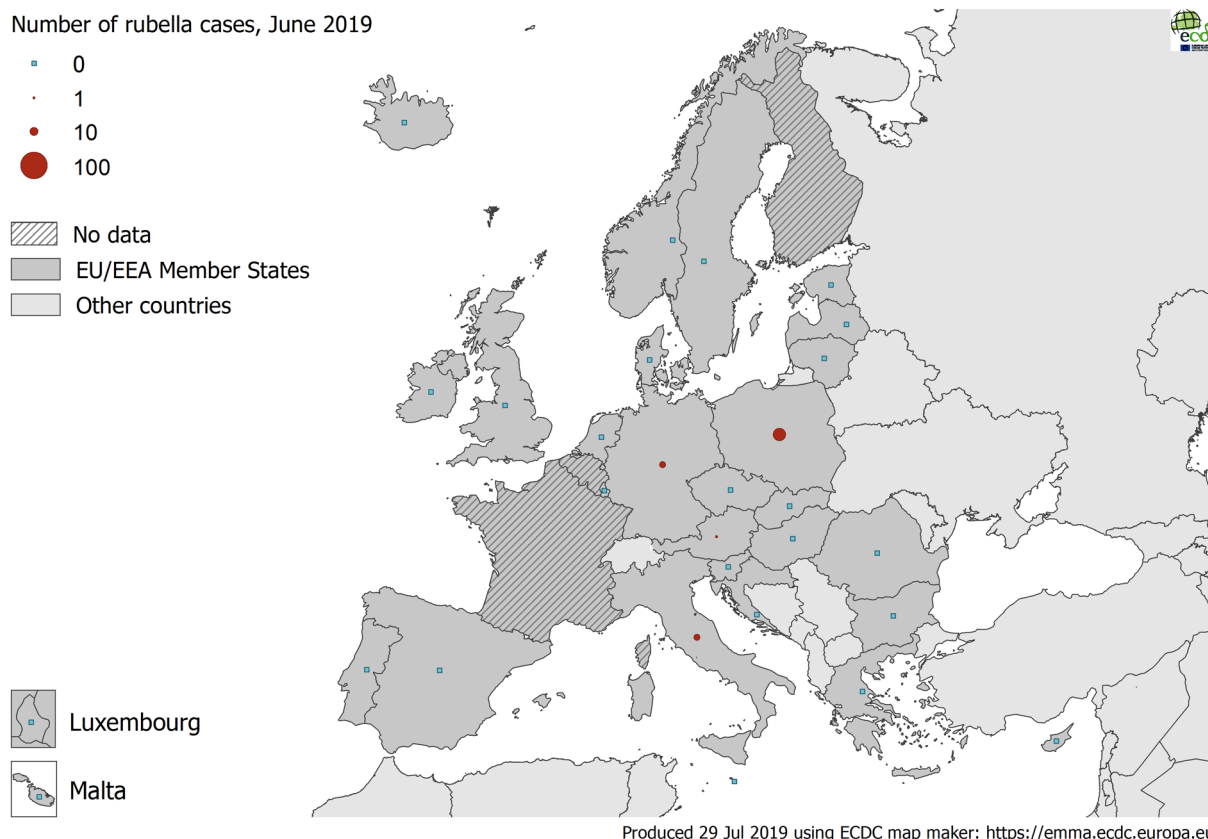
Rubella

Rubella in June 2019

Twenty-seven countries reported rubella data for June 2019, with 34 cases reported by four countries (Austria, Germany, Italy and Poland) and 23 countries reporting no cases. Finland did not report rubella data for June 2019 (Figure 5). Poland reported aggregated 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 continued to decrease compared with the previous two months. Twenty-two of the 34 cases (65%) were reported by Poland (Table 2).

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.

Figure 5. Number of rubella cases by country, EU/EEA, June 2019 (n=34)

Rubella from July 2018–June 2019

From 1 July 2018–30 June 2019, 11 EU/EEA Member States reported 483 cases of rubella, 48 (10%) of which were laboratory-confirmed. Seventeen countries reported no cases. The highest number of cases were reported by Poland (372), Germany (57), Italy (24), Spain (12) and Romania (4), accounting for 77%, 12%, 5%, 2% and 1% of all cases respectively (Table 2). Notification rates per million population above the EU/EEA average (1.1) were reported by Poland (9.8) and Latvia (1.6; Figure 6).

Data from Poland should be interpreted with caution, as only three of the 372 cases (1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 114 (31%) cases in children aged 5–9 years, 108 (29%) cases in children aged 1–4 years and 47 (13%) 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 July 2018–30 June 2019

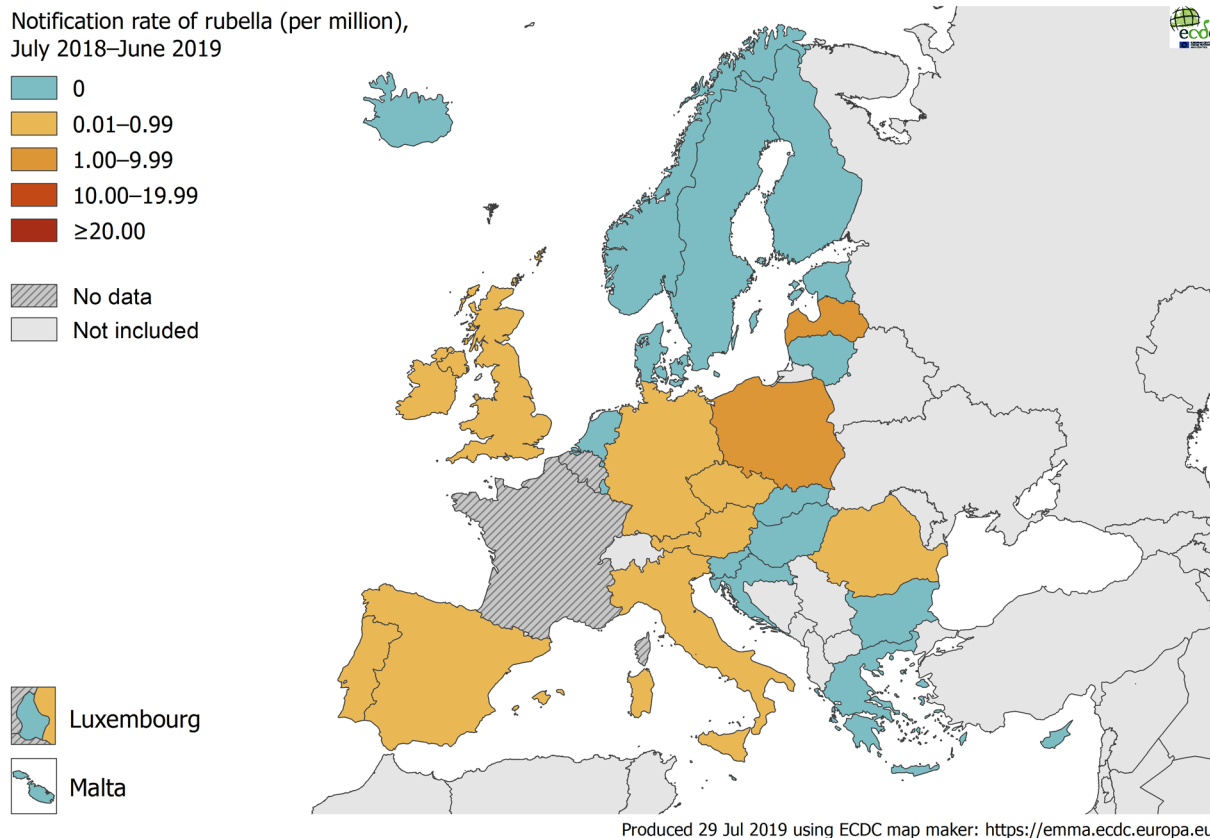
Country	2018						2019						Total cases	Cases per million	Total lab-confirmed cases
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
Austria	0	0	0	0	0	0	0	1	0	0	0	1	2	0.2	1
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Czech Republic	0	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
Germany	7	4	6	6	1	4	4	3	7	5	5	5	57	0.7	19
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	0	1	2	0	0	3	0.6	0
Italy	3	1	2	0	2	0	2	2	2	0	4	6	24	0.4	8
Latvia	0	0	0	0	0	0	1	1	0	0	1	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	39	36	22	27	26	24	43	22	43	31	37	22	372	9.8	3
Portugal	0	1	1	0	0	0	1	0	0	0	0	0	3	0.3	2
Romania	0	2	0	1	0	1	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	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	0	1	0	0	0	0	1	0	0	0	0	2	0.0	2
EU/EEA	49	45	32	34	29	38	54	30	53	38	47	34	483	1.1	48

Source: TESSy, data extracted on 29 July 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 July 2018–30 June 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 rubella-containing vaccine in 2017 (Figure 4). Sustained vaccination coverage of at least 95% for at least one dose of rubella-containing vaccine at all subnational levels is recommended to achieve elimination [7].

References

1. European Centre for Disease Prevention and Control. Surveillance Atlas of Infectious Diseases – Measles [Internet]. Stockholm: ECDC; 2019 [cited 6 August 2019]. Available from: <http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=335>
2. European Centre for Disease Prevention and Control. Infographics on measles – Monthly measles infographics [Internet]. Stockholm: ECDC; 2019 [cited 6 August 2019]. Available from: <http://ecdc.europa.eu/measles/facts/infographics>
3. European Centre for Disease Prevention and Control. Communicable disease threats report, 4-10 August 2019, week 32. Stockholm: ECDC; 2019. Available from: <http://ecdc.europa.eu/publications-data/communicable-disease-threats-report-4-10-august-2019-week-32>
4. European Centre for Disease Prevention and Control. Risk assessment: Who is at risk for measles in the EU/EEA? Identifying susceptible groups to close immunity gaps towards measles elimination – 28 May 2019. Stockholm: ECDC; 2019. Available from: <http://ecdc.europa.eu/publications-data/risk-assessment-measles-eu-eea-2019>
5. National Institute of Public Health Romania. Situatia rujeolei in Romania (Measles situation reports in Romania) [Internet]. Bucharest: INSP; 2019 [cited 6 August 2019]. Available from: <http://www.cnscbt.ro/index.php/informari-saptamanale/rujeola-1>
6. European Centre for Disease Prevention and Control. Vaccine Scheduler [Internet]. Stockholm: ECDC; 2019 [cited 6 August 2019]. Available from: <http://vaccine-schedule.ecdc.europa.eu>
7. World Health Organization Regional Office for Europe. Eliminating measles and rubella – Framework for the verification process in the WHO European Region. Copenhagen: WHO Regional Office for Europe; 2014. Available from: http://euro.who.int/_data/assets/pdf_file/0009/247356/Eliminating-measles-and-rubella-Framework-for-the-verification-process-in-the-WHO-European-Region.pdf
8. World Health Organization. WHO-UNICEF estimates of MCV1 coverage [Internet, downloadable spreadsheet]. Geneva: WHO; 2019 [cited 6 August 2019]. Available from: http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragemcv1.html
9. World Health Organization. WHO-UNICEF estimates of MCV2 coverage [Internet, downloadable spreadsheet]. Geneva: WHO; 2019 [cited 6 August 2019]. Available from: http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragemcv2.html
10. World Health Organization. WHO-UNICEF estimates of RCV1 coverage [Internet, downloadable spreadsheet]. Geneva: WHO; 2019 [cited 6 August 2019]. Available from: http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragercv1.html