

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

February 2018

Measles

January–December 2017

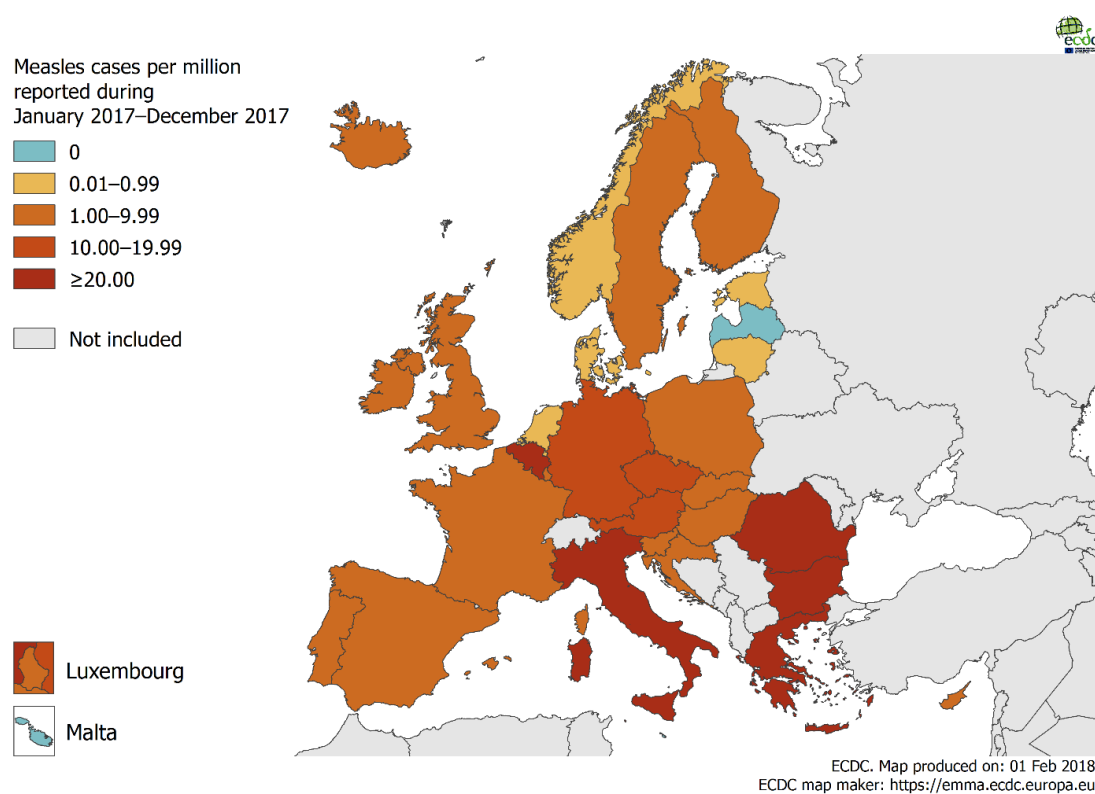
ECDC reports on a monthly basis on measles and rubella surveillance data submitted by 30 EU/EEA countries to the European Surveillance System (TESSy). This report is based on surveillance data reported to TESSy for the period 1 January 2017 to 31 December 2017. ECDC also monitors European measles outbreaks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

Between 1 January 2017 and 31 December 2017, the EU/EEA Member States reported 14 451 cases of measles (Source: TESSy). All 30 Member States reported consistently throughout this period. All but two (Latvia and Malta) EU/EEA countries reported measles cases for the 12 months' 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 \(INSP\)](#). ECDC has previously published a [Rapid Risk Assessment](#) on the outbreak in Romania.

During the period from 1 January 2017 to 31 December 2017, most cases were reported by Romania (5 560), Italy (5 004), Greece (967) and Germany (929), accounting, respectively, for 38%, 35%, 7% and 6% of all cases reported by EU/EEA countries. The diagnosis of measles was confirmed by positive laboratory results (serology, virus detection or isolation) in 61% 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 1 shows the notification rate per million population by country for this period.

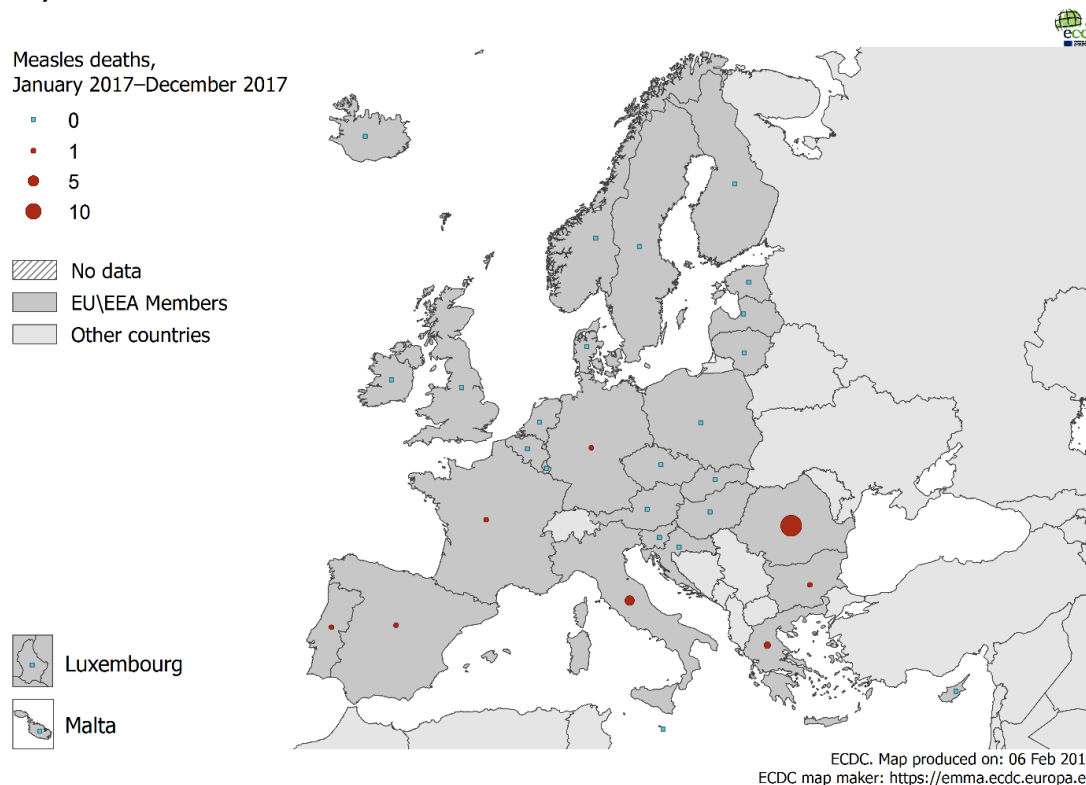
Table 1. Number of measles cases by month and notification rate per million population by country, 1 January 2017–31 December 2017, EU/EEA countries

Country	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	Total cases	Cases per million	Total lab-positive cases
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Austria	28	34	8	2	6	1	2	2	1	2	8	1	95	10.93	83
Belgium	26	79	151	35	21	34	16	0	2	0	3	1	368	32.53	244
Bulgaria	0	0	19	41	57	44	5	0	0	0	0	0	166	23.2	86
Croatia	2	5	0	0	0	0	0	0	0	0	0	0	7	1.67	7
Cyprus	0	0	0	0	1	2	0	0	0	0	0	0	3	3.54	3
Czech Republic	0	0	21	64	43	7	1	0	0	0	6	4	146	13.83	140
Denmark	0	0	1	0	0	0	0	3	0	0	0	0	4	0.7	4
Estonia	0	0	0	0	1	0	0	0	0	0	0	0	1	0.76	1
Finland	0	0	0	0	0	1	4	5	0	0	0	0	10	1.82	10
France	34	54	49	62	114	43	39	15	19	13	11	65	518	7.76	339
Germany	47	157	212	178	137	77	23	50	16	9	9	14	929	11.31	640
Greece	0	0	0	0	3	1	7	71	126	167	250	342	967	89.67	568
Hungary	1	11	3	0	0	0	9	10	1	1	0	0	36	3.66	36
Iceland	0	0	2	0	0	0	0	0	0	0	1	0	3	9.02	3
Ireland	0	0	0	0	0	0	0	0	0	10	9	2	21	4.44	21
Italy	288	464	903	816	745	596	538	237	158	122	57	80	5 004	82.49	3 954
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lithuania	0	0	0	1	0	0	1	0	0	0	0	0	2	0.69	2
Luxembourg	0	0	3	0	0	0	0	0	0	0	1	0	4	6.94	4
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	2	6	2	1	1	1	3	0	0	16	0.94	15
Norway	0	0	0	0	0	0	1	0	0	0	0	0	1	0.19	1
Poland	6	6	5	4	2	4	6	1	12	13	3	0	62	1.63	41
Portugal	0	2	10	18	4	0	0	0	0	0	0	0	34	3.29	29
Romania	484	843	1 334	1 176	1 029	100	100	100	91	101	102	100	5 560	281.37	2 071
Slovakia	0	0	0	1	0	0	0	0	0	0	0	5	6	1.11	6
Slovenia	2	4	0	0	0	0	0	0	0	0	0	1	7	3.39	7
Spain	10	29	22	10	38	18	9	10	2	0	2	10	160	3.45	150
Sweden	2	8	7	3	4	0	0	2	2	2	0	11	41	4.16	41
United Kingdom	10	1	8	17	34	25	22	12	18	22	65	46	280	4.28	280
Total	940	1 697	2 758	2 430	2 245	955	784	519	449	465	527	682	14 451	28	8 786

Figure 1. Measles notification rate per million population by country, 1 January 2017–31 December 2017, EU/EEA countries

Thirty deaths due to measles were reported to TESSy during the 12-month period; with 19 in Romania, four in Italy, two in Greece and one each in Bulgaria, France, Germany, Portugal and Spain (Figure 2).

Figure 2. Distribution of measles deaths by country, 1 January 2017–31 December 2017 (n=30), EU/EEA countries



In 2017, importation status was known for 13 541 cases (94%) and was reported by 27 countries. Among cases with known importation status, 11 989 (89%) were reported to be endemic, 1 169 (9%) import-related and 383 (3%) 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 14 451 cases with known age, 5 299 (37%) were children less than five years of age, while 6 440 (45%) were aged 15 years or older. The highest incidence was reported in children below one year of age (367.2 cases per million) and children from 1 to 4 years of age (161.7 cases per million). These data are also published in the [ECDC Surveillance Atlas of Infectious Diseases](#).

Of 13 610 cases with known vaccination status, 87% were unvaccinated, 8% were vaccinated with one dose, 3% were vaccinated with two or more doses, and 2% were vaccinated with an unknown number of doses. Of all cases, 6% had an unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 25–29 years (13%).

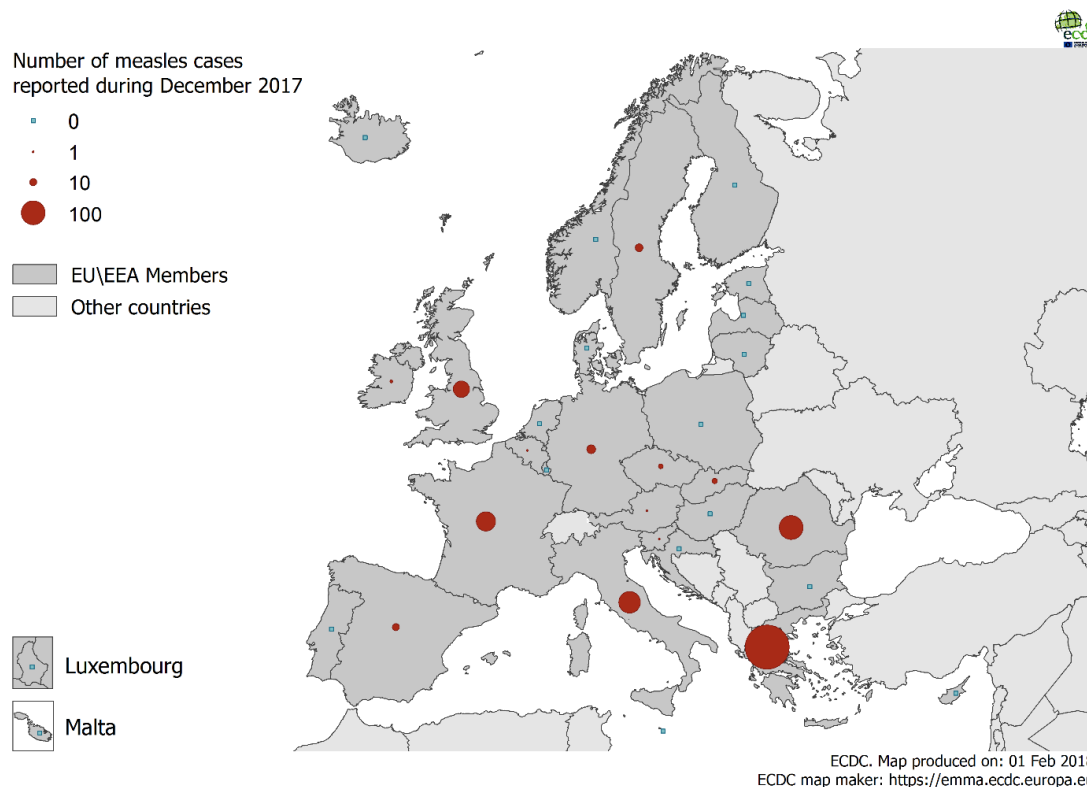
The proportion of unvaccinated cases was highest among children below one year of age (96%), who were too young to have received the first dose of the measles vaccine. Infants below the age of one year are particularly vulnerable to complications of measles and are best protected by herd immunity which is achieved when population coverage for the second dose of a measles-containing vaccine is at least 95%.

In the target group for the first dose of routine childhood measles, mumps and rubella (MMR) vaccination (one to four year-olds), 86% of the cases were unvaccinated, 11% were vaccinated with one dose, 0% with two doses or more, 1% with an unknown number of doses and 2% had an unknown vaccination status.

December 2017

In December 2017, 682 cases of measles were reported by 14 EU/EEA countries (Source: TESSy), with Greece and France particularly reporting an increased number of cases. The distribution of cases by country is presented in Figure 3.

Figure 3. Distribution of measles cases by country, December 2017 (n = 682), EU/EEA countries

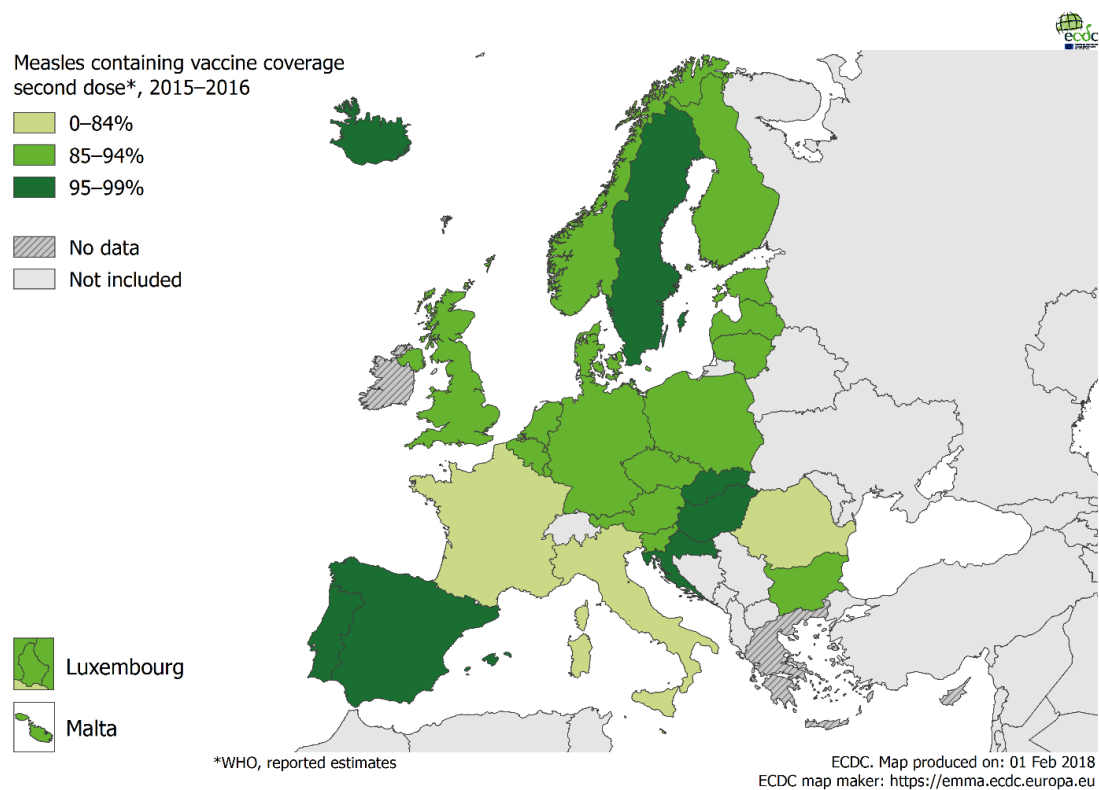


Greece reported 342 cases in December 2017, compared with 250 cases (including one death) in November and 167 cases (including one death) in October. For more information on this outbreak, see the most recent updates from the [Hellenic Centre for Disease Control and Prevention \(KEELPNO\)](#) and the [CDTR](#) of 9 February 2018.

France is also experiencing an outbreak, with 65 cases reported in December 2017. This is an increase from 11 cases in November and 13 in October. For more information on this outbreak in the Aquitaine region, see the most recent updates from the [Regional Public Health Agency \(L'ARS Nouvelle-Aquitaine\)](#) and the [CDTR](#) of 9 February 2018. Measles outbreaks are also ongoing in other EU/EEA countries ([CDTR](#)).

Measles continues to spread across Europe as the vaccination coverage in many EU/EEA countries is suboptimal. The vaccination coverage in 2015–2016 for the second dose of measles-containing vaccine was below 95% in 20 of the 27 EU/EEA countries with data. The latest available data on national [vaccination coverage](#) for the second dose of measles-containing vaccine are presented in Figure 4. If the elimination goal is to be reached, vaccination coverage rates for children targeted by routine vaccination programmes should increase and be sustained in a number of countries as the vaccination coverage of the second dose must be at least 95% to interrupt measles circulation.

Figure 4. Vaccination coverage for the second dose of measles-containing vaccine by country, 2015–2016, WHO*, EU/EEA countries



Rubella

Between 1 January 2017 and 31 December 2017, 28 EU/EEA Member States reported 693 cases of rubella (Source: TESSy). Belgium and France do not report rubella cases to TESSy. All 28 countries reported consistently throughout the 12-month period.

In the 12-month period, the highest number of cases were reported by Poland (496), Germany (73) and Italy (65) accounting for, respectively, 72%, 11% and 9% of reported cases. In December 2017, four EU/EEA countries reported 43 cases, of which 33 were reported by Poland.

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 December 2017 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 January 2017–31 December 2017, EU/EEA countries

Country	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	2017	Total cases	Cases per million	Total lab-positive cases
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Austria	0	0	24	1	1	0	0	0	0	1	7	5	39	4.49	36
Bulgaria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	1	1	0	0	0	0	0	0	0	2	0.19	2
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	0	0	0	0	0	0	0	0	0	1	0	0	1	0.18	1
Germany	5	5	8	7	9	9	6	4	4	9	4	3	73	0.89	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	0	0	0	0	0	0	0	0	0	0	0
Italy	3	8	14	11	12	6	2	1	2	2	2	2	65	1.07	32
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	49	39	44	43	57	45	44	37	31	40	34	33	496	13.06	6
Portugal	0	1	1	0	0	0	0	0	2	0	0	0	4	0.39	0
Romania	0	1	1	0	2	1	1	1	0	0	1	0	8	0.4	5
Slovakia	0	0	0	1	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	0
Spain	0	0	0	0	0	0	1	0	0	0	0	0	1	0.02	1
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	0	0	0	1	0	0	0	0	0	1	1	0	3	0.05	3
Total	57	54	92	65	82	61	54	43	39	54	49	43	693	1.6	97

Figure 5. Distribution of rubella cases by country, December 2017 (n =43), EU/EEA countries

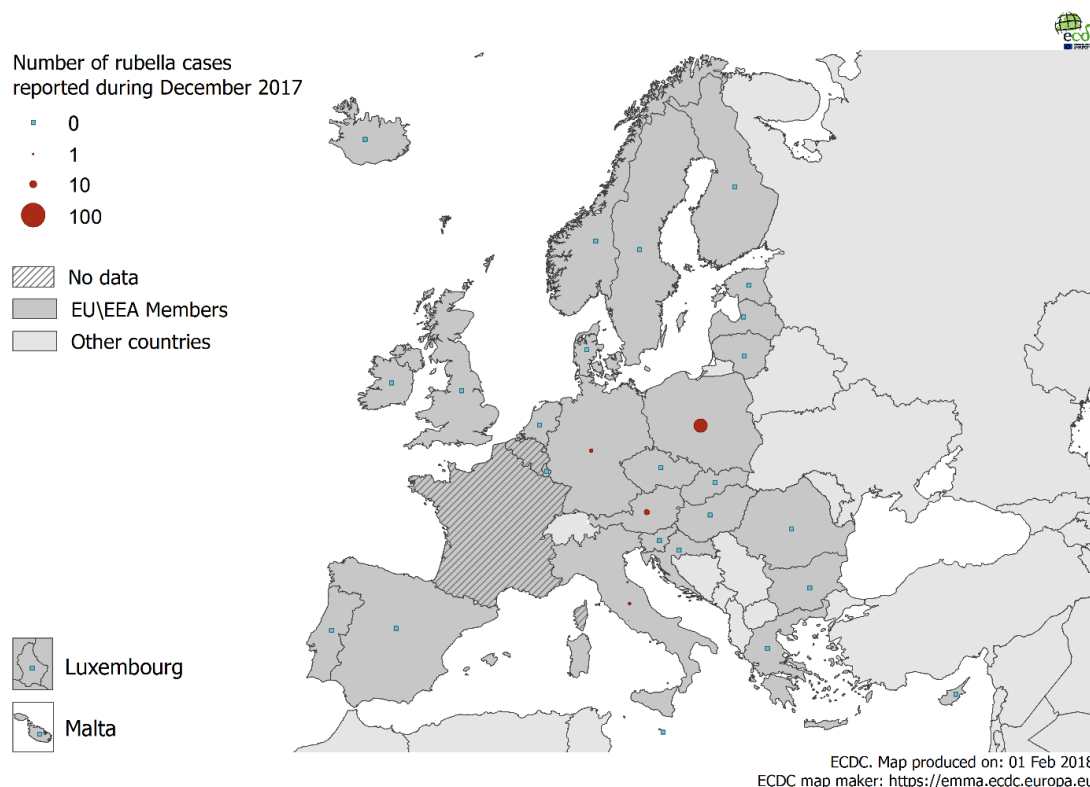
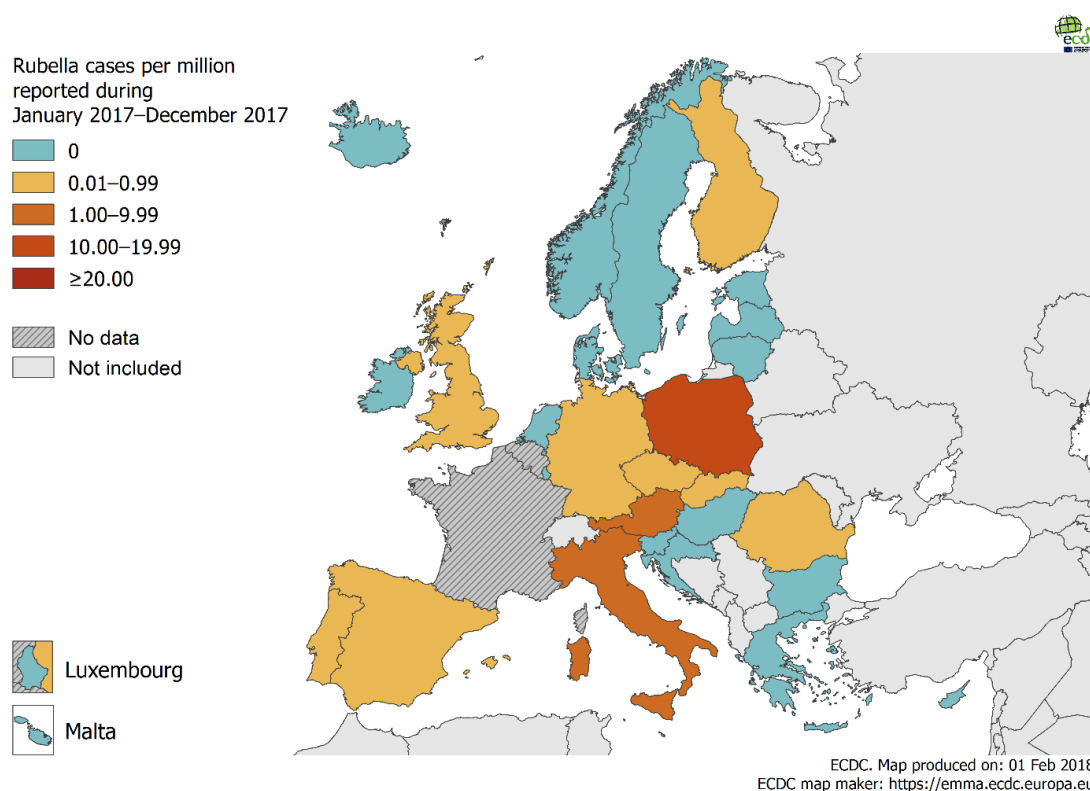


Figure 6. Rubella notification rate per million population by country, 1 January 2017–31 December 2017, EU/EEA countries



Data from Poland were reported in an aggregated format and should be interpreted with caution, as only six cases were confirmed through laboratory testing during the 12-month period. The highest number of cases in Poland was observed in children, with 47% of cases in children less than five years of age and 29% 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, 2015-2016, WHO*, EU/EEA countries

