

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

February 2019

Period covered: 1 January 2018 to 31 December 2018

Introduction

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

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 also 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 December 2018

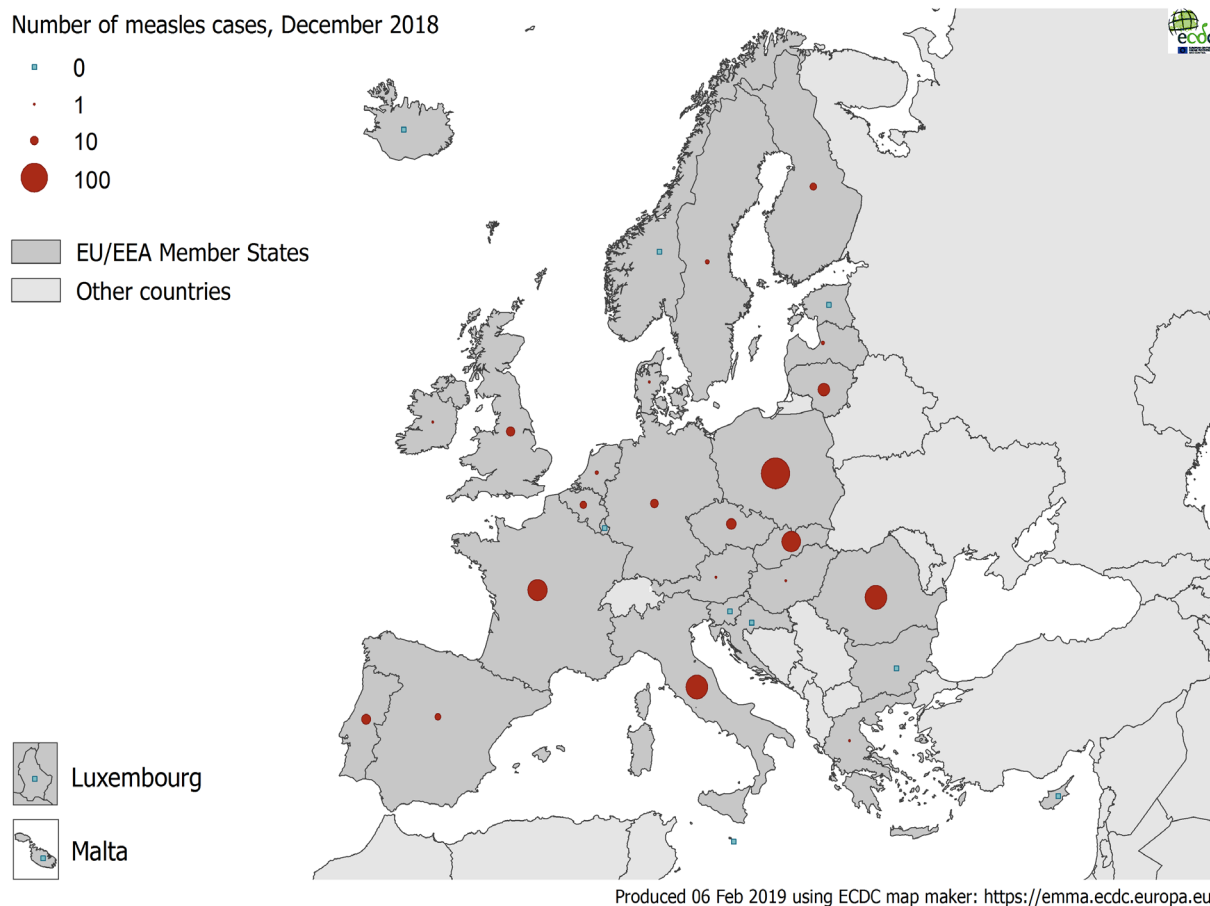
All 30 countries reported measles data for December 2018, with 457 cases reported by 21 countries and nine countries reporting no cases (Figure 1).

Overall, case numbers continued to increase compared with the previous two months. Poland, Romania, Italy, France and Slovakia had the highest case counts with 114, 70, 68, 54 and 52 cases, respectively (Table 1).

Notable increases were reported in Poland, Slovakia and Lithuania.

- Poland reported 114 cases in December, compared with 79 in November and 21 cases in October.
- Slovakia reported 52 cases in December, compared with 38 in November and 16 cases in October.
- Lithuania reported 20 cases in December, compared with eight in November and zero cases in October.

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

Figure 1. Number of measles cases by country, EU/EEA, December 2018 (n=457)

Measles between January 2018 and December 2018

Between 1 January 2018 and 31 December 2018, 30 EU/EEA Member States reported 12 352 cases of measles, 8 596 (70%) of which were laboratory-confirmed. One country reported no cases. The highest number of cases were reported by France (2 913), Italy (2 517), Greece (2 293), Romania (1 087), United Kingdom (953), Slovakia (572) and Germany (542), accounting for 24%, 20%, 19%, 9%, 8%, 5% and 4% of all cases, respectively (Table 1). Notification rates per million population above the EU/EEA average (23.9) were reported by Greece (212.9), Slovakia (105.2), Romania (55.3), France (43.5) and Italy (41.5) (Figure 2).

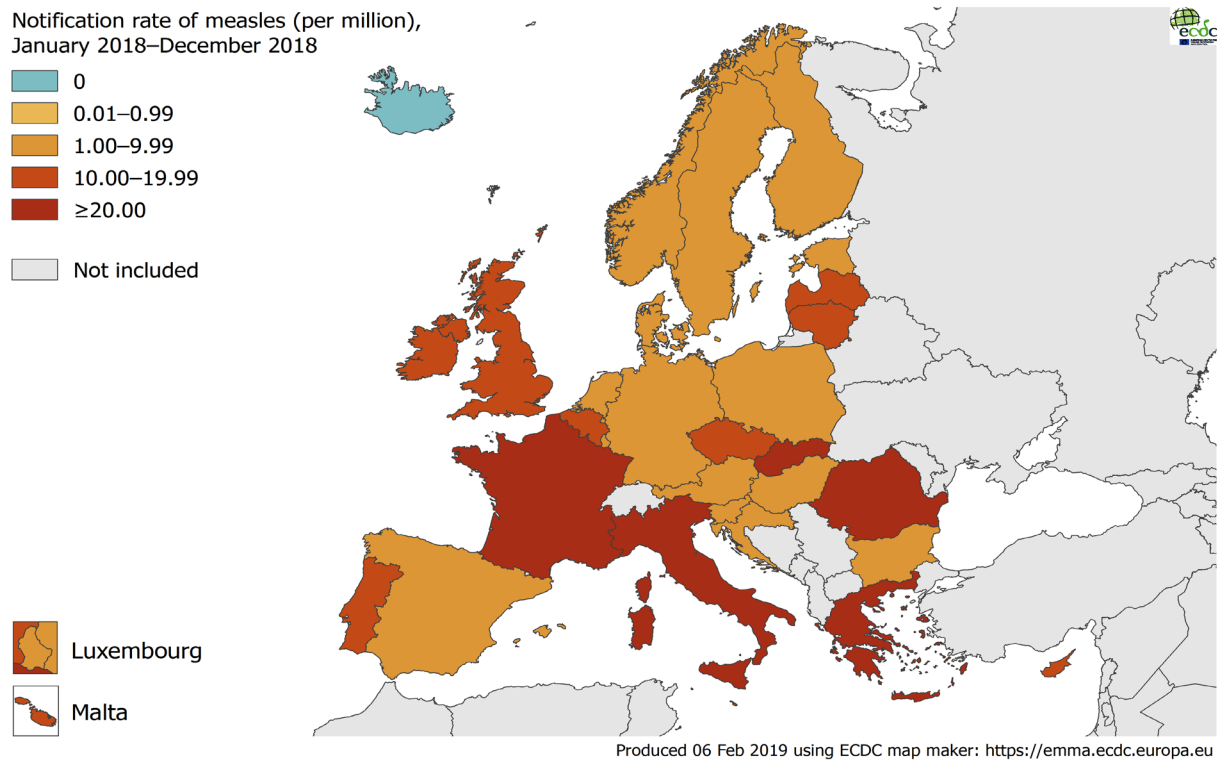
The number of measles cases reported to TESSy may be an underestimation in certain cases. In particular, this may apply to Romania. The sustained outbreak in the country has caused delays in case-based reporting to TESSy and the most up-to-date data are available from the Romanian National Institute of Public Health [4].

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

Country	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Austria	7	5	15	17	12	6	1	3	6	0	4	1	77	8.8	70
Belgium	1	6	9	11	24	22	3	11	14	4	8	7	120	10.6	94
Bulgaria	0	1	2	1	1	1	7	0	0	0	0	0	13	1.8	13
Croatia	0	0	0	1	2	16	3	1	0	0	0	0	23	5.5	23
Cyprus	5	6	4	0	0	0	0	0	0	0	0	0	15	17.6	15
Czech Republic	10	23	32	40	33	12	4	7	4	7	16	14	202	19.1	199
Denmark	0	0	3	0	0	0	0	2	2	0	0	1	8	1.4	8
Estonia	0	0	2	7	1	0	0	0	0	0	0	0	10	7.6	10
Finland	0	0	0	0	4	0	0	3	0	0	1	7	15	2.7	15
France	237	515	761	619	251	191	81	29	38	76	61	54	2913	43.5	1449
Germany	26	30	49	98	105	94	54	29	24	13	10	10	542	6.6	456
Greece	431	453	549	352	290	155	38	18	4	2	0	1	2293	212.9	1300
Hungary	2	5	6	0	0	0	0	0	0	0	0	1	14	1.4	14
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Ireland	9	13	17	12	0	2	5	18	6	4	3	1	90	18.8	73
Italy	214	297	374	467	429	276	126	77	54	81	54	68	2517	41.5	1926
Latvia	7	7	1	0	2	3	1	1	0	0	1	2	25	12.8	25
Lithuania	0	0	0	0	0	0	1	1	0	0	8	20	30	10.5	30
Luxembourg	0	0	0	1	0	0	0	2	0	0	1	0	4	6.8	4
Malta	0	0	0	0	0	0	5	0	0	0	0	0	5	10.9	5
Netherlands	0	2	2	0	3	10	1	4	0	0	0	2	24	1.4	23
Norway	0	4	2	1	2	0	0	3	0	0	0	0	12	2.3	10
Poland	18	11	3	22	19	12	13	19	9	21	79	114	340	8.9	214
Portugal	0	4	106	13	0	3	1	3	3	2	24	12	171	16.6	160
Romania	101	102	105	111	104	111	100	92	63	54	74	70	1087	55.3	865
Slovakia	1	0	0	3	18	72	257	87	28	16	38	52	572	105.2	372
Slovenia	2	0	0	0	3	3	0	0	0	1	0	0	9	4.4	9
Spain	6	14	52	50	41	25	15	7	4	4	1	6	225	4.8	220
Sweden	17	2	2	2	4	3	3	2	4	1	0	3	43	4.3	41
United Kingdom	55	81	150	202	155	100	82	54	16	21	26	11	953	14.5	953
EU/EEA	1149	1581	2246	2030	1503	1117	801	473	279	307	409	457	12352	23.9	8596

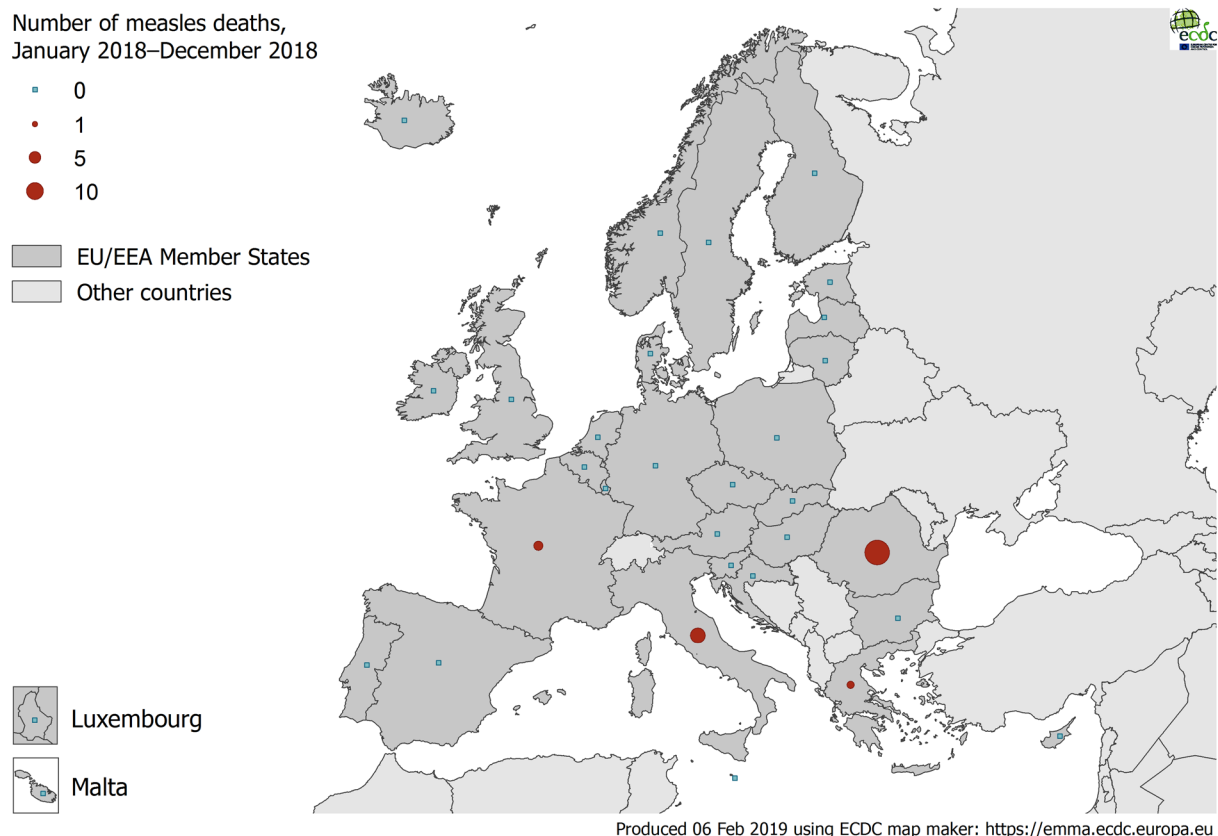
Source: TESSy, data extracted on 29 January 2019

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 January 2018 to 31 December 2018



Thirty-four deaths attributable to measles were reported to TESSy during the 12-month period in Romania (22), Italy (7), France (3) and Greece (2) (Figure 3). One additional death occurred in Italy, increasing the total number of deaths there to eight during the 12-month period. As this case reported late it has not been included in the figures presented in this report, but it is included in figures published in the Surveillance Atlas [1].

Figure 3. Number of measles deaths by country, EU/EEA, 1 January 2018 to 31 December 2018 (n=34)



Importation status was reported by 30 countries and known for 11 274 cases (91%), of which 695 (6%) were imported.¹

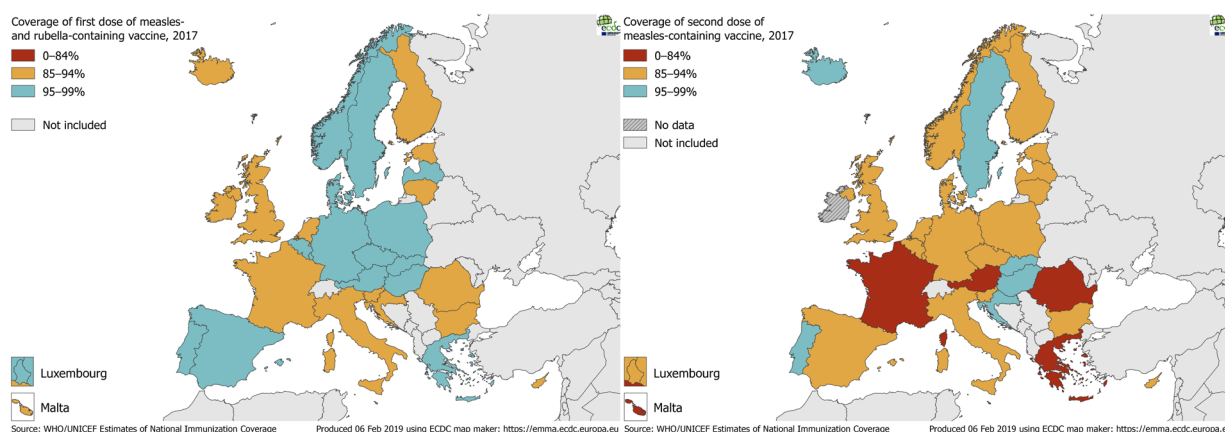
Of 12 351 cases with known age, 3 615 (29%) were children under five years and 6 501 (53%) were aged 15 years or older. The highest notification rates were in children under one year (261.2 cases per million) and aged 1–4 years (108.1 cases per million).

A total of 1 484 cases (12%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (740 of 3 188 cases; 23%). Of 10 867 cases (88% of all cases) with known age and vaccination status, 8 597 (79%) were unvaccinated, 1 238 (11%) were vaccinated with one dose of measles-containing vaccine, 817 (8%) were vaccinated with two or more doses and 215 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among children under one year (1 259 of 1 345 cases; 94%), 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 2 270 cases aged 1–4 years, 1 756 (77%) were unvaccinated, 336 (15%) were vaccinated with one dose of measles-containing vaccine, 50 (2%) were vaccinated with two or more doses and 23 (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 (WUENIC) 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 of 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



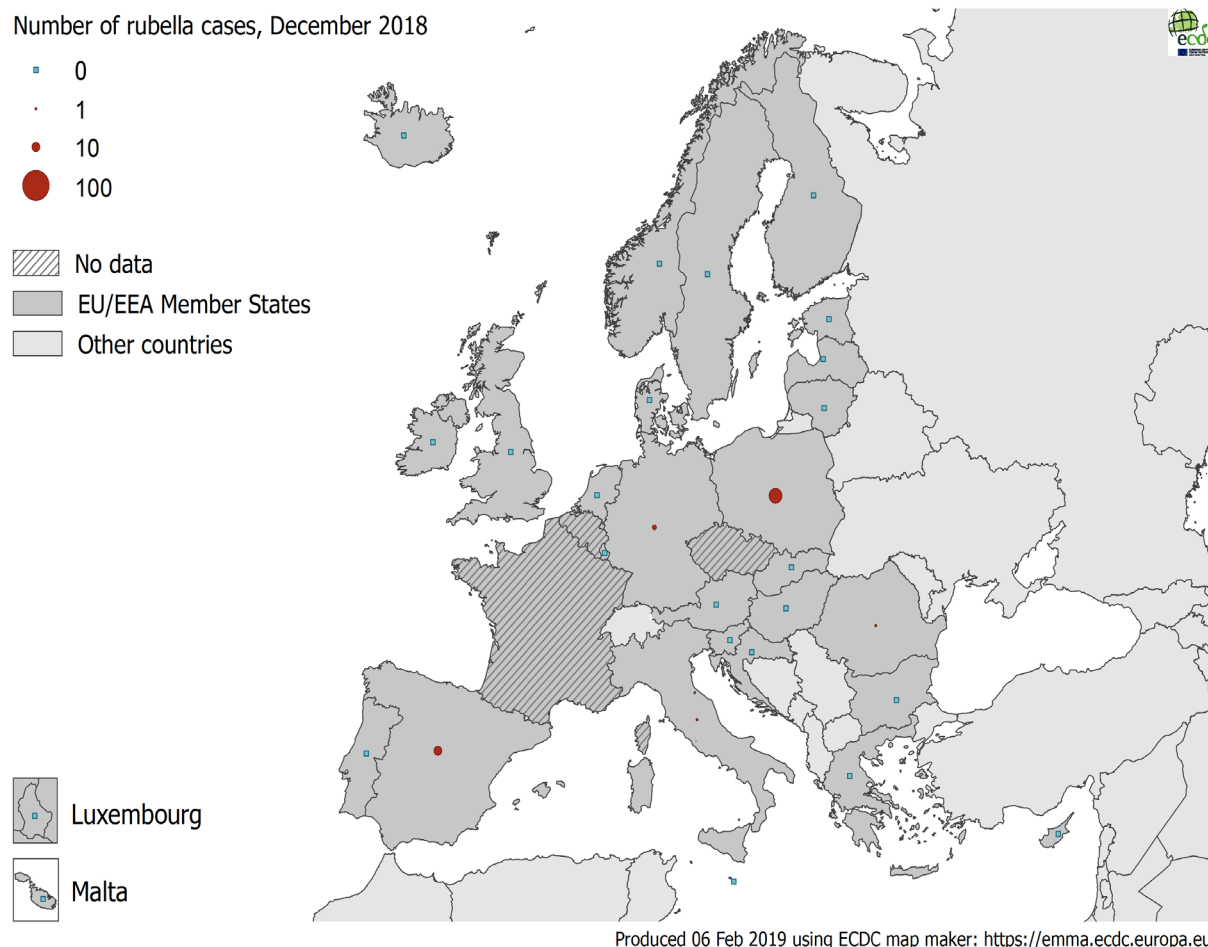
Rubella

Rubella in December 2018

All 28 countries reported rubella data for December 2018, with 39 cases reported by five countries (Germany, Italy, Poland, Romania and Spain) and 23 countries reporting no cases (Figure 5).

Overall, case numbers changed little compared with the previous two months. Twenty-four of the 39 cases (62%) were reported by Poland (Table 2). One new rubella outbreak was detected in Spain.

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, December 2018 (n=39)

Rubella between January 2018 and December 2018

Between 1 January 2018 and 31 December 2018, 14 EU/EEA Member States reported 579 cases of rubella, 57 (10%) of which were laboratory-confirmed. Fourteen countries reported no cases. The highest number of cases were reported by Poland (450), Germany (58), Italy (23) and Spain (13), accounting for 78%, 10%, 4% and 2% of all cases, respectively (Table 2). Notification rates per million population above the EU/EEA average (1.3) were reported by Poland (11.8) and Latvia (1.5) (Figure 6).

Data from Poland were reported in an aggregated format and should be interpreted with caution, as only three of 450 cases (1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 141 (31%) cases in children aged 5–9 years, 136 (30%) cases in children aged 1–4 years and 56 (12%) cases in children under one year.

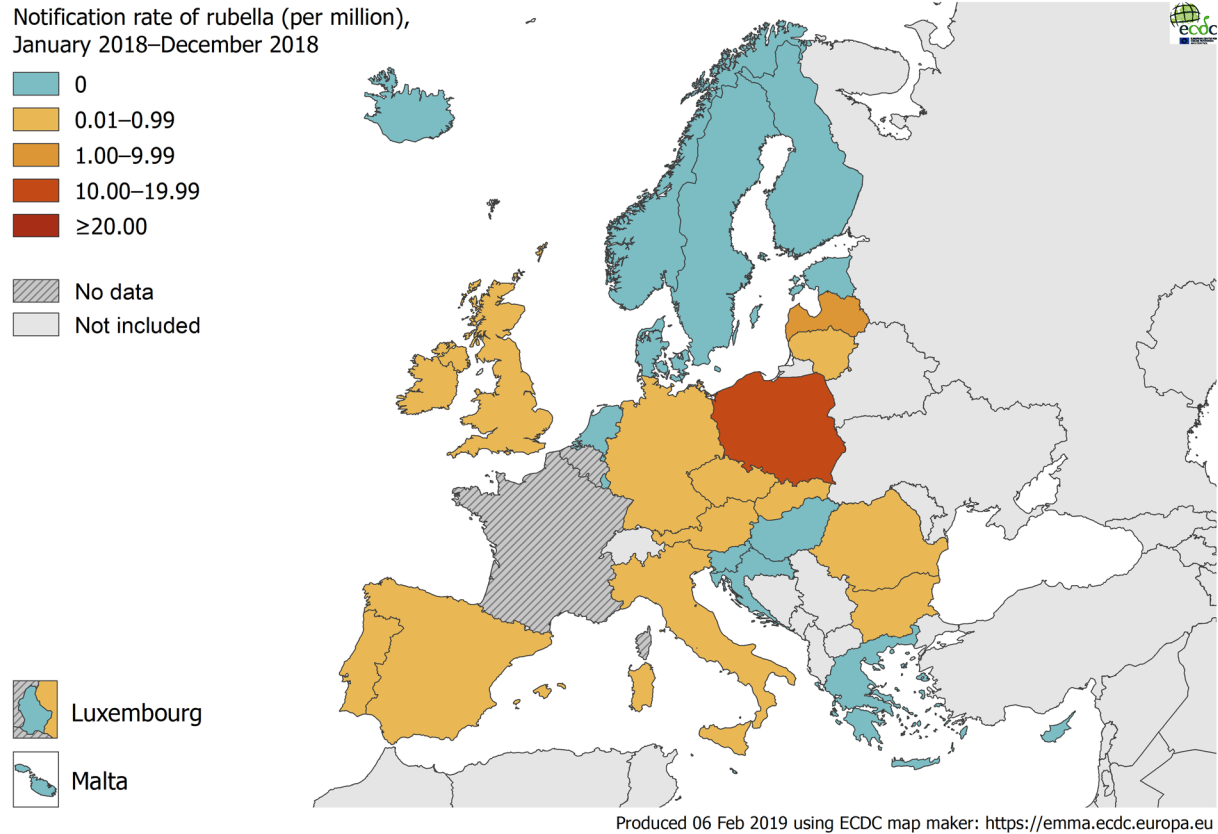
No deaths attributable to rubella were reported to TESSy during the 12-month period.

Table 2. Number of rubella cases by month and notification rate per million population by country, EU/EEA, 1 January 2018 to 31 December 2018

Country	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Austria	8	0	0	0	0	0	0	0	0	0	0	0	8	0.9	8
Bulgaria	0	0	0	1	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	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	1	0	0	0	0	2	0.2	1
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	4	7	5	3	6	7	5	6	6	1	3	58	0.7	14
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	1	0	1	0	0	0	1	0	0	1	0	4	0.8	0
Italy	1	2	2	4	2	2	3	2	2	0	2	1	23	0.4	7
Latvia	0	1	1	0	1	0	0	0	0	0	0	0	3	1.5	3
Lithuania	0	0	0	0	1	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	0
Poland	36	43	42	47	58	50	39	36	22	27	26	24	450	11.8	3
Portugal	0	1	0	0	0	2	0	1	1	0	0	0	5	0.5	3
Romania	0	1	1	0	1	1	0	2	0	1	0	1	8	0.4	5
Slovakia	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Spain	0	0	0	1	1	1	0	0	0	0	0	10	13	0.3	10
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	0	0	1	0	0	0	2	0.0	2
EU/EEA	50	55	53	59	67	62	49	48	32	35	30	39	579	1.3	57

Source: TESSy, data extracted on 29 January 2019

Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 January 2018 to 31 December 2018



The latest WUENIC estimates [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].

References

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