

Monthly measles and rubella monitoring report

May 2019

Period covered: 1 April 2018 to 31 March 2019

Introduction

This monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for the period 1 April 2018 to 31 March 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].

ECDC also monitors European measles and rubella outbreaks through epidemic intelligence and publishes recent updates in the Communicable Disease Threats Report (CDTR) [2] on the same day as this 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 March 2018 [3].

Measles

Measles in March 2019

Twenty-seven countries reported measles data for March 2019, with 1 548 cases reported by 22 countries and five countries reporting no cases. Czech Republic, Italy and Norway did not report measles data for March 2019 (Figure 1).

Overall, case numbers continued to increase compared with the previous two months. France, Lithuania, Poland, Romania, Bulgaria and Germany had the highest case counts with 295, 248, 219, 188, 185 and 123 cases, respectively (Table 1).

Notable decreases were reported in Belgium and Austria.

- Belgium reported 68 cases in March, compared with 89 in February and 20 in January.
- Austria reported one case in March, compared with 33 in February and 25 in January.

Notable increases were reported in France, Lithuania, Poland and Bulgaria.

- France reported 295 cases in March, compared with 209 in February and 124 in January.
- Lithuania reported 248 cases in March, compared with 72 in February and 12 in January.
- Poland reported 219 cases in March, compared with 178 in February and 123 in January.
- Bulgaria reported 185 cases in March, compared with 51 in February and zero in January.

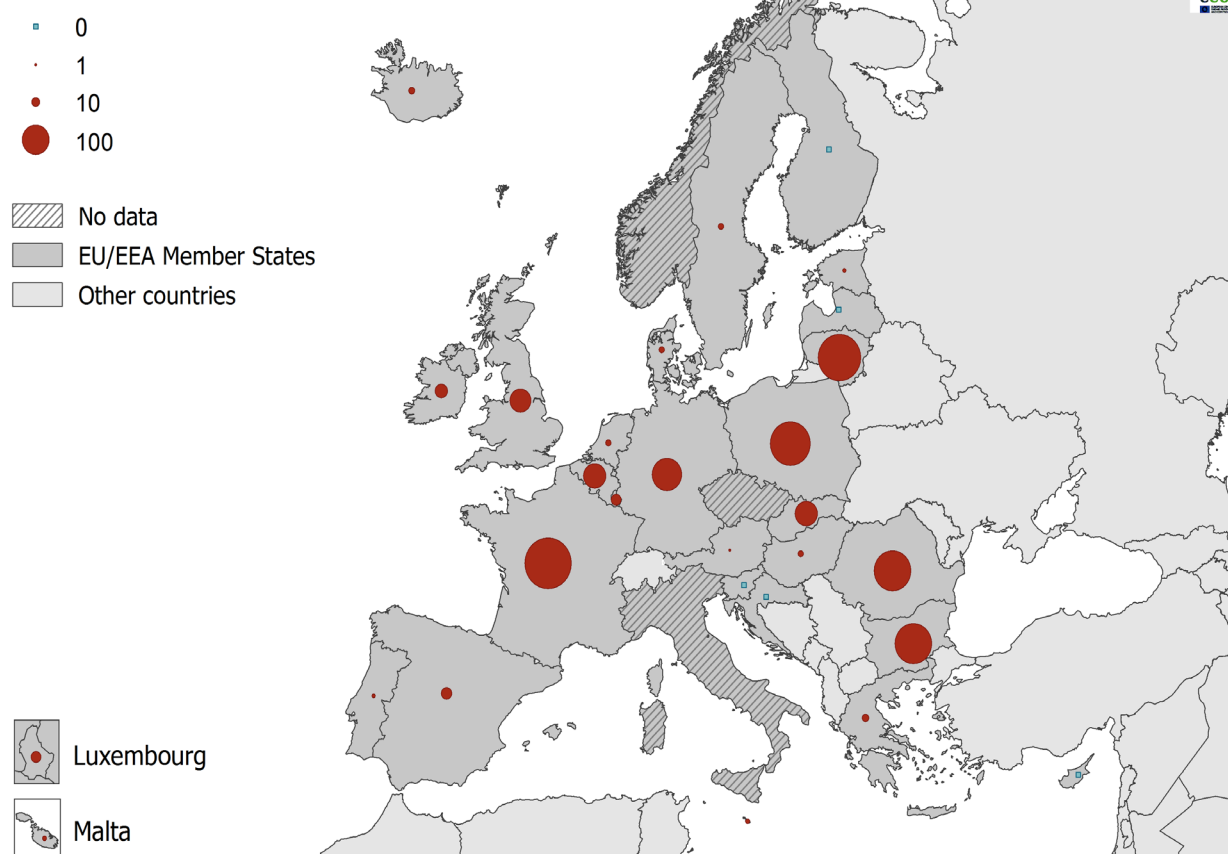
Where available, links to recent updates published by public health authorities in EU/EEA countries can be found in the CDTR [2].

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Figure 1. Number of measles cases by country, EU/EEA, March 2019 (n=1 548)

Number of measles cases, March 2019

Produced 26 Apr 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

Measles between April 2018 and March 2019

Between 1 April 2018 and 31 March 2019, 30 EU/EEA Member States reported 11 383 cases of measles, 8 396 (74%) of which were laboratory-confirmed. None of the countries reported no cases. The highest number of cases were reported by Italy (2 107), France (2 028), Romania (1 390), Greece (870), United Kingdom (860), Poland (828), Germany (733) and Slovakia (714), accounting for 18%, 18%, 12%, 8%, 8%, 7%, 6% and 6% of all cases, respectively (Table 1). Notification rates per million population above the EU/EEA average (22.0) were reported by Slovakia (131.4), Lithuania (127.1), Greece (80.8), Romania (70.8), Italy (34.8), Bulgaria (34.6), Luxembourg (32.2), France (30.3), Czech Republic (28.7) and Belgium (24.8) (Figure 2).

The number of measles cases reported to TESSy may be an underestimation in certain cases. In particular, this may apply 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 [4].

Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 April 2018 to 31 March 2019

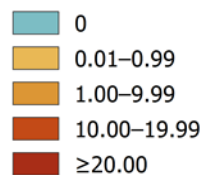
Country	2018	2018	2018	2018	2018	2018	2018	2018	2018	2019	2019	2019	Total cases	Cases per million	Total lab-positive cases
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Austria	17	12	6	1	3	6	0	4	1	25	33	1	109	12.4	101
Belgium	11	24	22	3	11	14	4	8	7	20	89	68	281	24.8	220
Bulgaria	1	1	1	7	0	0	0	0	0	0	51	185	246	34.6	218
Croatia	1	2	16	3	1	0	0	0	0	0	1	0	24	5.8	24
Cyprus	0	0	0	0	0	0	0	0	0	0	1	0	1	1.2	1
Czech Republic	40	33	12	4	7	4	7	16	19	47	115	.	304	28.7	250
Denmark	0	0	0	0	2	2	0	0	1	2	5	4	16	2.8	16
Estonia	7	1	0	0	0	0	0	0	0	3	6	2	19	14.4	19
Finland	0	4	0	0	3	0	0	1	7	3	3	0	21	3.8	21
France	619	251	191	81	29	38	76	61	54	124	209	295	2028	30.3	1093
Germany	99	105	94	54	29	24	13	10	10	102	70	123	733	8.9	585
Greece	352	290	155	38	18	4	2	0	1	0	3	7	870	80.8	454
Hungary	0	0	0	0	0	0	0	0	1	2	5	4	12	1.2	12
Iceland	0	0	0	0	0	0	0	0	0	0	1	6	7	20.7	7
Ireland	12	0	2	5	17	2	1	1	0	2	18	23	83	17.4	60
Italy	498	461	317	147	79	57	82	58	76	172	160	.	2107	34.8	1646
Latvia	0	2	3	1	1	0	0	1	2	0	0	0	10	5.1	10
Lithuania	0	0	0	1	1	0	0	8	20	12	72	248	362	127.1	362
Luxembourg	1	0	0	0	2	0	0	1	0	0	0	15	19	32.2	19
Malta	0	0	0	5	0	0	0	0	0	0	0	3	8	17.4	8
Netherlands	0	3	10	1	4	0	0	0	2	4	4	4	32	1.9	31
Norway	1	2	0	0	3	0	0	0	0	0	1	.	7	1.3	7
Poland	22	19	12	13	19	9	21	79	114	123	178	219	828	21.8	479
Portugal	13	0	3	1	3	3	2	24	12	2	3	2	68	6.6	60
Romania	111	104	111	100	92	72	65	81	130	261	75	188	1390	70.8	1092
Slovakia	3	18	67	257	87	28	16	38	50	43	37	70	714	131.4	524
Slovenia	0	3	3	0	0	0	1	0	0	0	0	0	7	3.4	7
Spain	50	41	25	15	7	4	4	1	6	11	10	16	190	4.1	185
Sweden	2	4	3	3	2	4	1	0	3	0	1	4	27	2.7	25
United Kingdom	202	155	100	82	54	16	21	26	11	71	61	61	860	13.1	860
EU/EEA	2062	1535	1153	822	474	287	316	418	527	1029	1212	1548	11383	22.0	8396

Source: TESSy, data extracted on 26 April 2019

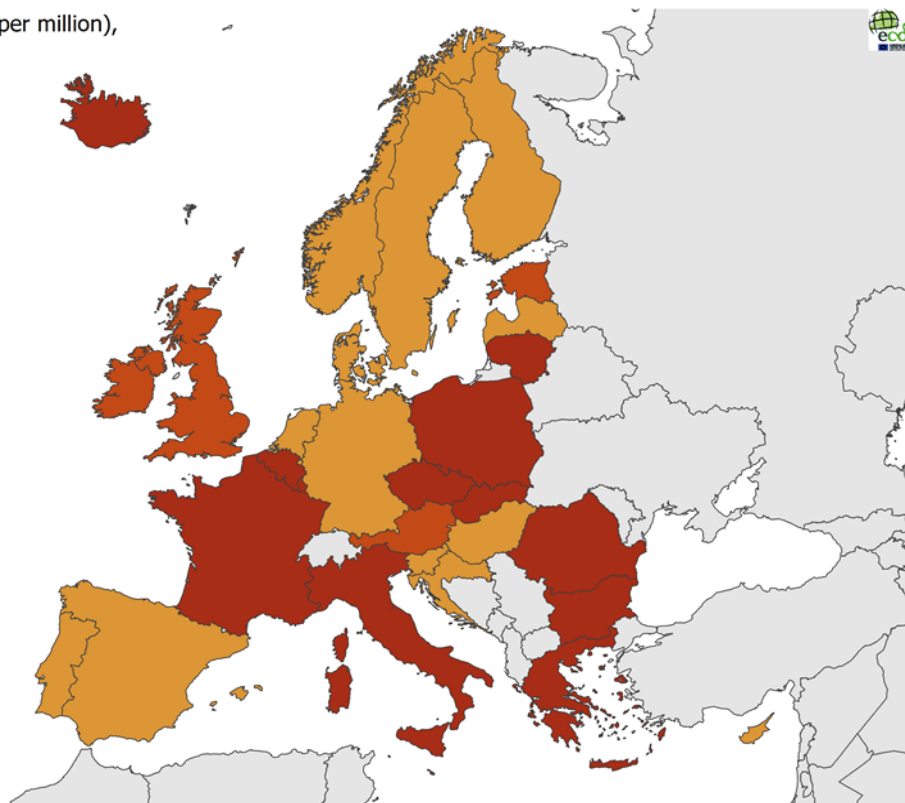
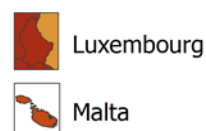
.: data not reported.

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 April 2018 to 31 March 2019

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



Not included



Produced 26 Apr 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

Twenty-two deaths attributable to measles were reported to TESSy during the 12-month period in Romania (14), Italy (5), France (2) and Greece (1) (Figure 3).

Figure 3. Number of measles deaths by country, EU/EEA, 1 April 2018 to 31 March 2019 (n=22)

Number of measles deaths,
April 2018–March 2019



EU/EEA Member States
Other countries



Produced 26 Apr 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

Importation status was reported by 30 countries and known for 9 600 cases (84%), 771 (8%) of which were imported.¹

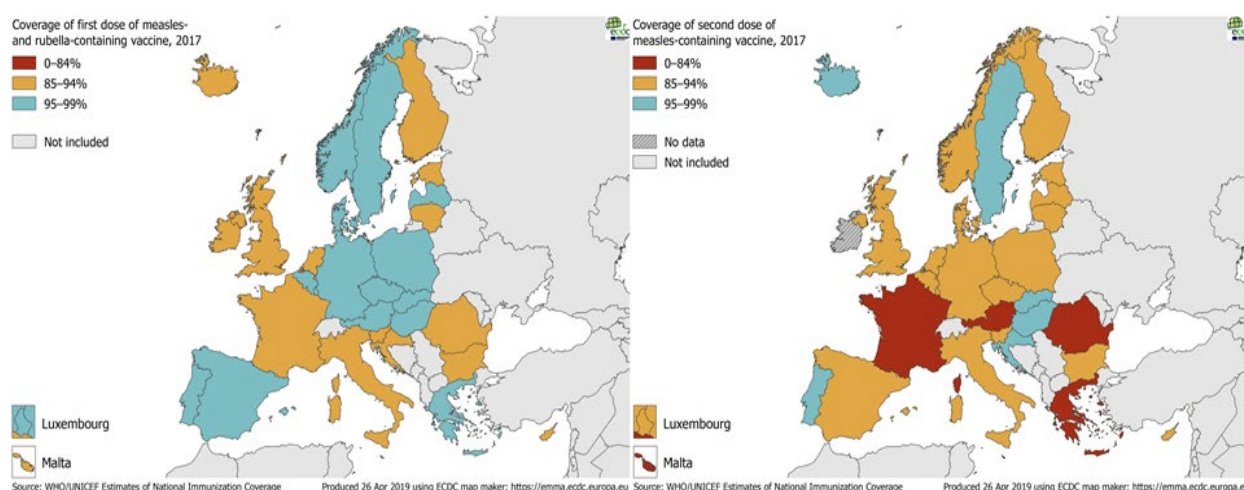
Of 11 045 cases with known age, 3 328 (30%) were children under five years and 5 832 (53%) were aged 15 years or older. The highest notification rates were observed in children under one year (255.5 cases per million) and aged 1–4 years (95.8 cases per million).

A total of 1 705 cases (15%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (847 of 3 021 cases; 28%). Of 9 340 cases (82% of all cases) with known age and vaccination status, 7 099 (76%) were unvaccinated, 1 293 (14%) were vaccinated with one dose of measles-containing vaccine, 808 (9%) were vaccinated with two or more doses and 140 (1%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among children under one year (1 163 of 1 316 cases; 88%), too young to have received the first dose of measles-containing vaccine. Infants under one year are particularly vulnerable to measles complications and are best protected by herd immunity. Among 2 012 cases aged 1–4 years, 1 439 (72%) were unvaccinated, 380 (19%) were vaccinated with one dose of measles-containing vaccine, 35 (2%) were vaccinated with two or more doses and 12 (1%) were vaccinated with an unknown number of doses.

Measles continues to spread across Europe because vaccination coverage in many countries is suboptimal. The latest WHO-UNICEF estimates of national immunisation coverage for the first [5] and second [6] doses of measles-containing vaccine show that only four EU/EEA countries (Hungary, Portugal, Slovakia and Sweden) reported at least 95% vaccination coverage for both doses in 2017 (Figure 4). If the elimination goal is to be reached, vaccination coverage for children and adults needs to increase in a number of countries. Sustained vaccination coverage of at least 95% for both the first and second doses of measles-containing vaccine must be achieved at all subnational levels and in all communities to interrupt measles circulation [7].

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



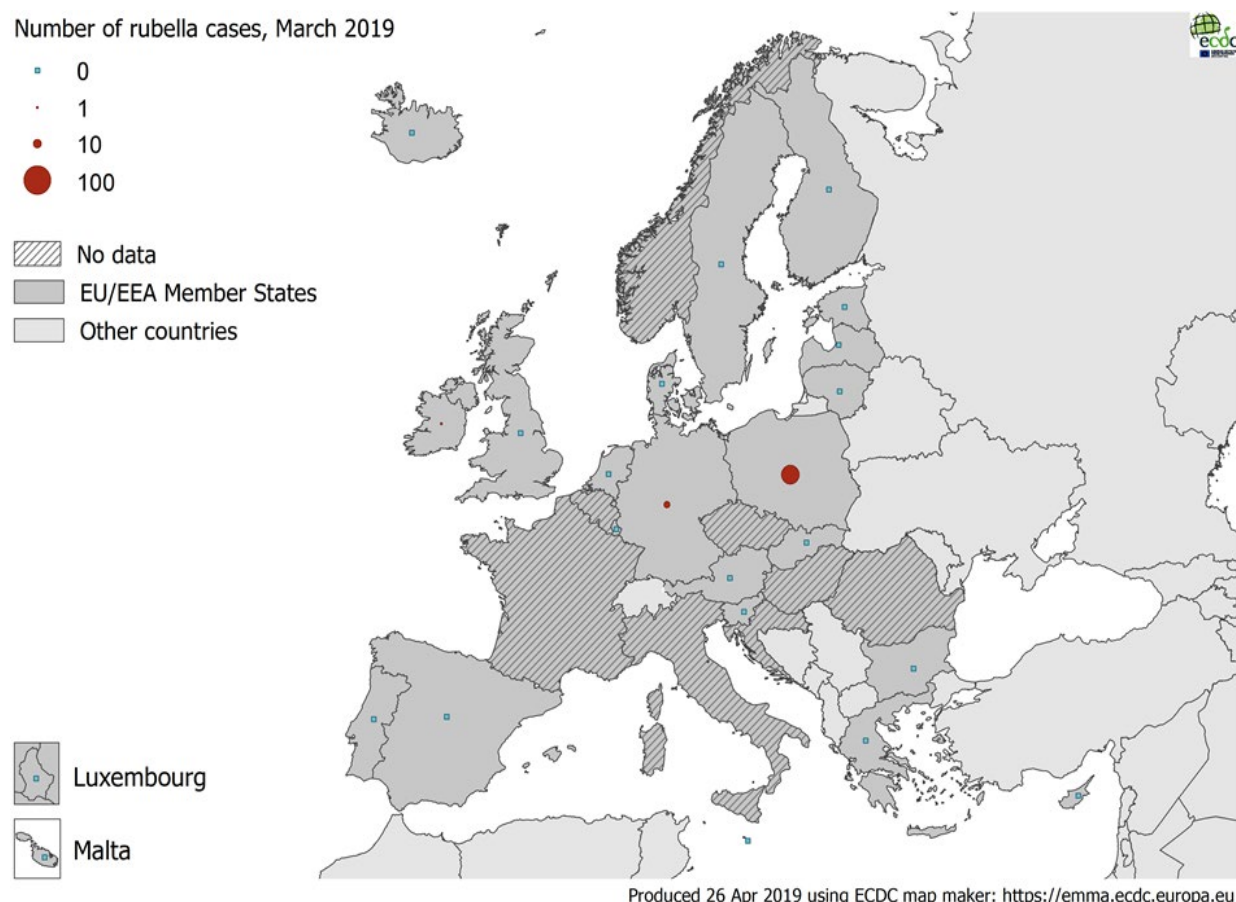
Rubella

Rubella in March 2019

Twenty-two countries reported rubella data for March 2019, with 51 cases reported by three countries (Germany, Ireland and Poland) and 19 countries reporting no cases. Czech Republic, Croatia, Hungary, Italy, Norway and Romania did not report rubella data for March 2019 (Figure 5).

Overall, case numbers increased compared with the previous month. Forty-four of the 51 cases (86%) 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.

Figure 5. Number of rubella cases by country, EU/EEA, March 2019 (n=51)

Rubella between April 2018 and March 2019

Between 1 April 2018 and 31 March 2019, 13 EU/EEA Member States reported 547 cases of rubella, 51 (9%) of which were laboratory-confirmed. Fifteen countries reported no cases. The highest number of cases were reported by Poland (437), Germany (54), Italy (20), Spain (16) and Romania (7), accounting for 80%, 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 (11.5) (Figure 6).

Data from Poland were reported in an aggregated format and should be interpreted with caution, as only four of 437 cases (1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 146 (33%) cases in children aged 5–9 years, 123 (28%) cases in children aged 1–4 years and 55 (13%) cases in children 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 April 2018 to 31 March 2019

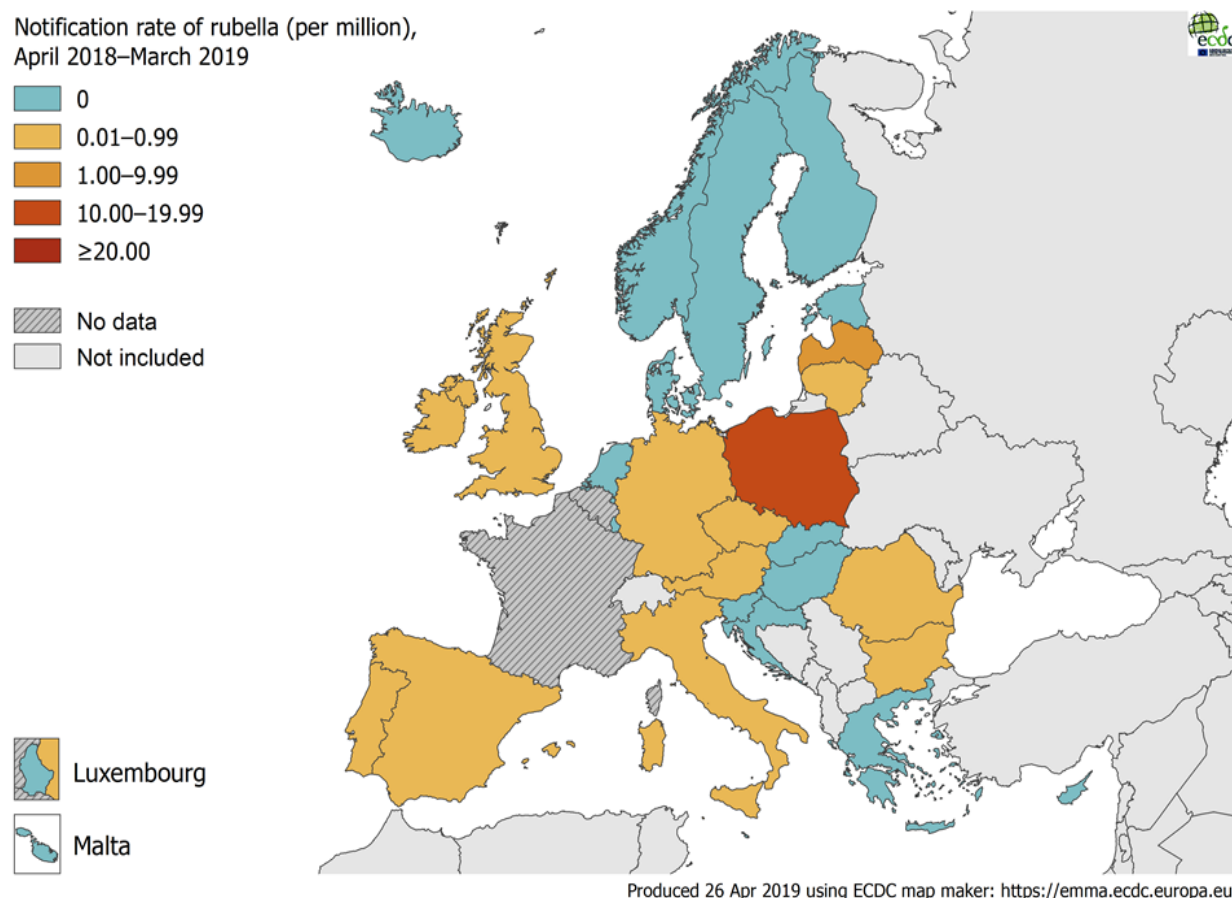
Country	2018	2018	2018	2018	2018	2018	2018	2018	2018	2019	2019	2019	Total cases	Cases per million	Total lab-positive cases
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Austria	0	0	0	0	0	0	0	0	0	0	1	0	1	0.1	1
Bulgaria	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	.	0	0.0	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Czech Republic	0	0	0	0	1	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	5	3	6	7	4	6	6	1	4	4	2	6	54	0.6	17
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
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	0	0	1	1	0.2	0
Italy	4	2	2	3	1	2	0	2	0	3	1	.	20	0.3	6
Latvia	0	1	0	0	0	0	0	0	0	1	0	0	2	1.0	1
Lithuania	0	1	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	0
Poland	47	58	50	39	36	22	27	26	24	42	22	44	437	11.5	4
Portugal	0	0	2	0	1	1	0	0	0	1	0	0	5	0.5	3
Romania	0	1	2	0	2	0	1	0	1	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	1	0	0	0	0	0	10	3	0	0	16	0.3	12
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	0	0	0	0	0	1	0	0	0	0	0	0	1	0.0	1
EU/EEA	58	67	63	49	45	32	34	29	39	54	26	51	547	1.2	51

Source: TESSy, data extracted on 26 April 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 April 2018 to 31 March 2019



The latest WHO-UNICEF estimates of national immunisation coverage [8] 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 must be achieved at all subnational levels and in all communities to interrupt rubella circulation and achieve elimination [7].

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