

# Monthly measles and rubella monitoring report

June 2019

Period covered: 1 May 2018–30 April 2019

## Introduction

The monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for 1 May 2018–30 April 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 this 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 measles transmission in the EU/EEA was published in May 2019 [4].

## Measles

### Measles in April 2019

All 30 countries reported measles data for April 2019, with 1 907 cases reported by 26 countries and four countries reporting no cases. (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 this report.

Overall, case numbers decreased compared with the previous month. France, Italy, Bulgaria, Lithuania and Poland had the highest case counts with 325, 299, 279, 218 and 188 cases respectively (Table 1).

Notable decreases were reported in Poland, the Czech Republic and Belgium.

- Poland reported 188 cases in April, compared with 223 in March and 232 in February.
- The Czech Republic reported 83 cases in April, compared with 186 in March and 147 in February.
- Belgium reported 37 cases in April, compared with 70 in March and 89 in February.

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Stockholm, June 2019

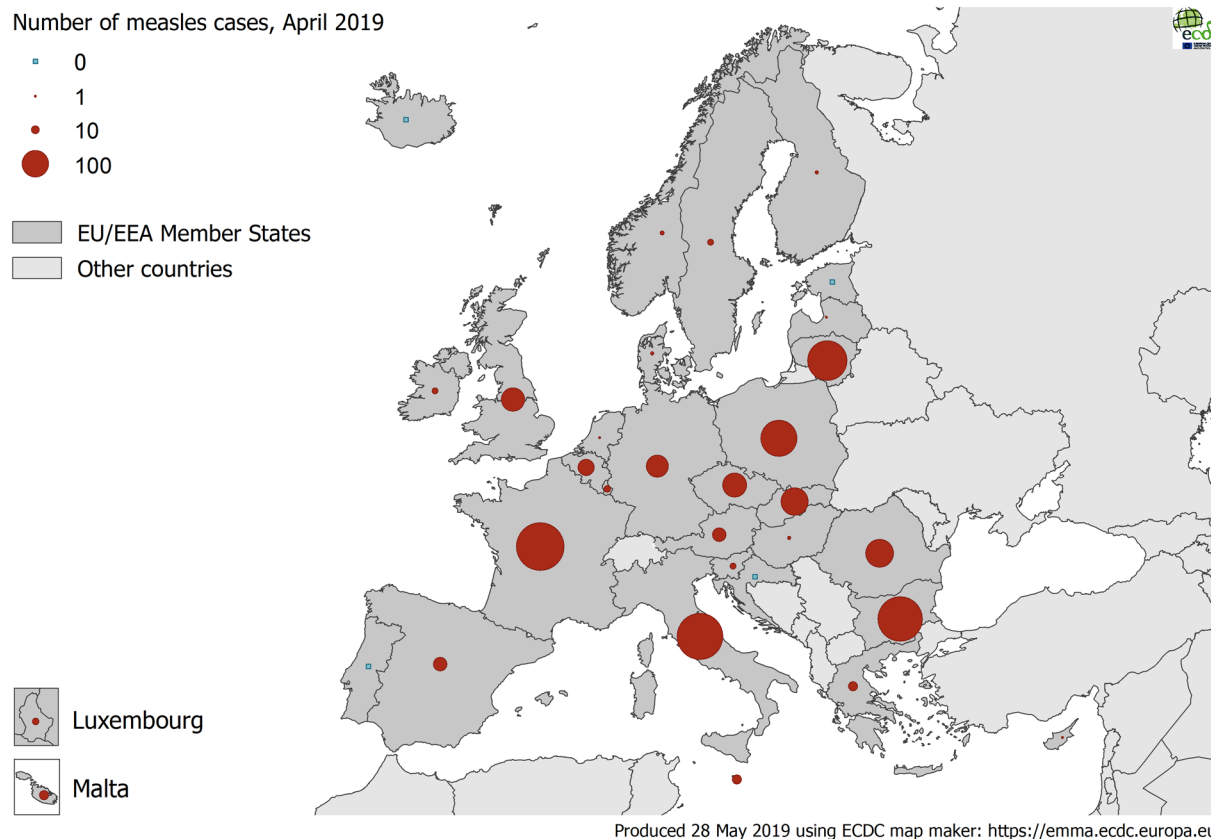
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Notable increases were reported in Italy, Bulgaria and Slovakia.

- Italy reported 299 cases in April, compared with 219 in March and 168 in February.
- Bulgaria reported 279 cases in April, compared with 185 in March and 51 in February.
- Slovakia reported 105 cases in April, compared with 70 in March and 37 in February.

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, April 2019 (n=1 907)**



## Measles from May 2018–April 2019

From 1 May 2018–30 April 2019, 30 EU/EEA Member States reported 11 795 cases of measles, 9 078 (77%) of which were laboratory-confirmed. None of the countries reported zero cases. The highest number of cases were reported by Italy (2 138), France (1 745), Romania (1 387), Poland (1 052), Slovakia (816), the United Kingdom (778) and Germany (707), accounting for 18%, 15%, 12%, 9%, 7%, 7% and 6% of all cases respectively (Table 1). Notification rates per million population above the EU/EEA average (22.8) were reported by Lithuania (206.5), Slovakia (149.9), Bulgaria (74.3), Romania (71.0), the Czech Republic (52.9), Greece (49.3), Malta (44.1), Luxembourg (41.5), Italy (35.4), Poland (27.7), Belgium (27.1) and France (26.1; 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 May 2018–30 April 2019**

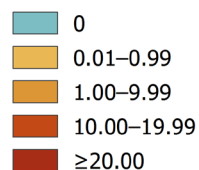
Country	2018								2019				Total cases	Cases per million	Total lab-positive cases
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr			
Austria	12	6	1	3	6	0	4	1	25	33	1	27	119	13.5	110
Belgium	24	22	3	11	14	4	8	7	20	89	70	37	309	27.1	239
Bulgaria	1	1	7	0	0	0	0	0	0	51	185	279	524	74.3	483
Croatia	2	16	3	1	0	0	0	0	0	1	0	0	23	5.6	23
Cyprus	0	0	0	0	0	0	0	0	0	1	0	1	2	2.3	2
Czech Republic	33	12	4	7	4	7	16	19	43	147	186	83	561	52.9	488
Denmark	0	0	0	2	2	0	0	1	2	5	4	2	18	3.1	18
Estonia	1	0	0	0	0	0	0	0	3	6	2	0	12	9.1	12
Finland	4	0	0	3	0	0	1	7	3	3	0	2	23	4.2	23
France	251	191	81	29	38	76	61	54	123	207	309	325	1 745	26.1	1 022
Germany	105	94	54	29	24	13	10	10	102	71	125	70	707	8.5	563
Greece	290	155	38	18	4	2	0	1	0	3	7	12	530	49.3	237
Hungary	0	0	0	0	0	0	0	1	2	5	4	2	14	1.4	14
Iceland	0	0	0	0	0	0	0	0	0	1	6	0	7	20.1	7
Ireland	0	2	5	17	2	1	1	0	2	18	23	6	77	15.9	52
Italy	461	317	147	79	57	82	58	76	175	168	219	299	2 138	35.4	1 730
Latvia	2	3	1	1	0	0	1	2	0	0	0	1	11	5.7	11
Lithuania	0	0	1	1	0	0	8	20	12	72	248	218	580	206.5	580
Luxembourg	0	0	0	2	0	0	1	0	0	0	15	7	25	41.5	25
Malta	0	0	5	0	0	0	0	0	0	0	3	13	21	44.1	21
Netherlands	3	10	1	4	0	0	0	2	4	4	7	1	36	2.1	35
Norway	2	0	0	3	0	0	0	0	0	1	.	3	9	1.7	9
Poland	19	12	13	19	9	21	79	114	123	232	223	188	1 052	27.7	664
Portugal	0	3	1	3	3	2	24	12	2	2	2	0	54	5.2	51
Romania	104	111	100	92	72	65	81	130	261	75	188	108	1 387	71.0	1 066
Slovakia	18	67	257	87	28	16	38	50	43	37	70	105	816	149.9	608
Slovenia	3	3	0	0	0	1	0	0	0	0	0	6	13	6.3	13
Spain	41	24	14	7	4	4	1	6	11	11	23	27	173	3.7	165
Sweden	4	3	3	2	4	1	0	3	0	1	4	6	31	3.1	29
United Kingdom	155	100	82	54	16	21	26	11	78	73	83	79	778	11.7	778
<b>EU/EEA</b>	<b>1 535</b>	<b>1 152</b>	<b>821</b>	<b>474</b>	<b>287</b>	<b>316</b>	<b>418</b>	<b>527</b>	<b>1 034</b>	<b>1 317</b>	<b>2 007</b>	<b>1 907</b>	<b>11 795</b>	<b>22.8</b>	<b>9 078</b>

Source: TESSy, data extracted on 28 May 2019.

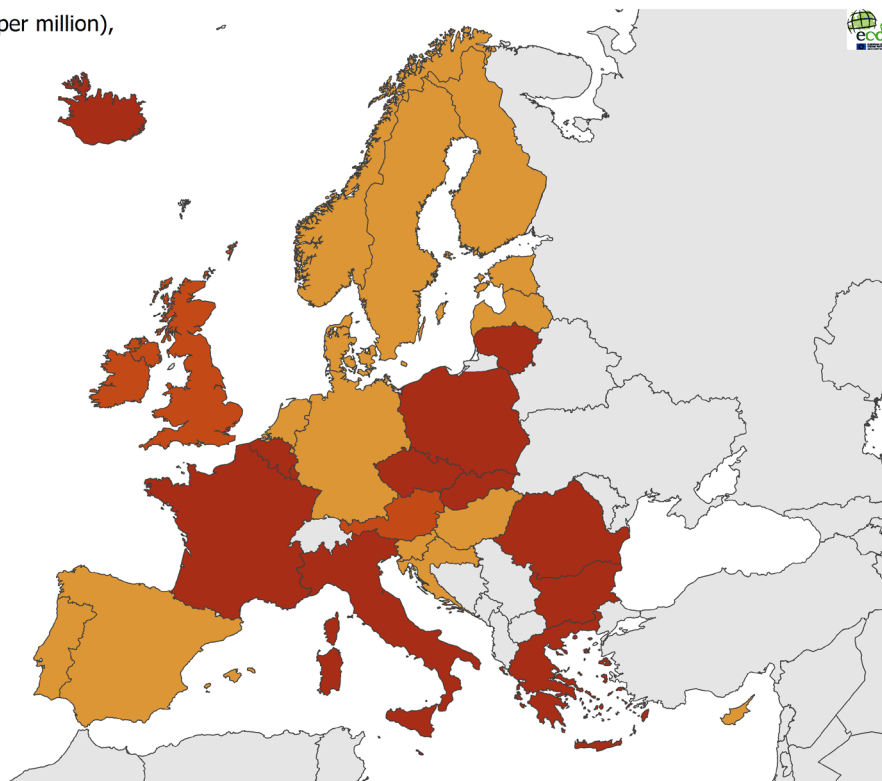
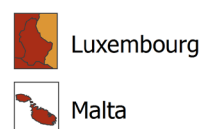
.: data not reported.

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

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



Not included



Produced 28 May 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

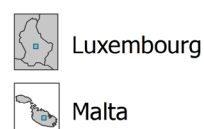
Thirteen deaths attributable to measles were reported to TESSy during the 12-month period in Romania (7), Italy (4) and France (2; Figure 3).

**Figure 3. Number of measles deaths by country, EU/EEA, 1 May 2018–30 April 2019 (n=13)**

Number of measles deaths,  
May 2018–April 2019



EU/EEA Member States  
Other countries



Produced 28 May 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

Importation status was reported by 30 countries and known for 9 577 cases (81%), 778 (8%) of which were imported.<sup>1</sup>

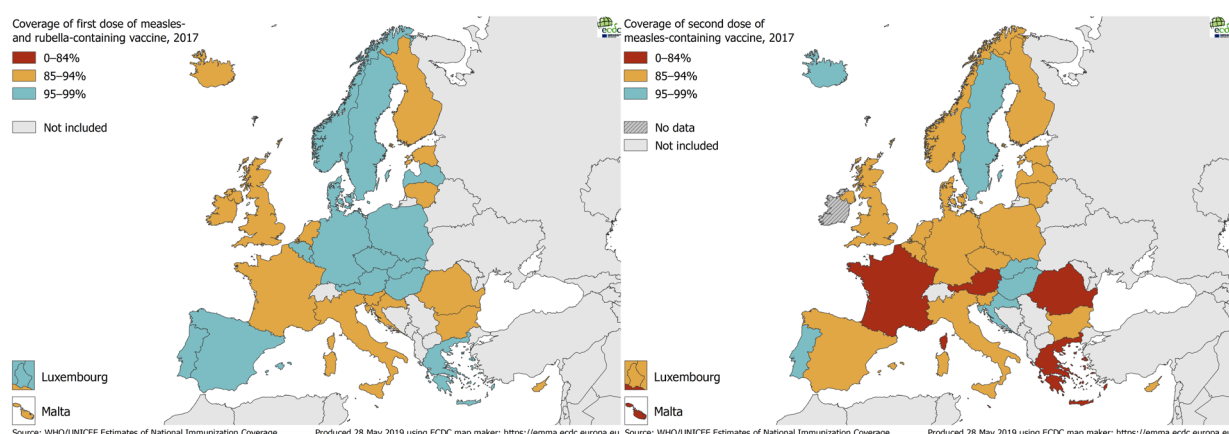
Of the 11 149 cases with known age, 3 271 (29%) were children under five years and 6 058 (54%) were aged 15 years or older. The highest notification rates were observed in children under one year (256.2 cases per million) and aged 1–4 years (93.9 cases per million).

A total of 2 056 cases (17%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (1 068 of 3 319 cases; 32%). Of 9 093 cases (77% of all cases) with known age and vaccination status, 6 636 (73%) were unvaccinated, 1 442 (16%) were vaccinated with one dose of measles-containing vaccine, 852 (9%) were vaccinated with two or more doses and 163 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among children under one year (1 128 of 1 305 cases; 86%), 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 1 966 cases aged 1–4 years, the target group of the first, and in certain countries second, dose [6], 1 330 (68%) were unvaccinated, 413 (21%) were vaccinated with one dose of measles-containing vaccine, 27 (1%) were vaccinated with two or more doses and 9 (<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% 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**



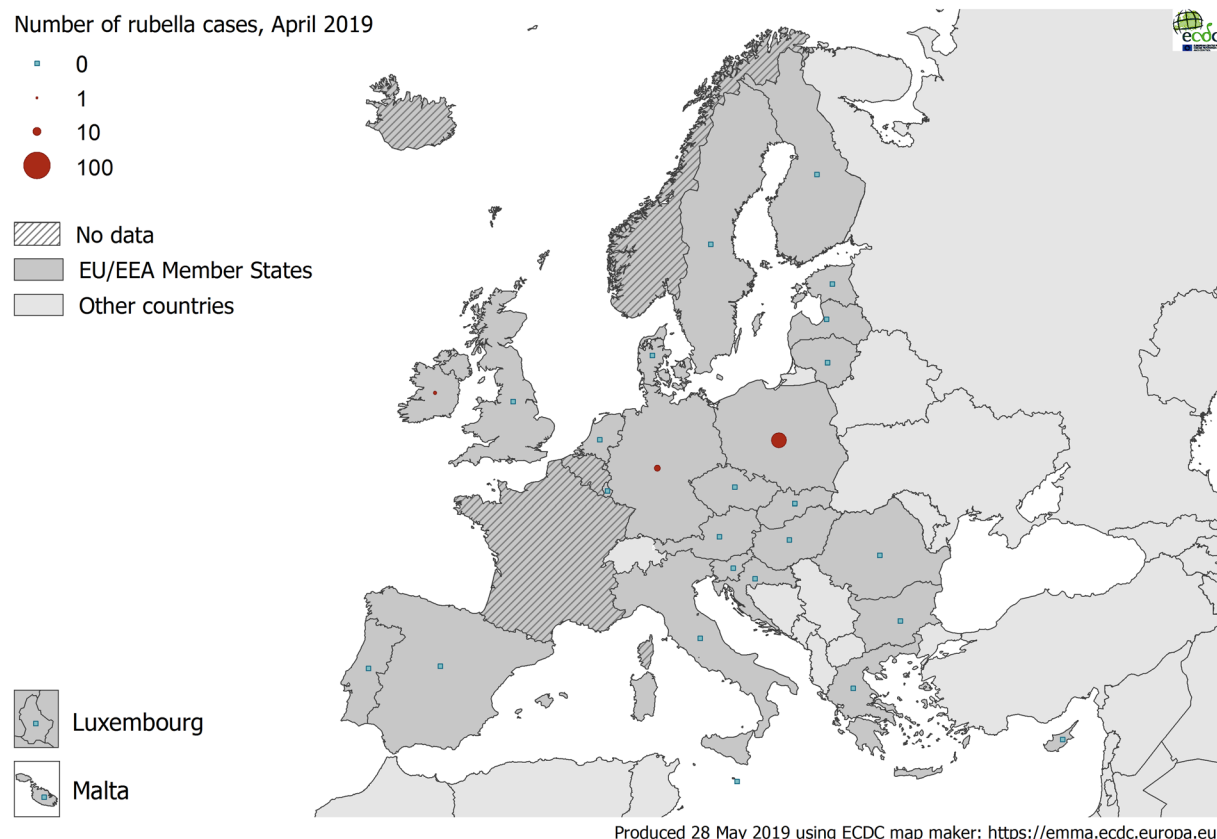
## Rubella

### Rubella in April 2019

Twenty-six countries reported rubella data for April 2019, with 39 cases classified as either confirmed, probable or possible reported by three countries (Germany, Ireland and Poland) and 23 countries reporting no cases. Iceland and Norway did not report rubella data for April 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 decreased compared with the previous month. Thirty-two of the 39 cases (82%) were reported by Poland (Table 2).

<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.

**Figure 5. Number of rubella cases by country, EU/EEA, April 2019 (n=39)**

## Rubella from May 2018– 2019

From 1 May 2018–30 April 2019, 12 EU/EEA Member States reported 530 cases of rubella, 48 (9%) of which were laboratory-confirmed. Sixteen countries reported no cases. The highest number of cases were reported by Poland (421), Germany (54), Italy (19), Spain (14) and Romania (7), accounting for 79%, 10%, 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 (11.1) and Latvia (1.6; Figure 6).

Data from Poland should be interpreted with caution, as only three of 421 cases (1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 136 (32%) cases in children aged 5–9 years, 128 (30%) cases in children aged 1–4 years and 53 (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 May 2018–30 April 2019**

Country	2018								2019				Total cases	Cases per million	Total lab-positive cases
	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr			
Austria	0	0	0	0	0	0	0	0	0	1	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	0	1	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	3	6	7	4	6	6	1	4	4	2	6	5	54	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
Ireland	0	0	0	0	0	0	0	0	0	0	1	2	3	0.6	0
Italy	2	2	3	1	2	0	2	0	3	2	2	0	19	0.3	5
Latvia	1	0	0	0	0	0	0	0	1	1	0	0	3	1.6	1
Lithuania	1	0	0	0	0	0	0	0	0	0	0	0	1	0.4	1
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
Poland	58	50	39	36	22	27	26	24	42	22	43	32	421	11.1	3
Portugal	0	2	0	1	1	0	0	0	1	0	0	0	5	0.5	3
Romania	1	2	0	2	0	1	0	1	0	0	0	0	7	0.4	5
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	1	0	0	0	0	0	9	3	0	0	0	14	0.3	10
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	0	0	0	0	1	0	0	0	0	0	0	0	1	0.0	1
<b>EU/EEA</b>	<b>67</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>28</b>	<b>52</b>	<b>39</b>	<b>530</b>	<b>1.2</b>	<b>48</b>

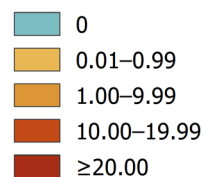
Source: TESSy, data extracted on 28 May 2019.

..: data not reported.

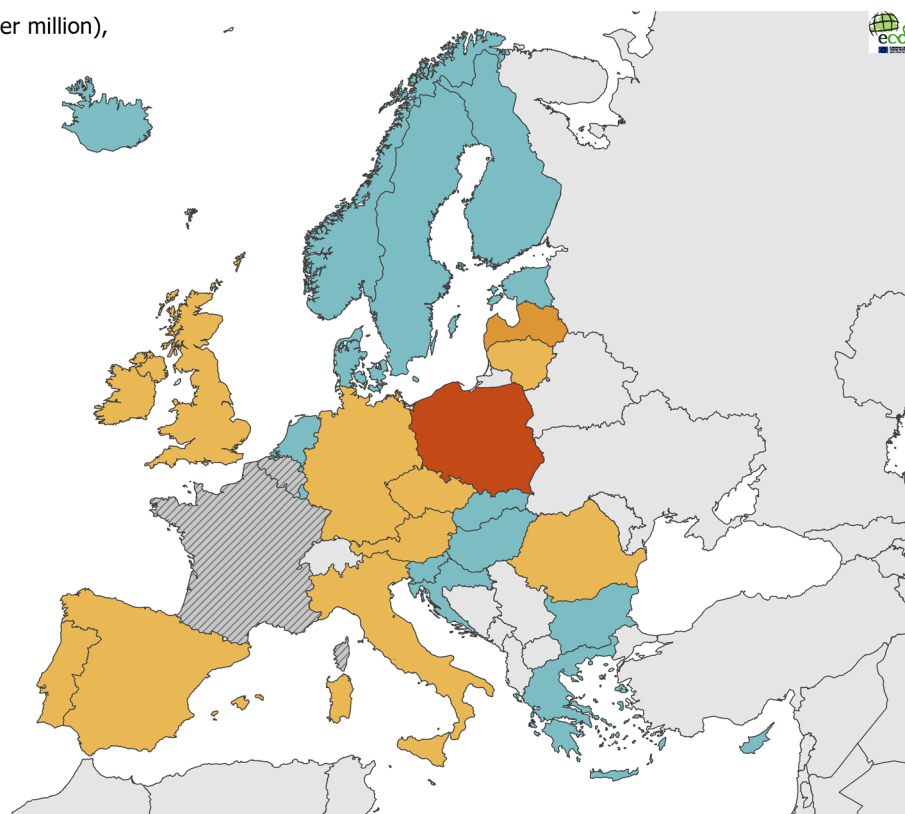
The national surveillance system for rubella in Denmark currently only captures rubella infections during pregnancy; therefore the true incidence of rubella in the Danish population is underestimated.

**Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 May 2018–30 April 2019**

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



No data  
Not included



Produced 28 May 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].



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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)