

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

September 2018

Period covered: 1 August 2017 to 31 July 2018

Introduction

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

Most recent month, July 2018

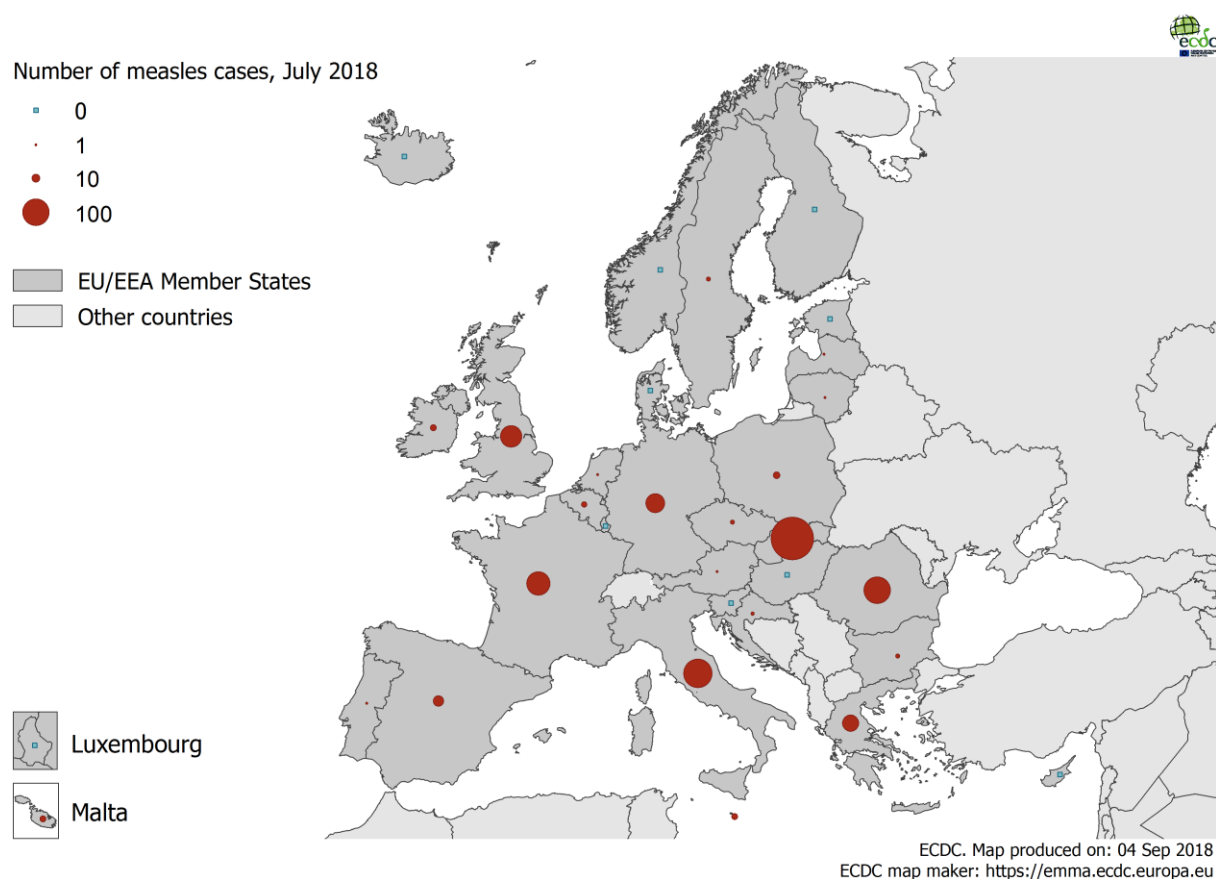
All 30 countries reported measles data for July 2018, with a total of 758 cases reported by 21 countries and nine countries reporting zero cases (Figure 1).

The increase previously observed in Slovakia continued with 257 cases reported, compared with 72 and 18 cases in June and May 2018, respectively. Measles outbreaks are also ongoing in other EU/EEA countries [1].

Italy, France, United Kingdom, Germany and Greece continued to report high case counts but with a decreasing trend:

- Italy reported 113 cases, a decrease from 273 in June and 413 cases in May 2018
- France reported 79 cases, compared with 191 in June and 252 cases in May 2018
- United Kingdom reported 65 cases, a decrease from 177 in June and 327 cases in May 2018
- Germany reported 52 cases, compared with 91 in June and 103 cases in May 2018
- Greece reported 38 cases, a decrease from 115 and 290 cases for June and May 2018, respectively.

In addition to the CDTR [1], recent updates are published online by the national public health authorities of Italy [4], France [5], Greece [6], Germany [7] and Slovakia [8].

Figure 1. Number of measles cases by country, EU/EEA, July 2018 (n=758)

12-month period, August 2017 – July 2018

Between 1 August 2017 and 31 July 2018, 30 EU/EEA Member States reported 14 118 cases of measles, of which 9 872 (70%) were laboratory-confirmed. The majority of cases were reported by Greece (3 224), Italy (2 873), France (2 794) and United Kingdom (1 714), accounting for 23%, 20%, 20% and 12% of all cases, respectively (Table 1). The highest notification rates per million population were reported by Greece (299.4), Romania (78.2), Slovakia (65.5), Italy (47.4) and France (41.7) (Figure 2).

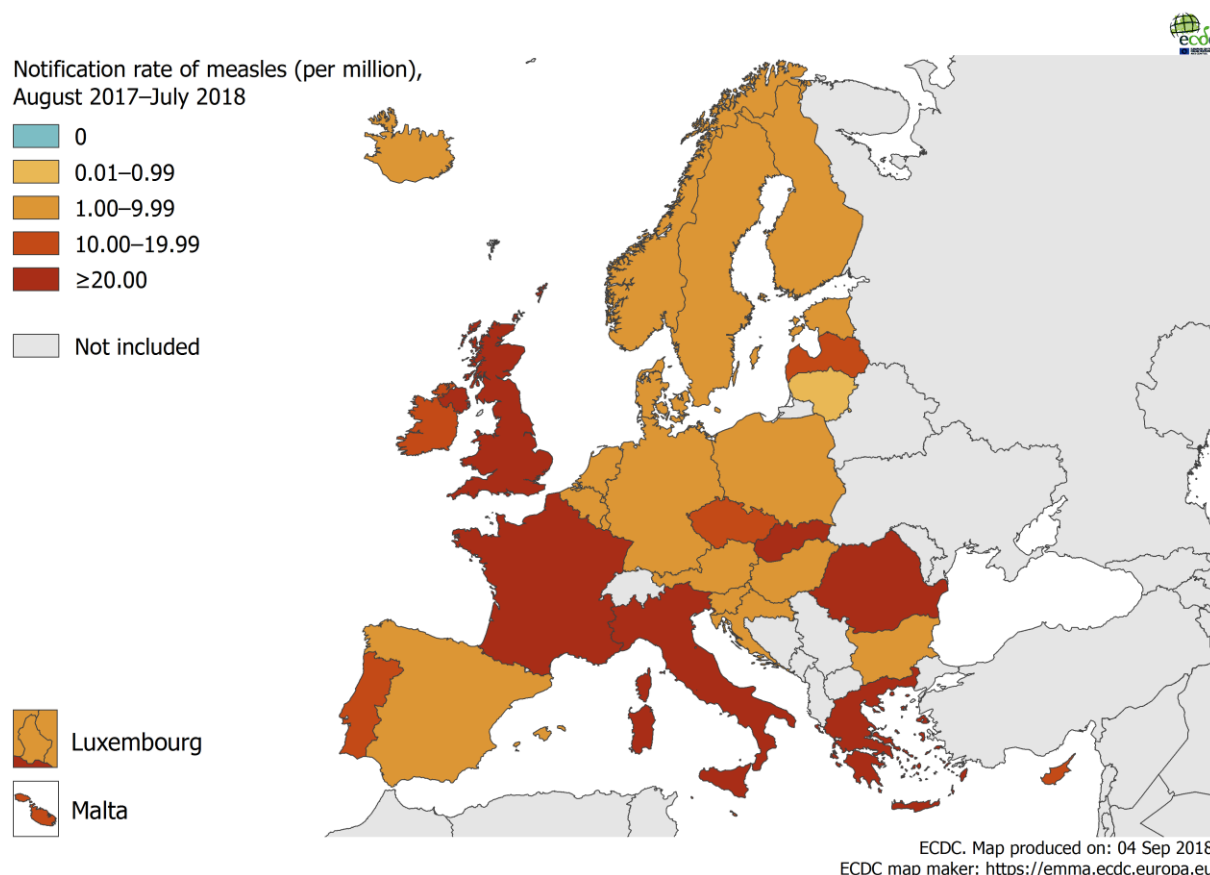
The number of measles cases reported to TESSy may be an underestimation, in particular for Romania. The sustained outbreak in the country has caused delays in case-based reporting to TESSy, and the most up-to-date data are available from the Romanian National Institute of Public Health (INSP) [9]. ECDC published a Rapid Risk Assessment on the Romanian outbreak in March 2017 [10].

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

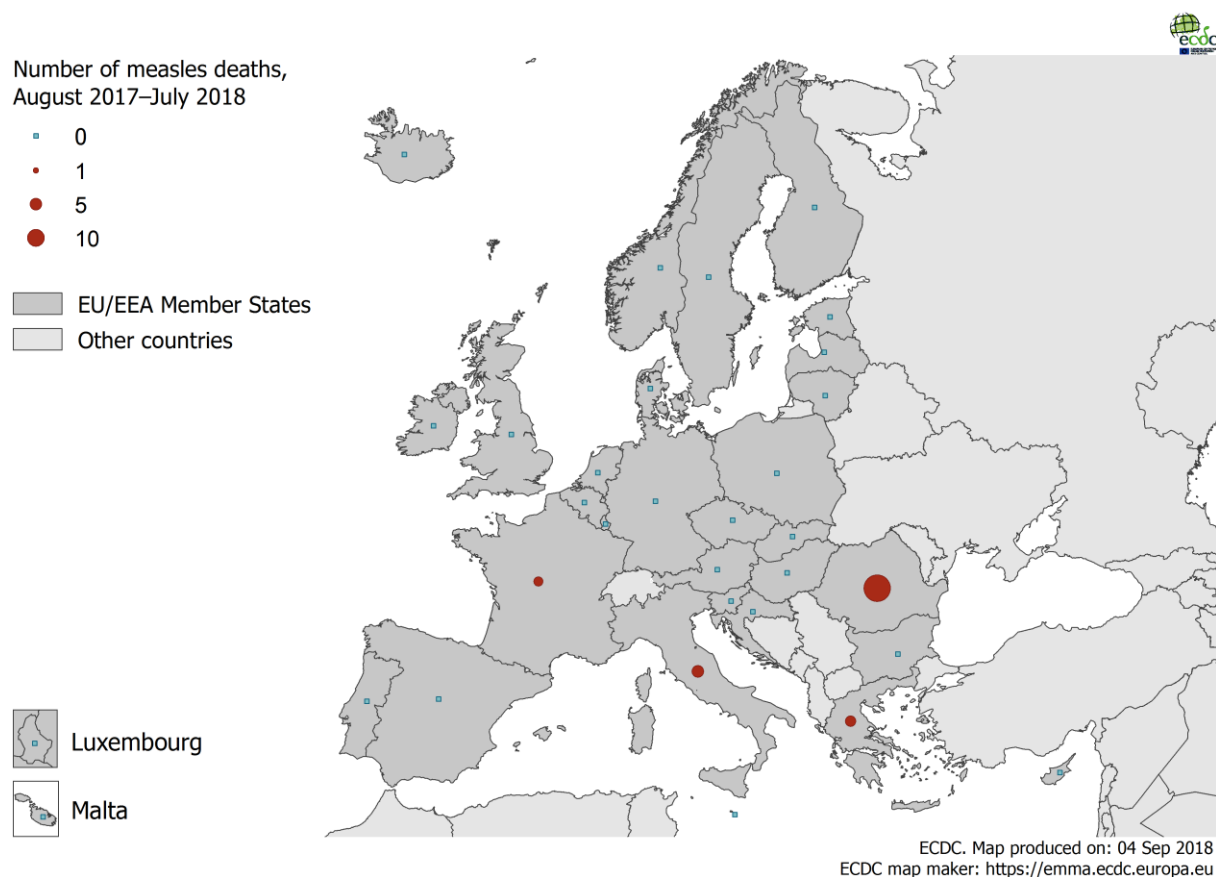
Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			
Austria	2	1	2	8	1	7	5	15	17	12	6	1	77	8.8	69
Belgium	0	2	0	3	1	1	6	9	11	23	21	4	81	7.1	64
Bulgaria	0	0	0	0	0	0	1	2	1	1	0	3	8	1.1	8
Croatia	0	0	0	0	0	0	0	0	1	2	16	2	21	5.1	21
Cyprus	0	0	0	0	0	5	6	4	0	0	0	0	15	17.6	15
Czech Republic	0	0	0	6	4	19	22	39	38	24	10	3	165	15.6	160
Denmark	3	0	0	0	0	0	0	3	0	0	0	0	6	1.0	6
Estonia	0	0	0	0	0	0	0	2	7	1	0	0	10	7.6	10
Finland	5	0	0	0	0	0	0	0	0	4	0	0	9	1.6	9
France	15	19	13	11	65	237	523	764	625	252	191	79	2794	41.7	1269
Germany	51	16	9	9	14	26	30	50	96	103	91	52	547	6.6	453
Greece	71	126	167	250	342	431	453	549	352	290	155	38	3224	299.4	1845
Hungary	10	1	1	0	0	2	5	6	0	0	0	0	25	2.6	25

Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			
Iceland	0	0	0	1	0	0	0	0	0	0	0	0	1	3.0	1
Ireland	0	0	10	9	5	10	14	17	12	0	2	6	85	17.8	75
Italy	251	166	127	66	114	212	296	375	467	413	273	113	2873	47.4	2236
Latvia	0	0	0	0	0	7	7	1	0	2	3	1	21	10.8	21
Lithuania	0	0	0	0	0	0	0	0	0	0	0	1	1	0.4	1
Luxembourg	0	0	0	1	0	0	0	0	1	0	0	0	2	3.4	2
Malta	0	0	0	0	0	0	0	0	0	0	0	5	5	10.9	5
Netherlands	1	1	3	0	0	0	2	2	0	2	9	1	21	1.2	20
Norway	0	0	0	0	0	0	4	0	1	2	0	0	7	1.3	7
Poland	1	12	13	3	1	17	10	2	10	16	9	7	101	2.7	66
Portugal	0	0	0	0	0	0	4	108	13	0	3	1	129	12.5	121
Romania	100	236	264	102	100	101	102	105	111	104	111	100	1536	78.2	1159
Slovakia	0	0	0	0	5	1	0	0	3	18	72	257	356	65.5	217
Slovenia	0	0	0	0	1	2	0	0	0	3	3	0	9	4.4	9
Spain	10	2	0	1	11	6	14	52	50	41	22	16	225	4.8	214
Sweden	2	2	2	0	11	17	2	2	2	4	3	3	50	5.0	50
United Kingdom	12	18	22	65	46	113	163	298	408	327	177	65	1714	26.1	1714
EU/EEA	534	602	633	535	721	1214	1669	2405	2226	1644	1177	758	14118	27.3	9872

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



Thirty-seven deaths attributable to measles were reported to TESSy during the 12-month period; 25 in Romania, five in Italy, four in Greece and three in France (Figure 3). There was also a death in a child from Sweden due to subacute sclerosing panencephalitis (SSPE) as a result of an initial infection that was contracted outside of the EU/EEA some years previously. SSPE is a rare but fatal late complication of measles.

Figure 3. Number of measles deaths by country, EU/EEA, 1 August 2017–31 July 2018 (n=37)

Importation status was reported by 30 countries and known for 12 984 cases (92%). Among cases with known importation status, 9 048 (70%) were reported to be endemic, 3 334 (26%) were import related, and 602 (5%) were imported.¹

Of 14 117 cases with known age, 4 250 (30%) were children less than five years of age, while 6 115 (50%) were aged 15 years or older. The highest notification rate was in children below one year of age (285.8 cases per million) and children aged 1–4 years (132.2 cases per million).

A total of 1 376 (10%) of all cases had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and older, reaching 20%. Of 12 742 cases (90% of all cases) with known age and vaccination status, 83% were unvaccinated, 10% 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.

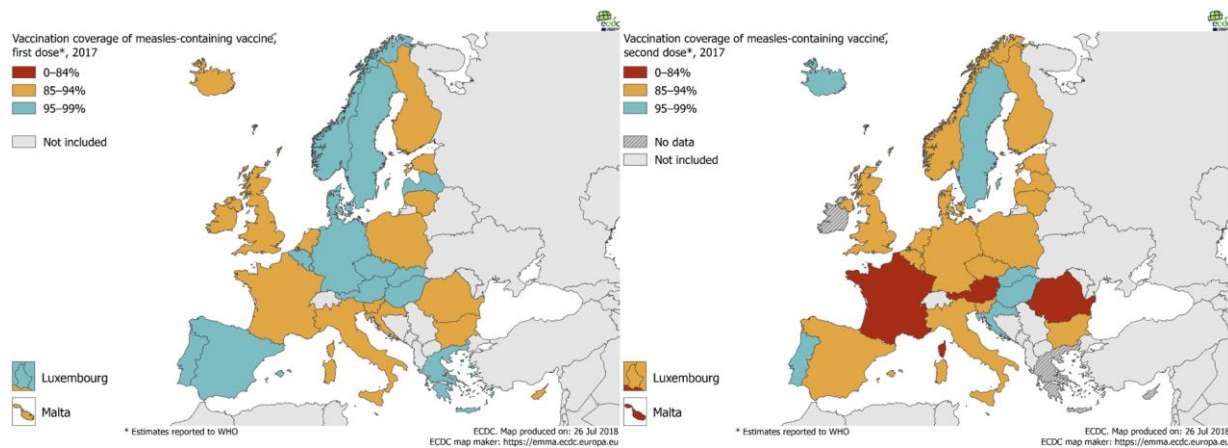
The proportion of unvaccinated cases was highest among children below one year of age (94%), who are too young to have received the first dose of the measles-containing vaccine. Infants below the age of one year are particularly vulnerable to complications of measles and are best protected by herd immunity.

Among cases aged 1–4 years, 81% were unvaccinated, 13% 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 [11] and second [12] 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 [13].

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.

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



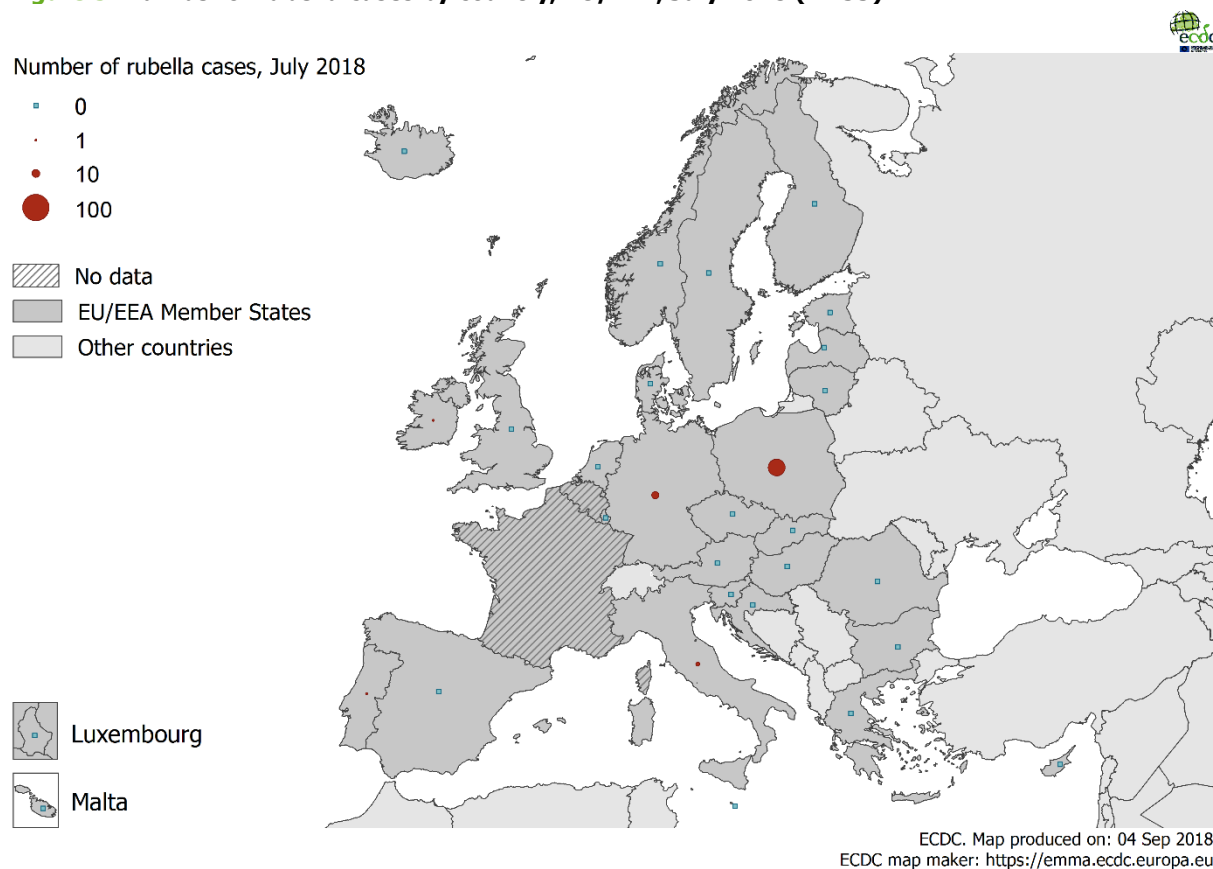
Rubella

Most recent month, July 2018

All 28 countries reported rubella data for July 2018, with a total of 53 cases reported by five countries (Germany, Italy, Ireland, Poland and Romania) and zero cases from the remaining 23 countries (Figure 5).

Forty of the 58 cases (69%) 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, July 2018 (n=53)



12 month period: August 2017 – July 2018

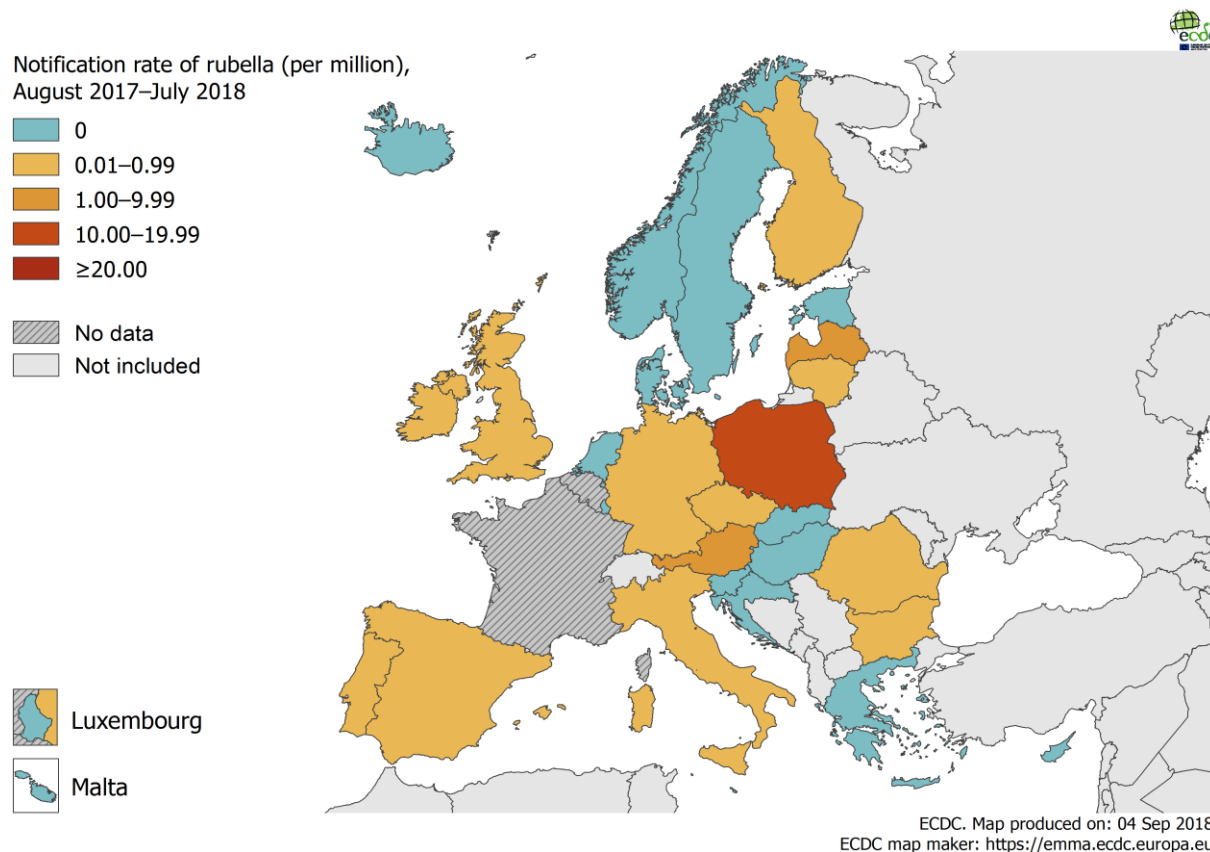
Between 1 August 2017 and 31 July 2018, 14 EU/EEA countries reported a total of 629 cases of rubella, of which 57 (9%) were laboratory-confirmed. Fourteen countries reported zero cases. The highest number of cases was reported by Poland (488), Germany (63), Italy (27) and Austria (21), accounting for 78%, 10%, 4% and 3% of all cases, respectively (Table 2). The highest notification rates per million population were reported by Poland (12.9), 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 number of cases in Poland was observed in children, with 45% of cases in children under five years of age and 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 August 2017–31 July 2018

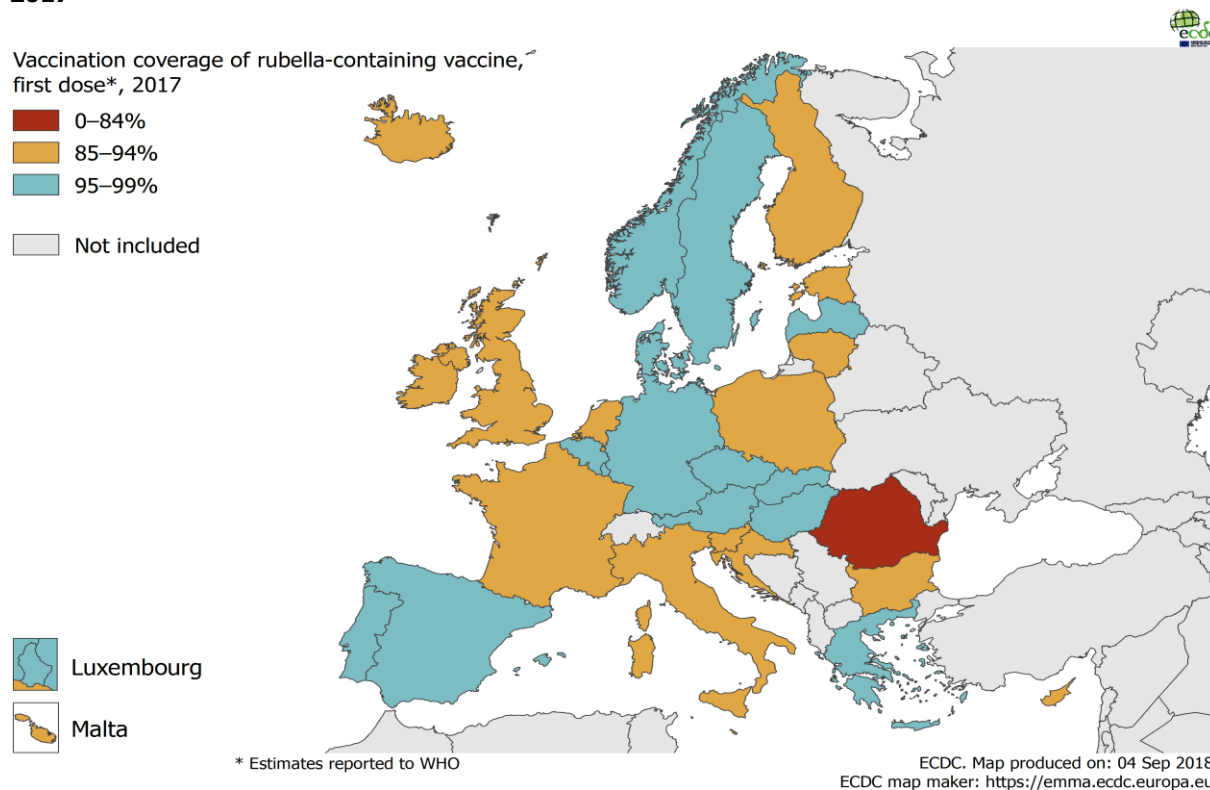
Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul			
Austria	0	0	1	7	5	8	0	0	0	0	0	0	21	2.39	21
Bulgaria	0	0	0	0	0	0	0	0	1	0	0	0	1	0.14	0
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Czech Republic	0	0	0	0	0	0	1	0	0	0	0	0	1	0.09	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	0	1	0	0	0	0	0	0	0	0	0	1	0.18	1
Germany	4	4	9	5	3	5	4	7	5	3	6	8	63	0.76	8
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	0	1	0	1	1	0	1	4	0.84	0
Italy	1	3	2	2	2	1	2	2	4	2	3	3	27	0.45	9
Latvia	0	0	0	0	0	0	1	1	0	1	0	0	3	1.54	3
Lithuania	0	0	0	0	0	0	0	0	0	1	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	37	30	34	31	33	36	44	42	48	59	54	40	488	12.85	3
Portugal	0	2	0	0	0	0	1	0	0	0	2	1	6	0.58	1
Romania	2	0	0	1	0	1	0	1	1	0	1	0	7	0.36	4
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	0	1	1	1	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	0	1	1	0	0	1	0	0	0	0	0	3	0.05	3
EU/EEA	44	39	48	47	43	51	55	53	61	68	67	53	629	1.43	57

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



The latest WHO data on national rubella vaccination coverage [14] 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 [13].

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



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