

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

October 2018

Period covered: 1 September 2017 to 31 August 2018

Introduction

This monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for the period 1 September 2017 to 31 August 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 ECDC's 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 August 2018

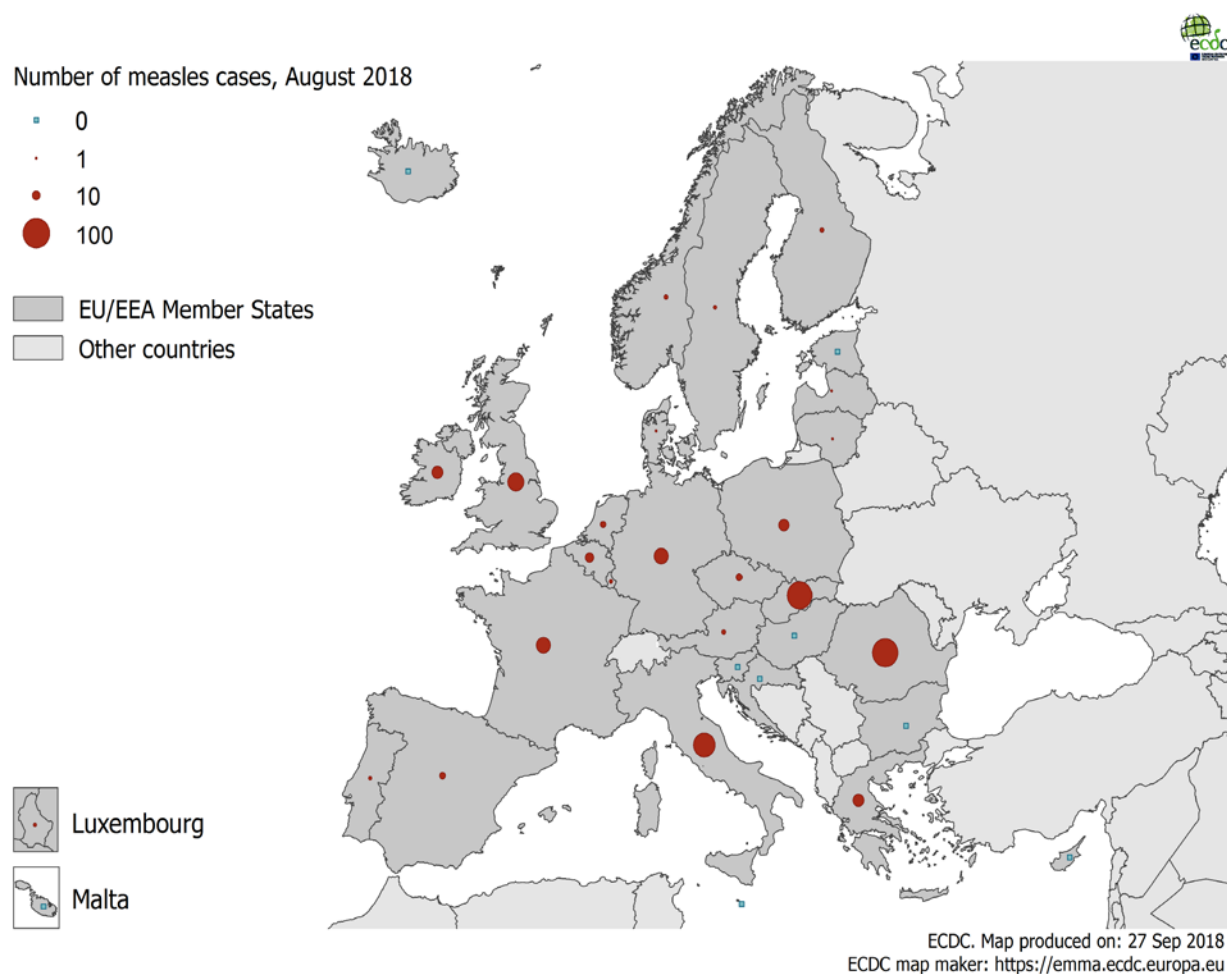
All 30 countries reported measles data for August 2018, with a total of 439 cases reported by 22 countries and eight countries reporting zero cases (Figure 1).

Overall, case numbers continued to decrease compared with previous months. A small increase was reported in Ireland, with 19 cases compared to six in July and two cases in June 2018.

Slovakia, Italy, United Kingdom, France and Germany continued to have the highest case counts, although the trend was decreasing:

- Slovakia reported 87 cases in August, a decrease from 257 cases in July and 72 cases in June
- Italy reported 66 cases in August, compared with 257 cases in July and 273 cases in June
- United Kingdom reported 38 cases in August, a decrease from 177 cases in July and 327 cases in June
- France reported 30 cases in August, compared with 81 cases in July and 191 cases in June
- Germany reported 29 cases in August, a decrease from 54 in July and 94 cases in June.

In addition to the CDTR [1], recent updates have been published online by the national public health authorities of Italy [4], France [5], Germany [6] and Slovakia [7].

Figure 1. Number of measles cases by country, EU/EEA, August 2018 (n=439)

Measles between September 2017 and August 2018

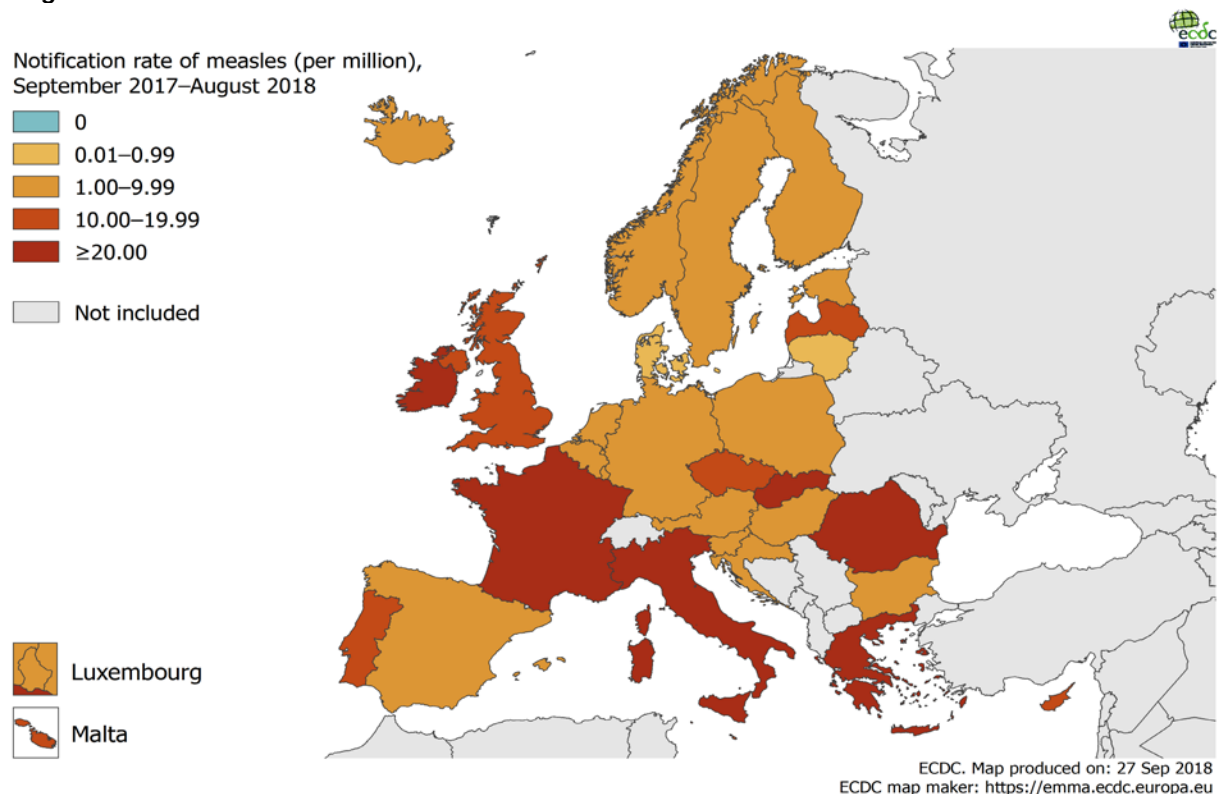
Between 1 September 2017 and 31 August 2018, 30 EU/EEA Member States reported 13 547 cases of measles, of which 9 364 (69%) were laboratory-confirmed. The majority of cases were reported by Greece (3 171), France (2 792), Italy (2 718), Romania (1 765) and United Kingdom (1 007), accounting for 23%, 21%, 20%, 13% and 7% of all cases respectively (Table 1). Notification rates per million population above the EU/EEA average (26.2) were reported by Greece (294.5), Romania (89.8), Slovakia (81.5), Italy (44.9) and France (41.7) (Figure 2).

The number of measles cases reported to TESSy may in some cases be an underestimation. This may particularly apply to Romania where a sustained outbreak 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) [8].

Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 September 2017–31 August 2018

Country	2017 Sep	2017 Oct	2017 Nov	2017 Dec	2018 Jan	2018 Feb	2018 Mar	2018 Apr	2018 May	2018 Jun	2018 Jul	2018 Aug	Total cases	Cases per million	Total lab- positive cases
Austria	1	2	8	1	7	5	15	17	12	6	1	3	78	8.9	70
Belgium	2	0	3	1	1	6	9	11	23	21	3	11	91	8.0	73
Bulgaria	0	0	0	0	0	1	2	1	1	0	3	0	8	1.1	8
Croatia	0	0	0	0	0	0	0	1	2	16	2	0	21	5.1	21
Cyprus	0	0	0	0	5	6	4	0	0	0	0	0	15	17.6	15
Czech Republic	0	0	6	4	5	8	15	10	68	41	6	5	168	15.9	163
Denmark	0	0	0	0	0	0	3	0	0	0	0	1	4	0.7	4
Estonia	0	0	0	0	0	0	2	7	1	0	0	0	10	7.6	10
Finland	0	0	0	0	0	0	0	0	4	0	0	3	7	1.3	7
France	19	13	11	65	237	516	760	619	251	190	81	30	2792	41.7	1366
Germany	16	9	9	14	26	30	49	97	105	94	54	29	532	6.5	438
Greece	126	167	250	342	431	453	549	352	290	155	38	18	3171	294.5	1788
Hungary	1	1	0	0	2	5	6	0	0	0	0	0	15	1.5	15
Iceland	0	0	1	0	0	0	0	0	0	0	0	0	1	3.0	1
Ireland	0	10	9	5	10	14	17	12	0	2	6	19	104	21.7	90
Italy	166	127	66	113	213	296	375	471	427	273	125	66	2718	44.9	2135
Latvia	0	0	0	0	7	7	1	0	2	3	1	1	22	11.3	22
Lithuania	0	0	0	0	0	0	0	0	0	0	1	1	2	0.7	2
Luxembourg	0	0	1	0	0	0	0	1	0	0	0	2	4	6.8	4
Malta	0	0	0	0	0	0	0	0	0	0	5	0	5	10.9	5
Netherlands	1	3	0	0	0	2	2	0	3	10	1	4	26	1.5	24
Norway	0	0	0	0	0	4	0	1	2	0	0	3	10	1.9	10
Poland	12	13	3	1	17	10	2	10	16	9	7	16	116	3.1	79
Portugal	0	0	0	0	0	4	108	13	0	3	1	2	131	12.7	123
Romania	236	264	339	100	101	102	105	111	104	111	100	92	1765	89.9	1341
Slovakia	0	0	0	5	1	0	0	3	18	72	257	87	443	81.5	270
Slovenia	0	0	0	1	2	0	0	0	3	3	0	0	9	4.4	9
Spain	2	0	1	11	6	14	52	50	41	25	14	6	222	4.8	214
Sweden	2	2	0	11	17	2	2	2	4	3	3	2	50	5.0	50
United Kingdom	18	22	65	46	55	81	148	201	154	99	80	38	1007	15.3	1007
EU/EEA	602	633	772	720	1143	1566	2226	1990	1531	1136	789	439	13547	26.2	9364

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 September 2017–31 August 2018



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

Figure 3. Number of measles deaths by country, EU/EEA, 1 September 2017–31 August 2018 (n=38)



Importation status was reported by 30 countries and known for 12 268 cases (93%). Among cases with known importation status, 8 712 (69%) were reported to be endemic, 3 243 (26%) were import-related, and 613 (5%) were imported.¹

Of 13 544 cases with known age, 4 167 (31%) were children under five years of age, while 6 698 (49%) were aged 15 years or older. The highest notification rate was in children under one year (285.6 cases per million) and children aged 1–4 years (128.3 cases per million).

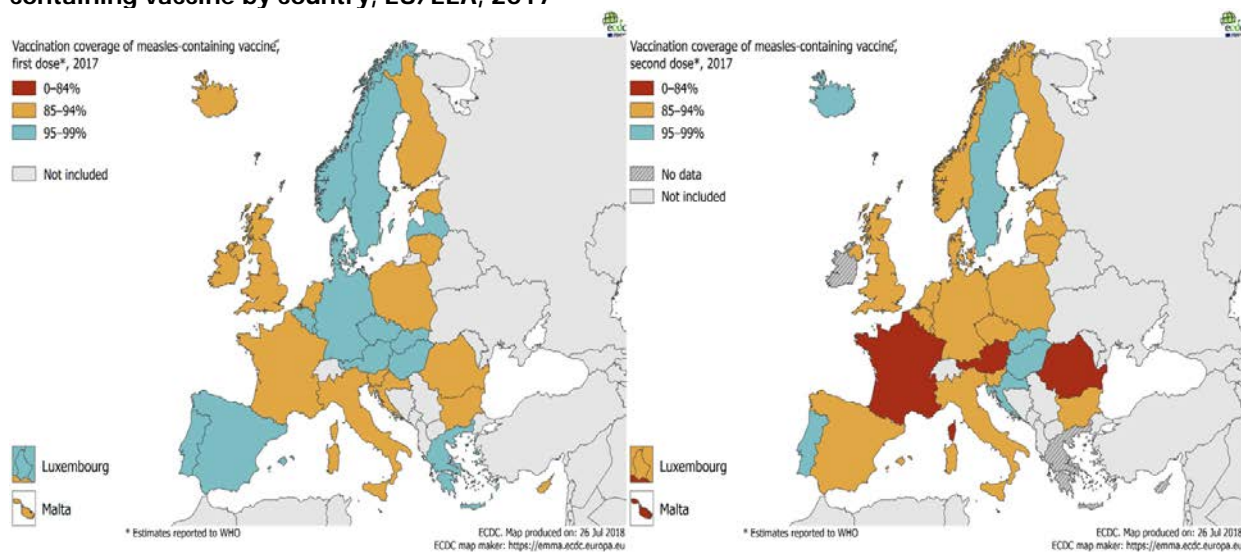
A total of 1 382 (10%) of all cases had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and over, reaching 21%. Of 12 162 cases (90% of all cases) with known age and vaccination status, 82% were unvaccinated, 11% were vaccinated with one dose of measles-containing vaccine, 6% were vaccinated with two or more doses, and 1% were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among children under one year (94%), as they were too young to have received the first dose of the measles-containing vaccine. Infants below the age of one year are particularly vulnerable to complications of measles and are best protected by herd immunity.

Among cases aged 1–4 years, 80% were unvaccinated, 14% were vaccinated with one dose, 2% with two doses or more, 0% with an unknown number of doses, and 4% had an unknown vaccination status.

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 [9] and second [10] doses of measles-containing vaccine show that only four EU/EEA countries 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 [11].

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 an imported virus, as supported by epidemiological and/or virological evidence.

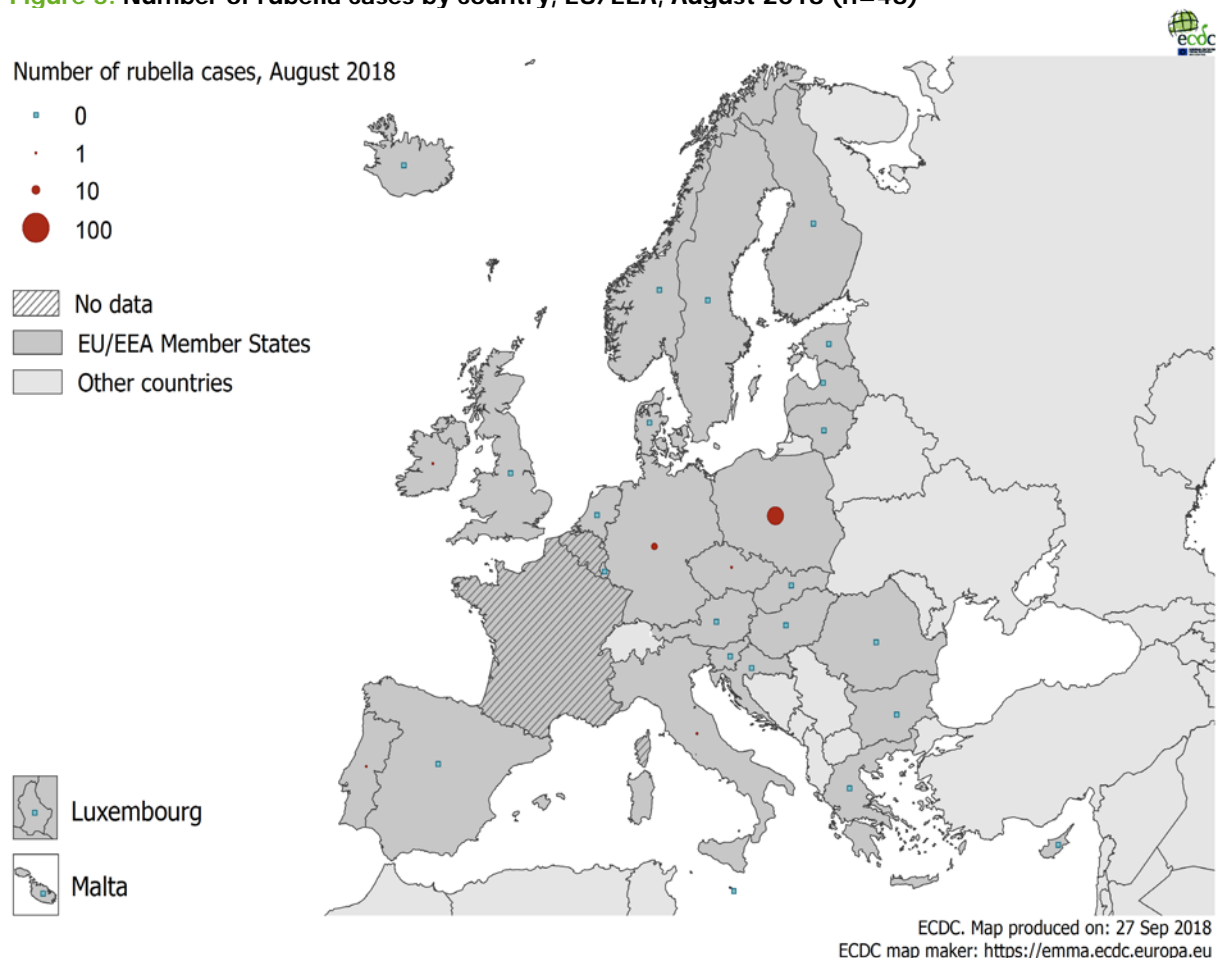
Rubella

Rubella in August 2018

All 28 countries reported rubella data for July 2018, with a total of 48 cases reported by six countries (Czech Republic, Germany, Ireland, Italy, Poland and Portugal) and zero cases from the remaining 23 countries (Figure 5).

Thirty-nine of the 48 cases (81%) were reported by Poland. There were no important changes in the number of cases reported by countries compared to recent months and no new rubella outbreaks were detected in the EU/EEA.

Figure 5. Number of rubella cases by country, EU/EEA, August 2018 (n=48)



Rubella between September 2017 and August 2018

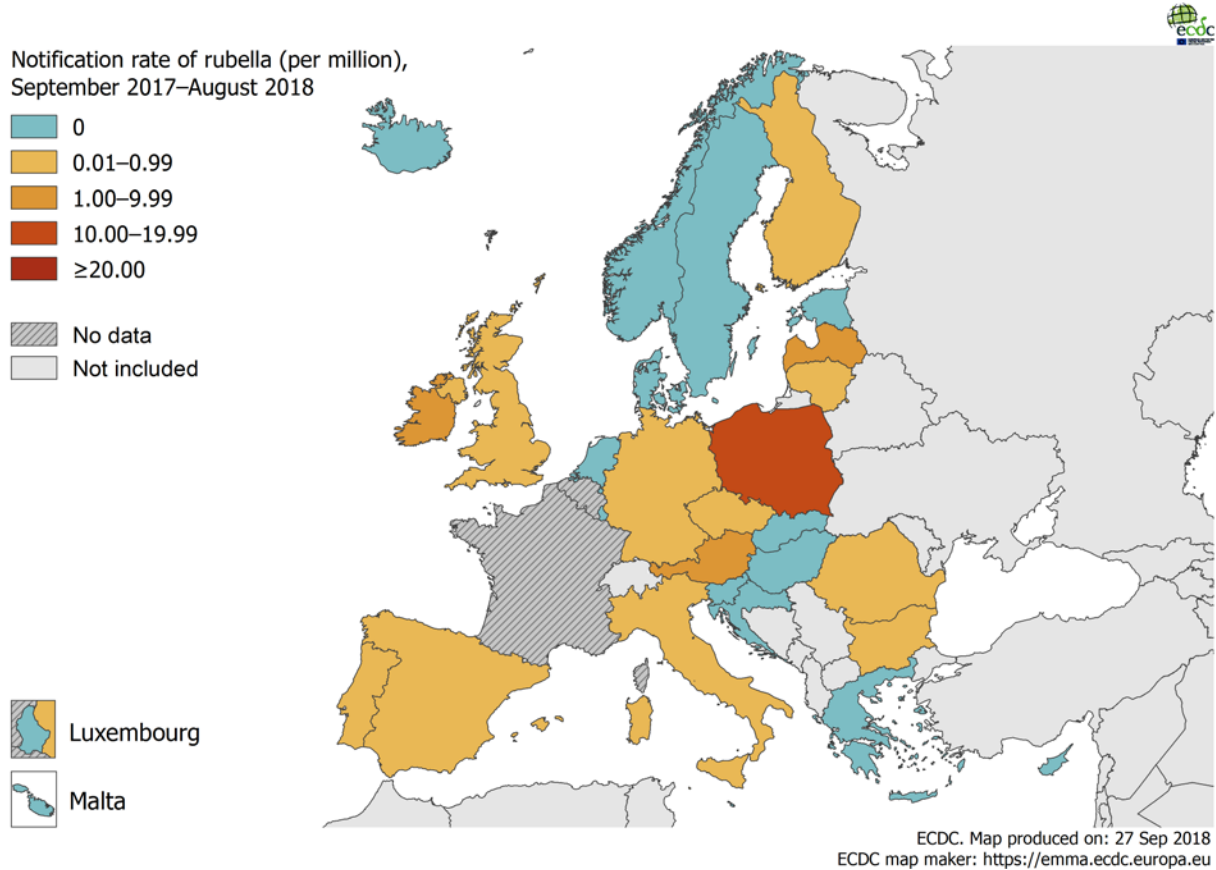
Between 1 September 2017 and 31 August 2018, 14 EU/EEA countries reported a total of 629 cases of rubella, of which 57 (9%) were laboratory-confirmed. Fourteen countries reported zero cases. The highest number of cases were reported by Poland (488), Germany (63), Italy (27) and Austria (21), accounting for 78%, 10%, 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 (12.8), 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 3/488 cases (0.6%) were laboratory-confirmed. The highest burden among cases reported by Poland was in children, with 220 (45%) cases in children under five years and 148 (30%) in children aged five to nine years.

Table 2. Number of rubella cases by month and notification rate per million population by country, EU/EEA, 1 September 2017–31 August 2018

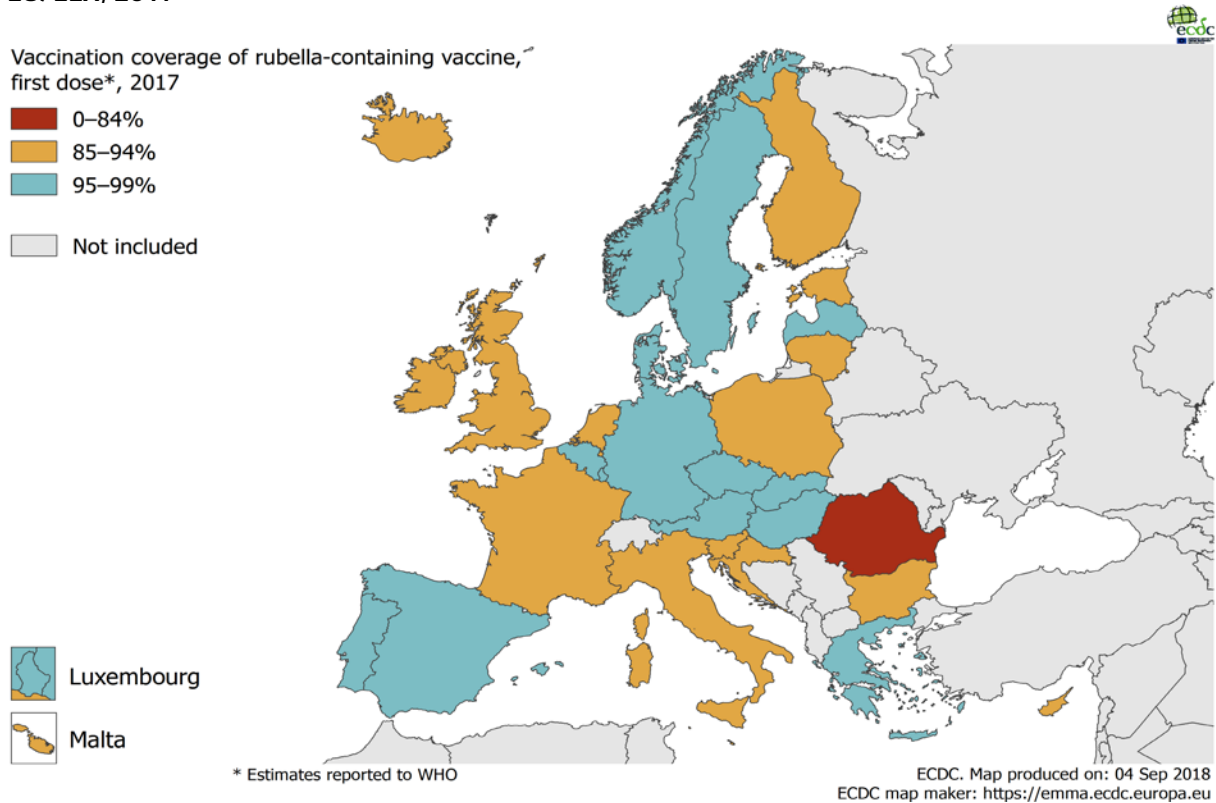
Country	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug			
Austria	0	1	7	5	8	0	0	0	0	0	0	0	21	2.39	21
Bulgaria	0	0	0	0	0	0	0	1	0	0	0	0	1	0.14	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Czech Republic	0	0	0	0	0	1	0	0	0	0	0	1	2	0.19	1
Denmark	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Estonia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Finland	0	1	0	0	0	0	0	0	0	0	0	0	1	0.18	1
Germany	4	9	5	3	5	4	7	5	3	6	7	5	63	0.76	10
Greece	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Ireland	0	0	0	0	0	1	0	1	1	0	1	1	5	1.05	0
Italy	3	2	2	2	1	2	2	4	2	3	3	1	27	0.45	8
Latvia	0	0	0	0	0	1	1	0	1	0	0	0	3	1.54	3
Lithuania	0	0	0	0	0	0	0	0	1	0	0	0	1	0.35	1
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Netherlands	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Norway	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Poland	30	34	31	33	36	44	42	48	59	52	40	39	488	12.85	3
Portugal	2	0	0	0	0	1	0	0	0	2	0	1	6	0.58	2
Romania	0	0	1	0	1	0	1	1	0	1	0	0	5	0.25	3
Slovakia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Spain	0	0	0	0	0	0	0	1	1	1	0	0	3	0.06	2
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
United Kingdom	0	1	1	0	0	1	0	0	0	0	0	0	3	0.05	3
EU/EEA	39	48	47	43	51	55	53	61	68	65	51	48	629	1.43	58

Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 September 2017–31 August 2018



The latest WHO data on national rubella vaccination coverage [12] show that 14 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 [11].

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



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