

## SURVEILLANCE REPORT

# Monthly measles and rubella monitoring report

January 2019

Period covered: 1 December 2017 to 30 November 2018

## Introduction

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

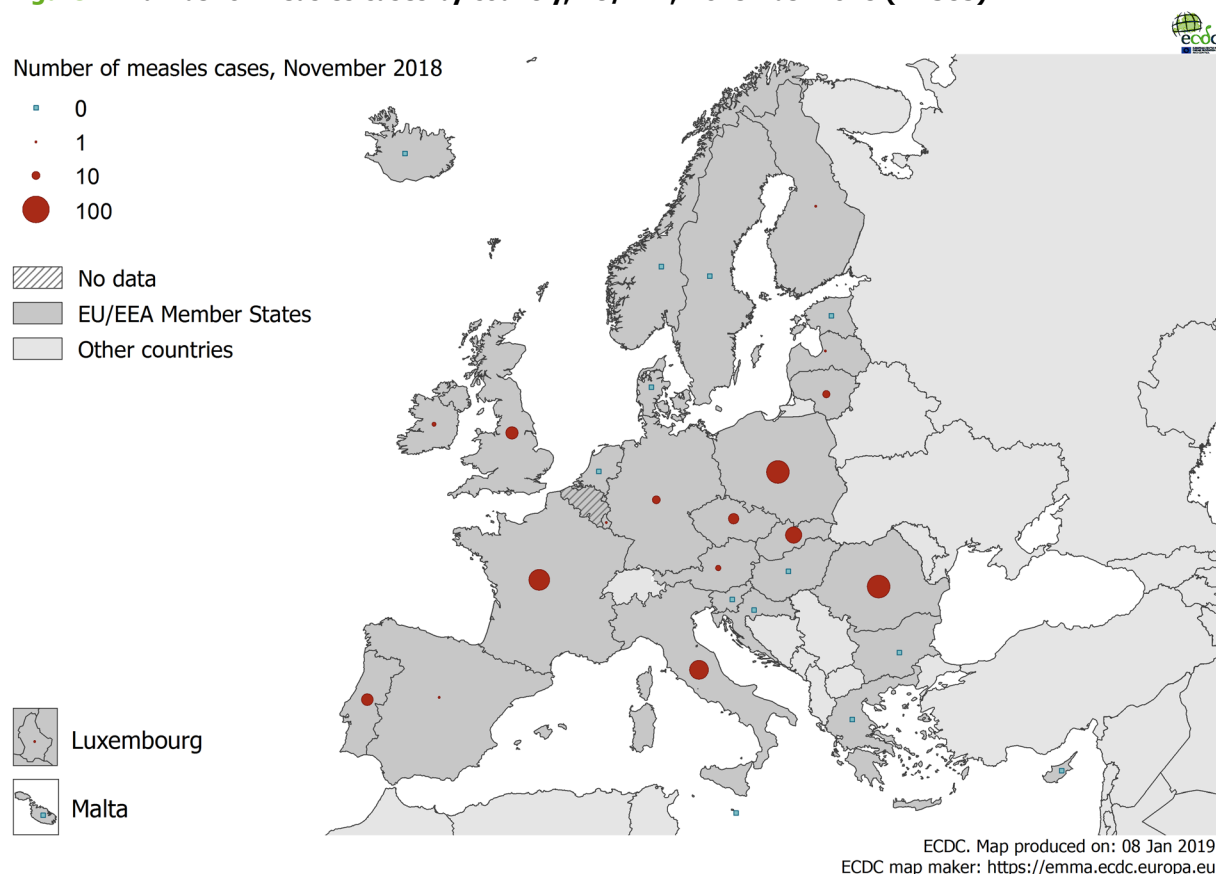
Twenty-nine countries reported measles data for November 2018, with 385 cases reported by 16 countries and 13 countries reporting no cases. Belgium did not report measles data for November 2018 (Figure 1).

Overall, case numbers continued to increase compared with the previous two months. Poland, France, Italy, United Kingdom and Portugal had the highest case counts with 74, 60, 51, 22 and 21 cases, respectively (Table 1).

Notable increases were reported in Poland and Portugal.

- Poland reported 74 cases in November, compared with 16 in October and nine cases in September.
- Portugal reported 21 cases in November, compared with two in October and two cases in September.

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, November 2018 (n=385)**

## Measles between December 2017 and November 2018

Between 1 December 2017 and 30 November 2018, 30 EU/EEA Member States reported 12 790 cases of measles, 8 949 (70%) of which were laboratory-confirmed. One country reported no cases. The highest number of cases were reported by France (2 921), Greece (2 634), Italy (2 548), Romania (1 346) and United Kingdom (984), accounting for 23%, 21%, 20%, 10% and 8% of all cases, respectively (Table 1). Notification rates per million population above the EU/EEA average (24.7) were reported by Greece (244.6), Slovakia (96.6), Romania (68.5), France (43.6) and Italy (42.0) (Figure 2).

The number of measles cases reported to TESSy may be an underestimation in certain cases. 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 [4].

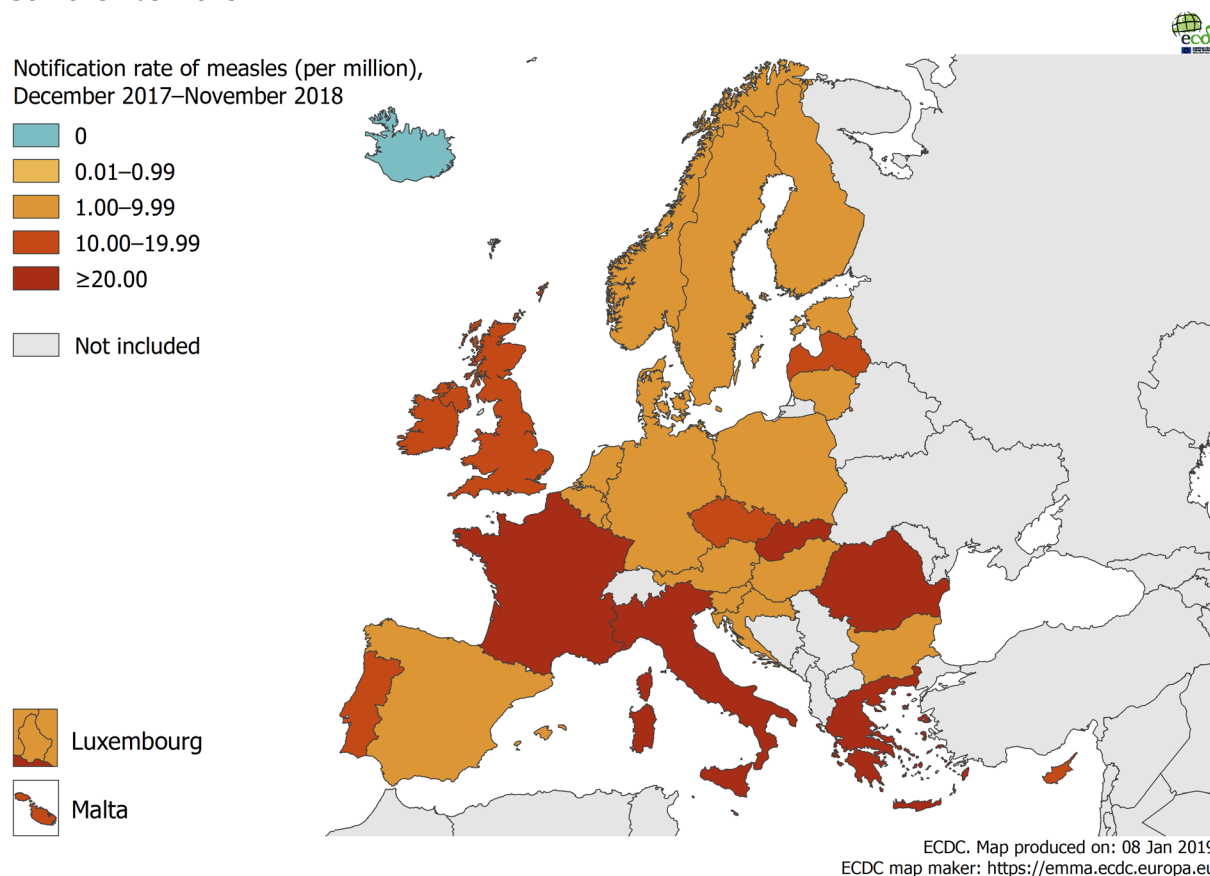
**Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 December 2017 to 30 November 2018**

Country	2017	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov			
Austria	1	7	5	15	17	12	6	1	3	6	0	4	77	8.8	70
Belgium	1	1	6	9	11	24	22	3	11	14	4	.	106	9.3	87
Bulgaria	0	0	1	2	1	1	1	7	0	0	0	0	13	1.8	13
Croatia	0	0	0	0	1	2	16	3	1	0	0	0	23	5.5	23
Cyprus	0	5	6	4	0	0	0	0	0	0	0	0	15	17.6	15
Czech Republic	4	10	23	32	40	33	12	4	7	4	7	16	192	18.1	189
Denmark	0	0	0	3	0	0	0	0	1	2	0	0	6	1.0	6
Estonia	0	0	0	2	7	1	0	0	0	0	0	0	10	7.6	10
Finland	0	0	0	0	0	4	0	0	3	0	0	1	8	1.4	8
France	65	237	515	760	619	251	190	81	29	38	76	60	2921	43.6	1434
Germany	14	26	30	49	98	105	94	54	29	24	13	10	546	6.6	460
Greece	342	431	453	549	352	290	155	38	18	4	2	0	2634	244.6	1478

Country	2017	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov			
Hungary	0	2	5	6	0	0	0	0	0	0	0	0	13	1.3	13
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Ireland	5	9	13	17	12	0	2	5	18	6	4	3	94	19.6	76
Italy	113	213	297	374	467	429	277	126	75	50	76	51	2548	42.0	1975
Latvia	0	7	7	1	0	2	3	1	1	0	0	1	23	11.8	23
Lithuania	0	0	0	0	0	0	0	1	1	0	0	8	10	3.5	10
Luxembourg	0	0	0	0	1	0	0	0	2	0	0	1	4	6.8	4
Malta	0	0	0	0	0	0	0	5	0	0	0	0	5	10.9	5
Netherlands	0	0	2	2	0	3	10	1	4	0	0	0	22	1.3	20
Norway	0	0	4	2	1	2	0	0	3	0	0	0	12	2.3	10
Poland	1	18	12	3	17	19	10	9	18	9	16	74	206	5.4	141
Portugal	0	0	4	108	13	0	3	1	3	2	2	21	157	15.2	148
Romania	329	101	102	105	111	104	111	100	92	63	54	74	1346	68.5	1122
Slovakia	5	1	0	0	3	18	72	257	87	28	16	38	525	96.6	336
Slovenia	1	2	0	0	0	3	3	0	0	0	1	0	10	4.8	10
Spain	11	6	14	52	50	41	25	15	6	4	4	1	229	4.9	228
Sweden	11	17	2	2	2	4	3	3	2	4	1	0	51	5.1	51
United Kingdom	46	55	81	149	202	155	100	82	55	16	21	22	984	14.9	984
<b>EU/EEA</b>	<b>949</b>	<b>1148</b>	<b>1582</b>	<b>2246</b>	<b>2025</b>	<b>1503</b>	<b>1115</b>	<b>797</b>	<b>469</b>	<b>274</b>	<b>297</b>	<b>385</b>	<b>12790</b>	<b>24.7</b>	<b>8949</b>

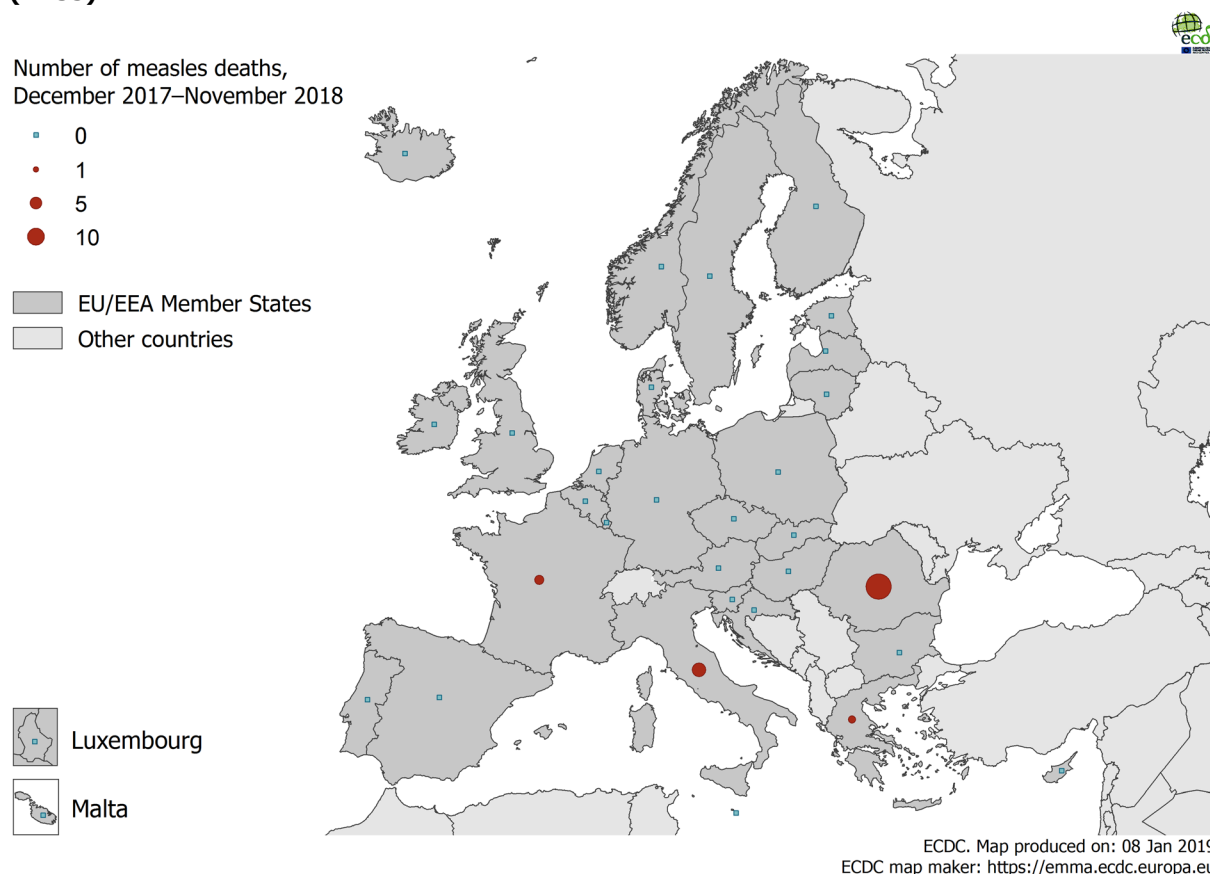
Source: TESSy, data extracted on 8 January 2019  
 ..: data not reported.

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



Thirty-five deaths attributable to measles were reported to TESSy during the 12-month period in Romania (23), Italy (7), France (3) and Greece (2) (Figure 3).

**Figure 3. Number of measles deaths by country, EU/EEA, 1 December 2017 to 30 November 2018 (n=35)**



Importation status was reported by 30 countries and known for 11 687 cases (91%). Among cases with known importation status, 8 354 (71%) were reported to be endemic, 2 691 (23%) were import-related and 642 (5%) were imported.<sup>1</sup>

Of 12 715 cases with known age, 3 810 (30%) were children under five years and 6 539 (51%) were aged 15 years or older. The highest notification rates were in children under one year (280.8 cases per million) and aged 1–4 years (112.5 cases per million).

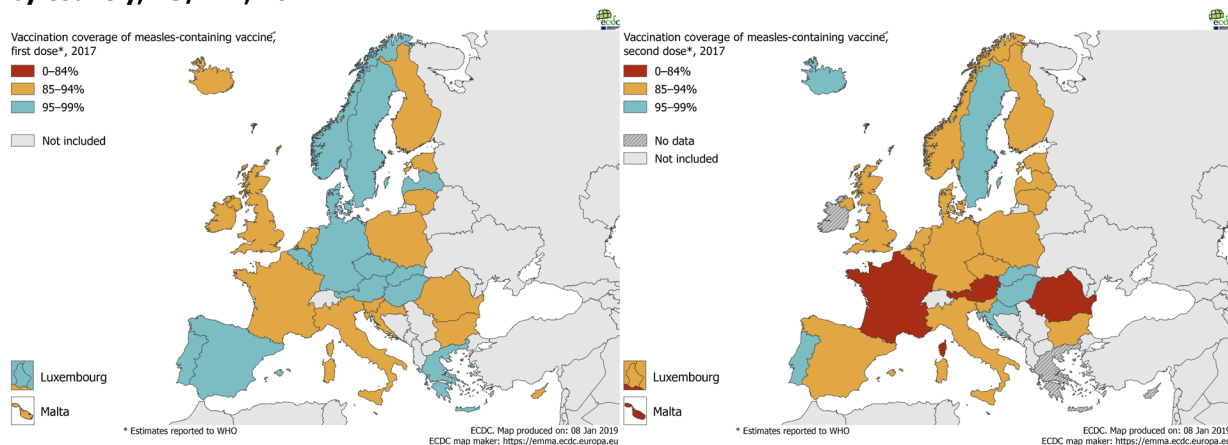
A total of 1 277 cases (10%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (628 of 3 149 cases; 20%). Of 11 438 cases (89% of all cases) with known age and vaccination status, 9 128 (80%) were unvaccinated, 1 275 (11%) were vaccinated with one dose of measles-containing vaccine, 814 (7%) were vaccinated with two or more doses and 221 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among children under one year (1 367 of 1 446 cases; 95%) 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 2 364 cases aged 1–4 years, 1 853 (78%) were unvaccinated, 349 (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 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 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 must be achieved at all subnational levels and in all communities to interrupt measles circulation [7].

<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) and second (right) doses of measles-containing vaccine by country, EU/EEA, 2017**



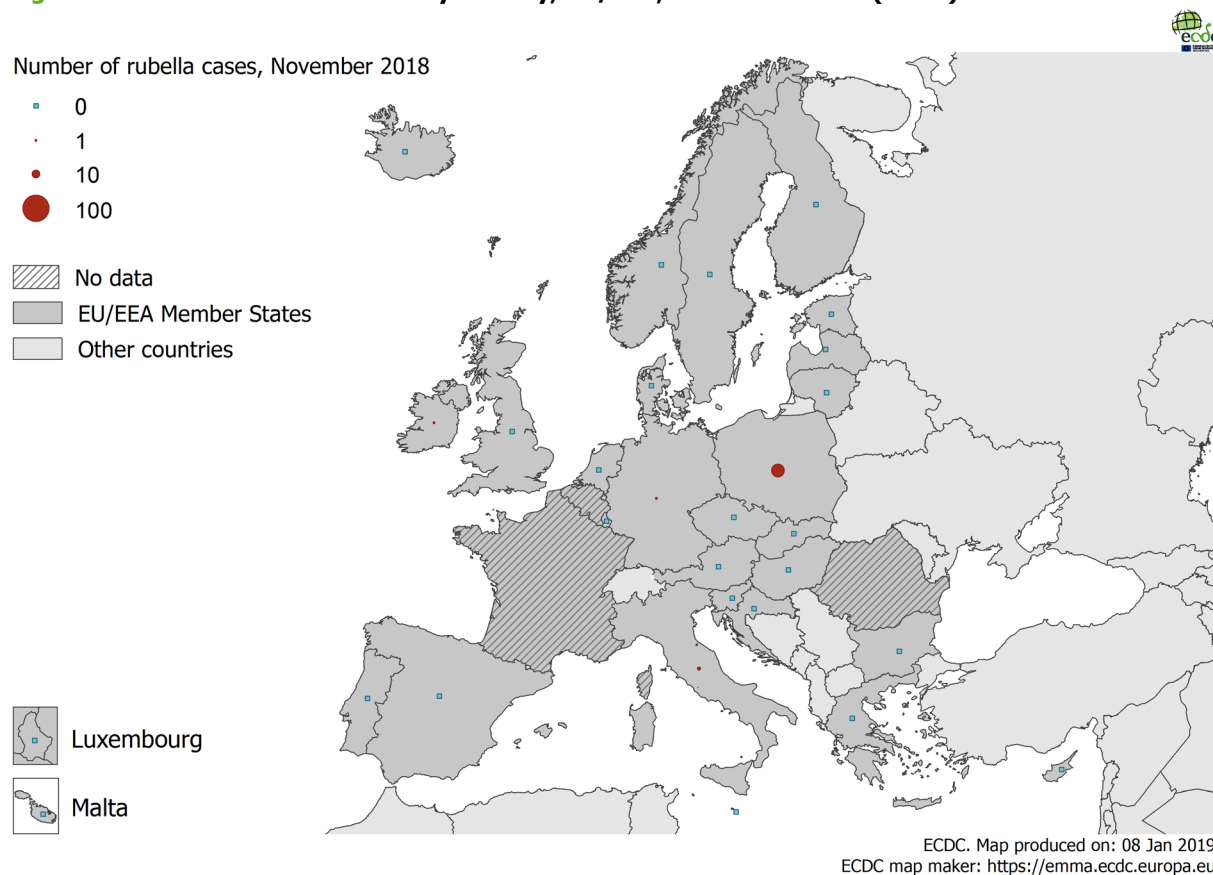
## Rubella

### Rubella in November 2018

Twenty-seven countries reported rubella data for November 2018, with 30 cases reported by four countries (Germany, Ireland, Italy and Poland) and 23 countries reporting no cases. Romania did not report rubella data for November 2018 (Figure 5).

Overall, case numbers changed little compared with the previous two months. Twenty-six of the 30 cases (87%) were reported by Poland (Table 2). No new rubella outbreaks were detected in the EU/EEA.

**Figure 5. Number of rubella cases by country, EU/EEA, November 2018 (n=30)**



## Rubella between December 2017 and November 2018

Between 1 December 2017 and 30 November 2018, 14 EU/EEA Member States reported 583 cases of rubella, 50 (9%) of which were laboratory-confirmed. Fourteen countries reported no cases. The highest number of cases were reported by Poland (459), Germany (58), Italy (24), Austria (13) and Romania (7), accounting for 79%, 10%, 4%, 2% and 1% of all cases, respectively (Table 2). Notification rates per million population above the EU/EEA average (1.3) were reported by Poland (12.1), Latvia (1.5) and Austria (1.5) (Figure 6).

Data from Poland were reported in an aggregated format and should be interpreted with caution, as only three of 459 cases (1%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 144 (31%) cases in children aged 5–9 years, 137 (30%) cases in children aged 1–4 years and 63 (14%) cases in children under one year.

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

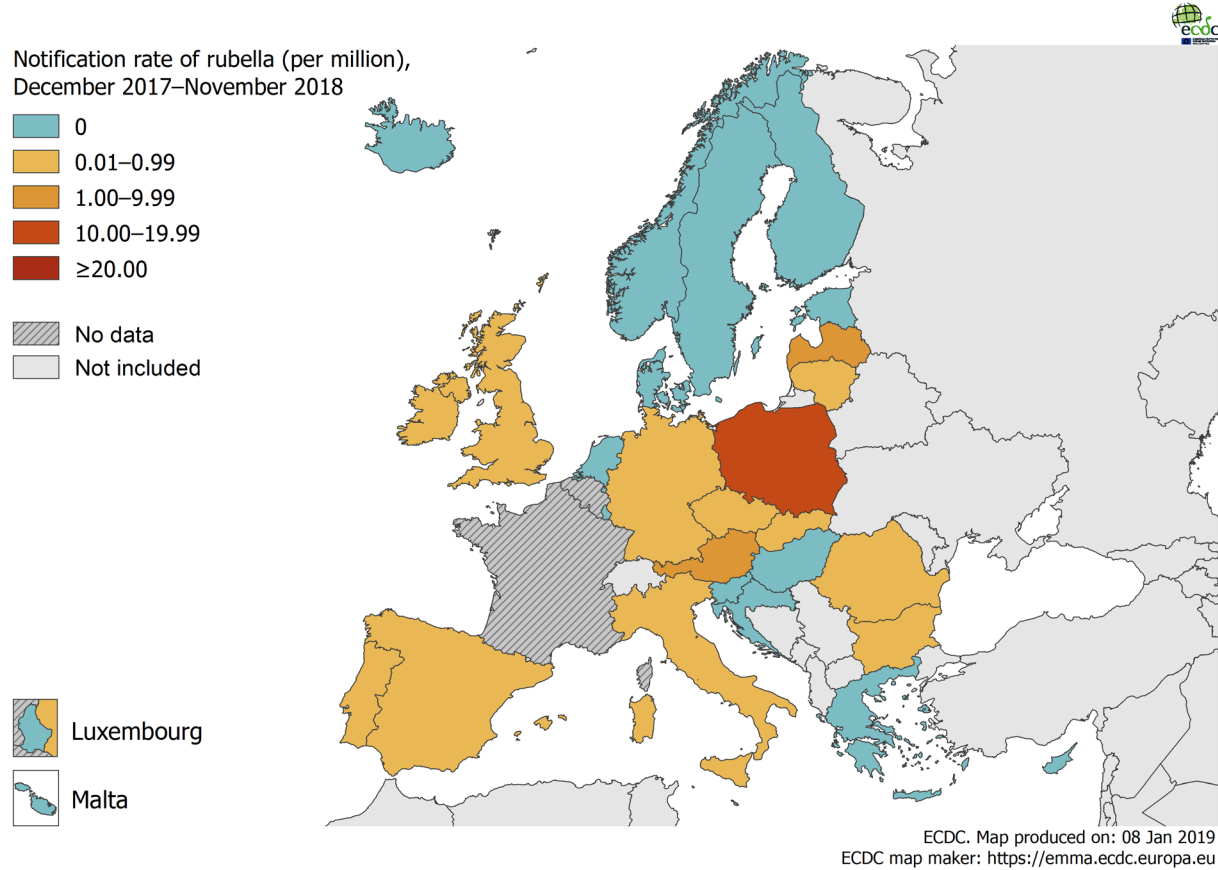
**Table 2. Number of rubella cases by month and notification rate per million population by country, EU/EEA, 1 December 2017 to 30 November 2018**

Country	2017	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov			
Austria	5	8	0	0	0	0	0	0	0	0	0	0	13	1.5	13
Bulgaria	0	0	0	0	1	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	0	1	0	0	0	0	0	1	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	3	5	4	7	5	3	6	7	5	6	6	1	58	0.7	12
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	1	0	1	0	0	0	1	0	0	1	4	0.8	0
Italy	2	1	2	2	4	2	2	3	2	2	0	2	24	0.4	6
Latvia	0	0	1	1	0	1	0	0	0	0	.	0	3	1.5	3
Lithuania	0	0	0	0	0	1	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	33	36	43	42	47	58	50	39	36	22	27	26	459	12.1	3
Portugal	0	0	1	0	0	0	2	0	1	1	0	0	5	0.5	3
Romania	0	1	0	1	1	0	1	1	1	0	1	.	7	0.4	4
Slovakia	0	0	0	0	0	0	0	0	0	0	1	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	0	1	1	1	0	0	0	0	0	3	0.1	2
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	0	0	1	0	0	0	0	0	0	1	0	0	2	0.0	2
<b>EU/EEA</b>	<b>43</b>	<b>51</b>	<b>54</b>	<b>53</b>	<b>60</b>	<b>66</b>	<b>62</b>	<b>50</b>	<b>47</b>	<b>32</b>	<b>35</b>	<b>30</b>	<b>583</b>	<b>1.3</b>	<b>50</b>

Source: TESSy, data extracted on 8 January 2019

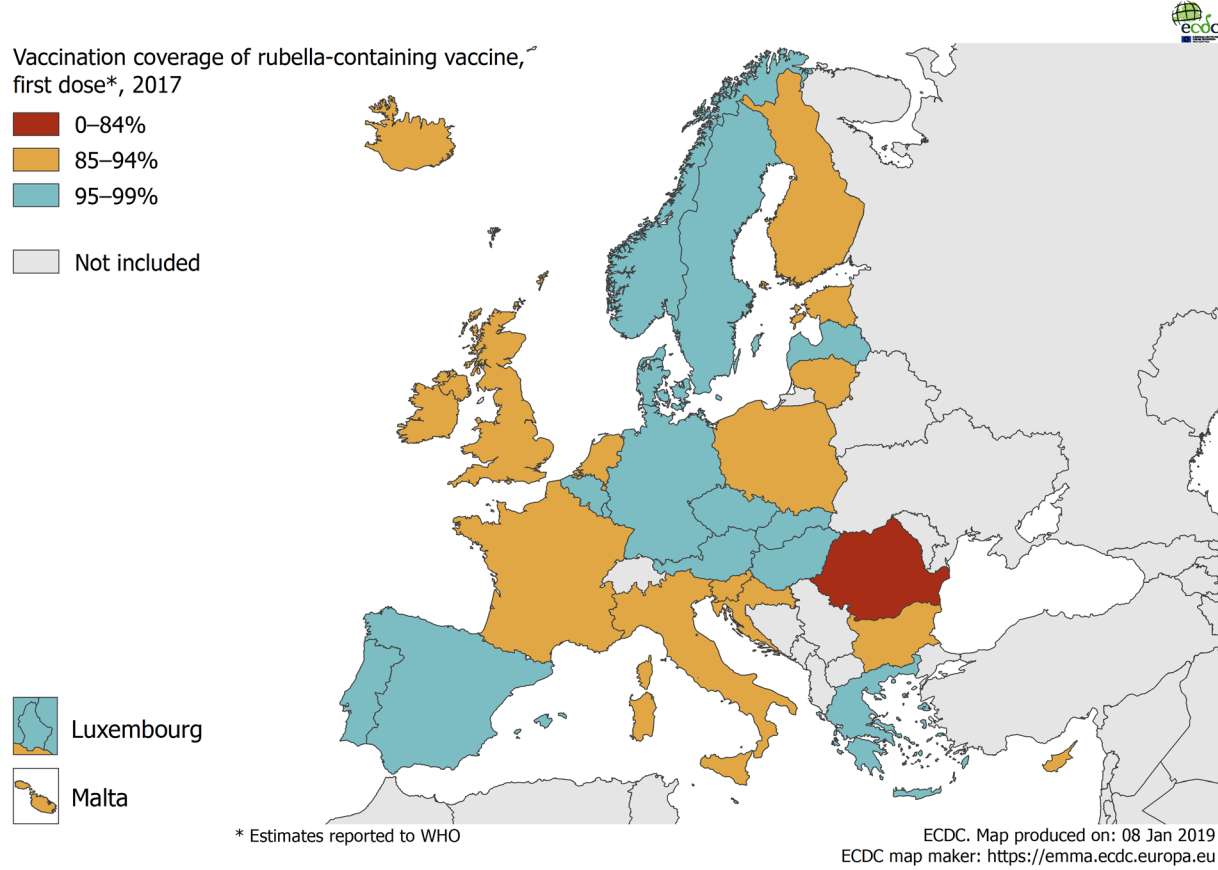
..: data not reported.

**Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 December 2017 to 30 November 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 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 – Measles [Internet]. Stockholm: ECDC; 2018 [cited 8 January 2019]. Available from: <https://atlas.ecdc.europa.eu/public/index.aspx?Dataset=335>
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7. World Health Organization Regional Office for Europe. Eliminating measles and rubella. Framework for the verification process in the WHO European Region. Copenhagen, WHO Regional Office for Europe; 2014 [cited 12 September 2018]. 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. Rubella-containing vaccine 1st dose – reported estimates of RCV1 coverage [Internet]. Geneva: WHO; 2018 [cited 12 September 2018]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tscoveragercv1.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tscoveragercv1.html).