

SURVEILLANCE REPORT

Monthly measles and rubella monitoring report

November 2017

Measles

ECDC reports on routine surveillance data submitted by 30 EU/EEA countries to the European Surveillance System (TESSy) on a monthly basis. This report is based on measles and rubella surveillance data reported to TESSy for 1 October 2016 to 30 September 2017. ECDC also monitors European and worldwide measles outbreaks through epidemic intelligence, publishing monthly the most recent updates in the [Communicable Disease Threats Report \(CDTR\)](#).

In September 2017, 420 cases of measles were reported by 10 EU/EEA countries (Source: TESSy). Greece is currently experiencing an outbreak, with 71 cases reported in August and 126 cases in September. The Hellenic Centre for Disease Control and Prevention does not exclude that more cases will be reported in the near future. For more information, see the [CDTR](#) of 10 November 2017.

Between 1 October 2016 and 30 September 2017, 30 EU/EEA Member States reported 12 743 cases of measles (Source: TESSy). All Member States reported consistently throughout this period. All EU/EEA countries have reported measles cases in the last 12 months, except Latvia and Malta. The number of measles cases in TESSy may be underestimated, in particular for Romania. While the outbreak has caused delays in case-based reporting to ECDC, updated figures are available from the [Romanian National Institute of Public Health](#). ECDC has also published a [Rapid Risk Assessment](#) on the outbreak in Romania. Measles outbreaks are also ongoing in other EU/EEA countries.

In this 12-month period, the highest numbers of cases were reported by Italy (4 925), Romania (4 854) and Germany (956), accounting for 39%, 38% and 8% respectively of EU/EEA cases. The diagnosis of measles was confirmed by positive laboratory results (serology, virus detection or isolation) in 63% of all EU/EEA cases.

Table 1. Number of measles cases by month and notification rate per million population by country, 1 October 2016 – 30 September 2017, EU/EEA countries

Country	2016	2016	2016	2017	2017	2017	2017	2017	2017	2017	2017	2017	Total cases	Cases per million	Total lab-positive cases
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Austria	3	1	4	28	34	8	2	6	1	2	2	1	92	10.59	81
Belgium	2	2	3	27	79	147	35	23	33	15	1	3	370	32.71	239
Bulgaria	0	0	0	0	0	19	41	57	44	5	0	0	166	23.2	86
Croatia	0	0	0	2	5	0	0	0	0	0	0	0	7	1.67	7
Cyprus	0	0	0	0	0	0	0	1	2	0	0	0	3	3.54	3
Czech Republic	0	1	0	0	0	21	63	43	7	1	0	0	136	12.89	129
Denmark	0	0	1	0	0	1	0	0	0	0	3	0	5	0.88	5
Estonia	0	0	0	0	0	0	0	1	0	0	0	0	1	0.76	1
Finland	0	0	3	0	0	0	0	0	1	4	5	0	13	2.37	13
France	2	2	4	34	52	49	61	114	42	38	15	18	431	6.46	279
Germany	11	25	22	47	157	212	178	137	77	23	50	17	956	11.63	664
Greece	0	0	0	0	0	0	0	3	1	7	71	126	208	19.29	176
Hungary	0	0	0	1	11	3	0	0	0	9	10	0	34	3.46	34
Iceland	0	0	0	0	0	2	0	0	0	0	0	0	2	6.01	2
Ireland	0	0	0	0	1	1	1	0	0	1	0	2	6	1.27	1
Italy	79	83	89	287	462	898	803	730	589	531	230	144	4 925	81.18	3 848
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lithuania	0	0	0	0	0	0	1	0	0	1	0	0	2	0.69	2
Luxembourg	0	0	0	0	0	3	0	0	0	0	0	0	3	5.21	3
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	4	0	0	0	2	6	2	1	0	NR	15	0.88	13
Norway	0	0	0	0	0	0	0	0	0	1	0	0	1	0.19	1
Poland	24	13	4	6	6	5	4	2	4	6	1	0	75	1.98	36
Portugal	0	0	0	0	2	10	18	4	0	0	0	0	34	3.29	29
Romania	426	614	506	484	843	1 334	100	156	100	100	100	91	4 854	245.64	1 982
Slovakia	0	0	0	0	0	0	1	0	0	0	0	0	1	0.18	1
Slovenia	0	0	0	2	4	0	0	0	0	0	0	0	6	2.91	6
Spain	2	6	2	10	29	22	10	40	31	7	10	NR	169	3.64	159
Sweden	0	0	0	2	8	7	3	4	0	0	2	2	28	2.84	28
United Kingdom	37	14	1	10	1	8	17	35	27	22	12	16	200	3.06	200
Total	586	761	643	940	1 694	2 750	1 340	1 362	961	774	512	420	12 743	24.7	8 028

Figure 1. Distribution of measles cases by country, September 2017 (n = 420), EU/EEA countries

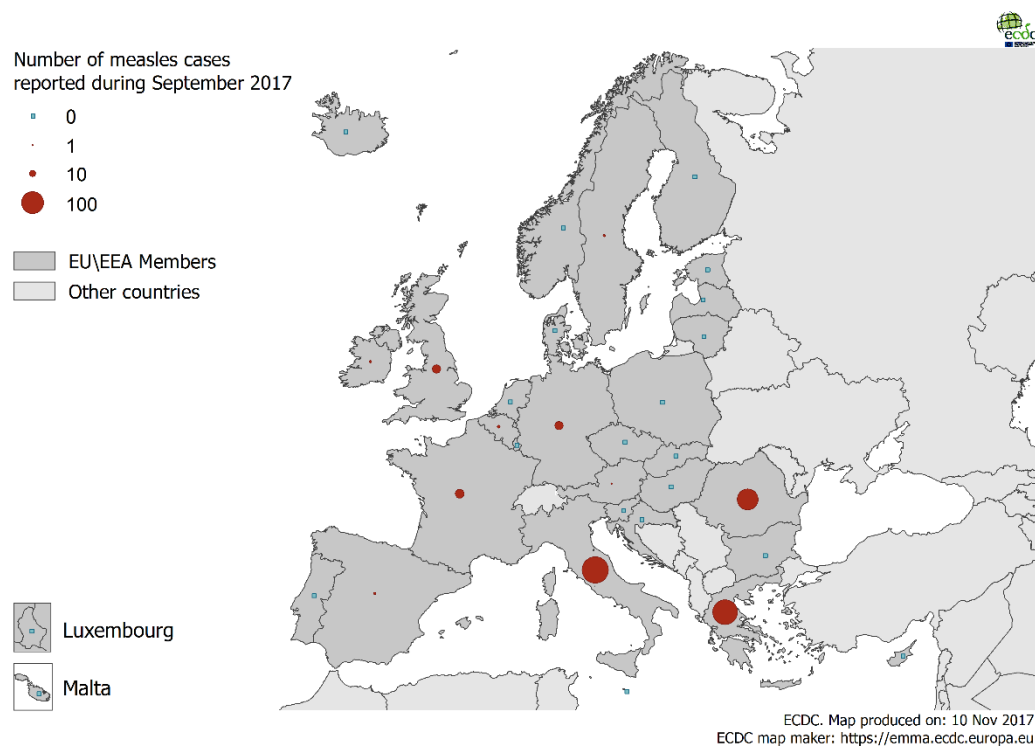
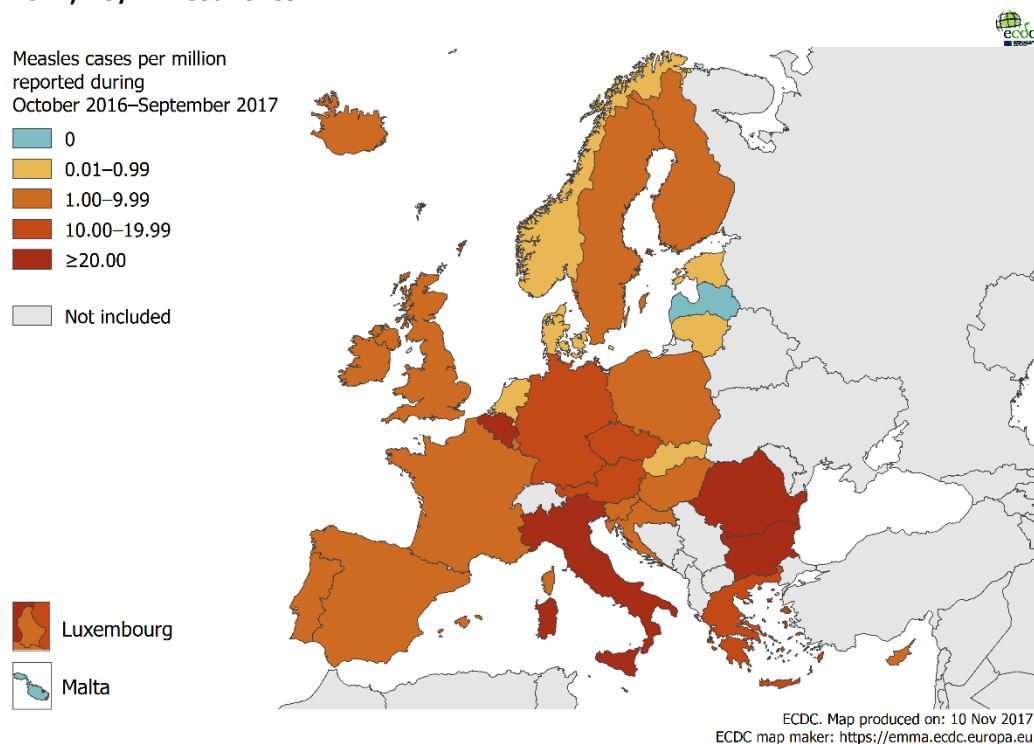


Figure 2. Measles notification rate per million population by country, 1 October 2016 – 30 September 2017, EU/EEA countries



The importation status was known for 12 477 cases (98%) and was reported by 27 countries. Among cases with known importation status, 11 662 (93%) were reported to be endemic, 489 (4%) import-related and 326 (3%) as imported. Imported cases are those with virological and/or epidemiological evidence of exposure outside the region or country during the 7–18 days prior to rash onset, while import-related cases are locally-acquired infections caused by imported virus, as supported by epidemiological and/or virological evidence.

Of 12 741 cases with known age, 4 517 (35%) were children less than 5 years of age, while 5 965 (47%) were aged 15 years or older. The highest incidence was reported in children below one year of age (300.3 per million) and children from 1 to 4 years of age (140.1 per million). These data can also be visualised in the [ECDC Surveillance Atlas of Infectious Diseases](#).

Of 11 926 cases with known vaccination status, 86% 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.

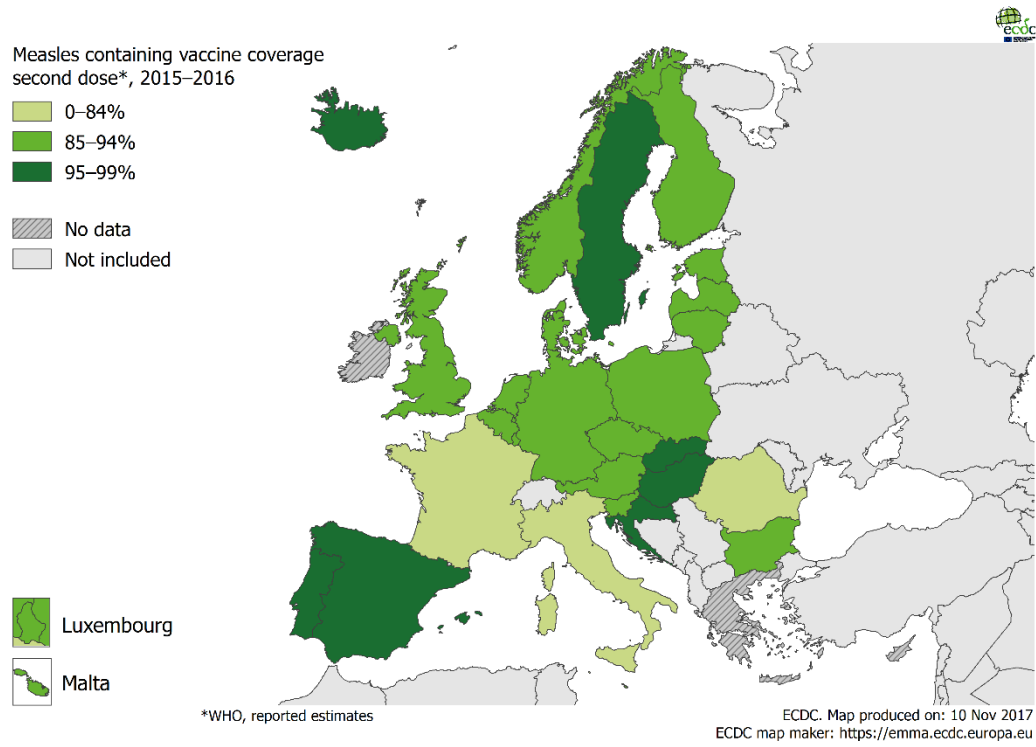
The proportion of cases with unknown vaccination status was highest in adults aged 25–29 years old, reaching 13%. The proportion of unvaccinated cases was highest among children below one year of age (96%), who are too young to have received the first dose of the measles vaccine. Infants below the age 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 (1–4 year-olds), 86% of the cases were unvaccinated, 12% 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.

Twenty-eight deaths due to measles were reported in TESSy during the 12-month period; with 19 in Romania, four in Italy, and one each in Bulgaria, France, Germany, Spain and Portugal.

Measles continues to spread across Europe as the vaccination coverage in many EU/EEA countries is suboptimal. The latest available figures on [vaccination coverage collected by WHO \(2016\)](#) show that the vaccination coverage for the first dose of measles was below 95% in 18 of 30 EU/EEA countries. The vaccination coverage for the second dose of measles was below 95% in 20 of 27 EU/EEA countries reporting second dose coverage data. If the elimination goal is to be reached, vaccination coverage rates for children targeted by routine vaccination programmes should increase in a number of countries as the vaccination coverage of the second dose must be at least 95% to interrupt measles circulation.

Figure 3. Vaccination coverage for the second dose of measles-containing vaccine by country, 2015–2016, WHO*, EU/EEA countries



Rubella

Between 1 October 2016 and 30 September 2017, 28 EU/EEA Member States reported 786 cases of rubella (Source: TESSy). Belgium and France do not report rubella cases to TESSy. Of the 28 reporting countries for rubella, 26 reported consistently throughout the 12-month period. The Netherlands and Romania did not report for September 2017.

In this 12-month period, the highest number of cases were reported by Poland (599), Germany (72) and Italy (64) accounting for 76%, 9% and 8% of reported cases, respectively. In September 2017, four EU/EEA countries reported 42 cases, of which 34 were reported by Poland.

Table 2. Number of rubella cases by month and notification rate per million population by country, 1 October 2016 – 20 September 2017, EU/EEA countries

Country	2016			2017			2017			2017			Total cases	Cases per million	Total lab-positive cases
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
Austria	0	0	0	0	0	24	1	1	0	0	0	0	26	2.99	23
Bulgaria	0	1	1	0	0	0	0	0	0	0	0	0	2	0.28	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	0	0	0	1	1	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	0	0	0	0	0	0
Germany	3	7	5	5	5	8	7	9	9	6	4	4	72	0.88	16
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	2	4	2	3	8	11	12	12	7	1	0	2	64	1.05	29
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	NR	0	0	0
Norway	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poland	78	57	70	49	39	45	43	57	44	46	37	34	599	15.78	5
Portugal	0	1	0	0	1	1	0	0	0	0	0	2	5	0.48	0
Romania	1	2	2	0	1	1	0	2	1	1	1	NR	12	0.61	9
Slovakia	0	0	0	0	0	0	1	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	0	0	0	1	0	NR	1	0.02	1
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
United Kingdom	0	1	0	0	0	0	1	0	0	0	0	0	2	0.03	2
Total	84	73	80	57	54	90	66	82	61	55	42	42	786	1.8	87

Figure 4. Distribution of rubella cases by country, September 2017 (n = 786), EU/EEA countries

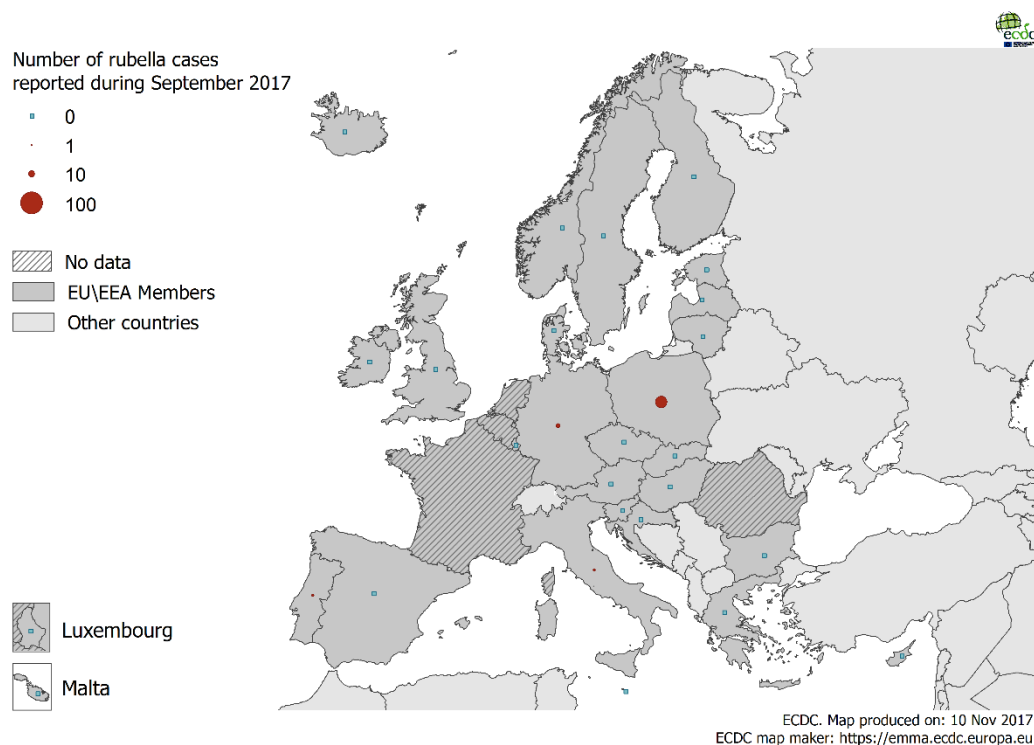
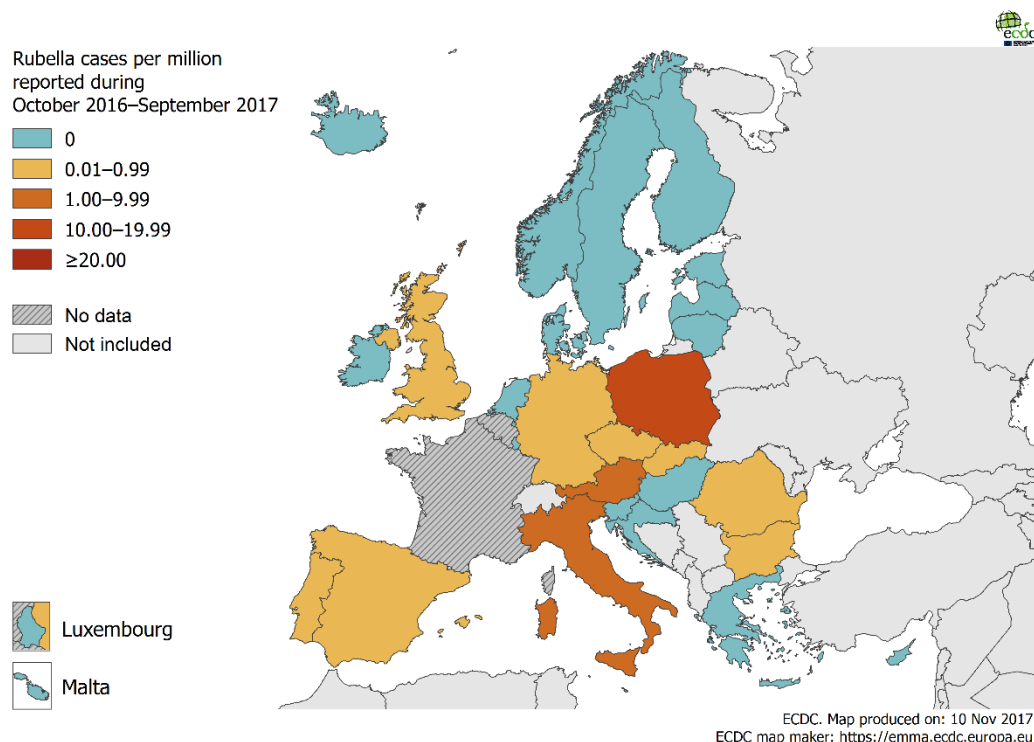


Figure 5. Rubella notification rate per million population by country, 1 October 2016 – 30 September 2017, EU/EEA countries



Data from Poland were reported in an aggregated format and need to be interpreted with caution, as only five cases were confirmed through laboratory testing. The highest number of cases in Poland was observed in children, with 46% of cases less than five years of age and 28% aged from five to nine years of age during these 12 months.

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 6. Vaccination coverage for the first dose of rubella-containing vaccine by country, 2015–2016, WHO*, EU/EEA countries

