

# Monthly measles and rubella monitoring report

July 2019

Period covered: 1 June 2018–31 May 2019

## Introduction

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

Twenty-nine countries reported measles data for May 2019, with 1 905 cases reported by 26 countries and three countries reporting no cases. The Czech Republic did not report measles data for May 2019 (Figure 1). 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.

Overall, case numbers continued to decrease compared with the previous two months. France, Bulgaria, Italy, Poland and Lithuania had the highest case counts, with 543, 281, 223, 178 and 116 cases respectively (Table 1).

Notable decreases were reported in Italy, Poland, Lithuania and Germany.

- Italy reported 223 cases in May, compared with 306 in April and 227 in March.
- Poland reported 178 cases in May, compared with 197 in April and 265 in March.
- Lithuania reported 116 cases in May, compared with 221 in April and 250 in March.
- Germany reported 51 cases in May, compared with 70 in April and 128 in March.

---

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

Stockholm, July 2019

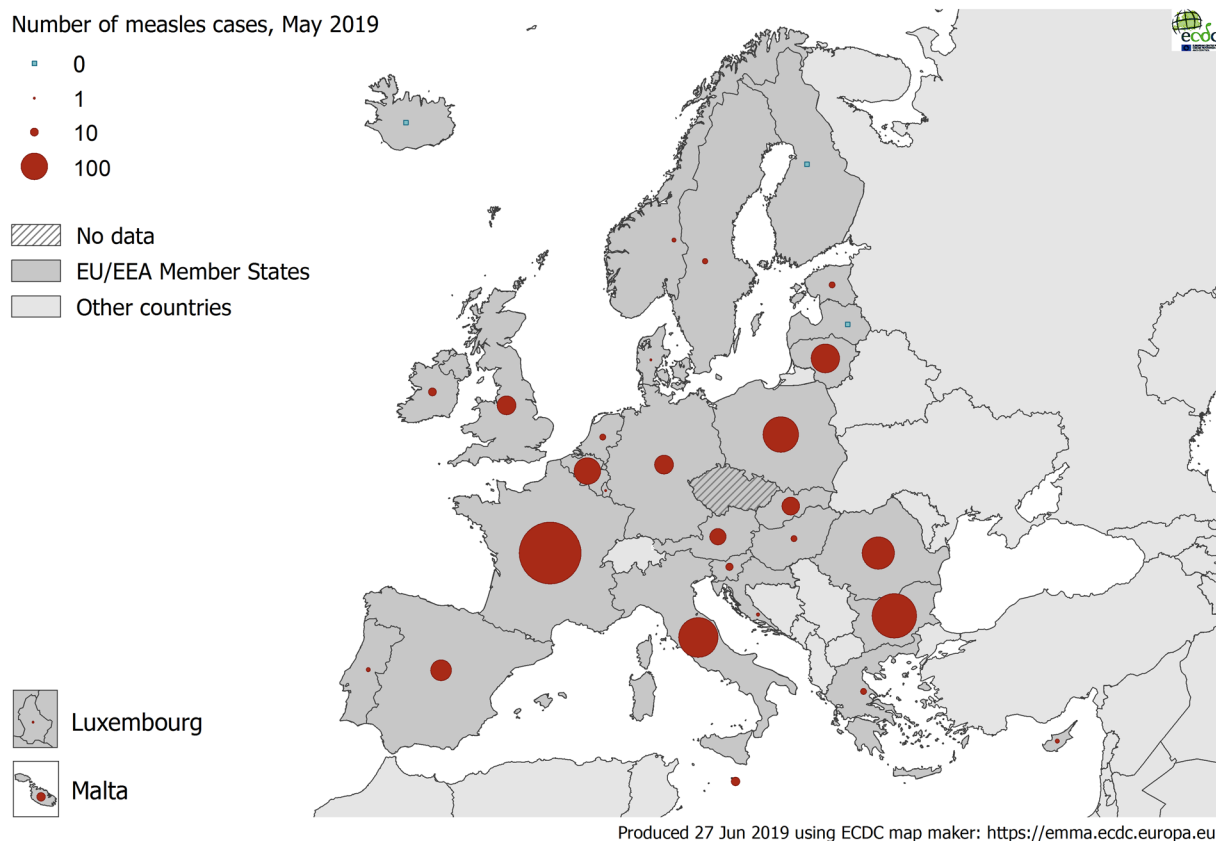
© European Centre for Disease Prevention and Control, 2019. Reproduction is authorised, provided the source is acknowledged.

Notable increases were reported in France and Belgium.

- France reported 543 cases in May, compared with 339 in April and 313 in March.
- Belgium reported 99 cases in May, compared with 36 in April and 70 in March.

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, May 2019 (n=1 905)**



## Measles from May 2018–April 2019

From 1 June 2018–31 May 2019, 30 EU/EEA Member States reported 12 535 cases of measles, 9 699 (77%) of which were laboratory-confirmed. None of the countries reported zero cases. The highest number of cases were reported by France (2 056), Italy (1 923), Romania (1 616) and Poland (1 270), accounting for 16%, 15%, 13% and 10% of all cases respectively (Table 1). Notification rates per million population above the EU/EEA average (24.2) were reported by Lithuania (249.9), Slovakia (154.7), Bulgaria (114.0), Romania (82.7), Malta (67.3), the Czech Republic (49.8), Luxembourg (43.2), Poland (33.4), Belgium (33.3), Italy (31.8) and France (30.7; Figure 2).

The number of measles cases reported to TESSy may be an underestimation in certain cases. 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 June 2018–31 May 2019**

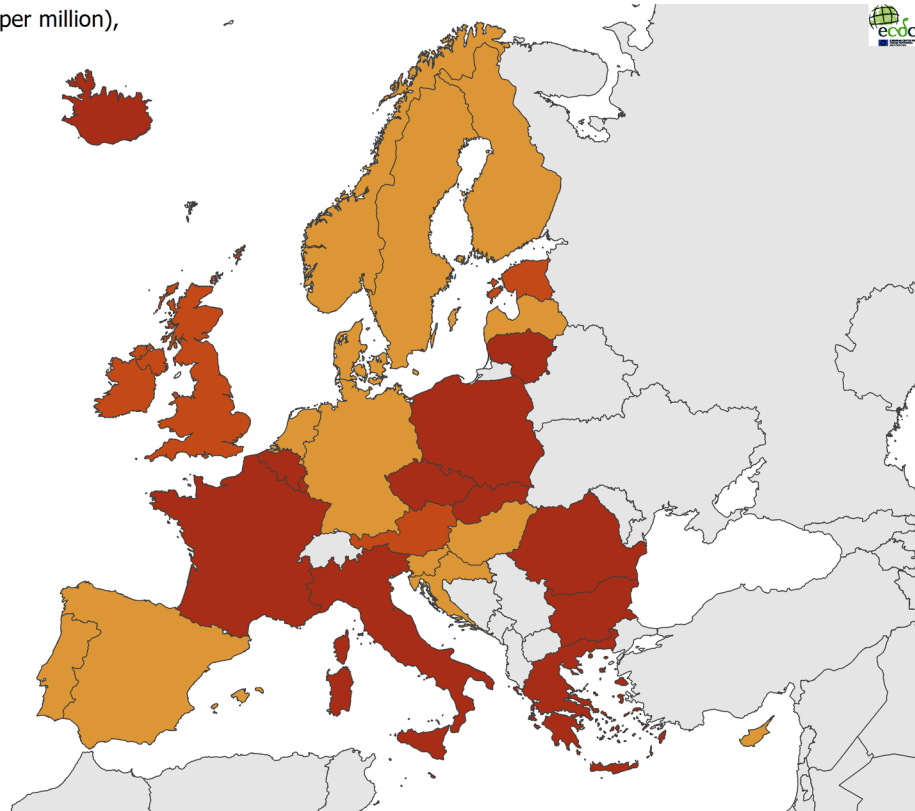
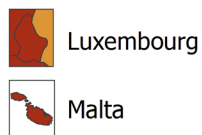
Country	2018							2019					Total cases	Cases per million	Total lab-positive cases
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			
Austria	6	1	3	6	0	4	1	25	33	1	27	38	145	16.4	134
Belgium	22	3	11	14	4	6	6	21	88	70	36	99	380	33.3	285
Bulgaria	1	7	0	0	0	0	0	0	51	185	279	281	804	114.0	750
Croatia	16	3	1	0	0	0	0	0	1	0	0	2	23	5.6	23
Cyprus	0	0	0	0	0	0	0	0	1	0	1	3	5	5.8	4
Czech Republic	12	4	7	4	7	16	19	43	147	186	83	.	528	49.8	455
Denmark	0	0	2	2	0	0	1	2	5	4	2	1	19	3.3	19
Estonia	0	0	0	0	0	0	0	3	6	2	0	6	17	12.9	17
Finland	0	0	3	0	0	1	7	3	3	0	2	0	19	3.5	19
France	191	81	29	38	76	61	54	123	208	313	339	543	2 056	30.7	1 182
Germany	94	54	29	24	13	10	10	102	71	128	70	51	656	7.9	511
Greece	155	38	18	4	2	0	1	0	3	7	12	6	246	22.9	114
Hungary	0	0	0	0	0	0	1	2	5	4	2	6	20	2.0	20
Iceland	0	0	0	0	0	0	0	0	1	6	0	0	7	20.1	7
Ireland	2	5	17	2	1	1	0	2	18	23	6	10	87	18.0	54
Italy	317	147	79	57	82	58	76	180	171	227	306	223	1 923	31.8	1 583
Latvia	3	1	1	0	0	1	2	0	0	0	1	0	9	4.7	9
Lithuania	0	1	1	0	0	8	20	12	73	250	221	116	702	249.9	702
Luxembourg	0	0	2	0	0	1	0	0	0	15	7	1	26	43.2	26
Malta	0	5	0	0	0	0	0	0	0	3	13	11	32	67.3	32
Netherlands	10	1	4	0	0	0	2	4	4	10	1	5	41	2.4	41
Norway	0	0	3	0	0	0	0	0	1	7	3	3	17	3.2	14
Poland	12	13	19	9	21	79	114	123	240	265	197	178	1 270	33.4	820
Portugal	3	1	3	3	2	24	12	2	2	2	0	3	57	5.5	53
Romania	111	285	92	72	65	81	130	261	75	188	108	148	1 616	82.7	1 221
Slovakia	67	257	87	28	16	38	50	43	37	70	105	44	842	154.7	639
Slovenia	3	0	0	0	1	0	0	0	0	0	6	8	18	8.7	18
Spain	24	14	7	4	4	1	6	11	11	23	67	63	235	5.0	215
Sweden	3	3	2	4	1	0	3	0	1	4	6	4	31	3.1	28
United Kingdom	100	82	54	16	21	26	11	79	75	95	93	52	704	10.6	704
<b>EU/EEA</b>	<b>1 152</b>	<b>1 006</b>	<b>474</b>	<b>287</b>	<b>316</b>	<b>416</b>	<b>526</b>	<b>1 041</b>	<b>1 331</b>	<b>2 088</b>	<b>1 993</b>	<b>1 905</b>	<b>12 535</b>	<b>24.2</b>	<b>9 699</b>

Source: TESSy, data extracted on 27 June 2019.

..: data not reported.

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

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

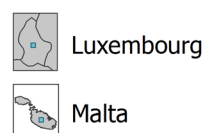


Produced 27 Jun 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

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

**Figure 3. Number of measles deaths by country, EU/EEA, 1 June 2018–31 May 2019 (n=6)**

Number of measles deaths,  
June 2018–May 2019



Produced 27 Jun 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

Importation status was reported by 30 countries and known for 9 659 cases (77%), 817 (8%) of which were imported and 282 (3%) of which were import-related.<sup>1</sup>

Of the 11 654 cases with known age, 3 484 (30%) were children under five years and 6 220 (53%) were aged 15 years or older. The highest notification rates were observed in infants under one year (277 cases per million) and children aged 1–4 years (99.1 cases per million).

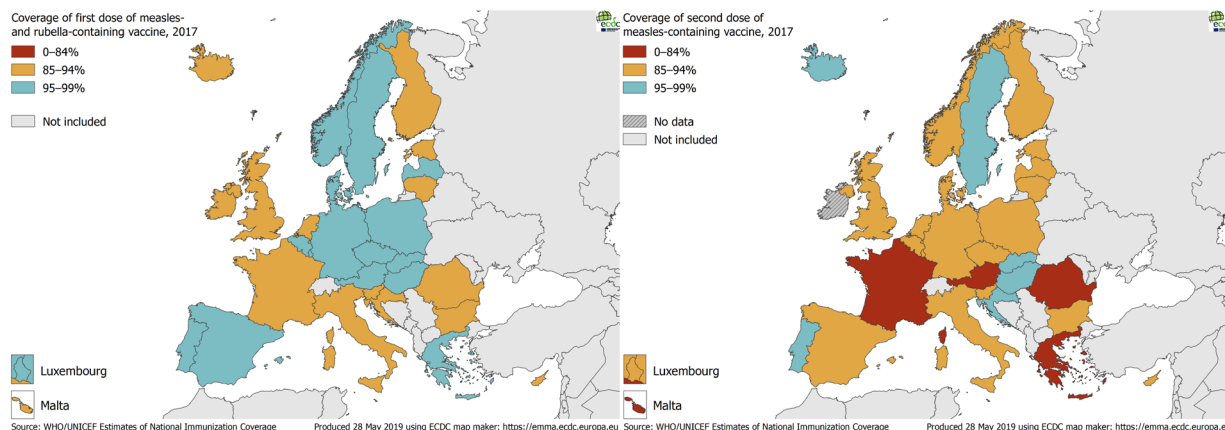
A total of 2 295 cases (18%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (1 187 of 3 456 cases; 34%). Of 9 359 cases (75% of all cases) with known age and vaccination status, 6 638 (71%) were unvaccinated, 1 626 (17%) were vaccinated with one dose of measles-containing vaccine, 933 (10%) were vaccinated with two or more doses and 162 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among infants under one year (1 231 of 1 411 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 2 073 cases aged 1–4 years, the target group of the first, and in certain countries second, dose [6], 1 354 (65%) were unvaccinated, 466 (22%) were vaccinated with one dose of measles-containing vaccine, 29 (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].

<sup>1</sup> 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 4. Vaccination coverage for first (left) dose of measles- and rubella-containing vaccine and second (right) dose of measles-containing vaccine, EU/EEA, 2017**



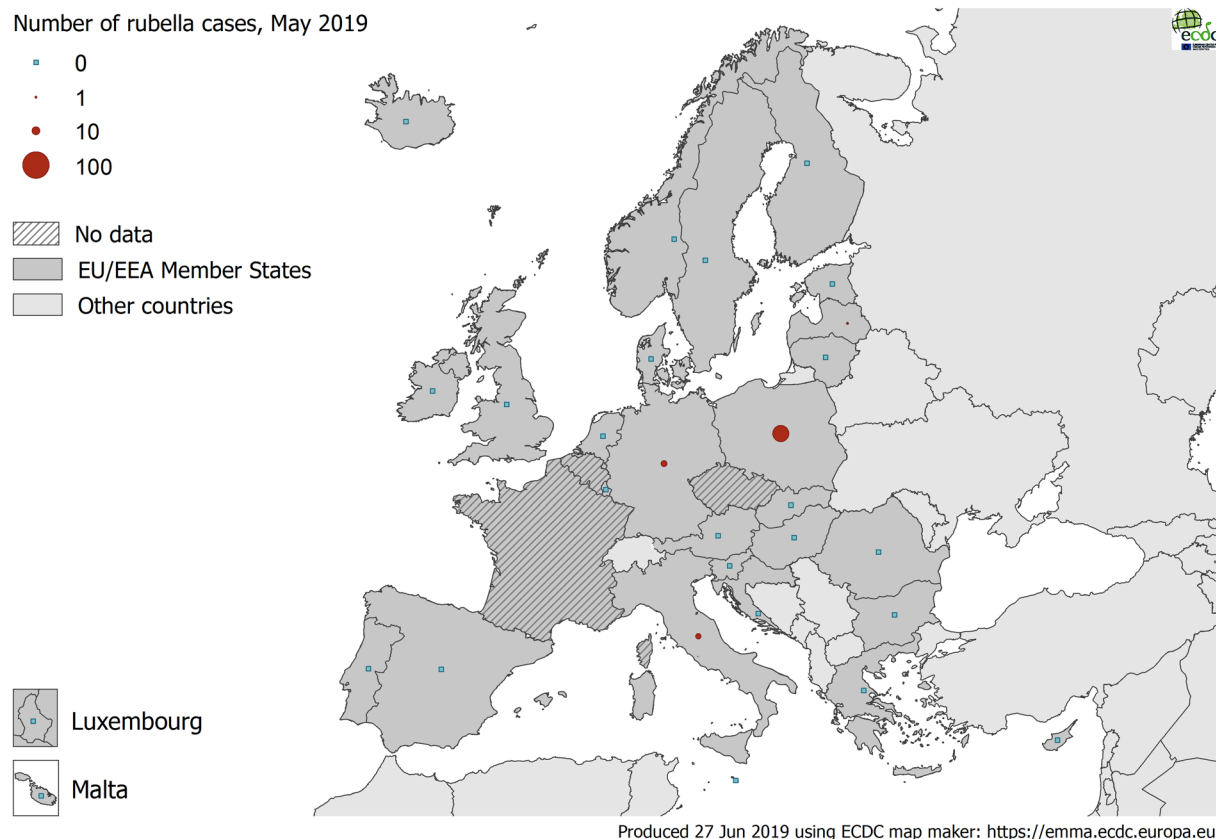
# Rubella

## Rubella in May 2019

Twenty-seven countries reported rubella data for May 2019, with 48 cases reported by four countries (Germany, Italy, Latvia and Poland) and 23 countries reporting no cases. The Czech Republic did not report rubella data for May 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. Thirty-eight of the 48 cases (79%) were reported by Poland (Table 2).

**Figure 5. Number of rubella cases by country, EU/EEA, May 2019 (n=48)**



## Rubella from June 2018–May 2019

From 1 June 2018–31 May 2019, 11 EU/EEA Member States reported 513 cases of rubella, 45 (9%) of which were laboratory-confirmed. Seventeen countries reported no cases. The highest number of cases were reported by Poland (402), Germany (58), Italy (20), Spain (13) and Romania (6), accounting for 78%, 11%, 4%, 3% and 1% of all cases, respectively (Table 2). Notification rates per million population above the EU/EEA average (1.2) were reported by Poland (10.6) and Latvia (1.6; Figure 6).

Data from Poland should be interpreted with caution, as only two of 402 cases (<1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 125 (31%) cases in children aged 5–9 years, 120 (30%) cases in children aged 1–4 years and 51 (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 June 2018–31 May 2019**

Country	2018							2019					Total cases	Cases per million	Total lab-positive cases
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			
Austria	0	0	0	0	0	0	0	0	1	0	0	0	1	0.1	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	0	1	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	6	7	4	6	6	1	4	4	3	7	5	5	58	0.7	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	0	0	1	2	0	3	0.6	0
Italy	2	3	1	2	0	2	0	2	2	2	0	4	20	0.3	6
Latvia	0	0	0	0	0	0	0	1	1	0	0	1	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	50	39	36	22	27	26	24	43	22	43	32	38	402	0.6	2
Portugal	2	0	1	1	0	0	0	1	0	0	0	0	5	0.5	3
Romania	2	0	2	0	1	0	1	0	0	0	0	0	6	0.3	4
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	1	0	0	0	0	0	9	3	0	0	0	0	13	0.3	9
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	0	0	0	1	0	0	0	0	0	0	0	0	1	0.0	1
<b>EU/EEA</b>	<b>63</b>	<b>49</b>	<b>45</b>	<b>32</b>	<b>34</b>	<b>29</b>	<b>38</b>	<b>54</b>	<b>29</b>	<b>53</b>	<b>39</b>	<b>48</b>	<b>513</b>	<b>1.2</b>	<b>45</b>

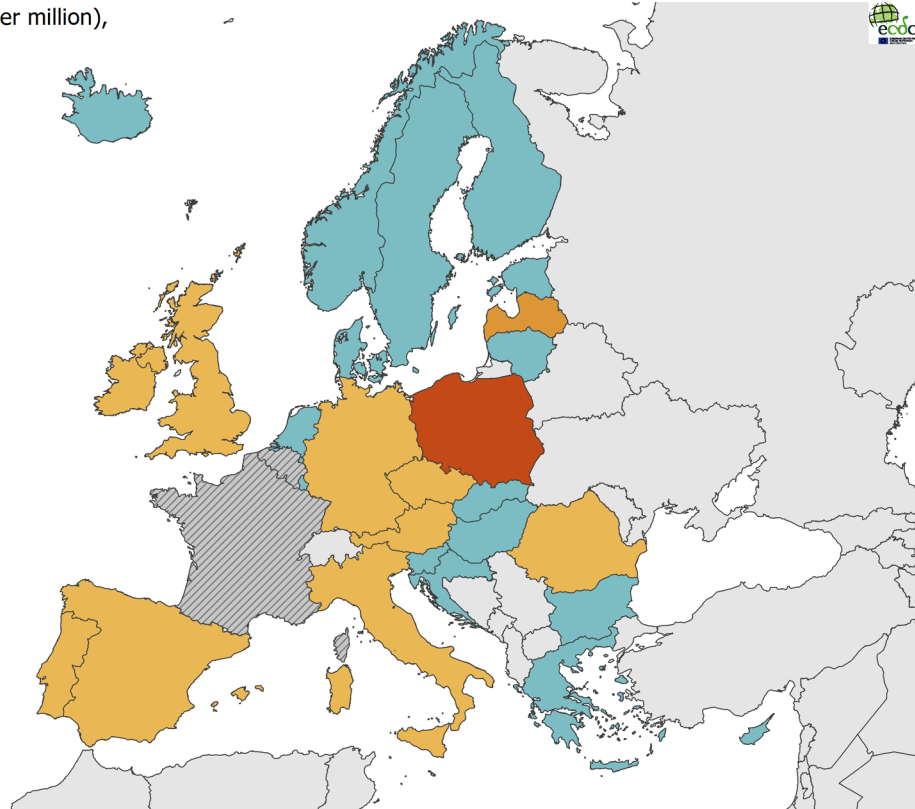
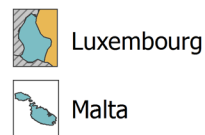
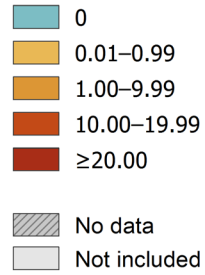
Source: TESSy, data extracted on 27 June 2019.

..: 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 June 2018–31 May 2019**

Notification rate of rubella (per million),  
June 2018–May 2019



Produced 27 Jun 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

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 9 July 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 9 July 2019]. Available from: <http://ecdc.europa.eu/measles/facts/infographics>
3. European Centre for Disease Prevention and Control. Communicable disease threats report, 14-20 July 2019, week 29. Stockholm: ECDC; 2019 Available from: <http://ecdc.europa.eu/publications-data/communicable-disease-threats-report-14-20-july-2019-week-29>
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/en/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 9 July 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 9 July 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 – 2014. Copenhagen: WHO Regional Office for Europe; 2014. Available from: [http://www.euro.who.int/\\_data/assets/pdf\\_file/0009/247356/Eliminating-measles-and-rubella-Framework-for-the-verification-process-in-the-WHO-European-Region.pdf](http://www.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]. Geneva: WHO; 2018 [cited 29 January 2019]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tswucoveragemcv1.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragemcv1.html)
9. World Health Organization. WHO-UNICEF estimates of MCV2 coverage [Internet]. Geneva: WHO; 2018 [cited 29 January 2019]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tswucoveragemcv2.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragemcv2.html)
10. World Health Organization. WHO-UNICEF estimates of RCV1 coverage [Internet]. Geneva: WHO; 2018 [cited 29 January 2019]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tswucoveragercv1.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tswucoveragercv1.html)