

Monthly measles and rubella monitoring report

October 2019

Period covered: 1 September 2018–31 August 2019

Introduction

The monitoring report is based on measles and rubella data from The European Surveillance System (TESSy) for 1 September 2018 to 31 August 2019.

Routine disease data are submitted on a monthly basis by 30 European Union/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 published each month in the ECDC Surveillance Atlas of Infectious Diseases [1], an interactive tool providing access to additional tables and graphs not included in the report. A monthly measles infographic is also published online [2].

ECDC also monitors European measles and rubella outbreaks through epidemic intelligence and publishes recent updates in the Communicable Disease Threats Report (CDTR) [3] on the same day as the monitoring report. Additionally, ECDC conducts assessments as significant 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 May 2019 [4].

Measles

Measles in August 2019

Twenty-nine countries reported measles data for August 2019, with 453 cases reported by 20 countries; nine countries reported no cases (Figure 1).

Overall, case numbers continued to decrease compared with the previous two months. France, Romania and Italy had the highest case counts with 107, 80 and 77 cases respectively (Table 1).

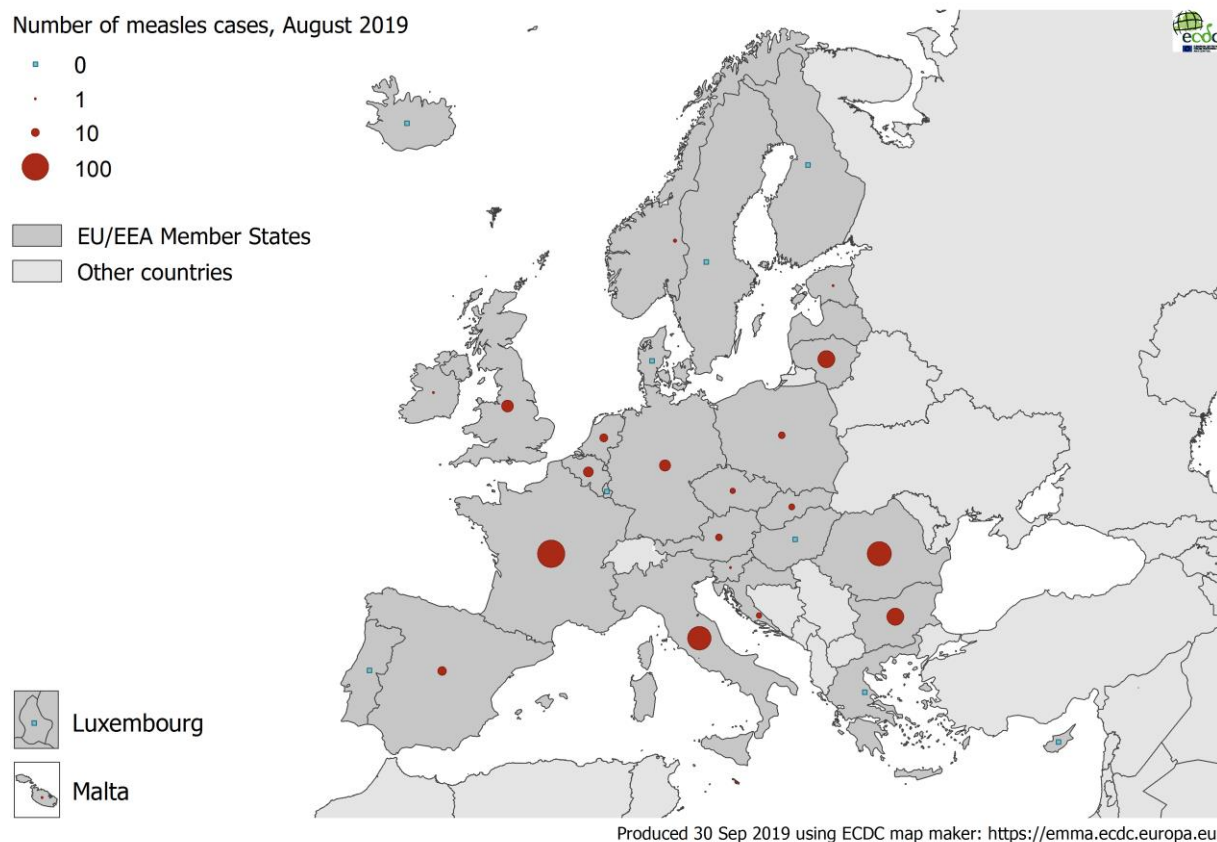
Notable decreases were reported in France, Italy and Bulgaria.

- France reported 107 cases in August, compared with 314 in July and 467 in June.
- Italy reported 77 cases in August, compared with 152 in July and 217 in June.
- Bulgaria reported 42 cases in August, compared with 84 in July and 236 in June.

Latvia did not report measles data for August 2019. Belgium and Poland reported aggregate data, while all other countries reported case-based data. Cases classified as discarded (see notes) are not included in the figures presented in the report.

Where available, links to recent updates published by national public health authorities in the EU/EEA can be found in the CDTR [3].

Figure 1. Number of measles cases by country, EU/EEA, August 2019 (n=453)



Measles cases from September 2018–August 2019

From 1 September 2018–31 August 2019, 30 EU/EEA Member States reported 13 264 cases of measles, 10 507 (79%) of which were laboratory confirmed. No countries reported zero cases during the 12-month period. The highest number of cases were reported by France (2 675), Italy (1 847), Poland (1 582), Romania (1 445) and Bulgaria (1 158), accounting for 20%, 14%, 12%, 11% and 9% of all cases, respectively (Table 1). Notification rates per million population above the EU/EEA average of 25.6 were reported by Lithuania (164.2), Slovakia (82.3), Romania (74.0), Malta (65.2), the Czech Republic (59.5), Poland (41.7), Luxembourg (41.5), France (40.0), Belgium (38.6) and Italy (30.5); (Figure 2).

The number of measles cases reported to TESSy may be an underestimation in certain countries. This may apply in particular to 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 [5].

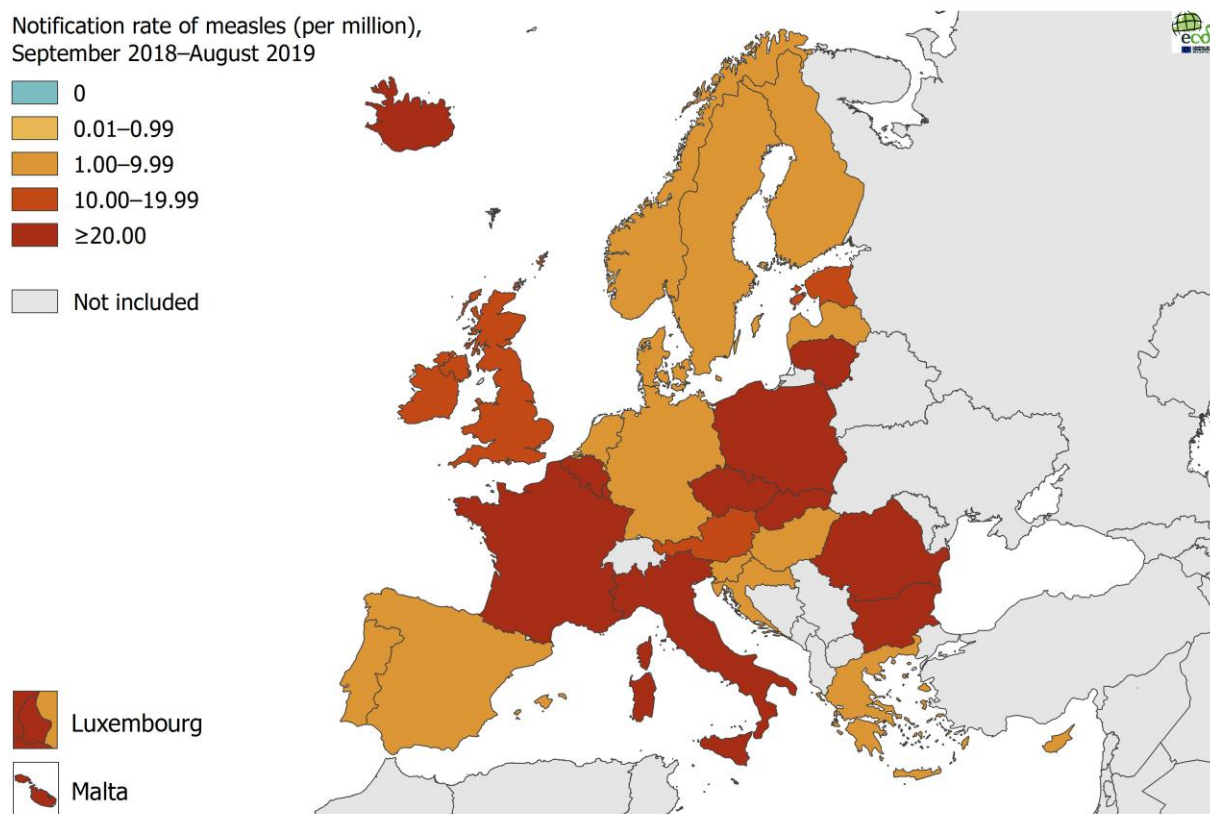
Table 1. Number of measles cases by month and notification rate per million population by country, EU/EEA, 1 September 2018–31 August 2019

Country	2018	2018	2018	2018	2019	2019	2019	2019	2019	2019	2019	2019	2019	Total cases	Cases per million	Total lab-positive cases
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Austria	6	0	4	1	25	33	1	27	38	8	4	7	154	17.5	143	
Belgium	14	4	6	6	20	87	67	34	94	66	28	14	440	38.6	341	
Bulgaria	0	0	0	0	0	51	185	279	281	236	84	42	1158	164.2	1047	
Croatia	0	0	0	0	0	1	0	0	4	6	10	4	25	6.1	25	
Cyprus	0	0	0	0	0	1	0	1	3	1	0	0	6	6.9	5	
Czech Republic	4	7	16	19	58	150	199	90	50	20	14	4	631	59.5	551	
Denmark	2	0	0	1	2	5	4	2	1	1	0	0	18	3.1	18	
Estonia	0	0	0	0	3	6	2	0	6	7	1	1	26	19.7	25	

	2018	2018	2018	2018	2019	2019	2019	2019	2019	2019	2019	2019			
Country	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total cases	Cases per million	Total lab-positive cases
Finland	0	0	1	7	3	3	0	2	0	0	0	0	16	2.9	16
France	38	76	62	61	122	209	321	341	557	467	314	107	2675	40.0	1625
Germany	24	13	10	10	102	71	129	70	50	20	20	19	538	6.5	426
Greece	4	2	0	1	0	3	7	12	6	0	0	0	35	3.3	20
Hungary	0	0	0	1	2	5	4	2	9	0	1	0	24	2.5	24
Iceland	0	0	0	0	0	1	6	0	0	0	1	0	8	23.0	8
Ireland	2	1	1	0	2	18	23	6	10	2	3	1	69	14.3	36
Italy	57	82	58	76	180	173	229	309	237	217	152	77	1847	30.5	1544
Latvia	0	0	1	2	0	0	0	1	0	0	0	.	4	2.1	4
Lithuania	0	0	8	20	12	73	250	232	122	62	32	40	851	303.0	851
Luxembourg	0	0	1	0	0	0	15	7	1	1	0	0	25	41.5	25
Malta	0	0	0	0	0	0	3	13	11	3	0	1	31	65.2	31
Netherlands	0	0	0	2	4	4	10	2	13	16	9	9	69	4.0	60
Norway	0	0	0	0	0	1	7	3	3	1	0	2	17	3.2	14
Poland	9	21	79	114	164	239	287	256	244	122	40	7	1582	41.7	1056
Portugal	3	2	24	12	2	2	2	0	2	1	0	0	50	4.9	47
Romania	72	65	81	130	261	77	188	110	148	123	110	80	1445	74.0	1135
Slovakia	28	16	38	50	43	37	70	105	43	9	3	6	448	82.3	385
Slovenia	0	1	0	0	0	0	0	6	8	3	1	1	20	9.7	20
Spain	4	4	1	6	11	11	23	67	74	28	13	11	253	5.4	230
Sweden	4	1	0	3	0	1	4	6	4	2	2	0	27	2.7	24
United Kingdom	16	21	26	11	81	81	108	118	125	113	52	20	772	11.7	771
EU/EEA	287	316	417	533	1097	1343	2144	2101	2144	1535	894	453	13264	25.6	10507

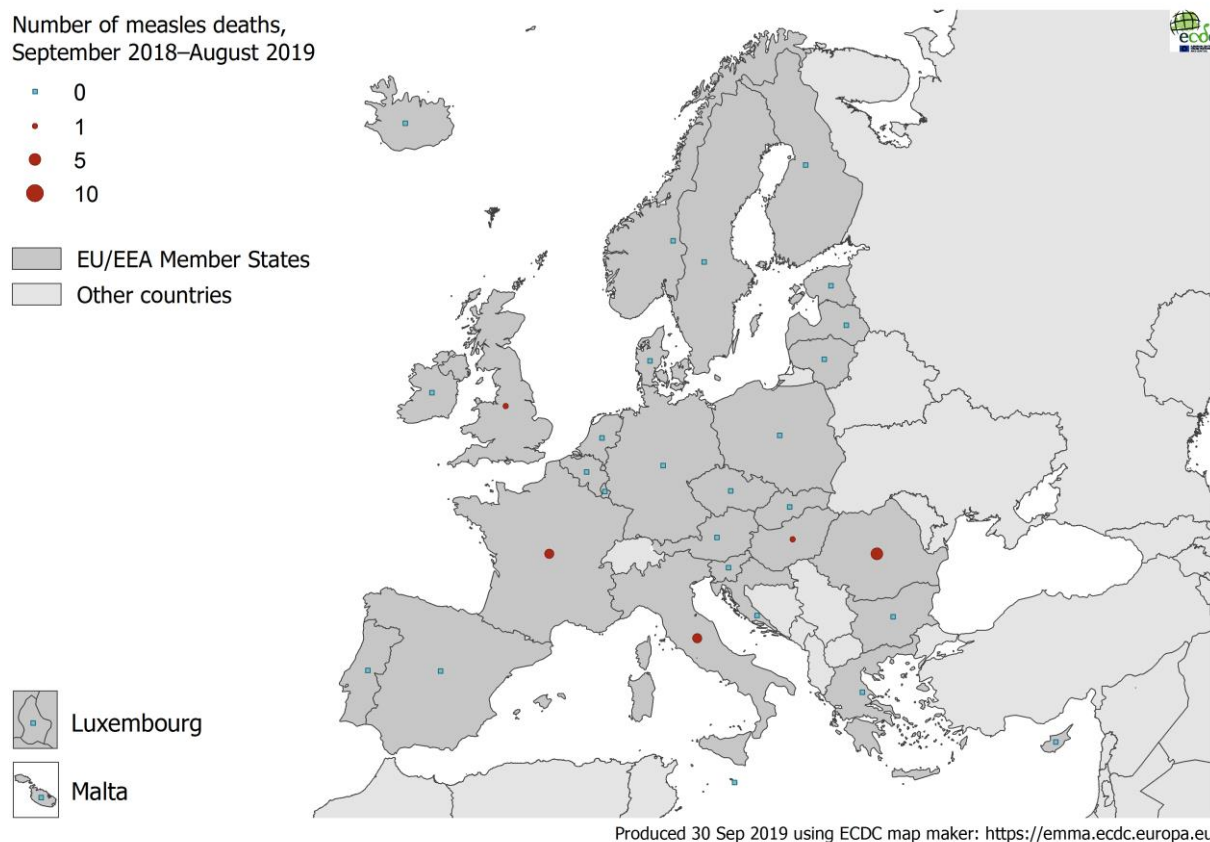
Source: TESSy, data extracted on 30 September 2019
 ..: data not reported.

Figure 2. Measles notification rate per million population by country, EU/EEA, 1 September 2018–31 August 2019



Thirteen deaths attributable to measles were reported to TESSy during the 12-month period in Romania (5), France (3), Italy (3), Hungary (1) and United Kingdom (1); (Figure 3).

Figure 3. Number of measles deaths by country, EU/EEA, 1 September 2018–31 August 2019 (n=13)



Importation status was reported by 30 countries and known for 10 067 cases (76%), 905 (9%) of which were imported and 312 (3%) of which were import related (see notes).

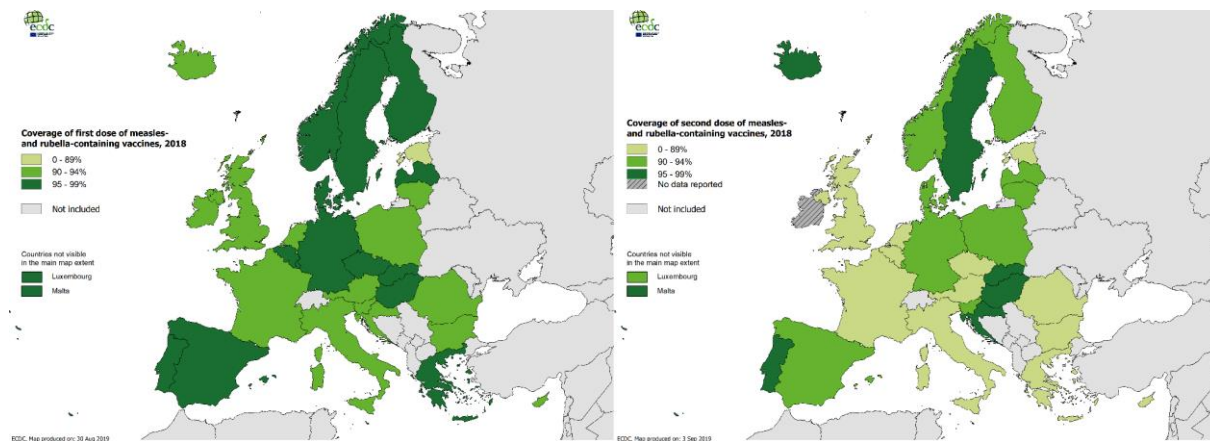
Of the 12 594 cases with known age, 3 608 (29%) were children under five years, and 6 960 (55%) were aged 15 years or older. The highest notification rates were observed in infants under one year (281.7 cases per million) and aged 1–4 years (103.8 cases per million).

A total of 3 005 cases (23%) had unknown vaccination status. The proportion of cases with unknown vaccination status was highest in adults aged 30 years and above (1 622 of 4 047 cases; 40%). Of 9 589 cases (72% of all cases) with known age and vaccination status, 6 767 (71%) were unvaccinated, 1 694 (18%) were vaccinated with one dose of a measles-containing vaccine, 956 (10%) were vaccinated with two or more doses, and 172 (2%) were vaccinated with an unknown number of doses.

The proportion of unvaccinated cases was highest among infants under one year (1 237 of 1 435 cases; 86%). Infants under one year are particularly vulnerable to measles complications and are best protected by herd immunity as the first dose of a measles-containing vaccine is given after 12 months of age in most EU/EEA countries [6]. Among 2 173 cases aged 1–4 years (the target group of the first, and in certain countries second, dose [6]), 1 392 (64%) were unvaccinated, 461 (21%) were vaccinated with one dose of a measles-containing vaccine, 29 (1%) were vaccinated with two or more doses and 6 (<1%) were vaccinated with an unknown number of doses.

Measles continues to spread across Europe because vaccination coverage in many countries is suboptimal. Sustained coverage of at least 95% for two doses of a measles-containing vaccine at all subnational levels is recommended [7]. However, the latest WHO-UNICEF estimates of national immunisation coverage show that only five EU/EEA countries (Hungary, Malta, Portugal, Slovakia and Sweden) reported at least 95% vaccination coverage for both the first [8] and second [9] doses in 2018 (Figure 4). If the elimination goal is to be reached, many countries need to make sustained improvements in the coverage of their routine childhood immunisation programmes and also close immunity gaps in adolescents and adults who have missed vaccination opportunities in the past [4].

Figure 4. Vaccination coverage for first (left) dose of a measles- and rubella-containing vaccine and second (right) dose of a measles-containing vaccine, EU/EEA, 2018



Rubella

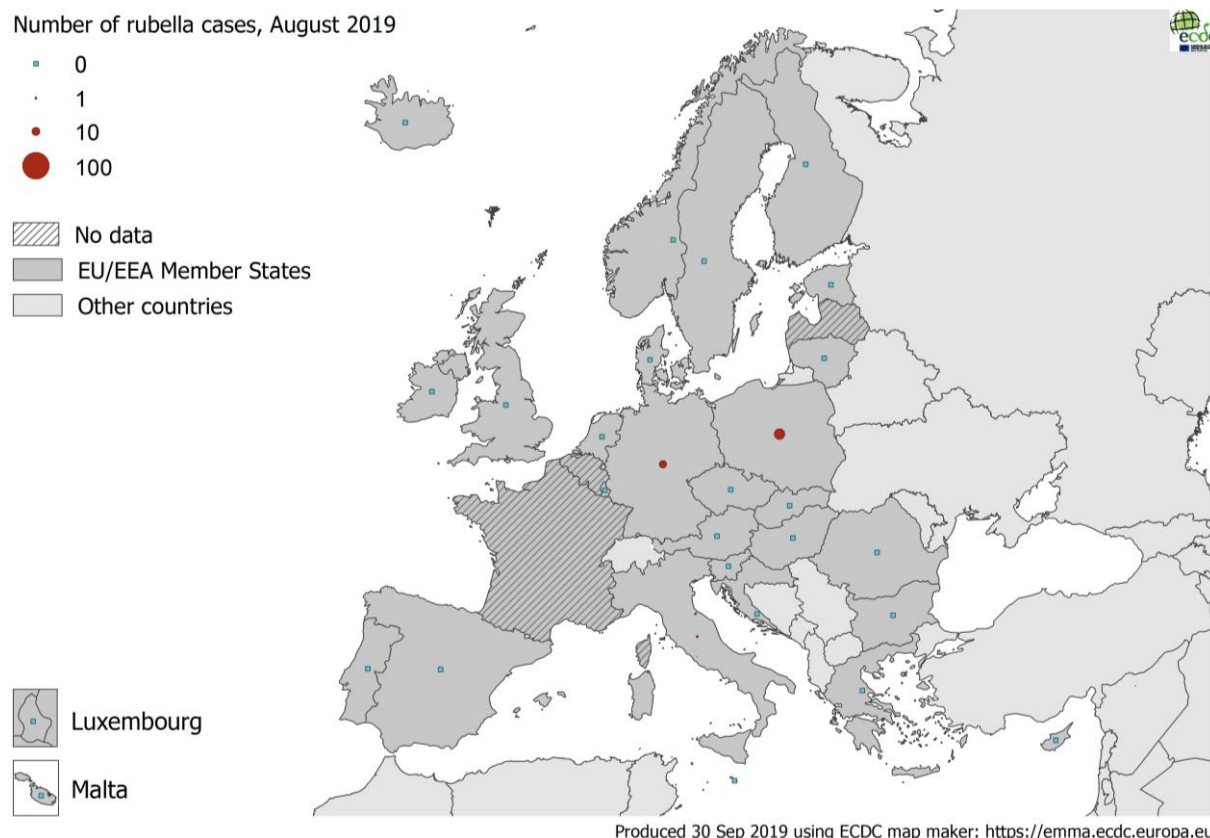
Rubella in August 2019

Twenty-seven countries reported rubella data for August 2019: three countries (Germany, Italy and Poland) reported 25 cases, while 24 countries reported no cases (Figure 5).

Overall, case numbers changed little compared with the previous two months. Sixteen of the 25 cases (64%) were reported by Poland (Table 2).

Latvia did not report rubella data for August 2019. Poland reported aggregate data, while all other countries reported case-based data. Cases classified as discarded (see notes) are not included in the figures presented in the report.

Figure 5. Number of rubella cases by country, EU/EEA, August 2019 (n=25)



Rubella cases from September 2018–August 2019

From 1 September 2018–31 August 2019, 10 EU/EEA Member States reported 429 cases of rubella, 46 (11%) of which were laboratory confirmed. Eighteen countries reported no cases during the 12-month period. The highest number of cases were reported by Poland (322), Germany (62), Italy (19) and Spain (12), accounting for 75%, 14%, 4% and 3% of all cases, respectively (Table 2). Notification rates per million population above the EU/EEA average (1.0) were reported by Poland (8.5) and Latvia (1.6); (Figure 6).

Data from Poland should be interpreted with caution, as only four of 322 cases (1%) were laboratory confirmed. The highest burden among cases reported by Poland was in children, with 91 (28%) cases in children aged 1–4 years, 90 (28%) cases in children aged 5–9 years, and 45 (14%) cases in infants under one year.

No deaths attributable to rubella were reported to TESSy during the 12-month period.

Table 2. Number of rubella cases by month and notification rate per million population by country, EU/EEA, 1 September 2018–31 August 2019

Country	2018	2018	2018	2018	2019	2019	2019	2019	2019	2019	2019	2019	2019	Total cases	Cases per million	Total lab-positive cases
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug				
Austria	0	0	0	0	0	1	0	0	0	1	0	0	2	0.2	1	
Bulgaria	0	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	0	
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	
Czech Republic	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	
Denmark	0	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	0	
Finland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	
Germany	6	6	1	4	4	3	7	5	5	5	8	8	62	0.8	19	
Greece	0	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	0	
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0	
Ireland	0	0	0	0	0	0	1	2	0	0	0	0	3	0.6	0	
Italy	2	0	1	0	2	2	2	0	4	5	0	1	19	0.3	8	

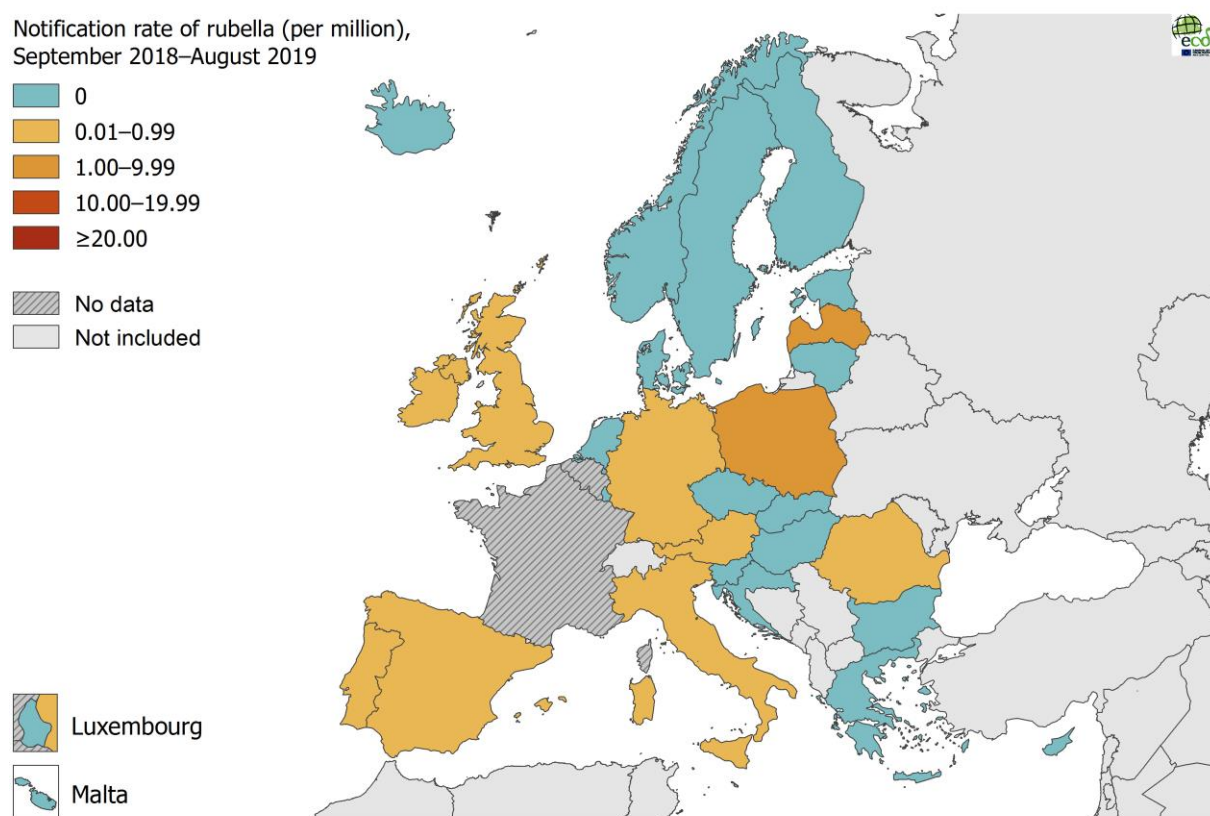
	2018	2018	2018	2018	2019	2019	2019	2019	2019	2019	2019	2019			
Country	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Total cases	Cases per million	Total lab-positive cases
Latvia	0	0	0	0	1	1	0	0	1	0	0	.	3	1.6	1
Lithuania	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Malta	0	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	0
Norway	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Poland	20	25	24	22	43	22	36	29	37	21	27	16	322	8.5	4
Portugal	1	0	0	0	1	0	0	0	0	0	0	0	2	0.2	1
Romania	0	1	0	1	0	0	0	0	0	0	0	0	2	0.1	1
Slovakia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Spain	0	0	0	9	3	0	0	0	0	0	0	0	12	0.3	9
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	1	0	0	0	0	1	0	0	0	0	0	0	2	0.0	2
EU/EEA	30	32	26	36	54	30	46	36	47	32	35	25	429	1.0	46

Source: TESSy, data extracted on 30 September 2019

∴ data not reported.

The national surveillance system for rubella in Denmark currently only captures rubella infections during pregnancy; therefore the true incidence of rubella in the Danish population is underestimated.

Figure 6. Rubella notification rate per million population by country, EU/EEA, 1 September 2018–31 August 2019



Produced 30 Sep 2019 using ECDC map maker: <https://emma.ecdc.europa.eu>

The latest WHO-UNICEF estimates of national immunisation coverage [10] show that 15 EU/EEA countries reported at least 95% vaccination coverage for the first dose of a rubella-containing vaccine in 2018 (Figure 4). Sustained vaccination coverage of at least 95% for at least one dose of a rubella-containing vaccine at all subnational levels is recommended to achieve elimination [7].

References

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Notes

TESSy collects a 'date used for statistics', which is a date chosen by the country for reporting purposes. This date may indicate onset of disease, date of diagnosis, date of notification or date of laboratory confirmation, depending on reporting practices in the respective countries. All data presented in this reported are based on the 'date used for statistics'. In addition, when reporting data on measles, rubella and other vaccine-preventable diseases to TESSy, countries may update previously reported data. This means that the date of retrieval can influence the data presented in this report, as later retrievals of data relating to the same period may result in slightly different numbers. The data for this report were retrieved on 30 September 2019.

Cases classified as discarded were suspected cases for whom subsequent investigation revealed a negative laboratory test, or confirmation of an alternative aetiology, supported by epidemiological and/or virological evidence.

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.