

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

November 2018

Period covered: 1 October 2017 to 30 September 2018

Introduction

This monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for the period 1 October 2017 to 30 September 2018.

Routine disease data are submitted on a monthly basis by 30 European Union and 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

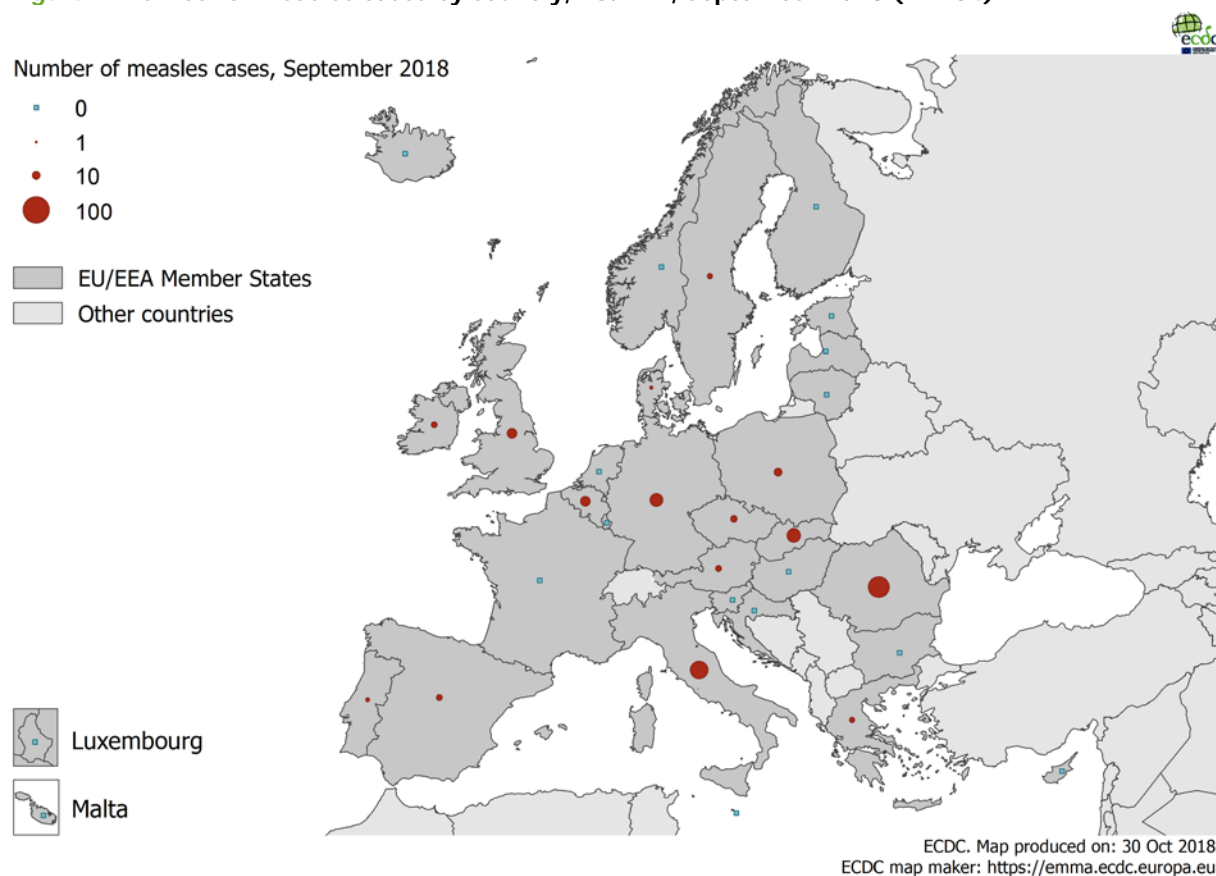
Measles in September 2018

All 30 countries reported measles data for September 2018, with a total of 234 cases reported by 15 countries, while 15 countries reported zero cases (Figure 1).

Overall, case numbers continued to decrease compared with previous months. Italy, Slovakia, Germany and United Kingdom had the highest case counts but with a decreasing trend:

- Italy reported 44 cases in September, a decrease from 68 in August and 124 cases in July
- Slovakia reported 28 cases in September, a decrease from 87 in August and 257 cases in July
- Germany reported 25 cases in September, a decrease from 29 in August and 55 cases in July
- United Kingdom reported 14 cases in September, a decrease from 52 in August and 82 cases in July.

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, September 2018 (n=234)

Measles between October 2017 and September 2018

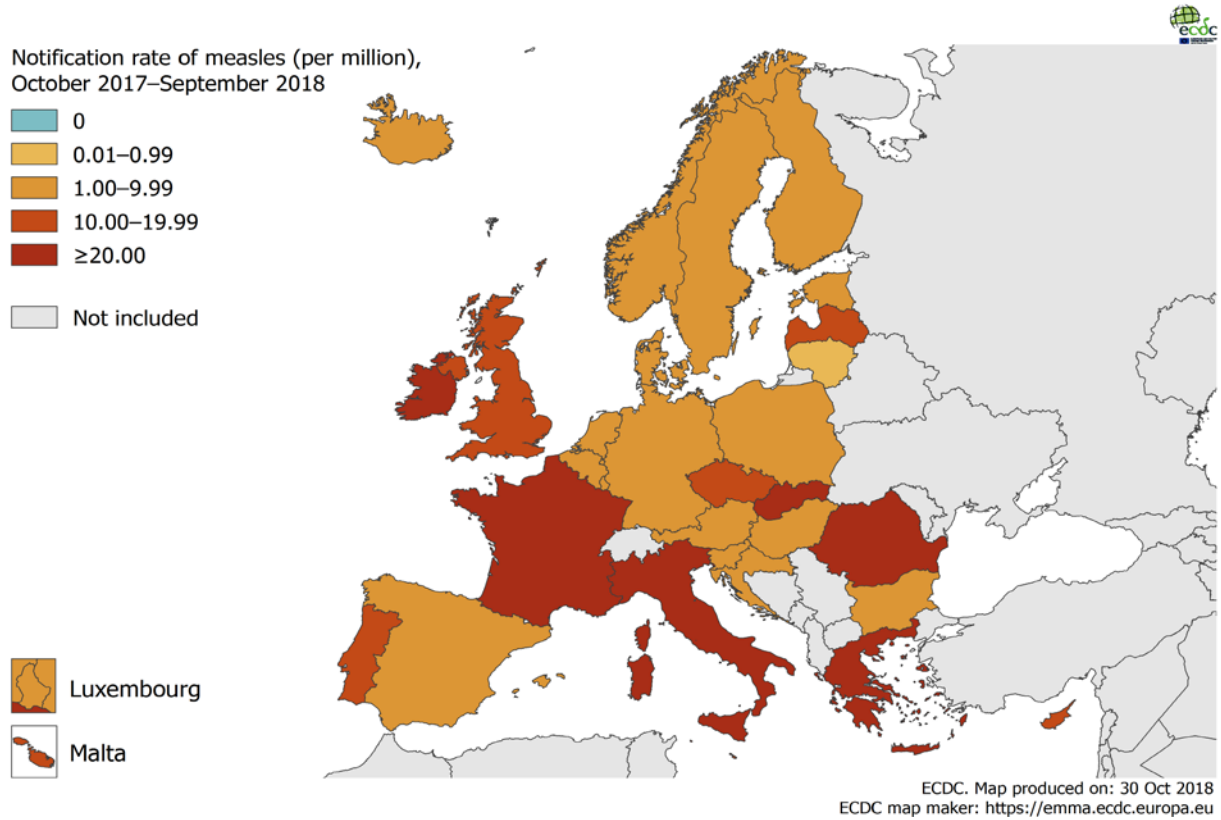
Between 1 October 2017 and 30 September 2018, 30 EU/EEA Member States reported 13 453 cases of measles, 9 389 (70%) of which were laboratory-confirmed. None of the countries reported zero cases. The highest number of cases were reported by Greece (3 049), France (2 771), Italy (2 599), Romania (1 821) and United Kingdom (1 019), accounting for 23%, 21%, 19%, 14% and 8% of all cases, respectively (Table 1). Notification rates per million population above the EU/EEA average (26.0) were reported by Greece (283.1), Romania (92.7), Slovakia (86.7), Italy (42.9) and France (41.4) (Figure 2).

The number of measles cases reported to TESSy may in some cases be an underestimation. This may apply in particular for 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 (INSP) [4].

Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 October 2017 to 30 September 2018

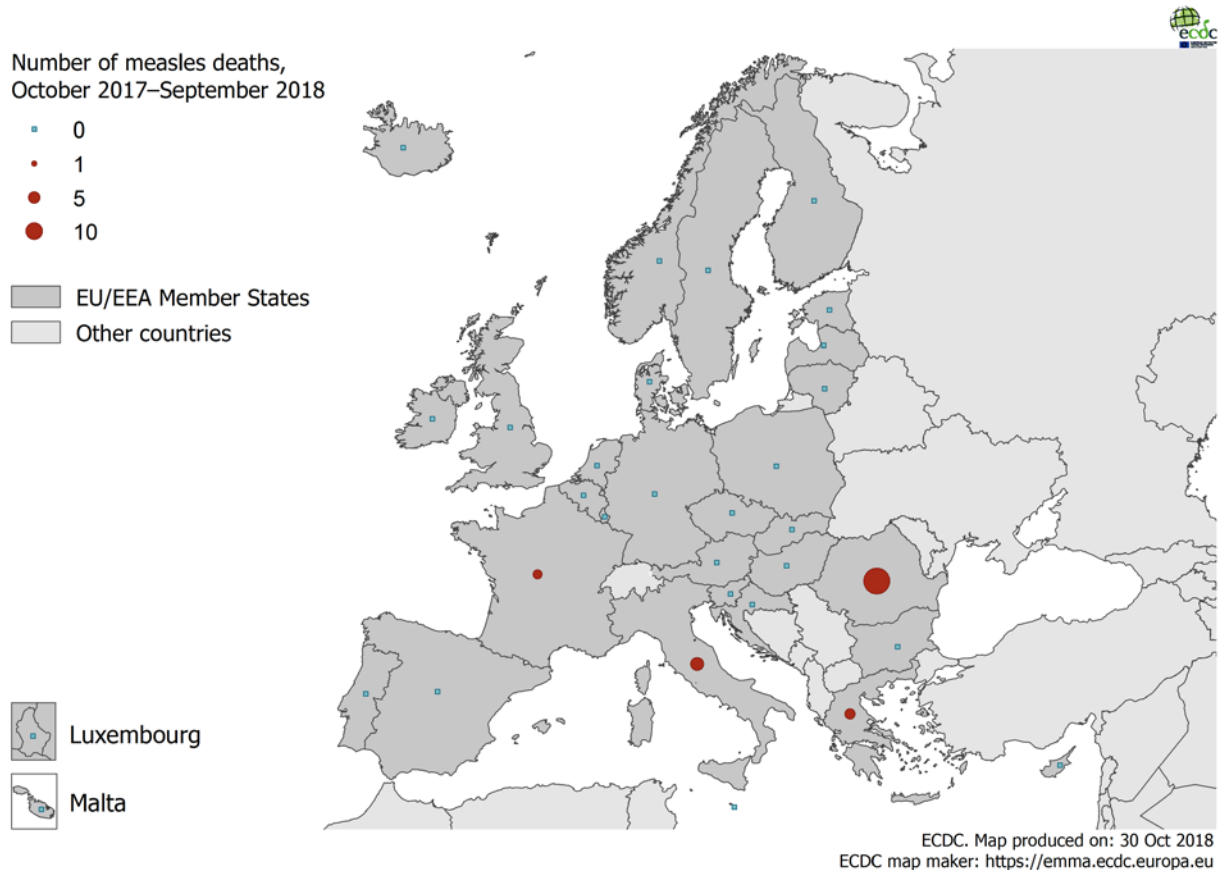
Country	2017	2017	2017	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Austria	2	8	1	7	5	15	17	12	6	1	3	6	83	9.5	75
Belgium	0	3	1	1	6	9	11	24	22	3	11	14	105	9.2	85
Bulgaria	0	0	0	0	1	2	1	1	0	3	0	0	8	1.1	8
Croatia	0	0	0	0	0	0	1	2	16	3	1	0	23	5.5	23
Cyprus	0	0	0	5	6	4	0	0	0	0	0	0	15	17.6	15
Czech Republic	0	6	4	5	8	15	10	68	41	6	5	7	175	16.5	170
Denmark	0	0	0	0	0	3	0	0	0	0	1	2	6	1	6
Estonia	0	0	0	0	0	2	7	1	0	0	0	0	10	7.6	10
Finland	0	0	0	0	0	0	0	4	0	0	3	0	7	1.3	7
France	13	11	65	237	515	760	619	251	190	81	29	0	2771	41.4	1351
Germany	9	9	14	26	30	49	97	105	94	55	29	25	542	6.6	447
Greece	167	250	342	431	453	549	352	290	155	38	18	4	3049	283.1	1689
Hungary	1	0	0	2	5	6	0	0	0	0	0	0	14	1.4	14
Iceland	0	1	0	0	0	0	0	0	0	0	0	0	1	3	1
Ireland	10	9	5	10	14	17	12	0	2	6	19	6	110	23	92
Italy	127	66	113	214	296	374	471	427	275	124	68	44	2599	42.9	2038
Latvia	0	0	0	7	7	1	0	2	3	1	1	0	22	11.3	22
Lithuania	0	0	0	0	0	0	0	0	0	1	1	0	2	0.7	2
Luxembourg	0	1	0	0	0	0	1	0	0	0	2	0	4	6.8	4
Malta	0	0	0	0	0	0	0	0	0	5	0	0	5	10.9	5
Netherlands	3	0	0	0	2	2	0	3	10	1	4	0	25	1.5	23
Norway	0	0	0	0	4	0	1	2	0	0	3	0	10	1.9	10
Poland	13	3	1	18	12	3	17	19	10	9	18	9	132	3.5	96
Portugal	0	0	0	0	4	108	13	0	3	1	3	3	135	13.1	126
Romania	264	339	329	101	102	105	111	104	111	100	92	63	1821	92.7	1482
Slovakia	0	0	5	1	0	0	3	18	72	257	87	28	471	86.7	291
Slovenia	0	0	1	2	0	0	0	3	3	0	0	0	9	4.4	9
Spain	0	1	11	6	14	53	51	41	25	15	6	5	228	4.9	217
Sweden	2	0	11	17	2	2	2	4	3	3	2	4	52	5.2	52
United Kingdom	22	65	46	55	81	148	201	154	99	82	52	14	1019	15.5	1019
EU/EEA	633	772	949	1145	1567	2227	1998	1535	1140	795	458	234	13453	26	9389

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 October 2017 to 30 September 2018



Thirty-seven deaths attributable to measles were reported to TESSy during the 12-month period; 24 in Romania, six in Italy, four in Greece and three in France (Figure 3).

Figure 3. Number of measles deaths by country, EU/EEA, 1 October 2017 to 30 September 2018 (n=37)



Importation status was reported by 30 countries and known for 12 460 cases (93%). Among cases with known importation status, 8 699 (70%) were reported as endemic, 3 114 cases (25%) were import-related and 647 cases (5%) were imported.¹

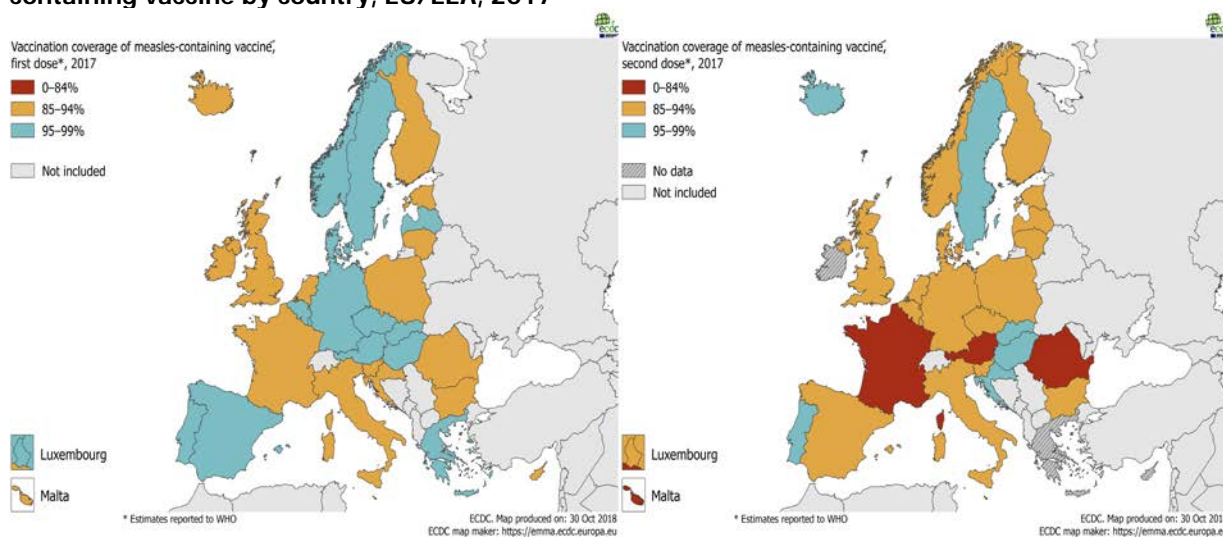
Of 13 452 cases with known age, 4 148 (31%) were children under five years, while 6 674 (50%) were aged 15 years or older. The highest notification rate was in children under one year of age (292.6 cases per million) and in children aged 1–4 years (125.7 cases per million).

A total of 1 371 cases (10%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above: 21% (680 of 3 201 cases). Of 12 081 cases (90% of all cases) with known age and vaccination status, 9 841 (81%) were unvaccinated, 1 344 (11%) were vaccinated with one dose of measles-containing vaccine, 781 (6%) were vaccinated with two or more doses and 115 (1%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among children under one year of age (1 422 of 1 507 cases; 94%), who are too young to have received the first dose of the measles-containing vaccine. Infants under one year are particularly vulnerable to complications of measles and are best protected by herd immunity. Among 2 641 cases aged 1–4 years, 2 092 (79%) were unvaccinated, 386 (15%) were vaccinated with one dose of measles-containing vaccine, 48 (2%) were vaccinated with two or more doses and 13 (0%) 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 data on national vaccination 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 of measles-containing vaccine for 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 the second dose must be achieved at all subnational levels and in all communities to interrupt measles circulation [7].

Figure 4. Vaccination coverage for the first (left panel) and second (right panel) doses of measles-containing vaccine by country, EU/EEA, 2017



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.

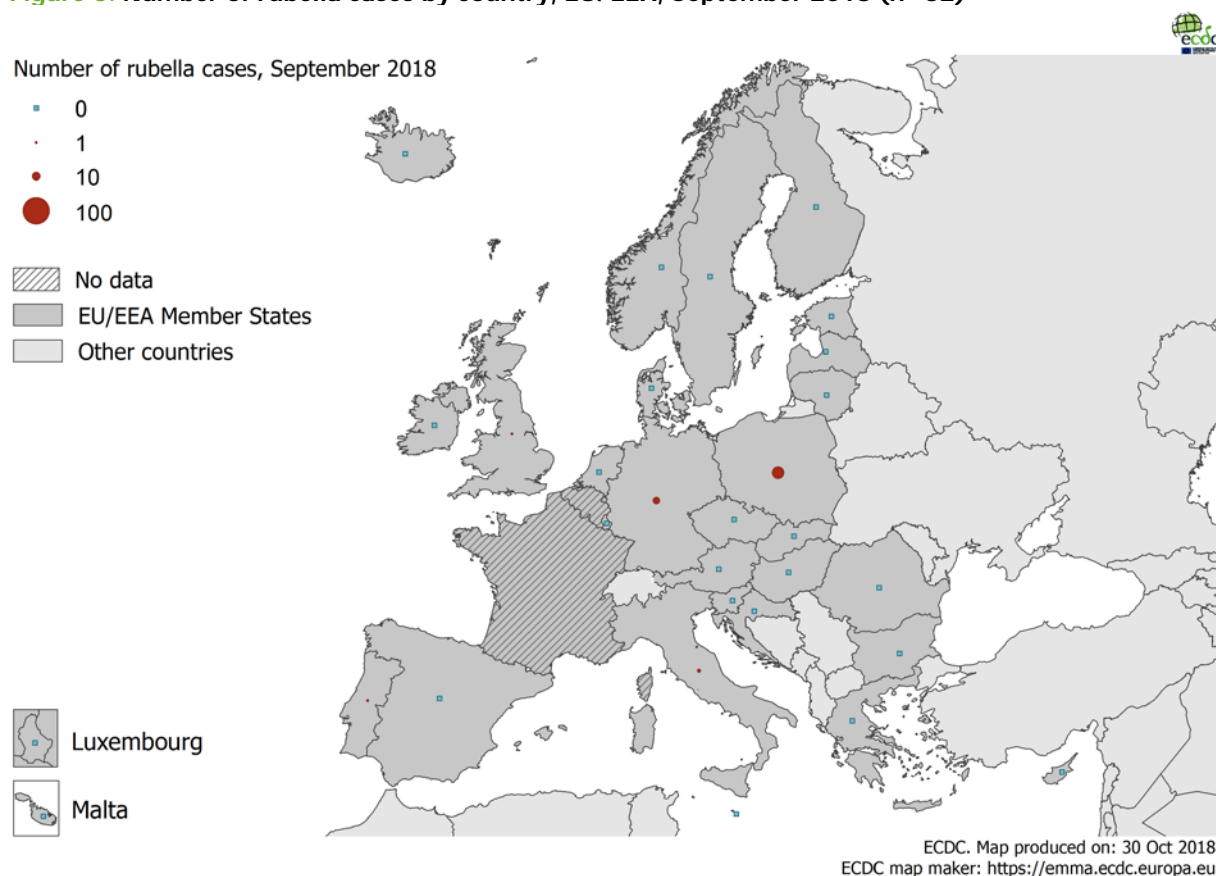
Rubella

Rubella in September 2018

All 28 countries reported rubella data for September 2018, with a total of 32 cases reported by five countries (Germany, Italy, Poland, Portugal and United Kingdom), while 23 countries reported zero cases (Figure 5).

Twenty-one of the 32 cases (66%) were reported by Poland. Fewer cases were reported than in recent months, largely due to a reduction in the number of cases reported by Poland. Poland reported 21 cases in September, compared to 38 in August and 39 cases in July. No new rubella outbreaks were detected in the EU/EEA.

Figure 5. Number of rubella cases by country, EU/EEA, September 2018 (n=32)



Rubella between October 2017 and September 2018

Between 1 October 2017 and 30 September 2018, 14 EU/EEA Member States reported 616 cases of rubella, 63 (10%) of which were laboratory-confirmed. Fourteen countries reported zero cases. The highest number of cases were reported by Poland (472), Germany (66), Italy (25) and Austria (21), accounting for 77%, 11%, 4% and 3% of all cases, respectively (Table 2). Notification rates per million population above the EU/EEA average (1.4) were reported by Poland (12.4), Austria (2.4) and Latvia (1.5) (Figure 6).

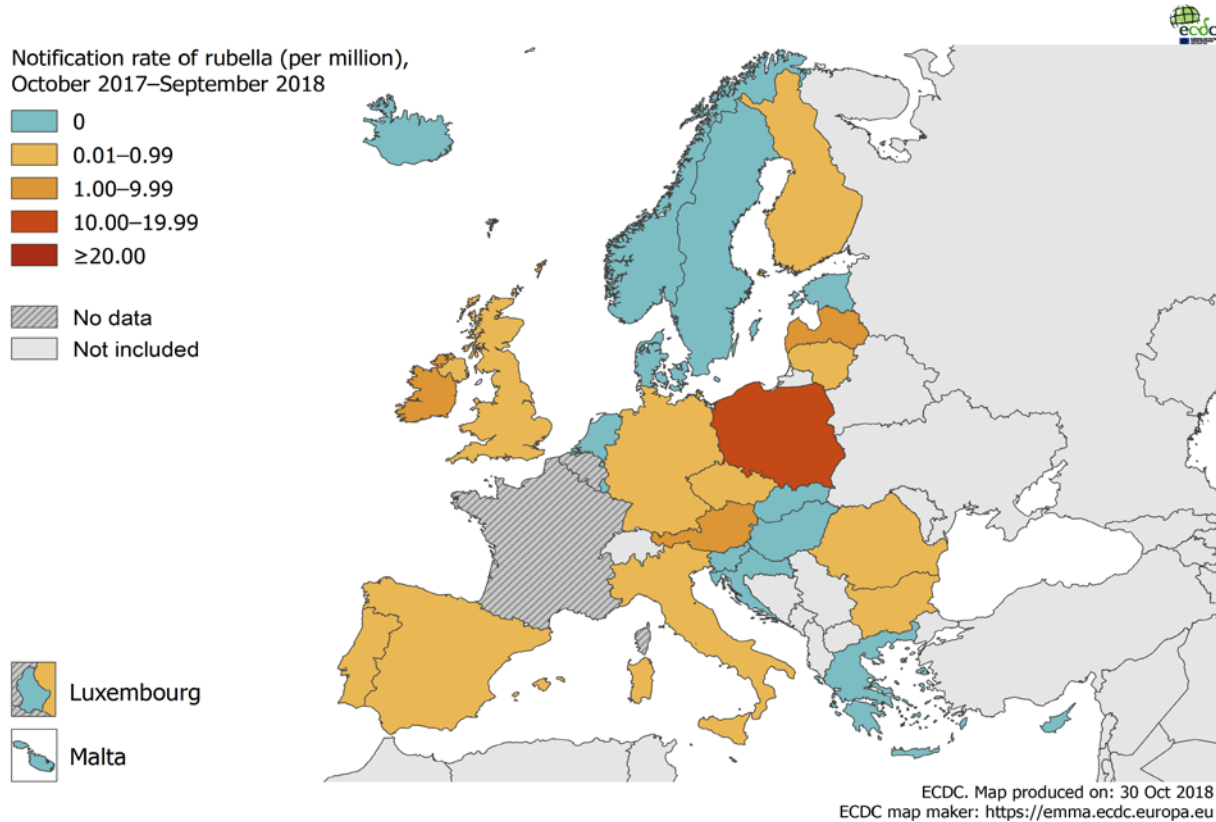
Data from Poland were reported in an aggregated format and should be interpreted with caution, as only 3/472 cases (0.6%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 146 (31%) cases in children aged 1–4 years, 141 (30%) cases in children aged 5–9 years and 68 (14%) cases in children under one year.

There were no deaths attributable to rubella 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 October 2017 to 30 September 2018

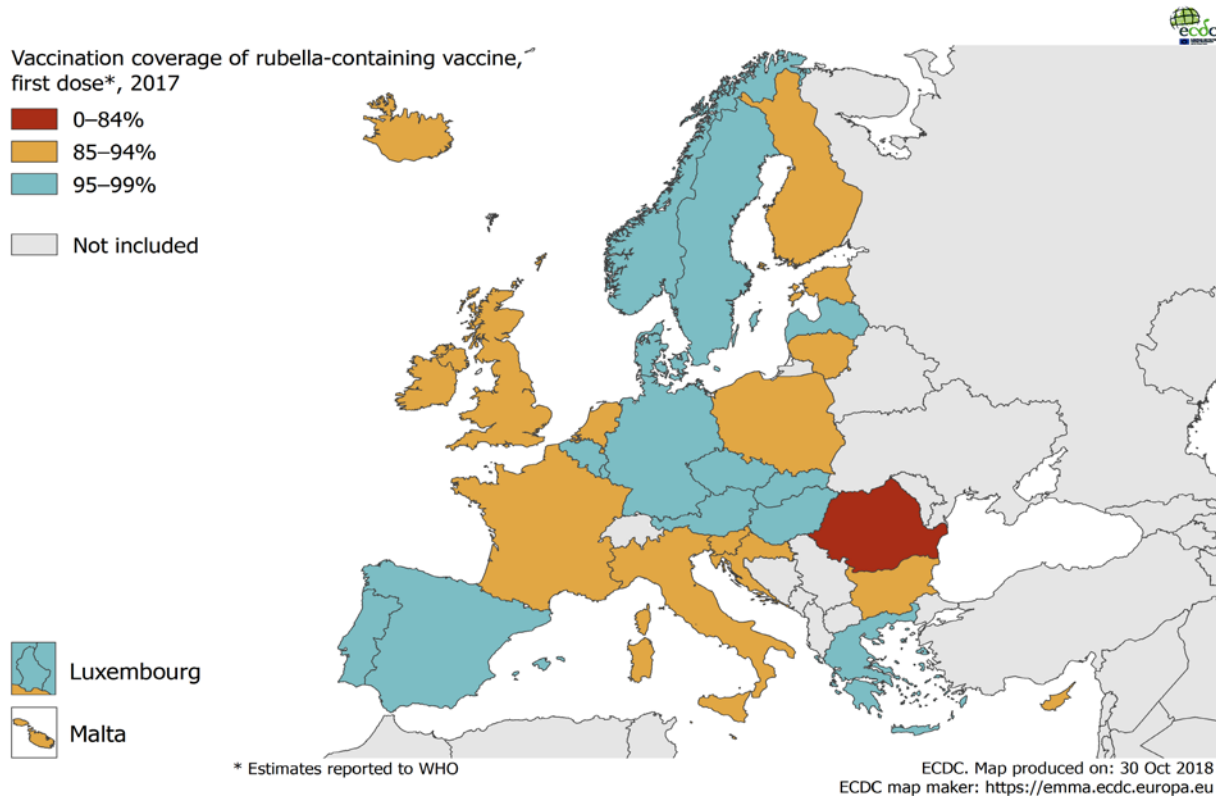
Country	2017	2017	2017	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Austria	1	7	5	8	0	0	0	0	0	0	0	0	21	2.39	21
Bulgaria	0	0	0	0	0	0	1	0	0	0	0	0	1	0.14	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	0	0	0	0	1	0	0	0	0	0	1	0	2	0.19	1
Denmark	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
Finland	1	0	0	0	0	0	0	0	0	0	0	0	1	0.18	1
Germany	9	5	3	5	4	7	5	3	6	7	5	7	66	0.8	11
Greece	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
Ireland	0	0	0	0	1	0	1	1	0	1	1	0	5	1.05	0
Italy	2	2	2	1	2	2	4	2	2	3	1	2	25	0.41	8
Latvia	0	0	0	0	1	1	0	1	0	0	0	0	3	1.54	3
Lithuania	0	0	0	0	0	0	0	1	0	0	0	0	1	0.35	1
Luxembourg	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
Netherlands	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	34	31	33	36	43	42	47	58	50	39	38	21	472	12.43	3
Portugal	0	0	0	0	1	0	0	0	2	0	1	1	5	0.48	3
Romania	0	1	0	1	0	1	1	0	1	1	1	0	7	0.36	5
Slovakia	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
Spain	0	0	0	0	0	0	1	1	1	0	0	0	3	0.06	2
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	1	1	0	0	1	0	0	0	0	0	0	1	4	0.06	4
EU/EEA	48	47	43	51	54	53	60	67	62	51	48	32	616	1.4	63

Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 October 2017 to 30 September 2018



The latest WHO data on national rubella vaccination coverage [8] show that 14 EU/EEA countries reported at least 95% vaccination coverage for the first dose of rubella-containing vaccine in 2017 (Figure 7). 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].

Figure 7. Vaccination coverage for the first dose of rubella-containing vaccine by country, EU/EEA, 2017



References

1. European Centre for Disease Prevention and Control. Surveillance Atlas of Infectious Diseases [internet]. Stockholm: ECDC; 2017 [cited 5 November 2018]. Available from: <http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=27&HealthTopic=35&Indicator=258323&GeoResolution=2&TimeResolution=Month&StartTime=2018-05&EndTime=2018-05&CurrentTime=2018-05&Distribution=258340&DistributionRepresentation=B&TimeSeries=region&TimeSeriesRepresentation=T>.
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