

## SURVEILLANCE REPORT

# Monthly measles and rubella monitoring report

August 2018

## Measles

Every month, ECDC reports on European measles and rubella surveillance data. Thirty European Union and European Economic Area (EU/EEA) countries routinely submit data to The European Surveillance System (TESSy). This report is based on disease surveillance data reported for the period between 1 July 2017 and 30 June 2018. ECDC also monitors European measles outbreaks through epidemic intelligence and publishes the most recent updates once a month in the Communicable Disease Threats Report (CDTR) [1].

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 [2].

## June 2018

Seventeen EU/EEA countries reported a total of 1 054 cases of measles for June 2018 (source: TESSy). France, Germany, Greece, Italy and the United Kingdom continued to report high case counts but with a decreasing trend. Slovakia reported a marked increase in June 2018. The Czech Republic, Lithuania and Portugal did not report data for June 2018. The number of cases by country for June 2018 is presented in Figure 1.

Italy reported 260 cases for June 2018, a decrease from the 413 and 465 cases reported for May and April 2018, respectively. The most recent updates on this outbreak are available from the National Centre for Disease Prevention and Health Promotion of Italy [3] and the CDTR [1] of 10 August 2018.

For June 2018, France reported 181 cases, which was a decrease from 251 and 623 cases (including one death) reported for May and April 2018, respectively. For more information on this outbreak, see the most recent updates from the French National Institute of Public Health (Santé publique France) [4] and the CDTR [1] of 10 August 2018.

Greece reported 155 cases for June 2018, a decrease from 290 cases reported for May 2018 and 352 cases (including one death) for April 2018. The most recent updates on this outbreak are available from the Hellenic Centre for Disease Control and Prevention (HCDCP) [5] and the CDTR [1] of 10 August 2018.

Ninety cases were reported by Germany for June 2018, compared with 100 cases for May and 95 cases for April 2018. More information on the situation is available from Robert Koch Institute [6] and the CDTR [1] of 10 August 2018.

The United Kingdom reported 89 cases for June 2018, a decrease from 174 (May 2018) and 207 cases (April 2018).

Slovakia reported 72 cases for June 2018, a sharp increase from 18 and 3 cases reported for May and April 2018, respectively. The most recent updates on this outbreak are available from the Public Health Authority of the Slovak

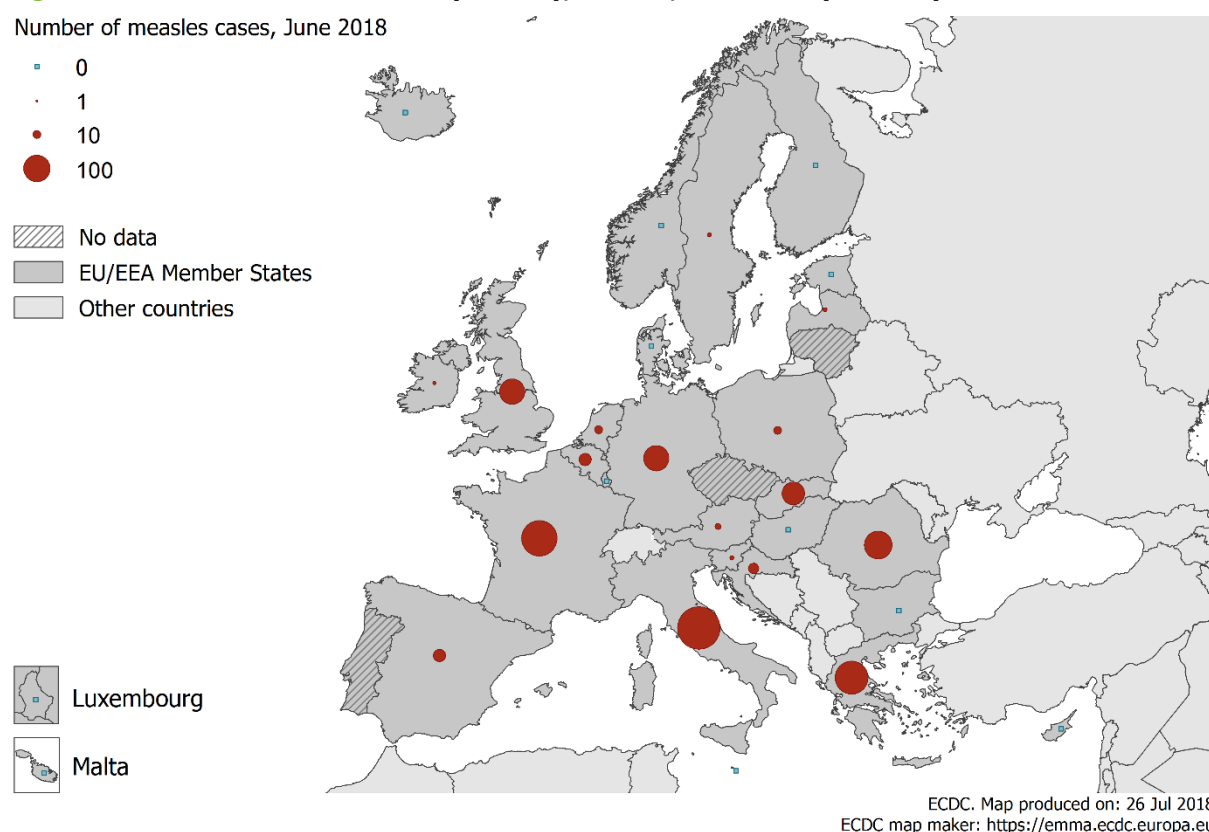
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Suggested citation: European Centre for Disease Prevention and Control. Monthly measles and rubella monitoring report, August 2018. Stockholm: ECDC; 2018

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Republic [7] and the CDTR [1] of 10 August 2018. Measles outbreaks are also ongoing in other EU/EEA countries [1].

**Figure 1. Number of measles cases by country, EU/EEA, June 2018 (n=1 054)**



## July 2017–June 2018

Between 1 July 2017 and 30 June 2018, 29 EU/EEA Member States reported 13 234 cases of measles (source: TESSy). Only Malta reported zero cases during this period. 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 ECDC, and the most up-to-date data are available from the Romanian National Institute of Public Health (INSP) [8]. ECDC previously published a Rapid Risk Assessment on the Romanian outbreak in March 2017 [9].

During the period from 1 July 2017 to 30 June 2018, most cases were reported by Italy (3 341), Greece (3 193), France (2 740) and Romania (1 354), accounting for 25%, 24%, 21% and 10%, 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 69% of all reported cases. The number of cases by month and notification rate per million population by country for this 12-month period are presented in Table 1. Figure 2 shows the notification rates per million population by country for this period.

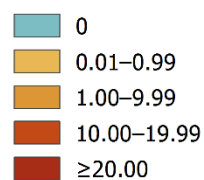
**Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 July 2017–30 June 2018**

Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
Austria	2	2	1	2	8	1	7	5	15	17	12	6	78	8.9	70
Belgium	16	0	2	0	3	1	1	6	9	11	23	22	94	8.3	73
Bulgaria	5	0	0	0	0	0	0	1	2	1	1	0	10	1.4	7
Croatia	0	0	0	0	0	0	0	0	0	1	2	16	19	4.6	19
Cyprus	0	0	0	0	0	0	5	6	4	0	0	0	15	17.6	15
Czech Republic	1	0	0	0	6	4	0	0	59	44	NR	NR	114	10.8	112
Denmark	0	3	0	0	0	0	0	0	3	0	0	0	6	1.0	6
Estonia	0	0	0	0	0	0	0	0	2	7	1	0	10	7.6	10

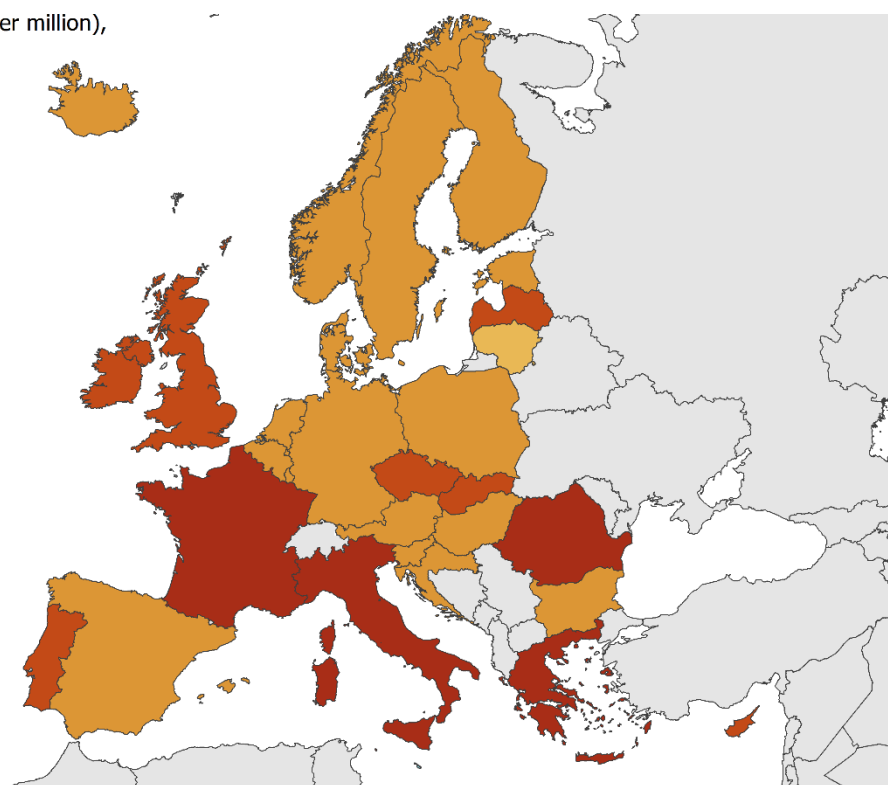
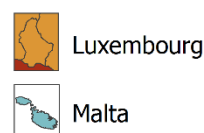
Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
Finland	4	5	0	0	0	0	0	0	0	0	4	0	13	2.4	13
France	39	15	19	13	11	65	237	523	763	623	251	181	2740	40.9	1223
Germany	23	51	16	9	9	14	26	30	51	95	100	90	514	6.2	431
Greece	7	71	126	167	250	342	431	453	549	352	290	155	3193	296.5	1833
Hungary	9	10	1	1	0	0	2	5	6	0	0	0	34	3.5	34
Iceland	0	0	0	0	1	0	0	0	0	0	0	0	1	3.0	1
Ireland	0	0	0	10	9	5	11	17	17	20	4	2	95	19.9	72
Italy	597	251	166	127	66	114	211	296	375	465	413	260	3341	55.1	2622
Latvia	0	0	0	0	0	0	7	7	1	0	2	3	20	10.3	20
Lithuania	1	0	0	0	0	0	0	0	0	0	0	NR	1	0.4	1
Luxembourg	0	0	0	0	1	0	0	0	0	1	0	0	2	3.4	2
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Netherlands	1	1	1	3	0	0	0	4	4	0	4	10	28	1.6	26
Norway	1	0	0	0	0	0	0	4	0	1	2	0	8	1.5	8
Poland	6	1	12	13	3	1	17	10	2	10	16	9	100	2.6	66
Portugal	0	0	0	0	0	0	0	4	108	13	0	NR	125	12.1	117
Romania	100	100	236	101	102	100	100	100	100	104	100	111	1354	68.9	1012
Slovakia	0	0	0	0	0	5	1	0	0	3	18	72	99	18.2	67
Slovenia	0	0	0	0	0	1	2	0	0	0	3	3	9	4.4	9
Spain	9	10	2	0	1	11	6	14	51	50	41	22	217	4.7	210
Sweden	0	2	2	2	0	11	17	2	2	2	6	3	49	4.9	48
United Kingdom	22	12	18	22	65	46	58	82	150	207	174	89	945	14.4	945
EU/EEA	843	534	602	470	535	721	1139	1569	2273	2027	1467	1054	13234	25.6	9072

**Figure 2. Measles notification rate per million population by country, EU/EEA, 1 July 2017–30 June 2018**

Notification rate of measles (per million),  
July 2017–June 2018



Not included



ECDC. Map produced on: 26 Jul 2018  
ECDC map maker: <https://emma.ecdc.europa.eu>

Eighteen deaths attributable to measles were reported to TESSy during the 12-month period, with six in Romania, five in Italy, four in Greece, and three in France. (Figure 3).

**Figure 3. Number of measles deaths by country, EU/EEA, 1 July 2017–30 June 2018 (n=18)**

Number of measles deaths,  
July 2017–June 2018



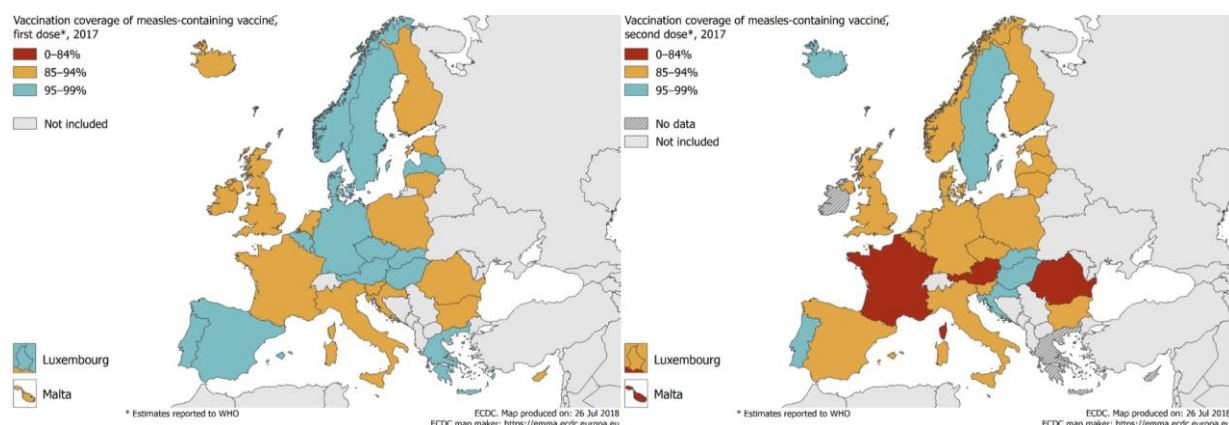
Importation status was reported by 28 countries and known for 12 186 cases (92%). Among cases with known importation status, 8 316 (68%) were reported to be endemic, 3 332 (27%) were import related, and 538 (4%) were imported. Cases were classified as imported if there was virological and/or epidemiological 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 13 233 cases with known age, 3 924 (30%) were children less than five years of age, while 6 796 (51%) were aged 15 years or older. The highest incidence was reported in children below one year of age (257.3 cases per million) and children from 1 to 4 years of age (123.7 cases per million). These data are also published in the ECDC Surveillance Atlas of Infectious Diseases [10].

Of all cases, 1 276 (10%) had an unknown vaccination status. The proportion of cases with unknown vaccination status reached 19% among adults aged 30 years and older. Of 11 957 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 one to four years, 82% of the cases were unvaccinated, 13% were vaccinated with one dose, 2% with two doses or more, and 3% 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 are presented in Figure 4. Only four EU/EEA countries reported at least 95% vaccination coverage for both doses of measles-containing vaccine for 2017. If the elimination goal is to be reached, vaccination coverage for children and adults needs to increase in a number of countries because the vaccination coverage for both the first and the second dose must be at least 95% at all subnational levels and in all communities to interrupt measles circulation.

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

## Rubella

Between 1 July 2017 and 30 June 2018, 13 EU/EEA Member States reported a total of 624 cases of rubella (source: TESSy). Belgium and France do not report rubella cases to TESSy. Lithuania and Portugal did not report data for June 2018; the Czech Republic did not report for March, April, May and June 2018.

In this 12-month period, the highest number of cases was reported by Poland (490), Germany (60), Italy (27) and Austria (21), accounting for 79%, 10%, 4% and 3% of reported cases, respectively. In June 2018, four EU/EEA Member States (Germany, Italy, Poland and Romania) reported a total of 65 cases, 55 of which were reported by Poland. The diagnosis of rubella was confirmed by positive laboratory results in 10% of all reported cases in 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 number of cases by country for June 2018 is shown in Figure 5, and the notification rates per million population by country are shown in Figure 6.

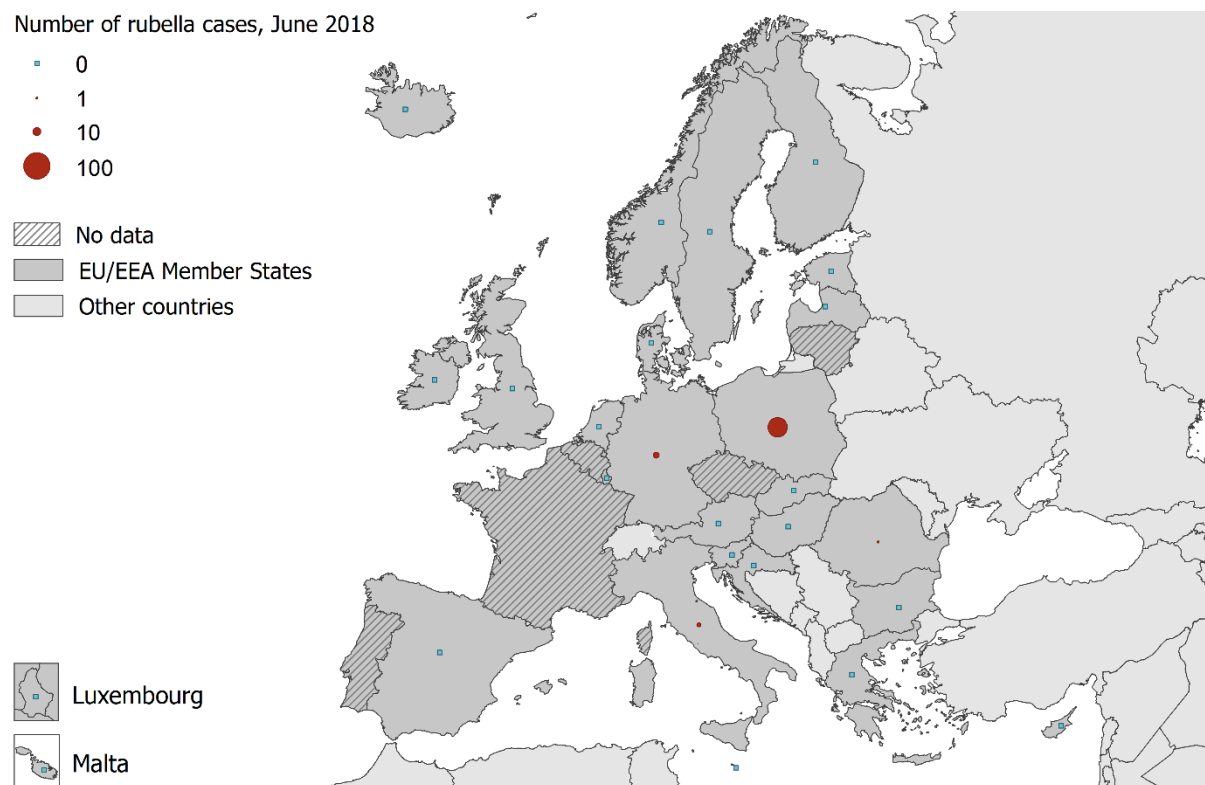
**Table 2. Number of rubella cases by month and notification rate per million population by country, EU/EEA, 1 July 2017–30 June 2018**

Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
Austria	0	0	0	1	7	5	8	0	0	0	0	0	21	2.39	21
Bulgaria	0	0	0	0	0	0	0	0	0	1	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	0	0	NR	NR	NR	NR	0	0.00	0
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	1	0	0	0	0	0	0	0	0	1	0.18	1
Germany	6	4	4	9	5	3	4	4	7	5	3	6	60	0.73	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	0	1	0	1	1	0	3	0.63	0
Italy	3	1	3	2	2	2	1	2	2	4	2	3	27	0.45	10
Latvia	0	0	0	0	0	0	0	1	1	0	1	0	3	1.54	3
Lithuania	0	0	0	0	0	0	0	0	0	0	1	NR	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	43	37	30	34	31	33	36	43	42	48	58	55	490	12.90	5
Portugal	0	0	2	0	0	0	0	1	0	0	0	NR	3	0.29	0

Country	2017	2017	2017	2017	2017	2017	2018	2018	2018	2018	2018	2018	Total cases	Cases per million	Total lab-positive cases
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun			
Romania	1	2	0	0	1	0	1	0	1	1	0	1	8	0.41	5
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	1	0	0	0	0	0	0	0	0	1	1	0	3	0.06	3
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0
United Kingdom	0	0	0	1	1	0	0	1	0	0	0	0	3	0.05	3
EU/EEA	54	44	39	48	47	43	50	53	53	61	67	65	624	1.40	60

**Figure 5. Number of rubella cases by country, EU/EEA, June 2018 (n=65)**

Number of rubella cases, June 2018



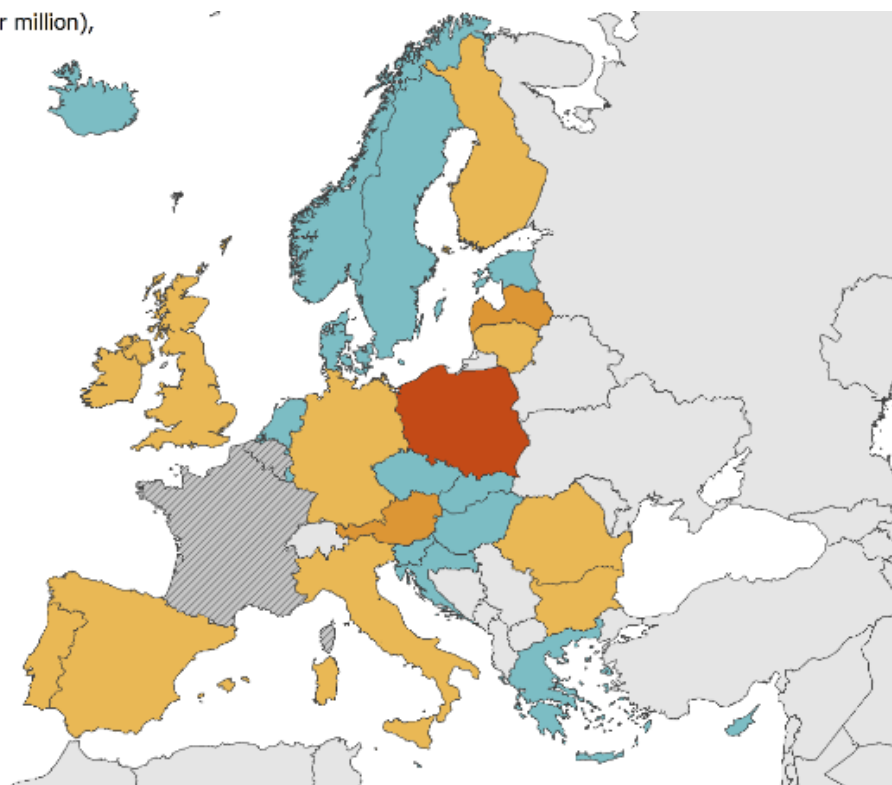
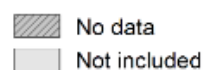
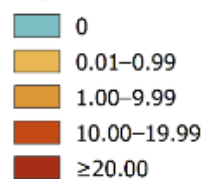
Data from Poland were reported in an aggregated format and should be interpreted with caution, as only five cases (1%) were confirmed through laboratory testing during the 12-month period. The majority of cases in Poland occurred in children, with 45% of cases in children under five years of age and 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 [13] by country in the EU/EEA.



**Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 July 2017–30 June 2018**

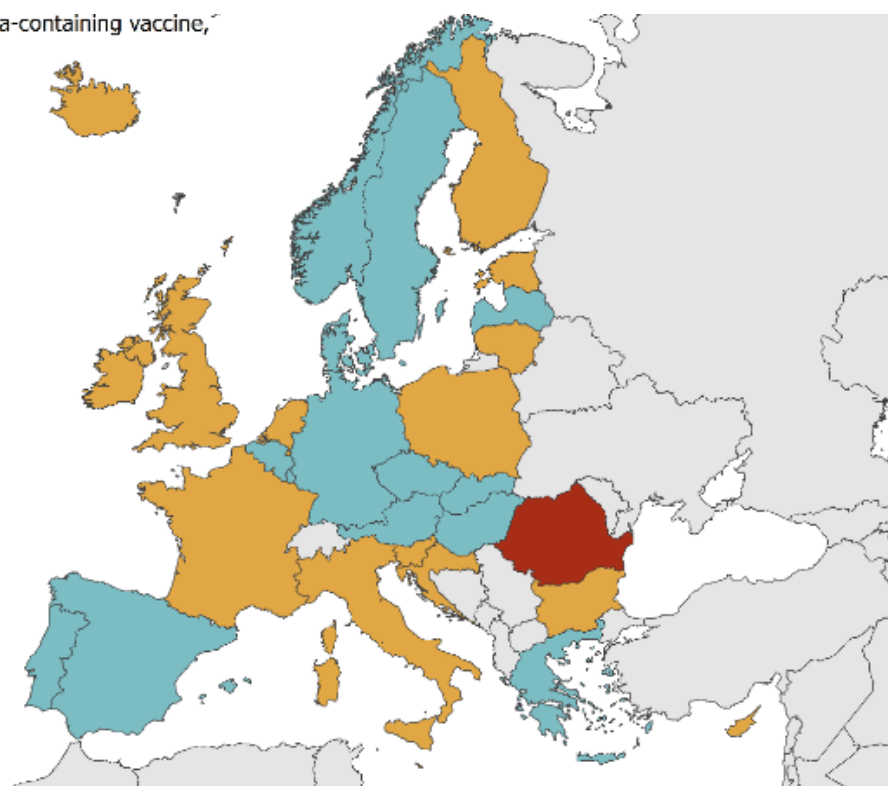
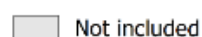
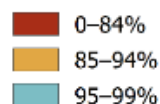
Notification rate of rubella (per million),  
July 2017–June 2018



ECDC. Map produced on: 26 Jul 2018  
ECDC map maker: <https://emma.ecdc.europa.eu>

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

Vaccination coverage of rubella-containing vaccine,  
first dose\*, 2017



\* Estimates reported to WHO

ECDC. Map produced on: 26 Jul 2018  
ECDC map maker: <https://emma.ecdc.europa.eu>

# References

1. European Centre for Disease Prevention and Control. Publications and data [internet]. Stockholm: ECDC; 2018 [cited 6 Aug 2018]. Available from: [https://ecdc.europa.eu/en/publications-data?f%5b0%5d=publication\\_series%3A1505](https://ecdc.europa.eu/en/publications-data?f%5b0%5d=publication_series%3A1505).
2. European Centre for Disease Prevention and Control. Risk of measles transmission in the EU/EEA, 21 March 2018. Stockholm, ECDC. 2018. Available from: <https://ecdc.europa.eu/en/publications-data/rapid-risk-assessment-risk-measles-transmission-eueea>.
3. Istituto superiore di sanità, Centro nazionale per la prevenzione delle malattie e la promozione della salute. EpiCentro – Morbillo & Rosolia News: il bollettino della sorveglianza integrata morbillo-rosolia [internet]. Rome: Istituto superiore di sanità; 2018 [cited 6 Aug 2018]. Available from: <http://www.epicentro.iss.it/problemi/morbillo/bollettino.asp>.
4. Santé publique France. Rougeole en France, données de surveillance au 1 août 2018 [internet]. Paris: Santé publique France; 2018 [cited 6 Aug 2018]. Available from: <https://www.santepubliquefrance.fr/Actualites/Rougeole-en-France-donnees-de-surveillance-au-1er-aout-2018>.
5. Hellenic Center for Disease Control and Prevention. Annual epidemiological reports, monthly data, weekly epidemiological reports [internet]. Athens: HCDCP; 2018 [cited 6 Aug 2018]. Available from: <http://www.keelpno.gr/en-us/epidemiologicalstatisticaldata.aspx>.
6. Robert Koch Institute. Epidemiologisches Bulletin [internet]. Berlin: RKI; 2018 [cited 6 Aug 2018]. Available from: [https://www.rki.de/DE/Content/Infekt/EpidBull/epid\\_bull\\_node.html](https://www.rki.de/DE/Content/Infekt/EpidBull/epid_bull_node.html).
7. Public Health Authority of the Slovak Republic. Measles [internet]. Bratislava: Úrad verejného zdravotníctva Slovenskej republiky; 2018 [cited 6 Aug 2018]. Available from: [http://www.uvzsr.sk/index.php?option=com\\_content&view=category&layout=blog&id=197&Itemid=138](http://www.uvzsr.sk/index.php?option=com_content&view=category&layout=blog&id=197&Itemid=138)
8. Institutul National De Sanatate Publica Rujeola [internet]. Bucharest: Centrul Național de Supraveghere și Control al Bolilor Transmisibile; 2018 [cited 6 Aug 2018]. Available from: <http://cnsrbt.ro/index.php/informari-saptamanale/rujeola-1>
9. European Centre for Disease Prevention and Control. Ongoing outbreak of measles in Romania, risk of spread and epidemiological situation in EU/EEA countries – 3 March 2017, Stockholm. ECDC; 2017. Available from: <https://ecdc.europa.eu/sites/portal/files/media/en/publications/Publications/27-02-2017-RRA-Measles-Romania%2C%20European%20Union%20countries.pdf>.
10. European Centre for Disease Prevention and Control. Surveillance atlas of infectious diseases [internet]. Stockholm: ECDC; 2017 [cited 6 Aug 2018]. Available from: <http://atlas.ecdc.europa.eu/public/index.aspx?Dataset=27&HealthTopic=35&Indicator=258323&GeoResolution=2&TimeResolution=Month&StartTime=2018-05&EndTime=2018-05&CurrentTime=2018-05&Distribution=258340&DistributionRepresentation=B&TimeSeries=region&TimeSeriesRepresentation=T>.
11. World Health Organization. Measles-containing vaccine – reported estimates of MCV1 coverage [internet]. Geneva: WHO; 2018 [cited 18 Jul 2018]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tscoveragemcv1.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tscoveragemcv1.html).
12. World Health Organization. Measles-containing vaccine 2nd dose – reported estimates of MCV2 coverage [internet]. Geneva: WHO; 2018 [cited 18 Jul 2018]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tscoveragemcv2.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tscoveragemcv2.html).
13. World Health Organization. Rubella-containing vaccine 1st dose – reported estimates of RCV1 coverage [internet]. Geneva: WHO; 2018 [cited 18 Jul 2018]. Available from: [http://apps.who.int/immunization\\_monitoring/globalsummary/timeseries/tscoveragercv1.html](http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tscoveragercv1.html).