

SURVEILLANCE REPORT

Measles and rubella monitoring

February 2014

Reporting on January–December 2013 surveillance data
and epidemic intelligence data to the end of February 2014

Main developments

Measles

- During the most recent 12-month period (January 2013 to December 2013) the 30 EU/EEA countries conducting measles surveillance reported 10 271 cases. Twenty-five of the 30 contributing countries reported consistently for the 12-month period.
- Germany, Italy, the Netherlands, Romania and the United Kingdom accounted for 91% of the cases in this period.
- In ten countries, the measles notification rate was less than one case per million population during the last 12 months.
- Sixty per cent of the cases had a positive result in a measles laboratory test (serology, virus detection, or isolation).
- Of the 10 268 cases for which information on vaccination status was available, 88% were unvaccinated. In the target group for routine childhood MMR vaccination (1–4-year-olds), 80% of the cases were unvaccinated.
- Three measles-related deaths were reported during the period January 2013 to December 2013, and eight cases were complicated by acute measles encephalitis.
- Anthroposophic schools were involved in two 2014 measles outbreaks in Austria and Finland.
- A new outbreak was reported in Wales in October 2013, in the same area as last year's outbreaks.
- The UK has seen ten measles cases in returning travellers from the Philippines where there is an ongoing outbreak.
- The measles outbreak in the Netherlands is still ongoing but is showing signs of slowing down.
- Of the EU neighbouring countries, Russia reported several large outbreaks which are still ongoing.

Erratum. The following correction was made on 4 March 2014:

Page 4, Table 1: 'November 2012 – November 2013' was changed to read 'January 2013 – December 2013'.

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Rubella

- The 27 EU/EEA countries reported 38 847 rubella cases during the most recent 12-month period between January 2013 and December 2013. Twenty countries reported consistently for the 12-month period.
- Poland accounted for 99% of all reported rubella cases in the 12-month period; 88% of these cases were either unvaccinated or had an unknown vaccination status.
- Less than 1% of the cases had a positive result in a rubella laboratory test.
- In 14 countries the rubella notification rate was rate less than one case per million population during the last 12 months.
- No outbreaks have been detected by epidemic intelligence since the last report.

Measles

Surveillance data

The enhanced measles surveillance data were retrieved from The European Surveillance System (TESSy) on 31 January 2014. The analysis covered the 12-month period from January 2013 to December 2013. All 30 contributing EU/EEA countries reported case-based data for all 12 months, except Lithuania which reported aggregated data. Bulgaria, the Czech Republic, Greece, Lithuania and the Netherlands did not report any data for the month of December (Figure 1, Table 1).

During the 12-month period, 10 271 cases of measles were reported. The number of cases and the notification rates by country for the past 12 months are shown in Table 1 and Figures 5 and 6. In 10 of the 25 countries which reported consistently over the 12-month period, the measles notification rate was less than one case per million population.

The countries which reported most cases were Germany (17%), Italy (22%), the Netherlands (24%), Romania (10%) and the United Kingdom (18%) (Table 1).

The highest notification rate was among infants under one year of age (134.6 cases per million population), followed by children aged between one and four years (78.1 cases per million population) and adolescents between 10 and 14 years (70.3 per million population) (Figure 3).

Sixty per cent of the cases tested positive for measles (serology, virus detection or isolation); there were large variations between countries in the proportion of laboratory-confirmed cases.

Vaccination status was known for 95% of the 10 268 cases reported with known age. Of these 9 708 cases, 88% (8 561 cases) were unvaccinated, 8% (783) had received one dose of measles vaccine, 0.1% (7) had received two or more doses, and 4% (35) had received an unknown number of doses. The proportion of unvaccinated cases was high across all age groups (Figure 4) and highest among children under one year of age (98%), who are often too young to be eligible for vaccination. Among the 1–4-year-olds, which is the age group targeted by routine childhood vaccination programmes, 80% of the cases were unvaccinated.

Over the last 12 months, eight cases were complicated by acute measles encephalitis, and there were three deaths.

The notification rate by age group was calculated for the five countries reporting most cases (Figure 7a-e). The notification rates showed a very heterogeneous pattern, with Italy showing the highest incidence among adolescents between 15 and 29 years. Germany, Romania and UK showed the highest incidence in infants below the age of one, and the Netherlands reported the highest incidence in the age group between 5 and 14 years of age. In all countries, the majority of cases were not vaccinated (Figure 7a-e).

The number of cases observed in 2013 remains low compared to the epidemic years 2010 and 2011 (Figure 2). However, numbers remains unacceptably high, considering that measles and rubella are targeted for elimination in Europe by 2015. Measures implemented in the Member States must be expanded and accelerated in order to reach this target.

Figure 1. Number of measles cases in 2012 and 2013 and number of European countries reporting in 2013, by month

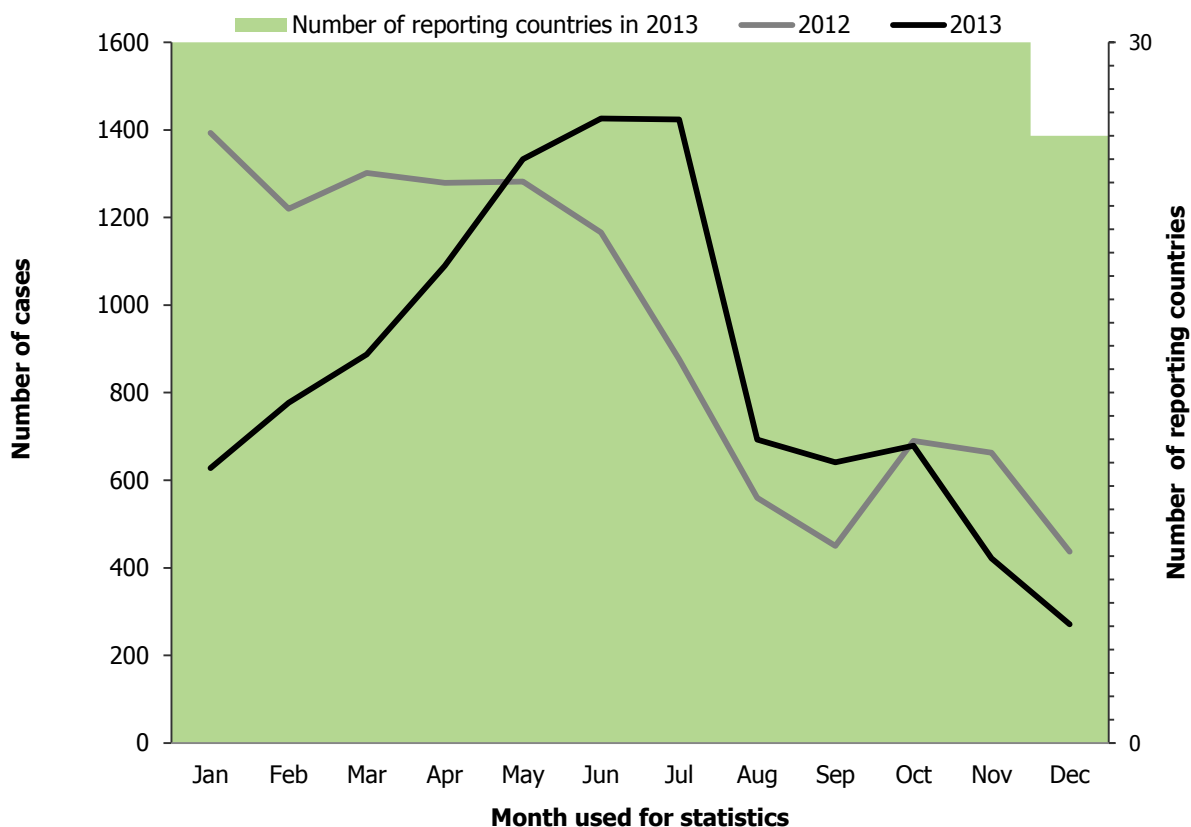
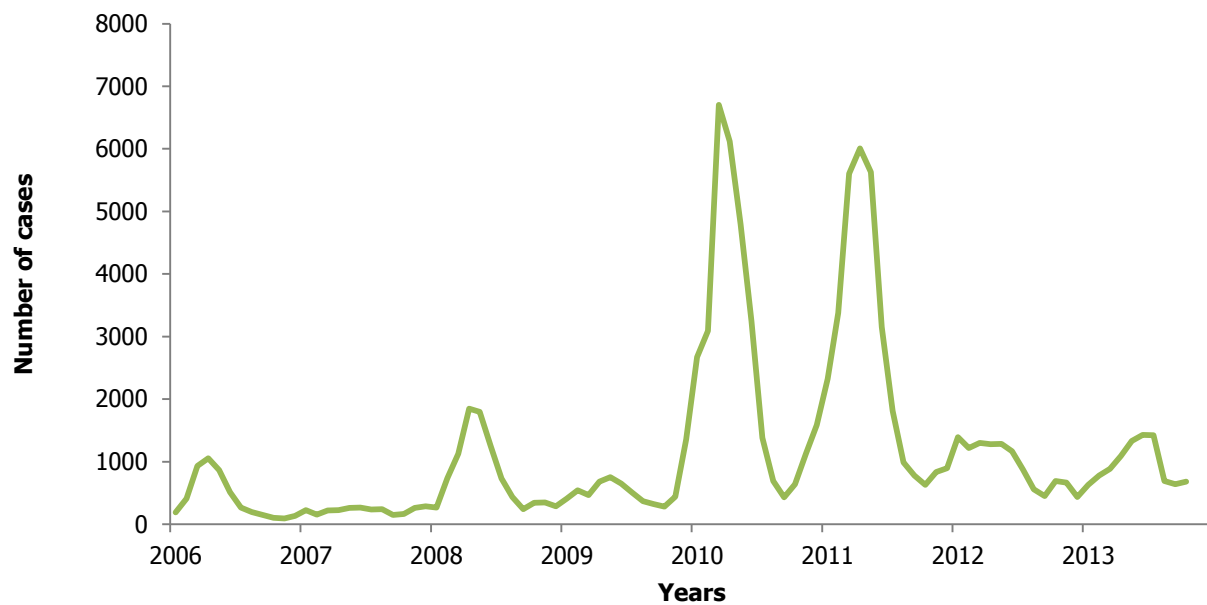


Figure 2. Number of measles cases by month, EU/EEA countries, January 2006–December 2013



Note: During 2006–2013, 29 EU/EEA countries consistently reported measles cases every month. Delays in reporting were observed only in December 2013 and are further explained in this report. All 30 countries are included in the figure; Croatia is included from 2012 onwards.

Table 1. Number of measles cases by month and notification rate (cases per million) by country, January 2013–December 2013, EU/EEA countries

Country	2013												Total cases	Cases per million	Total lab-positive cases
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Austria	4	8	8	11	11	5	0	6	5	9	3	5	75	8.9	46
Belgium	3	2	5	5	13	6	2	2	0	0	0	0	38	3.4	6
Bulgaria	0	0	0	0	6	7	2	0	0	1	0	NR	16	2.2	13
Croatia	0	0	0	0	0	0	0	1	0	0	0	0	1	0.2	0
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Czech Republic	0	3	3	4	3	1	0	0	0	0	0	NR	14	1.3	13
Denmark	3	0	8	6	0	0	0	0	0	0	0	0	17	3.0	13
Estonia	0	0	1	1	0	0	0	0	0	0	0	0	2	1.5	2
Finland	1	0	0	0	1	0	0	0	0	0	0	0	2	0.4	0
France	26	22	23	46	37	34	25	13	13	15	11	7	272	4.2	121
Germany	9	9	44	136	499	391	306	127	108	76	47	20	1772	21.7	1018
Greece	2	1	0	0	0	0	0	0	0	0	0	NR	3	0.3	3
Hungary	0	0	1	0	0	0	0	0	0	0	0	0	1	0.1	1
Iceland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Ireland	1	4	0	4	10	7	2	4	2	16	6	1	57	12.4	33
Italy	83	204	213	210	360	386	199	73	42	38	175	233	2216	36.4	1149
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Lithuania	0	0	0	0	27	7	0	0	1	0	0	NR	35	11.6	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Malta	0	0	2	0	0	0	0	0	0	0	0	0	2	4.8	2
Netherlands	1	4	10	5	18	295	700	408	441	470	147	NR	2499	149.4	798
Norway	0	0	1	0	0	7	0	0	0	0	0	0	8	1.6	8
Poland	4	9	7	20	12	17	10	3	1	1	1	1	86	2.2	56
Portugal	0	0	0	1	0	0	0	0	0	0	0	0	1	0.1	1
Romania	208	219	181	146	80	105	59	26	9	22	19	0	1074	50.3	816
Slovakia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Slovenia	0	0	0	0	0	0	1	0	0	0	0	0	1	0.5	1
Spain	5	15	13	15	15	18	31	8	4	3	0	0	127	2.7	105
Sweden	4	8	9	1	8	16	6	0	0	0	0	0	52	5.5	50
United Kingdom	274	269	358	479	233	124	81	22	15	28	13	4	1900	30.7	1894
Total	628	777	887	1090	1333	1426	1424	693	641	679	422	271	10271	20.1	6149

NR: Data not reported. Lichtenstein does not report.

Notification rates were calculated using the most recent population estimates available from Eurostat (2012).

Countries with a notification rate ≥ 1 per million population are highlighted in green. The target to monitor progress towards elimination is achievement of an incidence of less than one case per million population per year (including confirmed, probable and possible cases but excluding imported cases).

Achieving this target is consistent with progress towards elimination but does not define elimination or confirm that it has been achieved. In the table, all cases (endemic, imported, import-related) are included for the calculation of the notification rate.

For countries that did not report data for all 12 months, notification rates might be underestimated.

All confirmed, probable, possible or unknown cases, as defined by the EU 2008 case definitions, are included.

Tables on measles cases in previous years are available from:

http://www.ecdc.europa.eu/en/healthtopics/measles/epidemiological_data/pages/annual_epidemiological_reports.aspx

Figure 3. Measles notification rate (cases per million) by age group, January 2013–December 2013, EU/EEA countries (N=10 268 cases with known age)

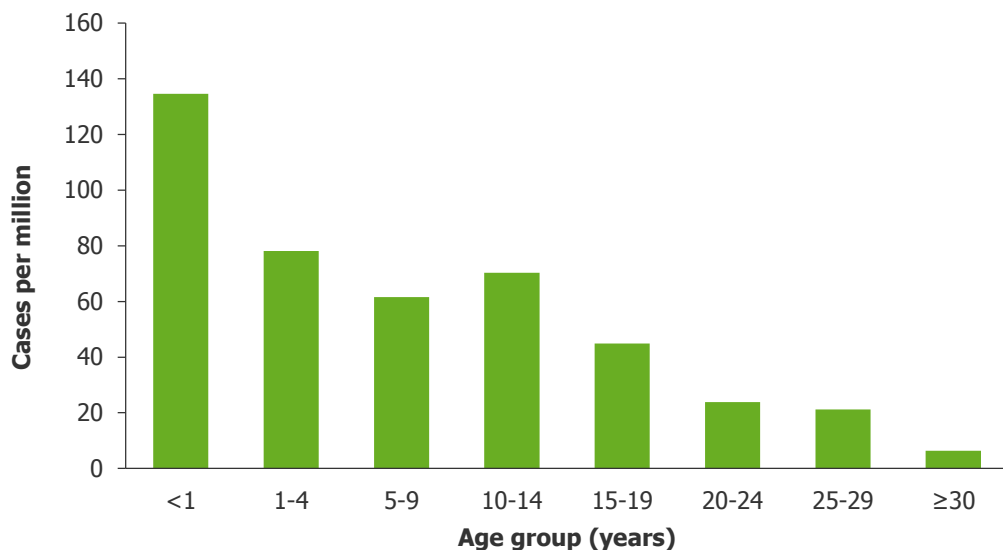


Figure 4. Proportion of vaccination status among measles cases by age group, January 2013 – December 2013, EU/EEA countries (N=10 268, cases with known age)

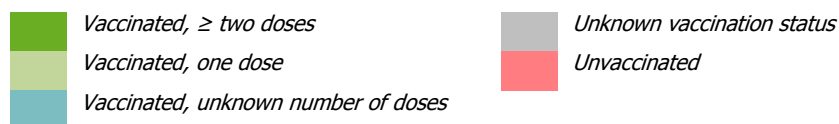
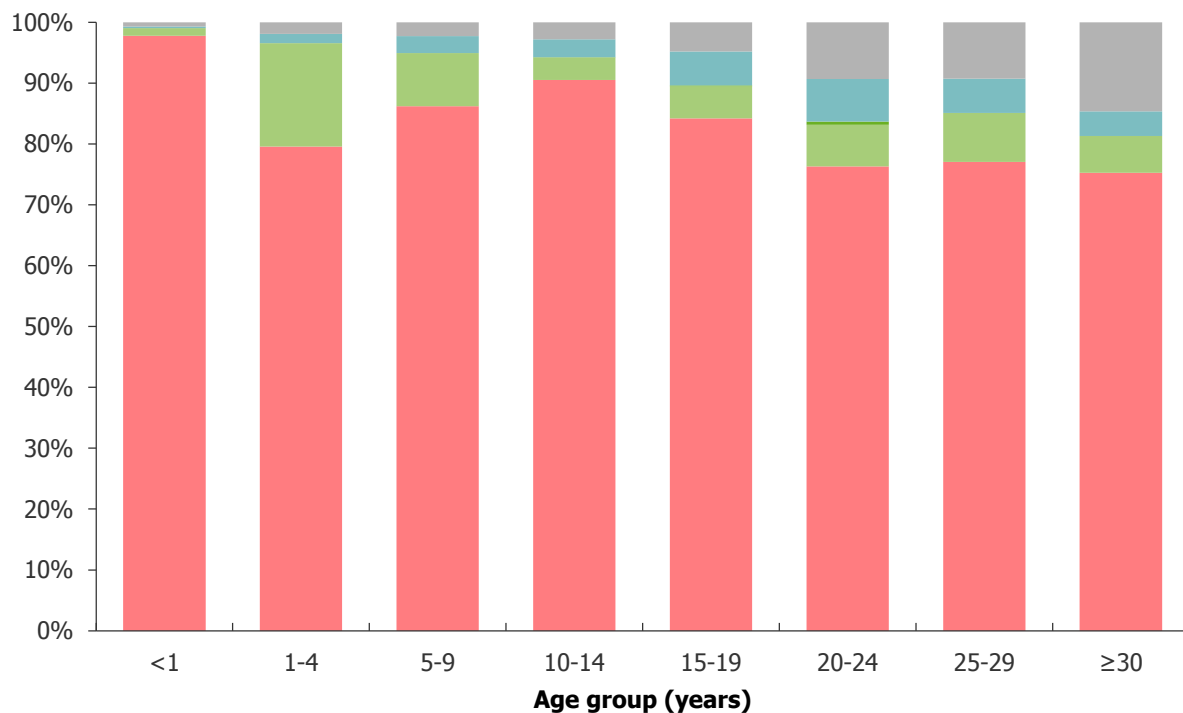
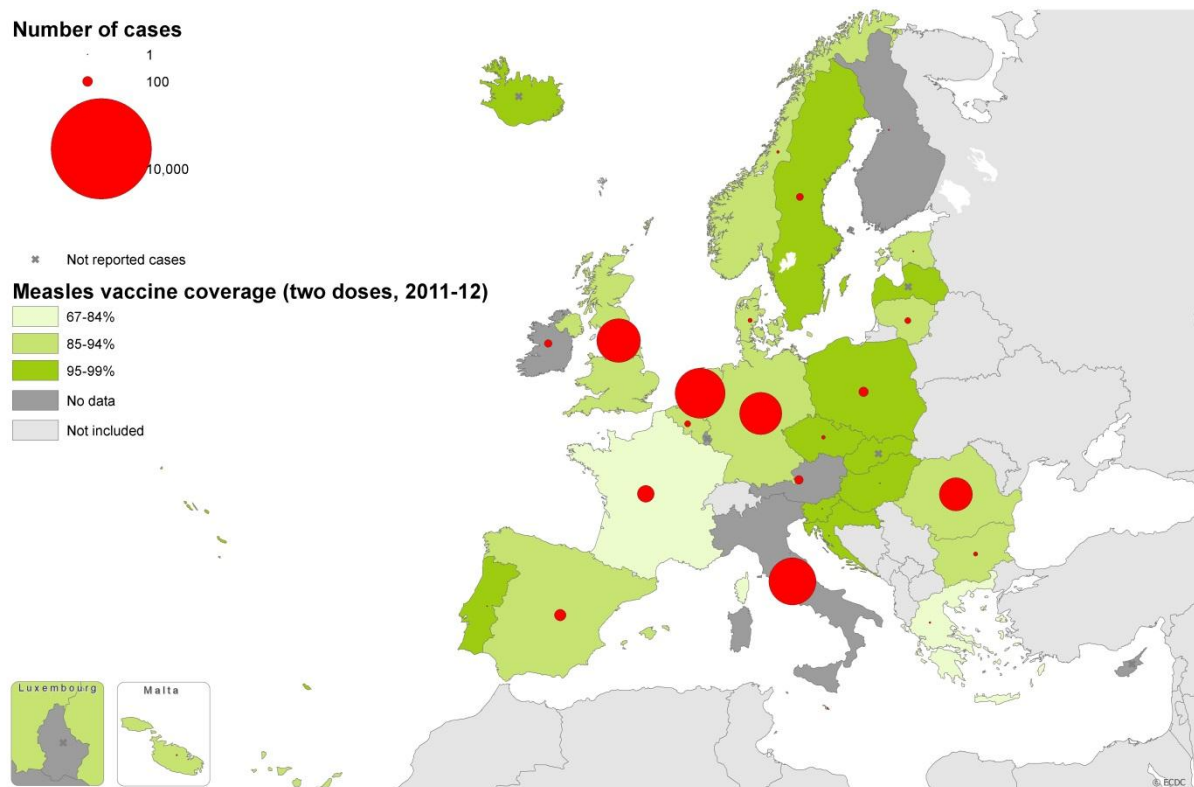
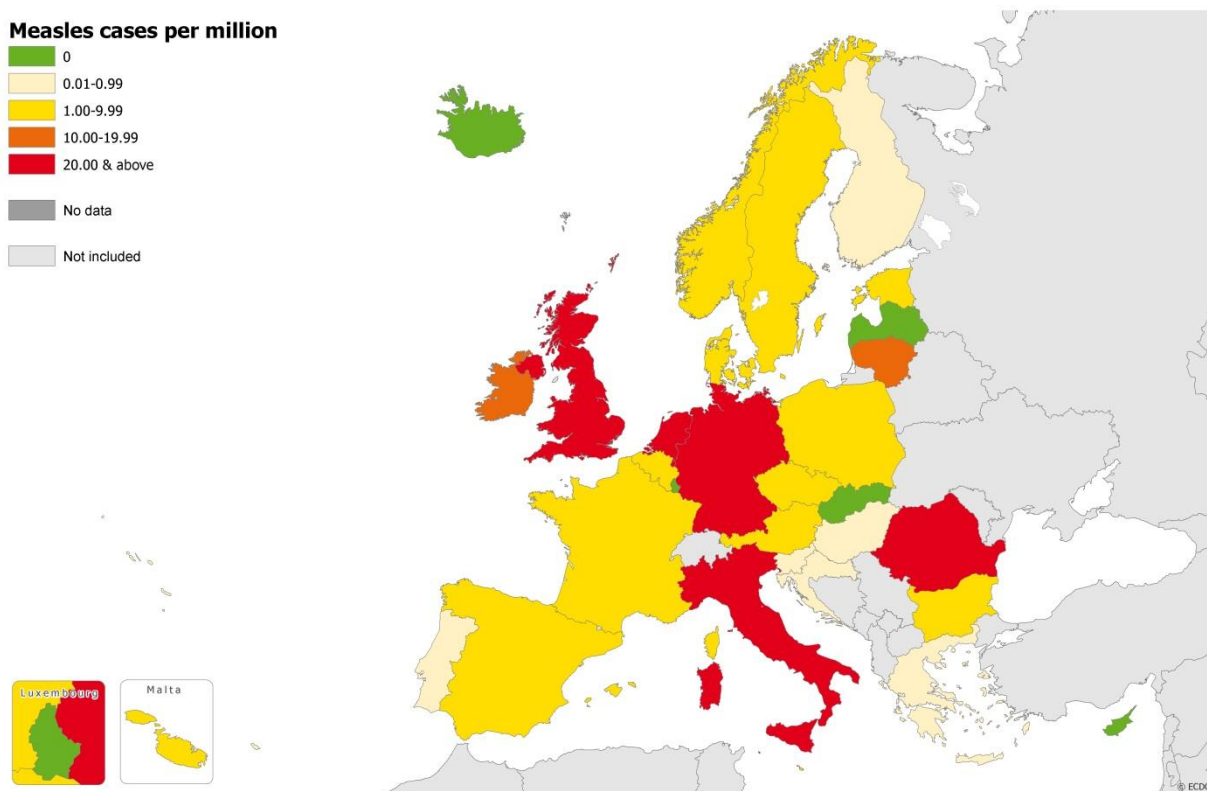


Figure 5. Number of measles cases by country, January 2013–December 2013 (N=10 271), and vaccine coverage (two doses, 2011–2012, WHO*), EU/EEA countries



* Coverage figures (%) are official national figures reported via the annual WHO/UNICEF Joint Reporting Form. See notes at the end of this report for further explanations.

Figure 6. Measles notification rate (cases per million) by country, January 2013–December 2013, EU/EEA countries (N=10 271)



For interactive maps relating to measles see <http://emmageocase.ecdc.europa.eu/atlas/measles>

Figures 7. Notification rate of measles cases and vaccination status for the five countries with the highest proportion of cases, by age group, January–December 2013

Vaccination status is indicated by colours:

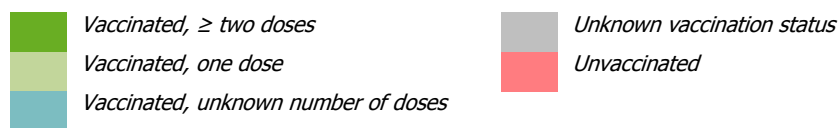


Figure 7a-1. Measles notification rate (cases per million) by age group, Italy, January–December 2013

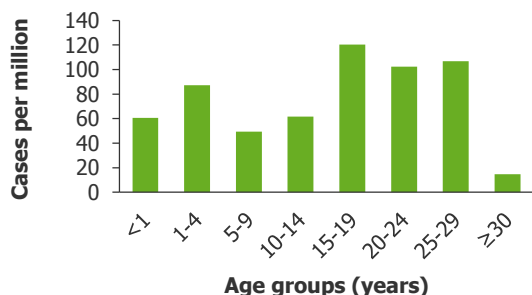


Figure 7a-2. Number of measles cases by age group and vaccination status, Italy, January–December 2013

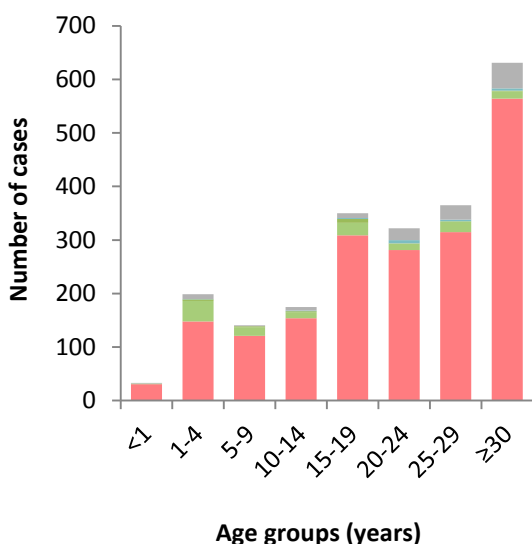


Figure 7b-1. Measles notification rate (cases per million) by age group, Germany, January–December 2013

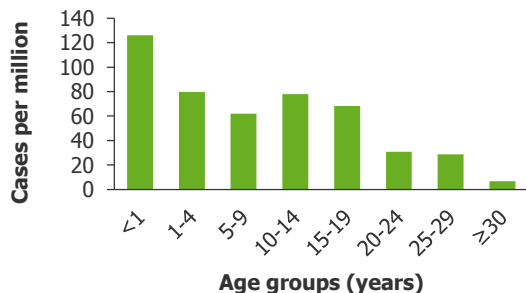


Figure 7b-2. Number of measles cases by age group and vaccination status, Germany, January–December 2013

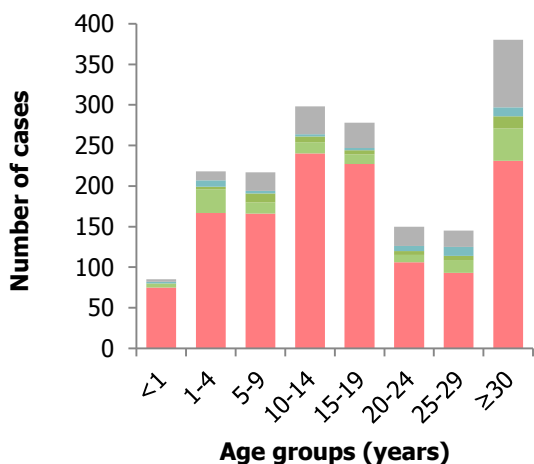


Figure 7c-1. Measles notification rate (cases per million) by age group, the Netherlands, January–December 2013

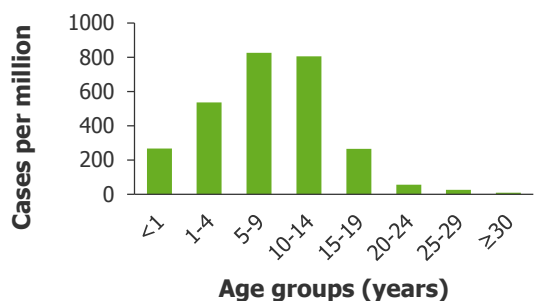


Figure 7c-2. Number of measles cases by age group and vaccination status, the Netherlands, January–November 2013

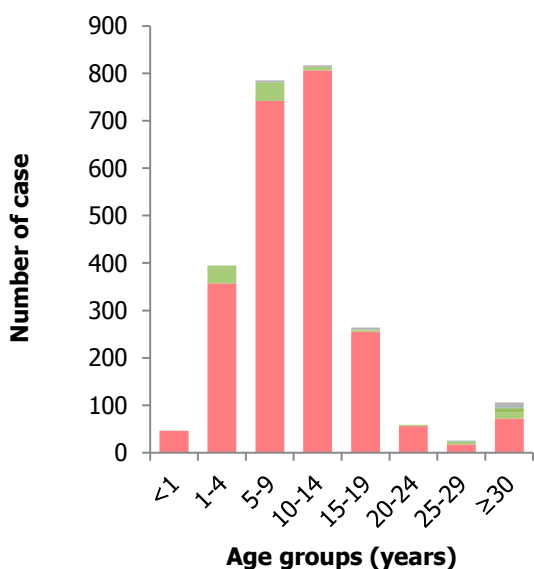


Figure 7d-1. Measles notification rate (cases per million) by age group, Romania, January–December 2013

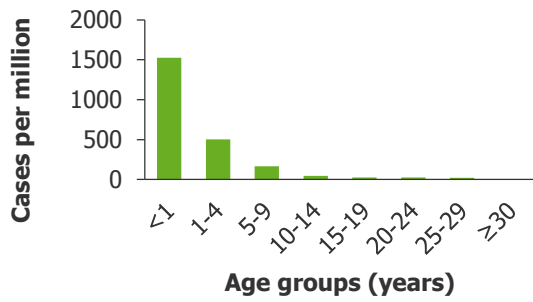


Figure 7d-2. Number of measles cases by age group and by vaccination status, Romania, January–December 2013

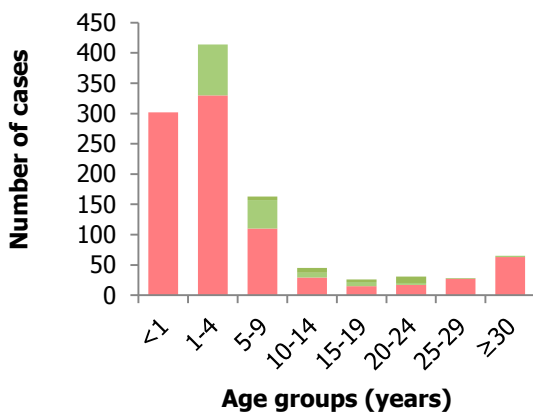


Figure 7e-1. Measles notification rate (cases per million) by age group, United Kingdom, January–December 2013

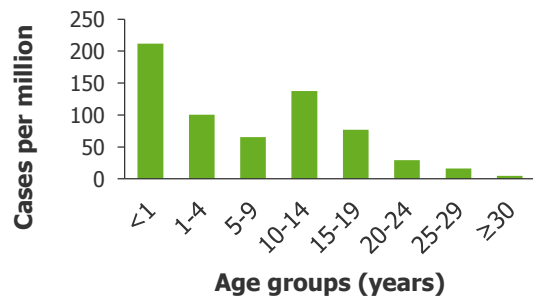
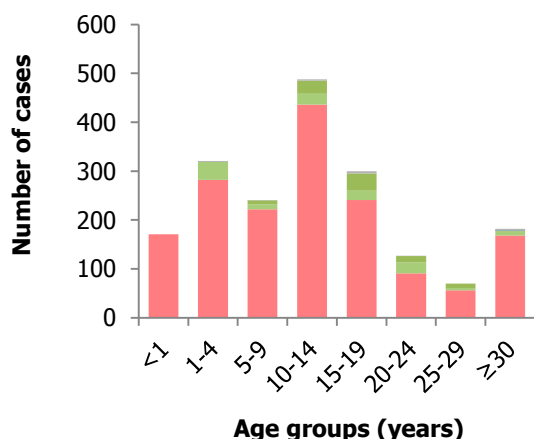


Figure 7e-2. Number of measles cases by age group and by vaccination status, United Kingdom, January–December 2013



Epidemic intelligence

In 2013, several large measles outbreaks occurred in the EU. The largest outbreaks were in Wales and the Netherlands. Germany, England and Italy were also affected by measles outbreaks in 2013.

Updates since the last report

European Union Member States

Austria

Between 1 December 2013 and 13 February 2014, 44 cases of measles were reported in Austria, compared with 70 cases from January 2013 to November 2013. Thirty-eight cases were due to the same outbreak affecting Lower Austria (28) and Vienna (10). Eleven cases of this outbreak were confirmed to be caused by genotype D8. In two cases from different regions (Tirol and Salzburg), genotype B3 was identified. Sixty-eight per cent of the confirmed and probable cases are unvaccinated, and in 11% the vaccination status is unknown. Thirty-nine per cent of the cases are reported to have been hospitalised. Three of the patients are healthcare workers, and 12 cases are students in an anthroposophic school. There have been previous outbreaks in anthroposophic schools in Austria. The largest one occurred in Salzburg in 2008 with 394 cases. Outbreak investigations continue, and recommendations are given regarding post-exposure prophylaxis as well as vaccination for people with no record of two doses of measles vaccinations.

The Austrian Ministry of Health has launched a measles initiative in the first week of January to increase awareness of measles vaccination.

Finland

Fifty school children in an anthroposophic school in Finland were placed under quarantine at the end of January 2014 due to a measles case in a student returning from abroad. Only half of the school's students have received MMR vaccine against measles. There are also susceptible children in a nearby kindergarten who are unvaccinated because of their young age.

Students who had received two MMR vaccinations were allowed to return to school, but fifty unvaccinated students under quarantine were asked to do their school assignments from home. Students under quarantine have been urged to stay at home and may not visit public places and friends until the end of the incubation period.

Sweden

The Swedish Public Health Agency (Folkhälsomyndigheten) reported on 7 February 2014 that investigations are ongoing regarding three measles cases in Stockholm. The cases were born in the 1940s and 1960s, and had fallen ill recently. None of them had been abroad before they became ill, and contact tracing is in progress to clarify the source of infection. Two unrelated cases were reported from Örebro and Skåne involving a returning traveller and a person who had contact with people who have recently been abroad.

The Netherlands – update

The measles epidemic in the Netherlands is still ongoing but slowing down. Since 1 May 2013 and as of 12 February 2014, RIVM reported 2 628 cases. A 17-year-old girl died due to complications. Most measles patients are unvaccinated children (94%) between 4 and 12 years (57%).

Since the beginning of the outbreak, 17 health workers have been diagnosed with measles. Of these, 11 were unvaccinated, two were vaccinated with two doses, three were given one dose, and one person was vaccinated with three doses.

There was a spread of measles from the Netherlands to Alberta, Canada, in October 2013 through a visitor, causing a local outbreak there with 42 cases.

The UK – measles cases ex Philippines

Public Health England reported ten cases of measles in the UK since December 2013 in persons returning from the Philippines where there is an ongoing outbreak. Ages of the cases ranged from less than one year to 45 years. Three cases were under 13 months of age and therefore not yet eligible for immunisation. The majority of the cases (eight) had travelled to the Philippines to visit family and friends, and at least four cases were infectious on their flight back to the UK, raising the possibility of onward transmission and further cases occurring.

In some instances patients seeking care were not isolated immediately, exposing healthcare workers and patients. Current advice by the Public Health England's Immunisation Department is that individuals with clinical features compatible with measles who have recently travelled to the Philippines should be treated as likely measles cases, and outbreak control actions – such as identifying contacts – should start ahead of laboratory confirmation of the diagnosis.

Several other countries have reported measles cases imported from the Philippines: Japan, the US (Hawaii), Taiwan, Canada, New Zealand and Australia.

Wales – update

Since October 2013, several community- and school-associated outbreaks have been reported by Public Health Wales. The majority of the cases were in or near the city of Swansea, an area which had been severely affected by a previous outbreak. So far, the highest incidence has been in the 10–18-years age group but adults have also been affected. Although more than 70 000 doses of MMR were given during the catch-up vaccination campaign in Wales in response to the last outbreak, around 30 000 children and young people between 10 and 18 years of age remain unprotected. Health authorities are again offering extended immunisation sessions in the affected schools and areas and are urging people born after 1970 to check their previous measles immunisations and bring their vaccination status up to date when necessary.

The largest ever outbreak reported in Wales started in November 2012 and was declared to be over in July 2013. It resulted in 1 219 notifications of measles. Eighty-eight people needed hospitalisation and there was one death.

Germany – SSPE fatality

A [German newspaper](#) reported the death of a 19-year old adolescent due to subacute sclerosing panencephalitis (SSPE). He contracted measles as a toddler and started to show symptoms of brain affection at the age of ten. He was later diagnosed with SSPE and has been in a vegetative state during the last seven years. More information is available here: <http://aktion-max.de/>.

Other countries

Russia

Several large ongoing outbreaks are reported. In Kursk, the number of cases of measles has reached 207 (as of 10 February) in an outbreak involving a Baptist community who refuse vaccination.

In the Astrakhan region, the number of reported measles cases (as of 10 February 2014) is 110, affecting several villages.

Another large outbreak is ongoing in the Tula region, with 62 cases of suspected and confirmed measles cases, both among Baptists and Roma people.

The Karachay-Cherkess Republic has reported 41 laboratory-confirmed measles cases since the beginning of 2014, mainly among adults. Seven of the patients are healthcare workers.

Vietnam

From 1 January to 13 February, the country recorded 621 cases, including seven deaths, according to a report of the National Institute of Hygiene and Epidemiology and the Pasteur Institute in Ho Chi Minh City. More than 160 children have been hospitalised so far because of measles. Twenty of the patients had serious complications, including pneumonia and respiratory failure.

Publications

[Weekly epidemiological record – WHO](#)

A recent meeting of the Strategic Advisory Group of Experts on Immunization (SAGE) in November 2013 reviewed the status of the measles and rubella situation. There has been a significant reduction in measles incidence, and measles mortality has been reduced by 75% since 2000. The Americas have maintained elimination of both measles and rubella, and the WHO Western Pacific region is approaching interruption of endemic measles

transmission. However, based on current trends and programme performance, the 2015 global targets as well as regional elimination targets in the European (2015), Eastern Mediterranean (2015) and African (2020) regions will not be achieved on time.

[The Australian and New Zealand Journal of Public Health](#)

Study regarding immunity to vaccine-preventable diseases in healthcare workers at an Australian hospital

The authors determined the vaccination status of a cohort of healthcare workers at a tertiary hospital in Melbourne, Victoria, through serology (hepatitis B, varicella, measles, mumps, rubella) and by questionnaire (diphtheria, tetanus and pertussis). Overall, 95 healthcare workers were evaluated. Mean age and duration of employment were 47.2 and 12.6 years, respectively. Forty-seven staff (49%) required vaccination to comply with Australian immunisation guidelines: 18% were non-immune to hepatitis B, 2% to varicella, 8% to measles, 19% to mumps and 13% to rubella. Healthcare workers without serological hepatitis B immunity were all staff with clinical roles.

Rubella

Enhanced surveillance data

The enhanced rubella surveillance data were retrieved from The European Surveillance System (TESSy) on 31 January 2014. The analysis covers the 12-month period from January 2013 to December 2013.

Three EU countries – Belgium, France and Germany – do not operate rubella surveillance systems with national coverage and hence do not contribute data to the EU/EEA enhanced rubella surveillance.

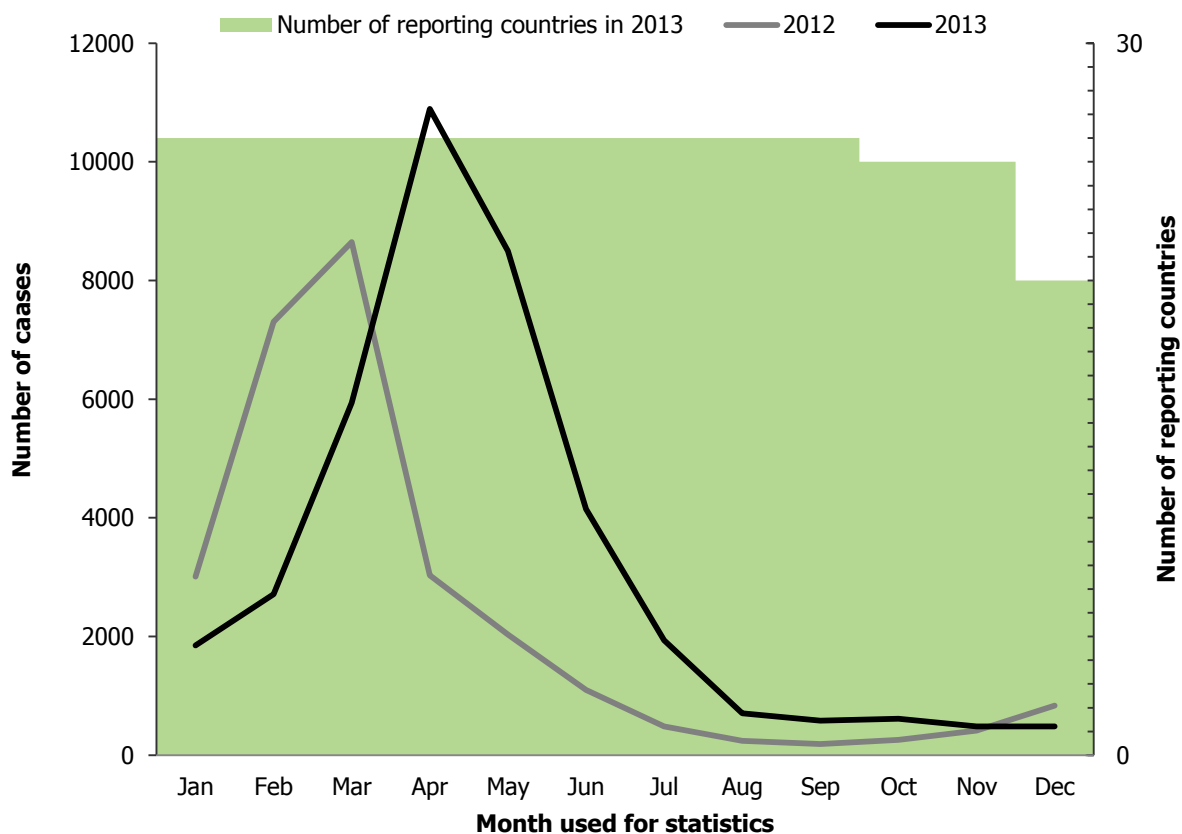
Of the 27 contributing countries, 20 reported data for the entire period. Italy did not report for the entire 12-month period; Bulgaria, the Czech Republic, Greece, Lithuania, the Netherlands and Portugal did not report data for December 2013 (Figure 8).

During the period January 2013–December 2013, 38 847 cases of rubella were reported. Less than 1% of the cases were reported as laboratory confirmed (by serology, virus detection or isolation).

The number of cases and notification rates by country for the past 12 months are shown in Table 2 and Figures 9 and 10. Fourteen of the 21 countries that reported data for all the 12-month period met the target of less than one case per million population.

Poland accounted for 99% of all reported rubella cases in the 12-month period (38 585 cases); data were reported in an aggregated format. None of the 38 585 cases were reported with a positive laboratory test, and the cases related to 2013 were reported with unknown age group. A total of 23 572 cases (61%) were unvaccinated, 4 000 (10%) cases were vaccinated with one dose, 607 (2%) cases with two or more doses, and 10 406 (27%) cases had an unknown vaccination status.

Figure 8. Number of rubella cases in 2012 and 2013 and number of European countries reporting in 2013, by month



Note: Belgium, France and Germany do not have rubella surveillance with national coverage.

Table 2. Number of rubella cases by month and notification rate (cases per million) by country, January 2013–December 2013, EU/EEA countries

Country	2013												Total cases	Cases per million	Total lab-positive cases
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
Austria	0	0	1	4	4	0	1	0	0	0	0	1	11	1.3	7
Belgium	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-
Bulgaria	1	1	1	0	3	0	0	0	2	0	1	NR	9	1.2	1
Croatia	0	0	0	0	0	0	1	0	0	0	0	0	1	0.2	1
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	NR	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	2	0	0	0	0	0	0	2	1.5	2
Finland	0	0	0	1	0	1	0	0	0	0	0	0	2	0.4	0
France	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-
Germany	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-
Greece	0	0	0	0	0	0	0	0	0	0	0	NR	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	1	1	2	0	1	0	1	2	0	0	8	1.7	0
Italy	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-
Latvia	0	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	NR	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	2	0	12	43	0	0	NR	NR	NR	57	3.4	15
Norway	1	1	0	0	1	0	0	0	0	0	0	0	3	0.6	3
Poland	1833	2690	5918	10856	8466	4114	1877	690	569	606	481	485	38585	1001.3	0
Portugal	0	1	0	0	0	0	0	0	0	0	0	NR	1	0.1	0
Romania	15	21	13	26	18	19	11	14	7	3	3	0	150	7.0	105
Slovakia	0	0	0	0	0	0	0	0	0	1	0	0	1	0.2	0
Slovenia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Spain	0	0	0	2	1	0	0	0	0	0	0	0	3	0.1	3
Sweden	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
United Kingdom	1	0	3	2	0	2	1	1	1	1	2	0	14	0.2	13
Total	1851	2714	5937	10894	8495	4150	1935	705	580	613	487	486	38847	132.8	150

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 will be underestimated.

NR: Data not reported. Lichtenstein does not report.

Countries with a notification rate ≥ 1 per million population are highlighted in green. The target to monitor progress towards elimination is achievement of an incidence of less than one case per million population per year (including confirmed, probable and possible cases but excluding imported cases).

Achieving this target is consistent with progress towards elimination but does not define elimination or confirm that it has been achieved. In the table, all cases (endemic, imported, import-related) are included for the calculation of the notification rate.

For countries that did not report data for all 12 months, notification rates might be underestimated.

All confirmed, probable, possible or unknown cases, as defined by the EU 2008 case definition, are included.

Cases were defined as laboratory-positive if at least one of the following variables was reported as positive: serological test for IgG, serological test for IgM, virus detection or isolation or IgG avidity test.

For tables relating to number of rubella cases in previous years,

see: http://www.ecdc.europa.eu/en/healthtopics/rubella/epidemiological-data/pages/epidemiological_data.aspx

Figure 8. Rubella notification rate (cases per million) by age group, January 2013–December 2013, EU/EEA countries (N=262 cases with known age)

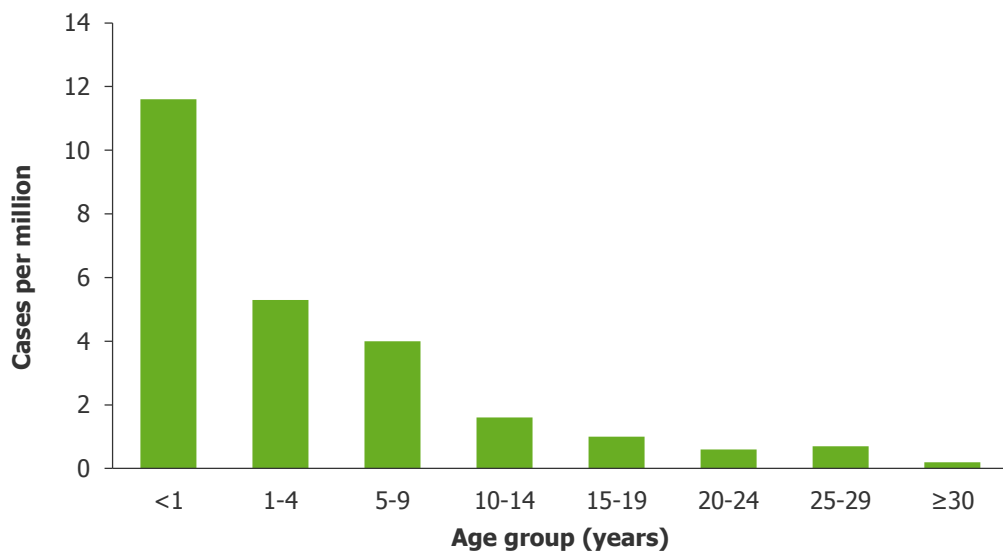
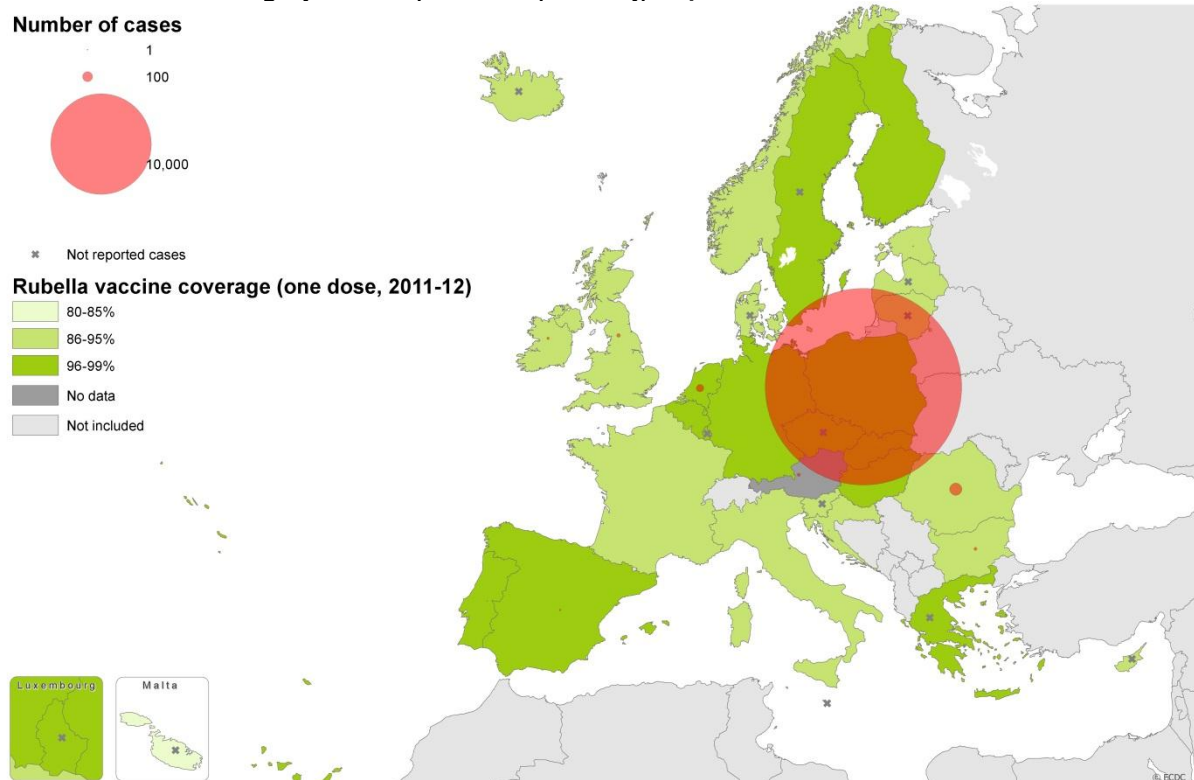
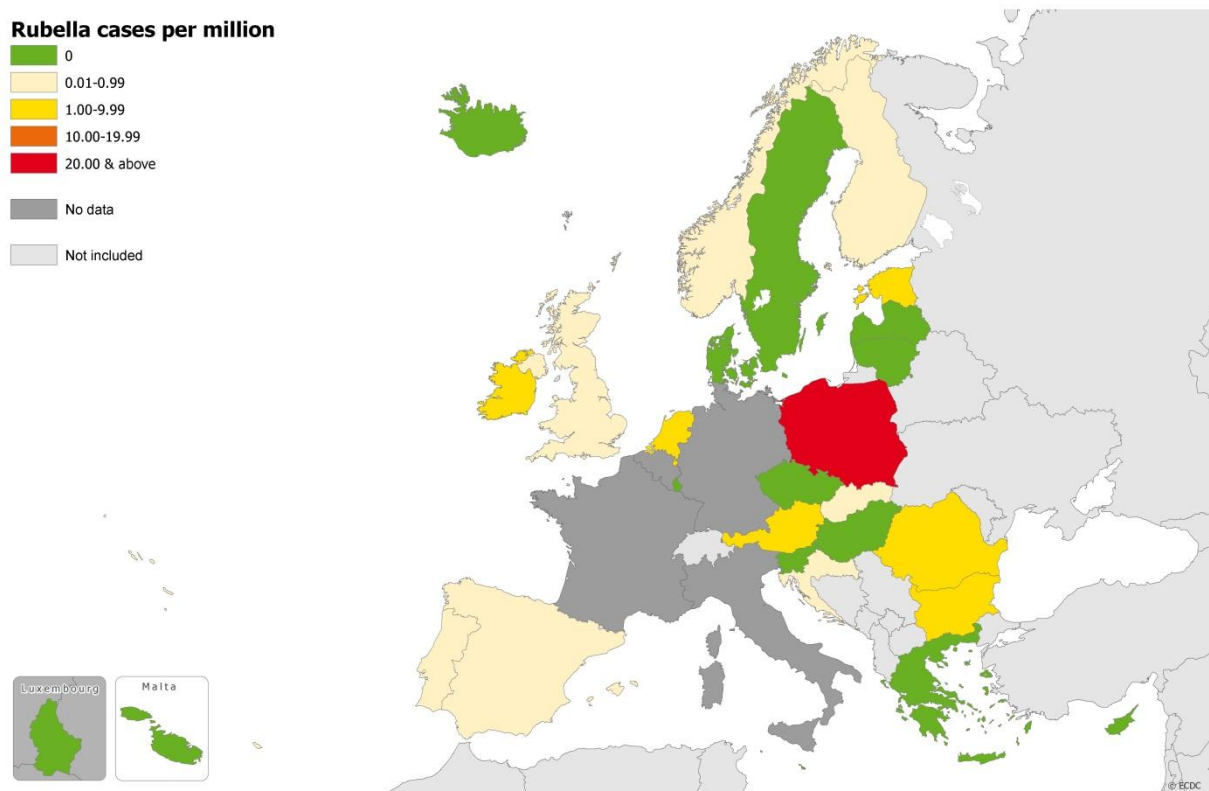


Figure 9. Number of rubella cases by country, January 2013–December 2013 (N=39 847), and rubella vaccine coverage (one dose, 2011–12, WHO*), EU/EEA countries



* Coverage figures (%) are official national figures reported via the annual WHO/UNICEF Joint Reporting Form. See notes at the end of this report for further explanations.

Figure 10. Rubella notification rate (cases per million) by country, January 2013 – December 2013, EU/EEA countries (N=38 8 47)



Epidemic intelligence

No rubella outbreaks have been detected by epidemic intelligence since the previous report.

Useful links

More information about measles and rubella is available on the ECDC website:

Measles health topic page, ECDC: <http://ecdc.europa.eu/en/healthtopics/measles/Pages/index.aspx>

Rubella health topic page, ECDC: <http://ecdc.europa.eu/EN/HEALTHTOPICS/RUBELLA/Pages/index.aspx>

Measles atlas to monitor progress toward elimination, ECDC: <http://emmageocase.ecdc.europa.eu/atlas/measles>

Vaccination schedules in EU/EEA countries, ECDC: <http://vaccine-schedule.ecdc.europa.eu/Pages/Scheduler.aspx>

Let's talk about protection, ECDC: <http://www.ecdc.europa.eu/en/healthtopics/immunisation/comms-aid/Pages/protection.aspx>

Information about vaccines and immunisation from the website of the World Health Organization's Regional Office for Europe: <http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella>

Website of the WHO CISID database: <http://data.euro.who.int/cisid/>

More information on the surveillance of vaccine-preventable diseases in the European Union is available from the [EUVAC-Net](#) website.

Immunisation health topic page, ECDC: <http://ecdc.europa.eu/en/healthtopics/immunisation/pages/index.aspx>

Notes

The European Surveillance System (TESSy) reports 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.

Countries report on measles, rubella and other vaccine-preventable diseases to the European Surveillance System at their own convenience. This means that the date of retrieval can influence the data presented in this report. For this reason, the date of data retrieval is indicated for each issue. For this issue, measles data and rubella data were retrieved on 31 January 2014. Later retrievals of data related to the same period may result in slightly different numbers as countries have the possibility to update data in TESSy retrospectively.

The vaccine coverage displayed in the maps of the report was retrieved from the WHO Global Database available from: http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tscoveragerubella1.html and http://apps.who.int/immunization_monitoring/globalsummary/timeseries/tscoveragemcv2.html

Measles. 2012 vaccine coverage (estimate) of two doses of measles-containing vaccine was used; if estimates from 2012 were not available, estimates from 2011 were used. Some countries do not report on coverage of two doses of measles vaccine; instead they report only on coverage of one dose of measles-containing vaccine. For more information, please check the above link to the WHO Global database.

Rubella. 2012 vaccine coverage (estimate) of one dose of rubella vaccine was used; if estimates from 2012 were not available, estimates from 2011 were used.