

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

May 2018

Measles

ECDC reports monthly on measles and rubella surveillance data submitted by 30 EU/EEA countries to the European Surveillance System (TESSy). This report is based on surveillance data reported to TESSy from 1 April 2017 to 31 March 2018. ECDC also monitors European measles outbreaks through epidemic intelligence and publishes the most recent updates monthly in the [Communicable Disease Threats Report \(CDTR\)](#).

As outbreaks or public health events develop, ECDC may conduct rapid risk/outbreak assessments to support Member States and the European Commission in their preparedness and response to a public health threat. The most recent [Rapid Risk Assessment \(RRA\)](#) on the prevailing risk of measles transmission in the EU/EEA was published in March 2018.

Twenty-one EU/EEA countries reported 2 143 cases of measles for March 2018 (Source: TESSy). In particular, France, Greece and Italy continued to report increasing numbers of cases. Czech Republic and Portugal reported new increases in the number of cases. The distribution of cases by country for March 2018 is presented in Figure 1.

France reported 753 cases for March 2018, an increase from 523 cases in February 2018 and 237 (including one death) in January 2018. For more information on this outbreak, see the most recent updates from the French National Institute of Public Health ([Santé Publique France](#)) of 16 May 2018 and the CDTR of 18 May 2018.

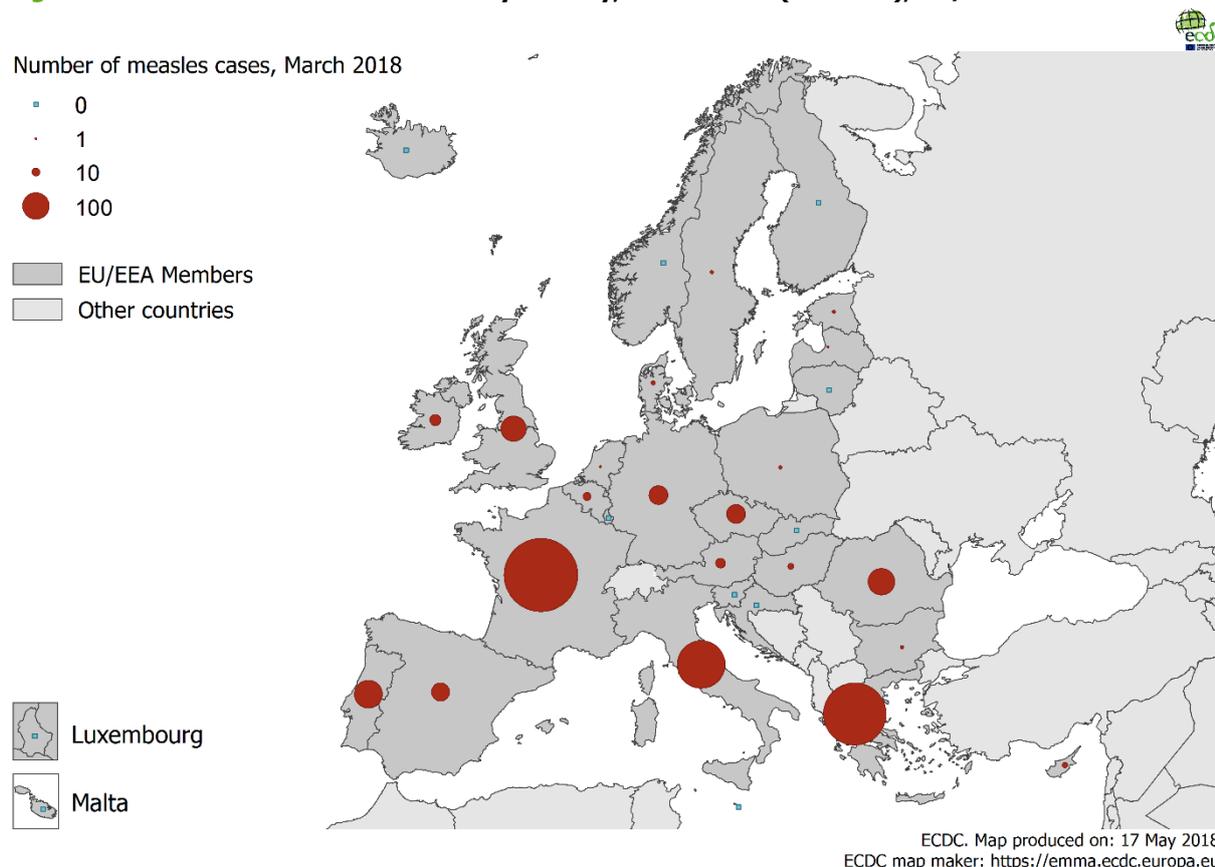
Greece reported 549 cases in March 2018, compared to 453 (including one death) in February 2018, and 431 cases in January 2018. The most recent updates on this outbreak are available from the Hellenic Centre for Disease Control and Prevention ([HCDCP](#)) and the CDTR of 18 May 2018.

For 2018, Italy reported 326 cases (including two deaths) which was an increase from 272 and 199 cases (including two deaths) reported for February and January 2018, respectively. The most recent updates on this outbreak are available from Italy's National Centre for Disease Prevention and Health Prevention ([Centro nazionale per la prevenzione delle malattie e la promozione della salute](#)) and in the CDTR of 18 May 2018.

Portugal reported 109 cases for March 2018, an increase from four cases in February (and no cases for January 2018.) Further information on this ongoing outbreak are available from the Portuguese Directorate General for Health ([Direção-Geral da Saúde](#)), in the RRA of March 2018 and the CDTR of 18 May 2018.

Having reported no cases for January and February 2018, the Czech Republic reported 50 cases in March 2018. The most recent updates on this outbreak are available in the CDTR of 18 May 2018. Measles outbreaks are also ongoing in other EU/EEA countries (CDTR, [RRA](#)).

Figure 1. Distribution of measles cases by country, March 2018 (n=2 143), EU/EEA



April 2017 – March 2018

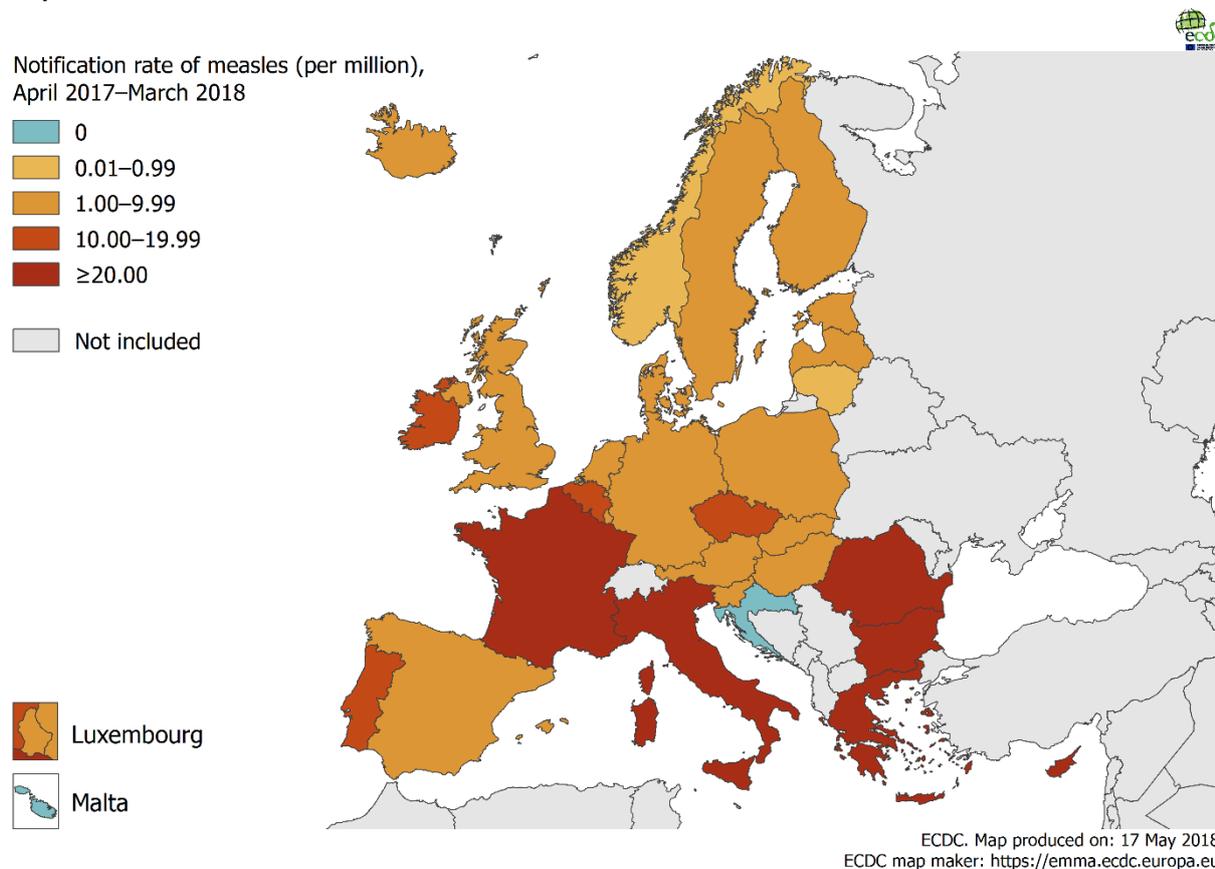
Between 1 April 2017 and 31 March 2018, 28 EU/EEA Member States reported 14 216 cases of measles (source: TESSy). Only Croatia and Malta reported zero cases in this period. The number of measles cases reported to TESSy may be an underestimation, in particular for Romania. The ongoing outbreak in the country has caused delays in case-based reporting to ECDC and the most up-to-date data are available from the Romanian National Institute of Public Health ([INSP](http://www.insp.ro)). ECDC previously published a RRA on the Romanian outbreak in March 2017.

During the period from 1 April 2017 and 31 March 2018, most cases were reported by Italy (4 448), Romania (3 243), Greece (2 400) and France (1 894), accounting for 31%, 23%, 17% and 13%, respectively of all cases reported by EU/EEA countries. The diagnosis of measles was confirmed by positive laboratory results (serology, virus detection or isolation) in 65% of all reported cases. The number of cases by month and notification rate per million population per country for this 12-month period is presented in Table 1. Figure 2 shows the notification rate per million population by country for this period.

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

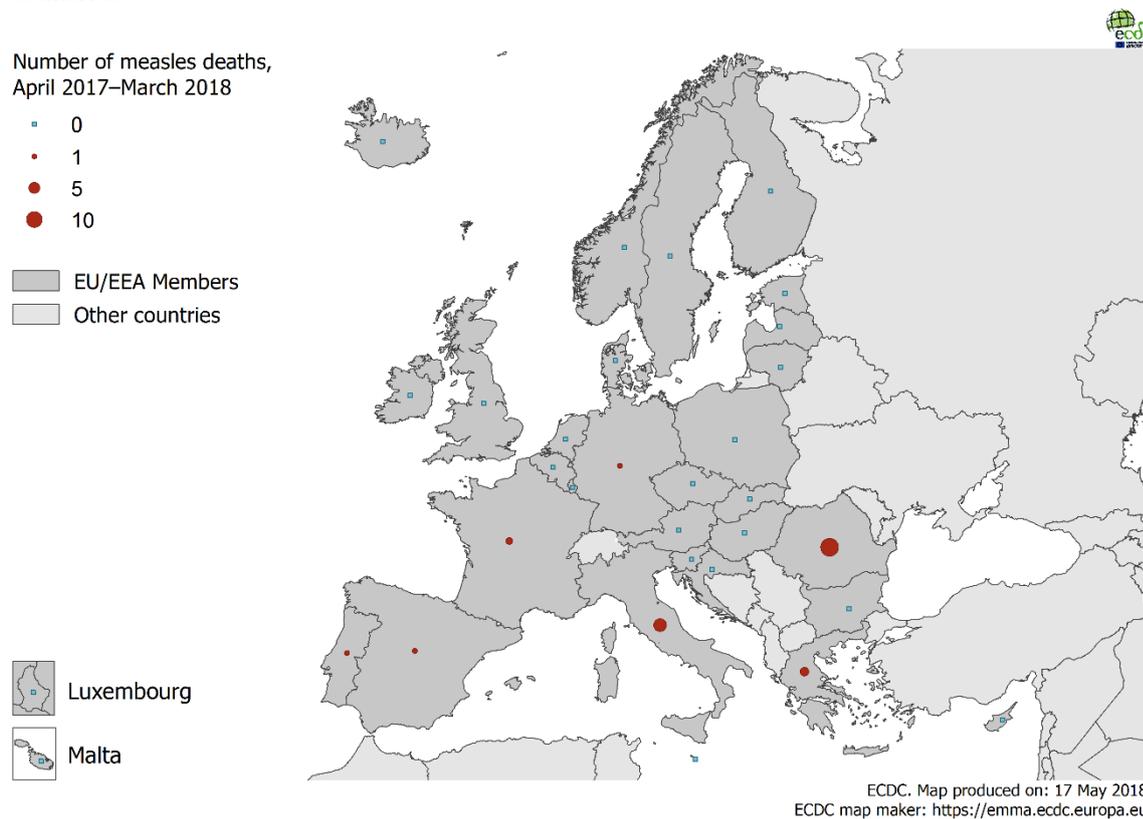
Country	2017	2017	2017	2017	2017	2017	2017	2017	2017	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Austria	2	6	1	2	2	1	2	8	1	7	5	15	52	5.9	45
Belgium	35	21	34	16	0	2	0	3	1	1	6	10	129	11.4	101
Bulgaria	42	55	44	5	0	0	0	0	0	0	1	2	149	21.0	107
Croatia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Cyprus	0	1	2	0	0	0	0	0	0	5	6	4	18	21.1	18
Czech Republic	64	43	7	1	0	0	0	6	4	0	0	50	175	16.5	170
Denmark	0	0	0	0	3	0	0	0	0	0	0	3	6	1.0	6
Estonia	0	1	0	0	0	0	0	0	0	0	0	2	3	2.3	3
Finland	0	0	1	4	5	0	0	0	0	0	0	0	10	1.8	10
France	62	114	43	39	15	19	13	11	65	237	523	753	1894	28.3	861
Germany	178	137	77	23	51	16	9	9	14	26	30	51	621	7.5	458
Greece	0	3	1	7	71	126	167	250	342	431	453	549	2400	222.9	1422
Hungary	0	0	0	9	10	1	1	0	0	2	5	6	34	3.5	34
Iceland	0	0	0	0	0	0	0	1	0	0	0	0	1	3.0	1
Ireland	0	0	0	0	0	0	10	9	5	11	17	19	71	14.8	61
Italy	863	804	661	600	251	166	126	66	114	199	272	326	4448	73.4	3572
Latvia	0	0	0	0	0	0	0	0	0	7	7	1	15	7.7	15
Lithuania	1	0	0	1	0	0	0	0	0	0	0	0	2	0.7	2
Luxembourg	0	0	0	0	0	0	0	1	0	0	0	0	1	1.7	1
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Netherlands	2	6	2	1	1	1	3	0	0	0	2	1	19	1.1	17
Norway	0	0	0	1	0	0	0	0	0	0	4	0	5	1.0	5
Poland	4	2	4	6	1	12	13	3	1	17	10	2	75	2.0	49
Portugal	18	4	0	0	0	0	0	0	0	0	4	109	135	13.1	118
Romania	1220	1029	100	100	100	91	101	102	100	100	100	100	3243	165.1	1464
Slovakia	1	0	0	0	0	0	0	0	5	1	0	0	7	1.3	7
Slovenia	0	0	0	0	0	0	0	0	1	2	0	0	3	1.5	3
Spain	10	38	19	9	10	2	0	1	11	6	14	49	169	3.6	157
Sweden	3	4	0	0	2	2	2	0	11	17	2	2	45	4.5	45
United Kingdom	17	34	25	22	12	18	22	65	46	57	79	89	486	7.4	486
EU/EEA	2522	2302	1021	846	534	457	469	535	721	1126	1540	2143	14216	27.5	9238

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



Twenty-eight deaths attributable to measles were reported to TESSy during the 12-month period; with 13 in Romania, seven in Italy, three in Greece, two in France and one each in Germany, Portugal and Spain (Figure 3).

Figure 3. Distribution of measles deaths by country, 1 April 2017–31 March 2018 (n=28), EU/EEA countries



Importation status was known for 13 056 cases (92%) and was reported by 27 countries. Among cases with known importation status, 9 075 (76%) were reported to be endemic, 2 618 (20%) import-related and 463 (4%) imported. 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.

Of 14 206 cases with known age, 4 691 (33%) were children under five years of age, while 6 887 (48%) were aged 15 years or older. The highest incidence was reported in children below one year (319.2 cases per million) and children 1–4 years of age (145.0 cases per million). These data are also published in the ECDC Surveillance Atlas of Infectious Diseases.

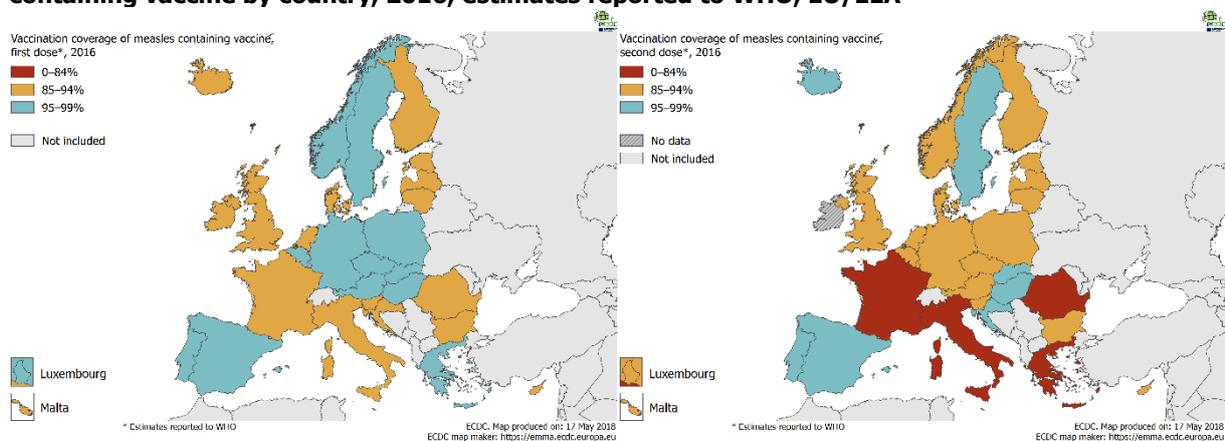
Of 12 880 cases with known age and vaccination status, 84% were unvaccinated, 9% were vaccinated with one dose of measles-containing vaccine, 5% were vaccinated with two or more doses, and 2% were vaccinated with an unknown number of doses. Of all cases, 9% had an unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and over, reaching 18%.

The proportion of unvaccinated cases was highest among children below one year of age (95%), who were too young to have received the first dose of the measles vaccine. Infants under one year are particularly vulnerable to complications from measles and are best protected by herd immunity, which is achieved when population coverage for the second dose of a measles-containing vaccine is at least 95%.

Among cases aged one to four years, 83% were unvaccinated, 12% were vaccinated with one dose, 1% with two doses or more, 1% with an unknown number of doses and 3% had an unknown vaccination status.

Measles continues to spread across Europe as the vaccination coverage in many EU/EEA countries is suboptimal. The latest available data on national vaccination coverage for the first and second doses of measles-containing vaccine are presented in Figure 4. Only five EU/EEA countries reported at least 95% vaccination coverage for both doses of measles-containing vaccine. If the elimination goal is to be reached, vaccination coverage for children and adults needs to increase in a number of countries as the vaccination coverage of both the first and the second dose must be at least 95% at all subnational levels to interrupt measles circulation.

Figure 4. Vaccination coverage for the first (left panel) and second (right panel) doses of measles-containing vaccine by country, 2016, estimates reported to WHO, EU/EEA



Rubella

Between 1 April 2017 and 31 March 2018, 13 EU/EEA Member States reported 652 cases of rubella (source: TESSy). Belgium and France do not report rubella cases to TESSy. Czech Republic and Hungary did not report data for March 2018, while Norway did not report for February 2018.

In the 12-month period, the highest number of cases were reported by Poland (488), Germany (70), Italy (47) and Austria (23) accounting for 75%, 11%, 7% and 4% of reported cases, respectively. In March 2018, five EU/EEA Member States (Germany, Italy, Latvia, Poland and Romania) reported 57 cases; 47 of which were reported by Poland. The diagnosis of rubella was confirmed by positive laboratory results in 11% of all reported cases during the 12-month period.

The number of rubella cases by month and notification rate by country for the 12-month period is presented in Table 2; the distribution of cases by country for February 2018 is shown in Figure 5 and the notification rate per million population by country is shown in Figure 6.

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

Country	2017	2017	2017	2017	2017	2017	2017	2017	2017	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Austria	1	1	0	0	0	0	1	7	5	8	0	0	23	2.62	23
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	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	1	1	0	0	0	0	0	0	0	0	0	NR	2	0.19	2
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	0	0	0	0	1	0	0	0	0	0	1	0.18	1
Germany	7	9	9	6	4	4	9	5	3	4	4	6	70	0.85	9
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	NR	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	0	0	0	0	1	0	1	0.21	0
Italy	11	12	6	3	1	3	2	2	2	1	2	2	47	0.78	17
Latvia	0	0	0	0	0	0	0	0	0	0	1	1	2	1.03	2
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
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	NR	0	0	0.00	0
Poland	43	57	45	44	37	31	40	34	33	34	43	47	488	12.85	6
Portugal	0	0	0	0	0	2	0	0	0	0	1	0	3	0.29	0
Romania	1	2	0	1	2	0	0	1	0	1	0	1	9	0.46	6
Slovakia	1	0	0	0	0	0	0	0	0	0	0	0	1	0.18	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
Spain	0	0	0	1	0	0	0	0	0	0	0	0	1	0.02	1
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
United Kingdom	1	0	0	0	0	0	1	1	0	0	1	0	4	0.06	4
EU/EEA	66	82	60	55	44	40	54	50	43	48	53	57	652	1.50	71

Figure 5. Distribution of rubella cases by country, March 2018 (n=54), EU/EEA

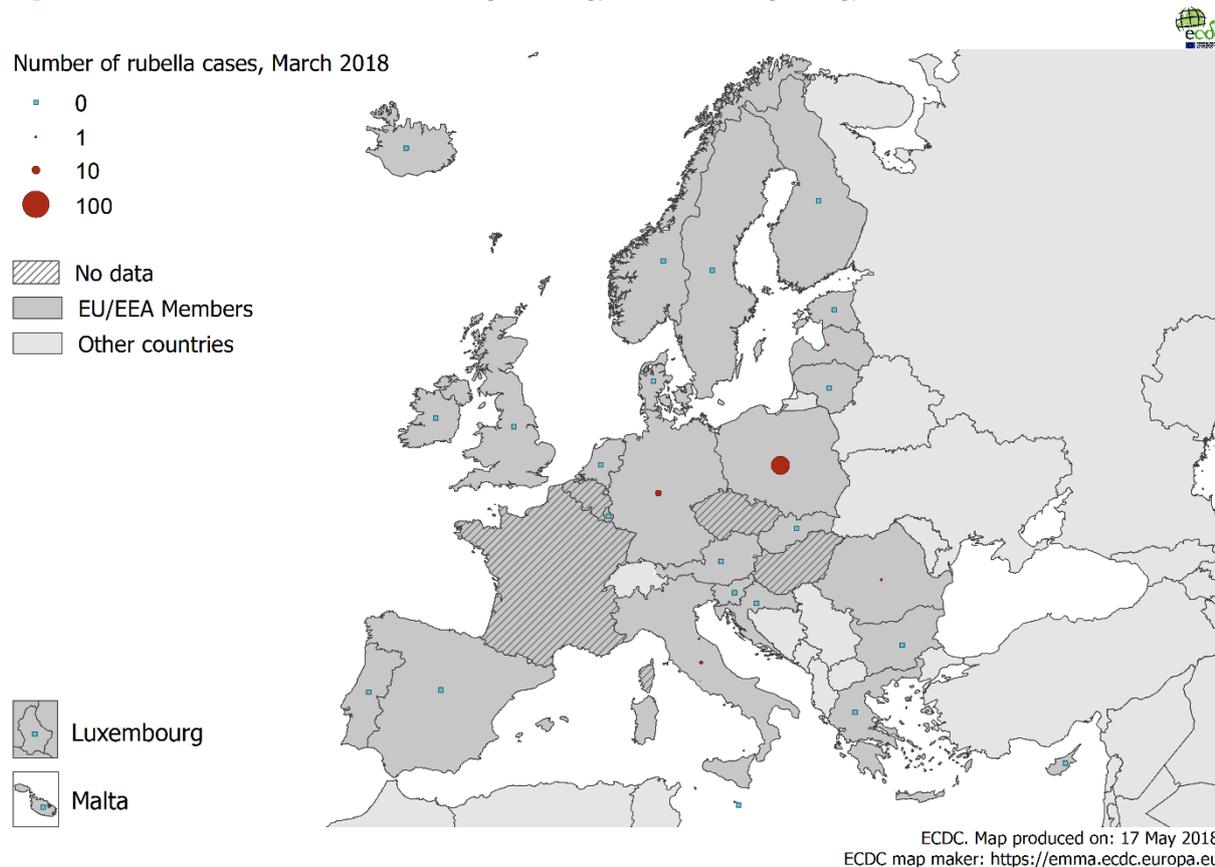
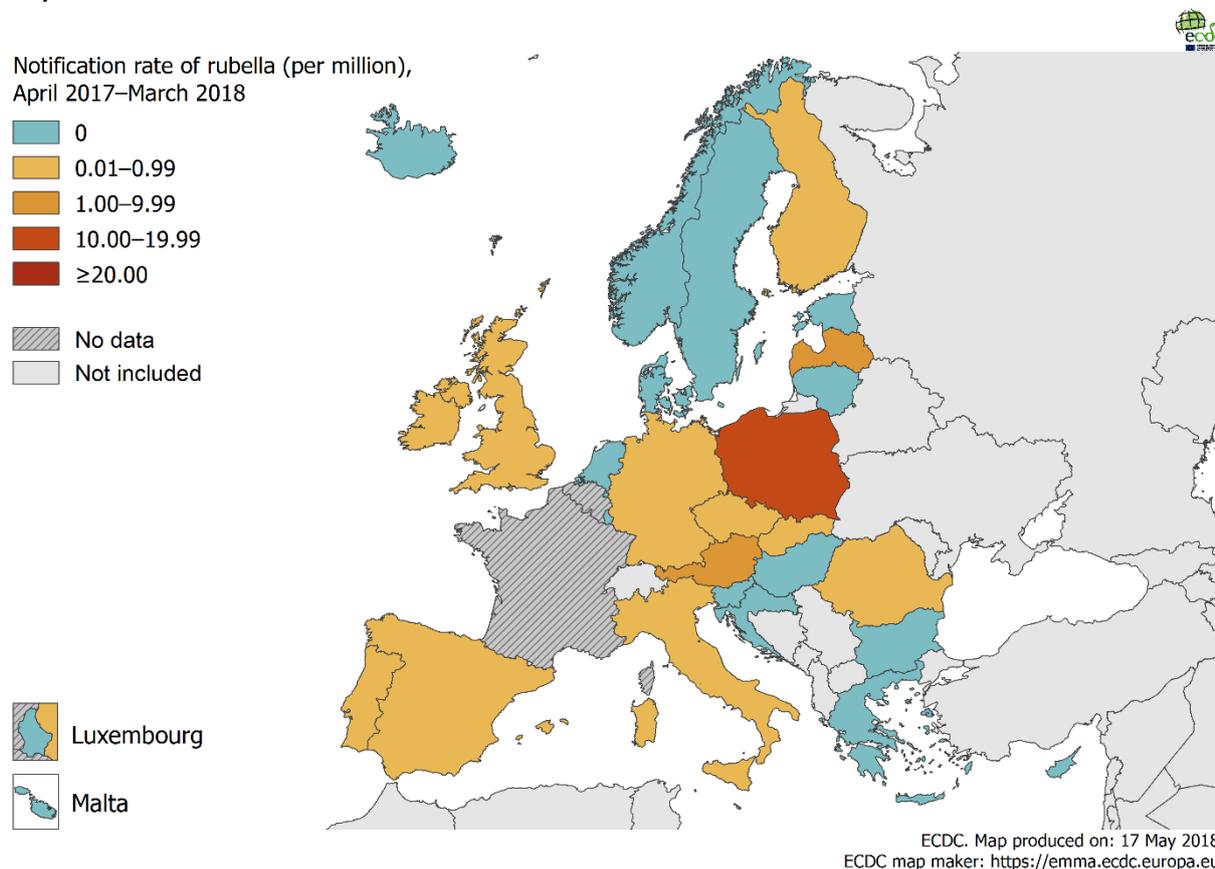


Figure 6. Rubella notification rate per million population by country, 1 April 2017–31 March 2018, EU/EEA



Data from Poland were reported in an aggregated format and should be interpreted with caution, as only six cases (1%) were confirmed through laboratory testing during the 12-month period. The highest number of cases in Poland was observed in children, with 48% of cases in children under five years and 30% in children aged five to nine years.

ECDC monitors European rubella outbreaks on a monthly basis through epidemic intelligence. No new rubella outbreaks were detected in the EU/EEA since the last monthly update. Figure 7 shows the latest vaccination coverage data for the first dose of rubella-containing vaccine by country in the EU/EEA.

Figure 7. Vaccination coverage for the first dose of rubella-containing vaccine by country, 2016, estimates reported to WHO, EU/EEA

