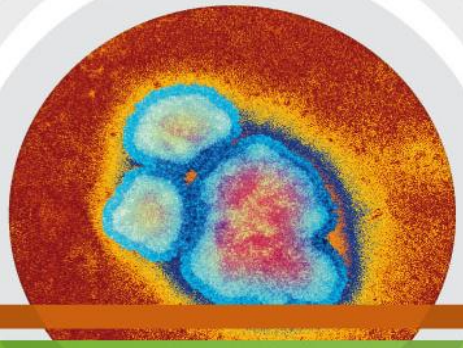


SURVEILLANCE REPORT

Measles and rubella monitoring

April 2014

Reporting on April 2013–March 2014 surveillance data and epidemic intelligence data to the end of April 2014

Main developments

Measles

- During the most recent 12-month period (April 2013 to March 2014), the 30 EU/EEA countries conducting measles surveillance reported 9 579 cases. Twenty-seven of the 30 contributing countries reported consistently for the 12-month period.
- Germany, Italy, the Netherlands, Romania and the United Kingdom accounted for 90.2% 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.
- Of all cases, 54.3% tested positive for measles (serology, virus detection, or isolation).
- Of all cases, 93.5% had a known vaccination status, and of these, 88.7% were unvaccinated. In the target group for routine childhood MMR vaccination (one- to four-year-olds), 79.2% of the cases were unvaccinated.
- Three measles-related deaths were reported during the period April 2013 to March 2014, and five cases were complicated by acute measles encephalitis.
- Since the previous bulletin, several outbreaks have been detected in EU Member States: Spain, Latvia, Ireland, the Czech Republic, the Netherlands, Denmark and Italy.
- The suspected primary case in a large outbreak with more than 400 cases in a religious community in Canada had a history of recent travel to the Netherlands.
- Several of the outbreaks in EU Member States have a serological and epidemiological link to the large ongoing outbreak in the Philippines.

Suggested citation: European Centre for Disease Prevention and Control. Measles and rubella monitoring, April 2014 – Reporting on April 2013–March 2014 surveillance data and epidemic intelligence data to the end of April 2014. Stockholm: ECDC; 2014.

Rubella

- Twenty-eight EU/EEA countries reported 30 743 rubella cases during the most recent 12-month period (April 2013 to March 2014). Twenty one countries reported consistently for the 12-month period.
- Germany reported data on rubella to TESSy for the first time. Rubella has recently been made a notifiable disease in Germany.
- Poland accounted for 99.2% of all reported rubella cases in the 12-month period; 84.7% of these cases were either unvaccinated or had an unknown vaccination status.
- Less than 1% of the cases tested positive for rubella.
- In 16 countries the rubella notification rate was 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 28 April 2014. The analysis covered the 12-month period from April 2013–March 2014. Twenty-seven contributing EU/EEA countries reported case-based data for all 12 months. Luxembourg reported aggregated data in January 2014 and no data in February. Iceland and the Netherlands did not report data for March 2014 (Figure 1, Table 1).

During the 12-month period, 9 579 cases of measles were reported (Table 1), which is low compared to the epidemic years 2010 and 2011 (Figure 2). The notification rates for the past 12 months and number of cases observed in March 2014 by country are shown in Figures 3 and 4. The measles notification rate was less than one case per million population in 10 of the 27 countries which reported consistently over the 12-month period (Table 1).

The countries which reported the most cases were the Netherlands (27.8% of all cases), Italy (26.5%), Germany (18.7%), the United Kingdom (11.3%) and Romania (5.8%) (Table 1).

The highest notification rate was among infants under one year of age (90.6 cases per million population), followed by children aged between one and four years (68.6) and adolescents between 10 and 14 years (64.8) (Figure 5).

Of all cases, 54.3% tested positive for measles (serology, virus detection or isolation); there were large variations between countries in the proportion of laboratory-confirmed cases.

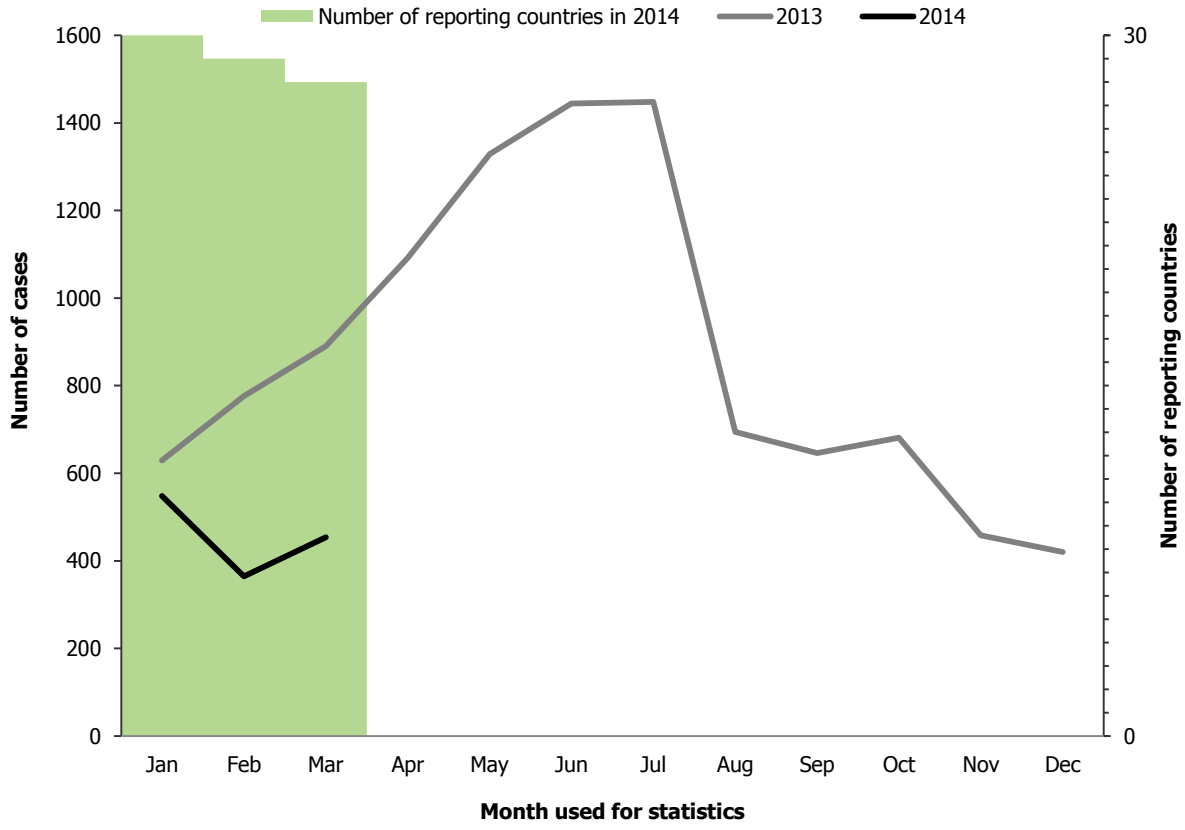
Vaccination status was known for 93.5% of the 9 575 cases reported with known age. Of these, 88.7% (7 943 cases) were unvaccinated, 7.8% (695) had received one dose of measles vaccine, 2.5% (227) had received two or more doses, and 1.0% (91) had received an unknown number of doses. The proportion of unvaccinated cases was high across all age groups and highest among children under one year of age (96.1%), who are often too young to be eligible for vaccination. Among the one- to four-year-olds, the age group targeted by routine childhood vaccination programmes, 79.2% of cases were unvaccinated (Figure 6). The measles vaccination coverage (two doses) for each country is presented in Figure 3.

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

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

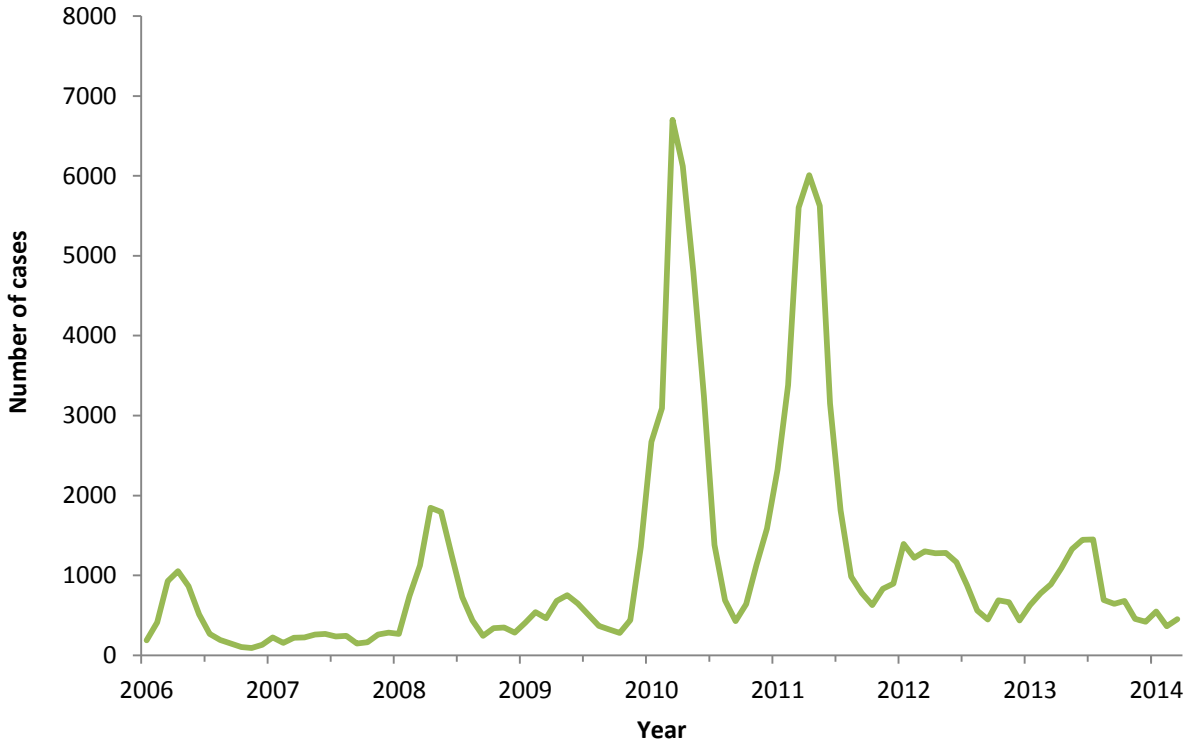
The number of cases remains high, considering that measles and rubella are targeted for elimination in Europe by 2015. Measures implemented in the Member States must be expanded and accelerated in order to reach this target.

Figure 1. Number of measles cases in 2013 and 2014, and number of European countries reporting in 2014, by month, EU/EEA



Note: All countries reported data for all months during 2013

Figure 2. Number of measles cases by month, EU/EEA countries, January 2006–March 2014



Note: During 2006–2014, 29 EU/EEA countries consistently reported measles cases every month. Delays in reporting were observed only in February and March 2014. 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, April 2013–March 2014, EU/EEA countries

Country	2013									2014			Total cases	Cases per million	Total lab-positive cases
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Austria	11	11	5	0	6	5	9	3	5	33	11	8	107	12.7	70
Belgium	5	13	6	2	2	0	0	0	0	2	8	4	42	3.8	5
Bulgaria	0	6	7	1	0	0	0	0	0	0	0	0	14	1.9	13
Croatia	0	0	0	0	1	0	0	0	0	0	1	0	2	0.5	1
Cyprus	0	0	0	0	0	0	0	0	0	0	0	4	4	4.6	2
Czech Republic	4	3	1	0	0	0	0	0	1	0	2	32	43	4.1	42
Denmark	6	0	0	0	0	0	0	0	0	0	5	8	19	3.4	11
Estonia	1	0	0	0	0	0	0	0	0	0	0	0	1	0.7	1
Finland	0	1	0	0	0	0	0	0	0	2	0	0	3	0.6	0
France	46	37	34	25	13	13	15	11	7	41	38	27	307	4.7	149
Germany	136	499	391	306	127	108	76	47	20	23	26	36	1795	22.0	1039
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	NR	0	0.0	0
Ireland	4	10	7	2	4	2	16	6	1	2	6	15	75	16.4	43
Italy	212	356	383	200	74	42	37	178	263	315	205	271	2536	41.7	1197
Latvia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Lithuania	0	27	7	0	0	1	0	0	0	0	0	2	37	12.3	2
Luxembourg	0	0	0	0	0	0	0	0	0	1	NR	0	1	1.9	0
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Netherlands	5	18	295	700	407	444	473	177	106	38	0	NR	2663	159.2	883
Norway	0	0	7	0	0	0	0	0	0	0	0	0	7	1.4	7
Poland	20	12	17	10	3	1	1	1	1	16	26	25	133	3.5	94
Portugal	1	0	0	0	0	0	0	0	0	0	0	0	1	0.1	1
Romania	146	80	127	83	27	11	23	22	12	26	0	0	557	26.1	429
Slovakia	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Slovenia	0	0	0	1	0	0	0	0	0	0	0	0	1	0.5	1
Spain	15	15	18	31	8	4	3	0	0	8	3	2	107	2.3	92
Sweden	1	8	15	6	0	0	0	0	0	2	7	0	39	4.1	39
United Kingdom	479	233	124	81	22	15	28	13	4	39	27	20	1085	17.6	1080
Total	**1092**	**1329**	**1444**	**1448**	**694**	**646**	**681**	**458**	**420**	**548**	**365**	**454**	**9579**	**18.7**	**5201**

NR: Data not reported. Lichtenstein does not report.

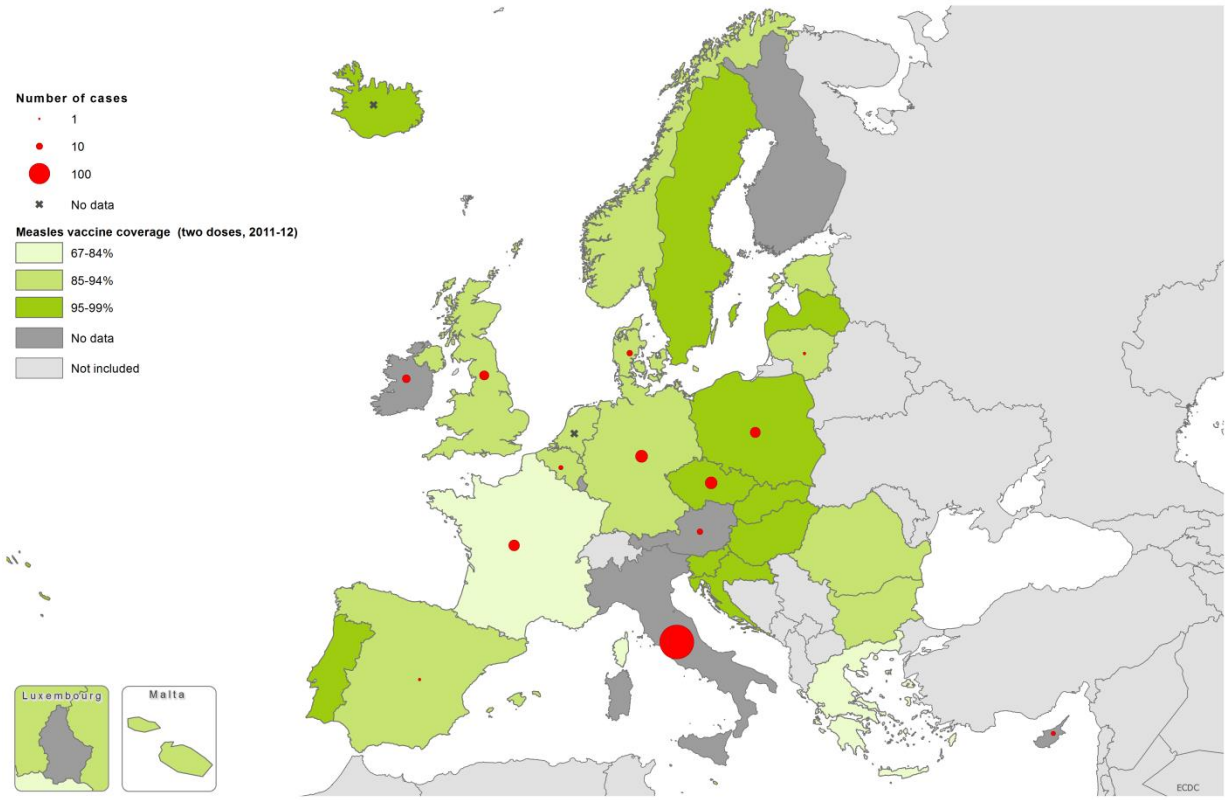
Notification rates were calculated using the most recent population estimates available from Eurostat (2012).
Countries with a notification rate ≥1 per million population are highlighted in green. The target to monitor progress towards elimination is achievement of an incidence of less than one case 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.

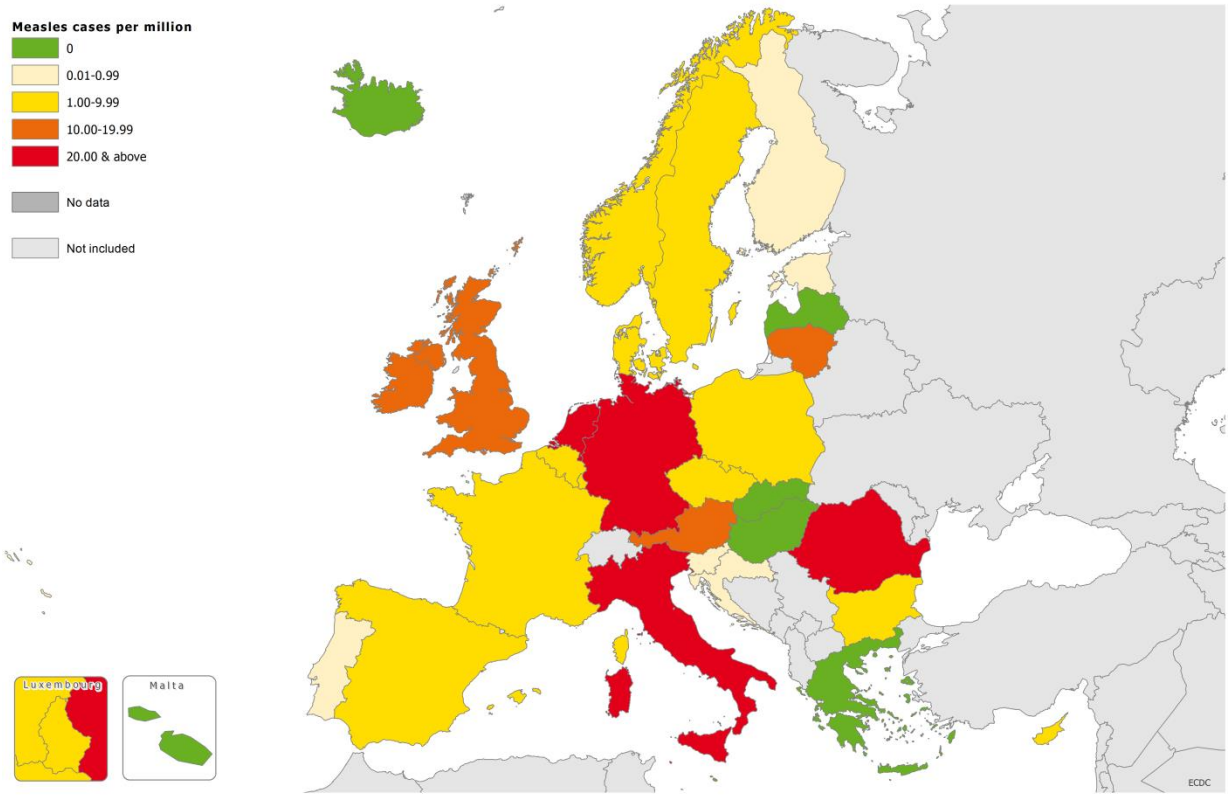
Tables on measles cases in previous years are available from:
http://www.ecdc.europa.eu/en/healthtopics/measles/epidemiological_data/pages/annual_epidemiological_reports.aspx

Figure 3. Number of measles cases by country, March 2014 (N=454), 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 4. Measles notification rate (cases per million) by country, April 2013–March 2014, EU/EEA countries (N=9 579)



For interactive maps on measles see http://emmageocase.ecdc.europa.eu/atlas/measles

Figure 5. Measles notification rate (cases per million) by age group, April 2013–March 2014, EU/EEA countries (N=9 575 cases with known age)

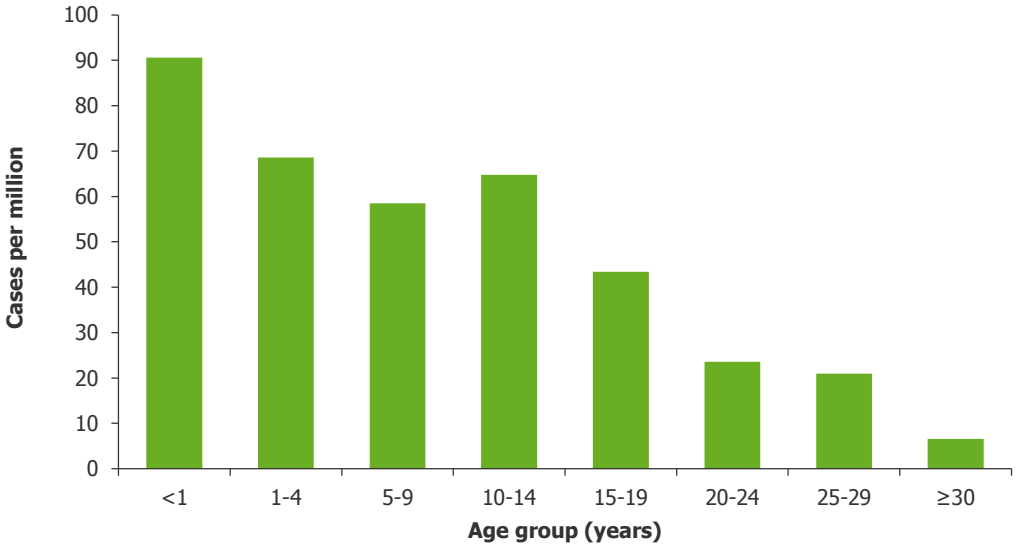


Figure 6. Percentage distribution of vaccination status among measles cases by age group, April 2013–March 2014, EU/EEA countries (N=9 575, cases with known age)

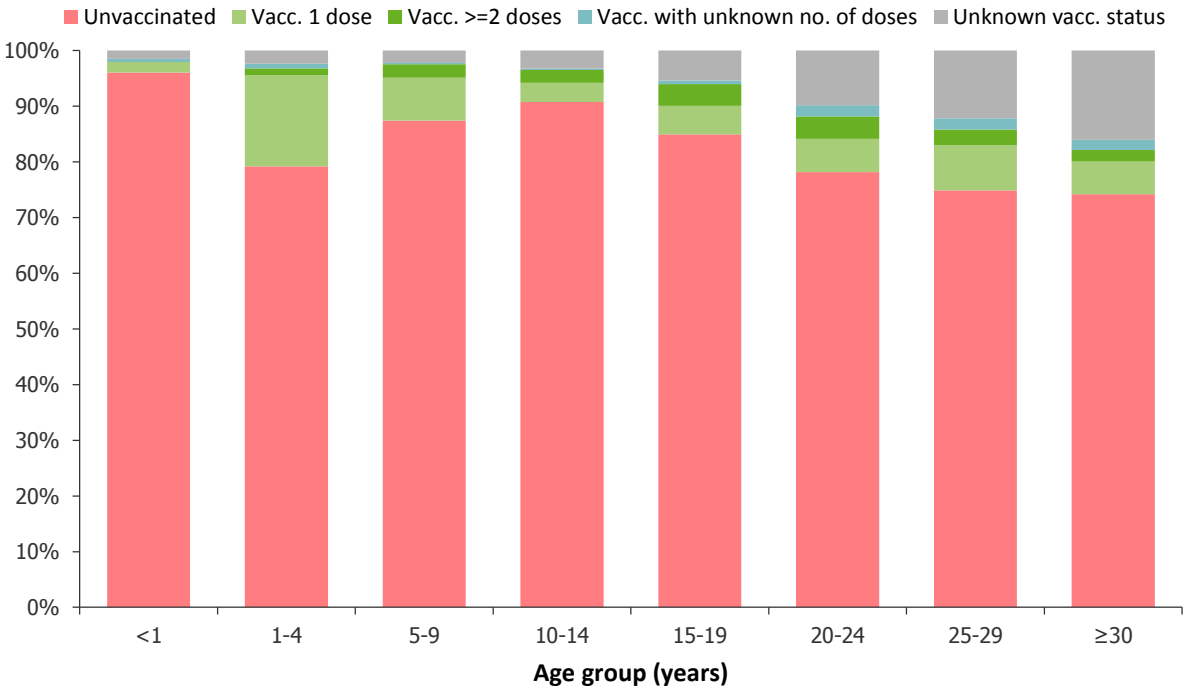


Figure 7. Notification rate of measles cases and vaccination status for the five countries with the highest proportion of cases, by age group, April 2013–March 2014

Figure 7a. Measles notification rate (cases per million) by age group, the Netherlands, April 2013–March 2014

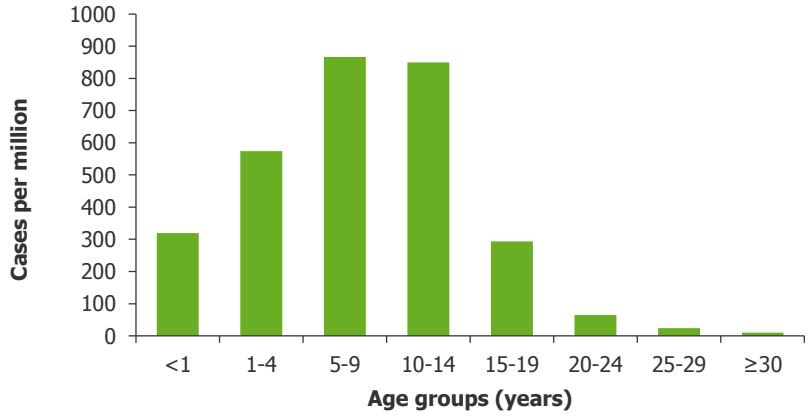


Figure 7b. Number of measles cases by age group and vaccination status, the Netherlands, April 2013–March 2014

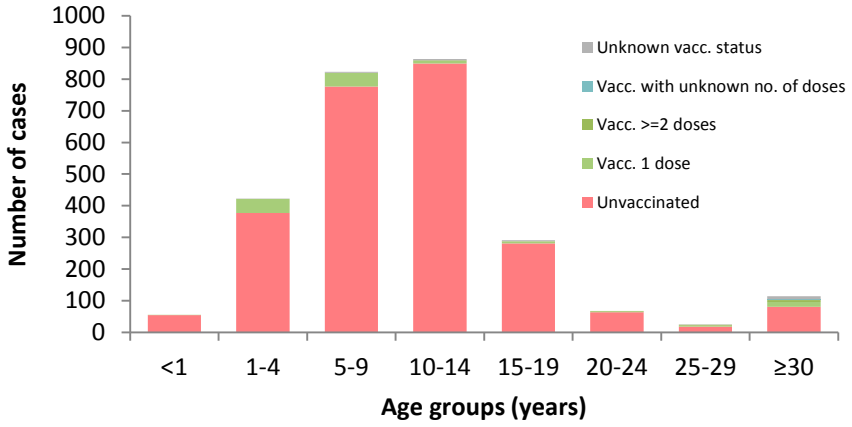


Figure 7c. Measles notification rate (cases per million) by age group, Italy, April 2013–March 2014

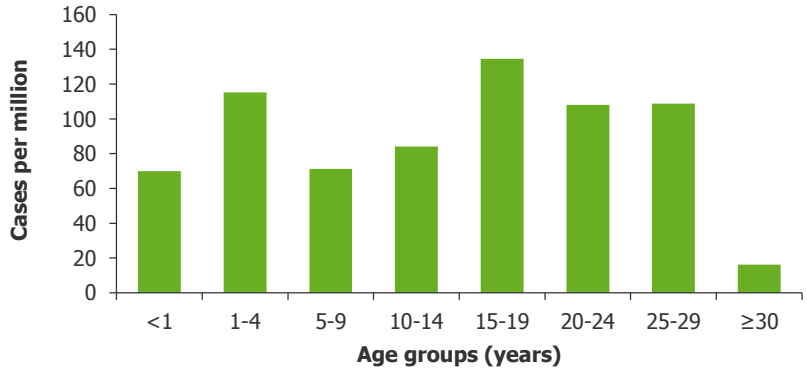


Figure 7d. Number of measles cases by age group and vaccination status, Italy, April 2013–March 2014

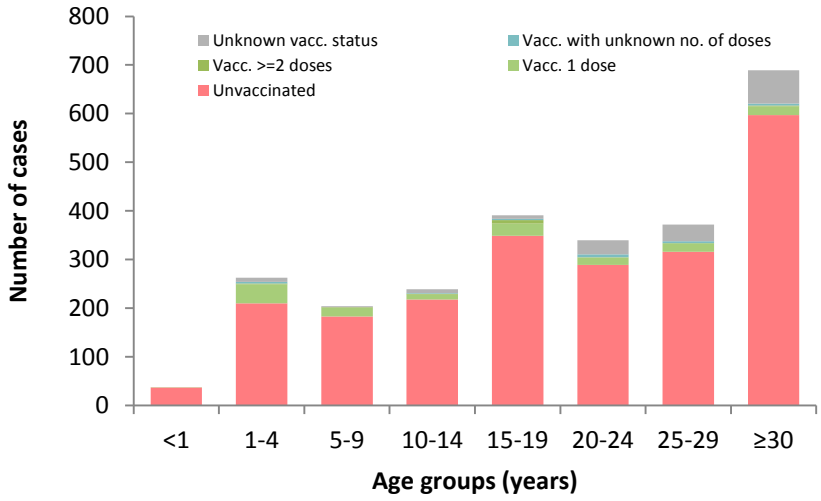


Figure 7e. Measles notification rate (cases per million) by age group, Germany, April 2013–March 2014

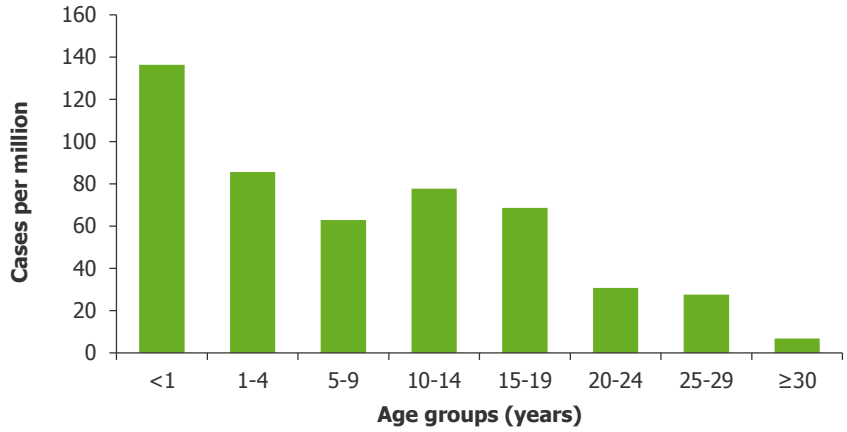


Figure 7f. Number of measles cases by age group and vaccination status, Germany, April 2013–March 2014

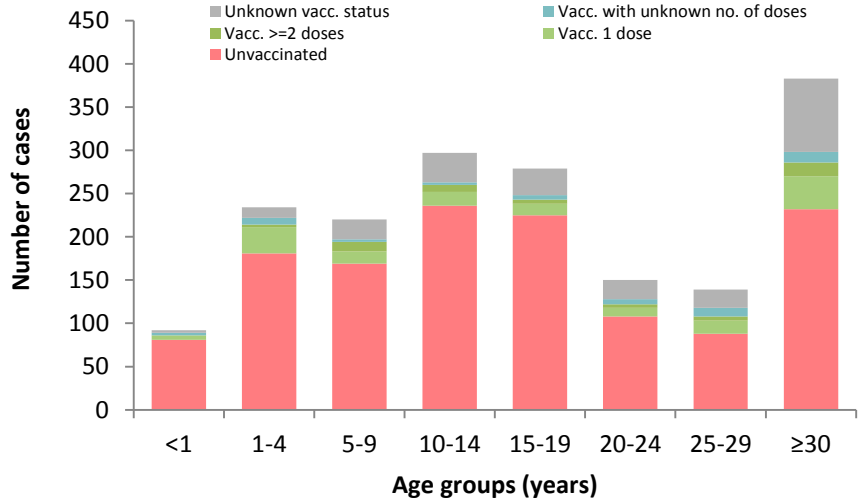


Figure 7g. Measles notification rate (cases per million) by age group, United Kingdom, April 2013–March 2014

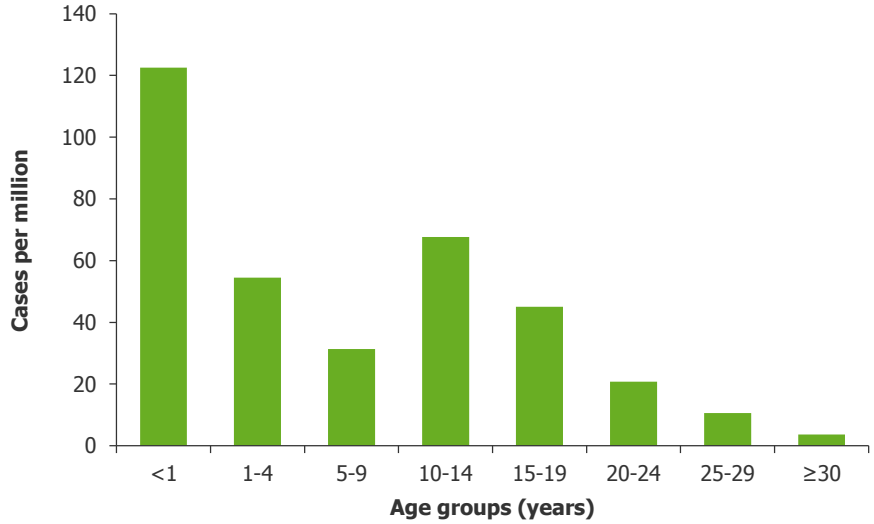


Figure 7h. Number of measles cases by age group and by vaccination status, United Kingdom, April 2013–March 2014

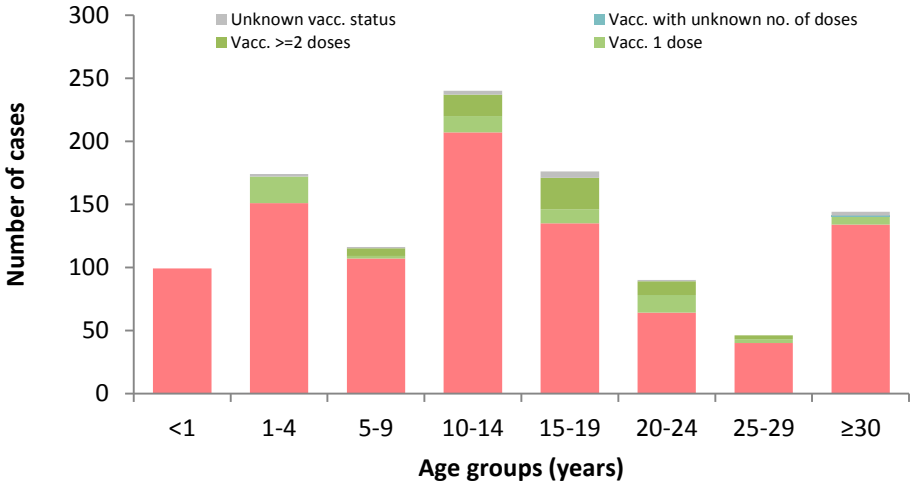


Figure 7i. Measles notification rate (cases per million) by age group, Romania, April 2013–March 2014

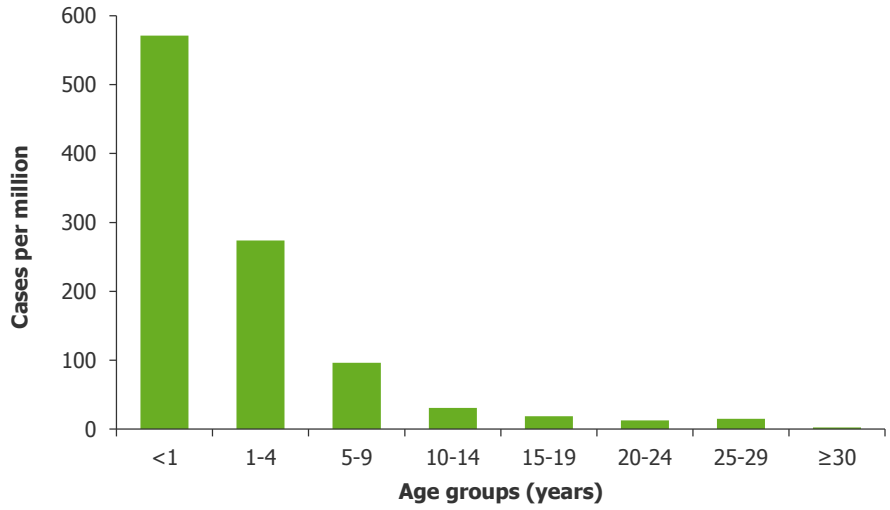
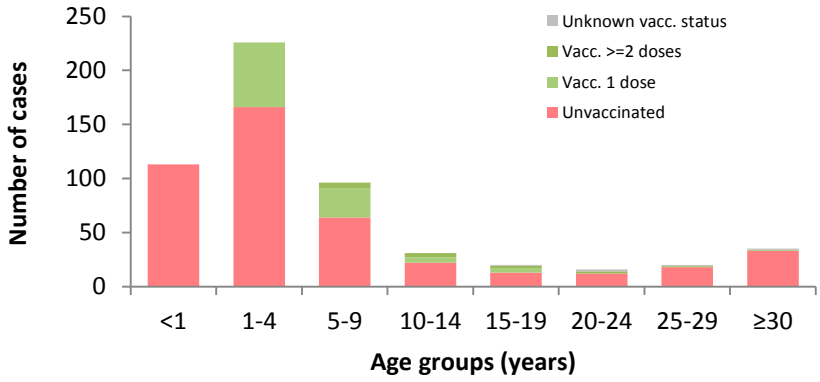


Figure 7j. Number of measles cases by age group and by vaccination status, Romania, April 2013–March 2014



Epidemic intelligence

Updates since the last bulletin

Spain

A measles outbreak began in late January in Catalonia and affected 26 people by the end of February 2014. Twelve cases were hospitalised. The cases were detected in the city of Barcelona and in several municipalities in the province of Girona. Most of those affected were adults between 18 and 47 years of age who were unvaccinated or had not completed the recommended vaccination regimen. The primary case was a 37-year-old visitor.

Latvia

Latvia is affected by an ongoing outbreak. As of 25 April 2014, 17 cases have been reported. Two of the cases travelled to international meetings while they were contagious. Investigations and follow-ups are ongoing. Latvia reported no cases during the past year.

Ireland

An outbreak started at the end of March among students, or contacts of students, attending higher education institutions in Galway. As of 23 April 2014, the Health Protection Surveillance Centre has been notified of 15 measles cases from Mayo, Kerry and Galway. The average age of cases is 20 years (median 19 years), with an age range of 14–33 years. Ten cases are laboratory confirmed. Vaccination status was available for 12 of the 15 cases: eight were unvaccinated, four cases reported either one (one case) or two doses of MMR vaccine (three cases); records to confirm vaccination status were only available for one of the individuals who reported two doses of MMR.

Denmark

There have been 12 cases of measles in Denmark in 2014 since mid-February, all in the Copenhagen area. Seven of the cases were laboratory confirmed. Five of the cases were children below three years of age, all unvaccinated. Two cases were reported in Nordsjælland in returning adult visitors from the Philippines. Five of the Danish cases were caused by measles virus of genotype B3. It is estimated that around 100 000 Danes over 18 years have not been vaccinated against measles and are therefore particularly vulnerable in the event of an epidemic.

The Czech Republic

The Czech Republic reported an outbreak of measles in a hospital from the Ustecky region (Masarykova Hospital, Usti nad Labem) that started in February. Eighty cases were recorded (41 laboratory confirmed, 39 suspected). The primary case, a 46-year-old man, had travelled to India. He was subsequently hospitalised. The majority of cases in the outbreak were healthcare workers (59%). Measures were taken and about 200 persons were vaccinated. The last case was identified on 10 March 2014.

The Netherlands – update

The large outbreak (more than 2 600 cases) in the Netherlands which affected regions with low vaccine uptake due to religious beliefs, was declared over at the end of February 2014.

Since the end of February 2014, a new outbreak has been affecting The Hague region. As of the 22 April, 34 cases have been reported. Fifteen of the patients are children, 19 are adults.

Austria – update

The outbreak near Vienna, reported in the previous bulletin, was declared to be over in March 2014. As of 19 March 2014, 44 cases have been reported. Half of the laboratory-confirmed cases were due to genotype D8. Three-quarters of the cases were either not vaccinated against measles or their measles vaccination status was

unknown. Forty-three percent of patients were hospitalised. Four cases occurred in healthcare workers. Transmission in a hospital setting occurred twice during the outbreak. Almost one-third of the cases occurred in students of a Montessori school. Two measles patients were 10-month-old children.

In Tyrol, cases due to serotype B3 were reported recently; potentially, the primary case could have been exposed to the disease in the Philippines.

Italy

A measles outbreak was declared on 27 February 2014 on the *Costa Pacifica*, a cruise ship sailing in the north-western Mediterranean with port calls in Marseille, Barcelona, Palma de Mallorca, Civitavecchia, La Spezia and Savona. The index case in the outbreak was a crew member who sought medical care off the ship for fever and rash on 22 February and was laboratory confirmed to have measles on 27 February. Measles viruses of genotype B3 were isolated from this outbreak. The fragment sequences are identical to a strain associated with an outbreak in the Philippines. More than 800 crew members were vaccinated. As of 21 March 2014, 33 patients have been associated with the outbreak on the Costa Pacifica.

Former Yugoslav Republic of Macedonia

An outbreak is ongoing since January 2014 in the Skopje region, with a total of 25 confirmed cases as of end of April. Twenty-two of the patients needed hospitalisation, including a pregnant woman who lost her baby. Half of the patients are between 20 to 40 years of age, the other half are children under the age four.

Russia

A nosocomial outbreak has been reported from Primorye, in the far eastern part of Russia. The index case was a woman who had returned from the Philippines and Hong Kong. Eleven cases were reported, six of them children.

The number of reported cases in Moscow since the beginning of 2014 was 10 times higher than during the same period last year. There are 263 notified cases, including 117 children below 18 years. Outside of Moscow, measles outbreaks have occurred in several other regions of Russia this year.

Canada – update

In the first months of 2014, a large outbreak in British Columbia with over 400 cases affected a religious community associated with the North American Reformed Church; the community had low vaccination coverage. This was the largest outbreak in British Columbia in almost 30 years. The suspected primary case had a travel history to the Netherlands. To date, three Canadian provinces have experienced importations from the outbreak in the Netherlands. The outbreak in British Columbia was declared over at the end of April 2014. However, new outbreaks are currently reported from Alberta, Saskatchewan and Manitoba provinces.

USA

During 1 January–18 April 2014, health authorities in Orange County, California, received reports of 58 confirmed measles cases, including 12 hospitalisations. This was the highest number reported for that period since 1995. Patients ranged in age from five months to 60 years. Among the 58 cases, 54 (93%) were classified as 'importation-associated'. Transmission for 11 cases occurred in healthcare settings; six of these 11 cases were in healthcare personnel. Genotypes identified were B3 (32 patients), the measles genotype currently circulating in the Philippines, and D8 (seven patients). Most of the 58 patients were either unvaccinated (25 [43%]) or had no vaccination documentation available (18 [31%]). Three healthcare workers had documentation of serologic evidence of immunity before exposure, and one additional patient was found to have serologic evidence of immunity when tested as part of a contact investigation before symptom onset.

A new outbreak has been reported from Ohio. The outbreak originated in four unvaccinated residents of an Amish community who had travelled to the Philippines on a humanitarian mission. There are now 14 other cases in the community.

Brazil

There is an ongoing outbreak in Ceará with 388 suspected cases since the end of 2013. Ceará is one of the venues for the 2014 FIFA World Cup.

Vietnam – update

The outbreak reported earlier in Vietnam is slowing down. So far, 3 716 cases of measles have been reported, affecting the whole country.

China

In the past two months, a growing number of measles cases have been reported to the Beijing Centre for Disease Control and Prevention (CDC). As of early March 2014, 149 measles cases have been reported. More than half of the infected people in Beijing and neighbouring regions are adults. In China, children are required to be vaccinated against measles at the ages of eight months and seven years.

Rubella

Enhanced surveillance data

Enhanced rubella surveillance data were retrieved from The European Surveillance System (TESSy) on 28 April 2014. The analysis covers the 12-month period from April 2013 to March 2014.

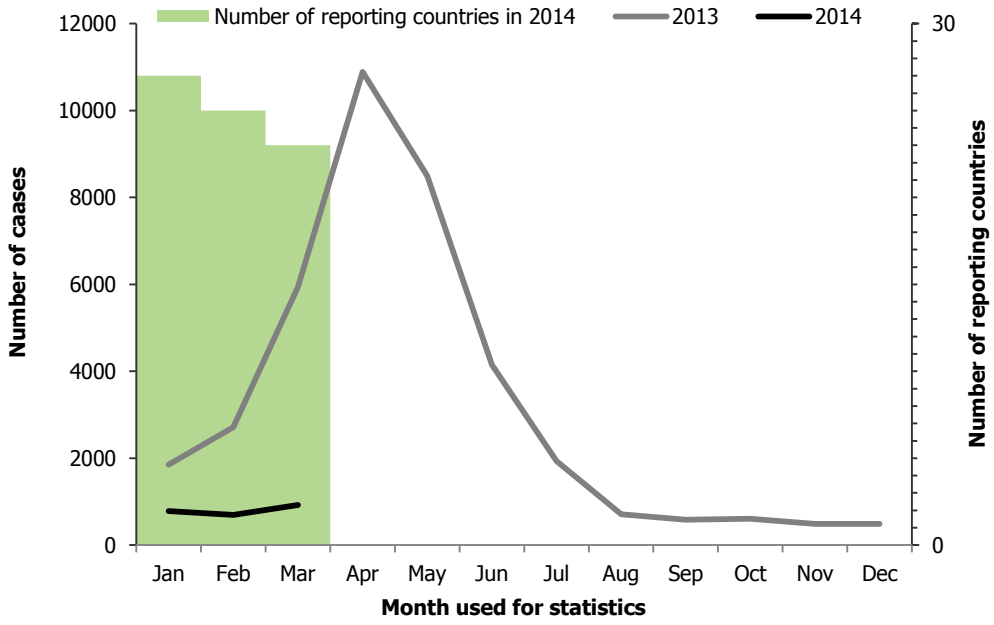
Two EU countries – Belgium and France – do not operate rubella surveillance systems with national coverage and hence do not contribute data to EU/EEA enhanced rubella surveillance. Of the 28 contributing countries, 21 reported data for the entire period. Italy did not report for the entire 12-month period; Luxembourg did not report data for February 2014; Cyprus, Iceland and the Netherlands did not report data for March 2014; and Croatia did not report data for February and March 2014. Germany reported data on rubella for the first time and reported data from December 2013 onwards[1] (Figure 8, Table 2).

During the period April 2013–March 2014, 30 743 cases of rubella were reported. Less than 1% of the cases were reported as laboratory confirmed (by serology, virus detection or isolation) (Table 2). The notification rates for the past 12 months and the number of cases observed in March 2014 by country are shown in Figures 9 and 10. Sixteen of the 21 countries that reported data for the entire 12-month period met the target of less than one case per million population (Table 2).

The highest notification rate was observed in cases aged five to nine years old (36.6 cases per million population) (Figure 11).

Poland accounted for 99.2% of all reported rubella cases in the 12-month period (30 493 cases). Data were reported in an aggregated format. A total of 17 991 cases (59.0%) were unvaccinated, 4 044 (13.3%) cases were vaccinated with one dose, 613 (2.0%) cases received two or more doses, and 7 845 (25.7%) cases had an unknown vaccination status. None of the 30 493 cases were reported with a positive laboratory test, and all cases reported in 2013 (n=28 144) had unknown age data.

Figure 8. Number of rubella cases in 2013 and 2014 and number of European countries reporting in 2014, by month



Note: Belgium and France do not have rubella surveillance with national coverage. Of the countries that have rubella surveillance with national coverage, only Italy did not report data for all months in 2013

[1] Matysiak-Klose D. Hot spot: epidemiology of measles and rubella in Germany and the WHO European region. Bundesgesundheitsblatt Gesundheitsforschung Gesundheitsschutz. 2013 Sep;56(9):1231-7

Table 2. Number of rubella cases by month and notification rate (cases per million) by country, April 2013–March 2014, EU/EEA countries

Country	2013									2014			Total cases	Cases per million	Total lab-positive cases
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar			
Austria	4	4	0	1	0	0	0	0	1	1	1	0	12	1.4	8
Belgium	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-
Bulgaria	0	3	0	0	0	2	0	1	0	1	5	0	12	1.6	2
Croatia	0	0	0	1	0	0	0	0	0	0	NR	NR	1	0.2	1
Cyprus	0	0	0	0	0	0	0	0	0	0	0	NR	0	0.0	0
Czech Republic	0	0	0	0	0	0	0	0	0	1	0	0	1	0.1	1
Denmark*	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Estonia	0	0	2	0	0	0	0	0	0	0	0	0	2	1.5	2
Finland	1	0	1	0	0	0	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	0	13	20	13	46	0.6	10
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	NR	0	0.0	0
Ireland	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	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	0	0	0.0	0
Luxembourg	0	0	0	0	0	0	0	0	0	0	NR	0	0	0.0	0
Malta	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Netherlands	2	0	12	43	0	0	0	0	0	0	0	NR	57	3.4	15
Norway	0	1	0	0	0	0	0	0	0	1	2	0	4	0.8	3
Poland**	10856	8466	4114	1877	690	569	606	481	485	769	669	911	30493	791.3	0
Portugal	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0	0
Romania	23	19	17	7	17	9	2	1	3	0	0	0	98	4.6	78
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	2	1	0	0	0	0	0	0	0	0	0	1	4	0.1	3
Sweden	0	0	0	0	0	0	0	0	0	0	0	1	1	0.1	1
United Kingdom	2	0	2	1	1	1	1	2	0	0	0	0	10	0.2	9
Total**	**10890**	**8494**	**4148**	**1930**	**708**	**581**	**609**	**485**	**489**	**786**	**697**	**926**	**30743**		**133**

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.

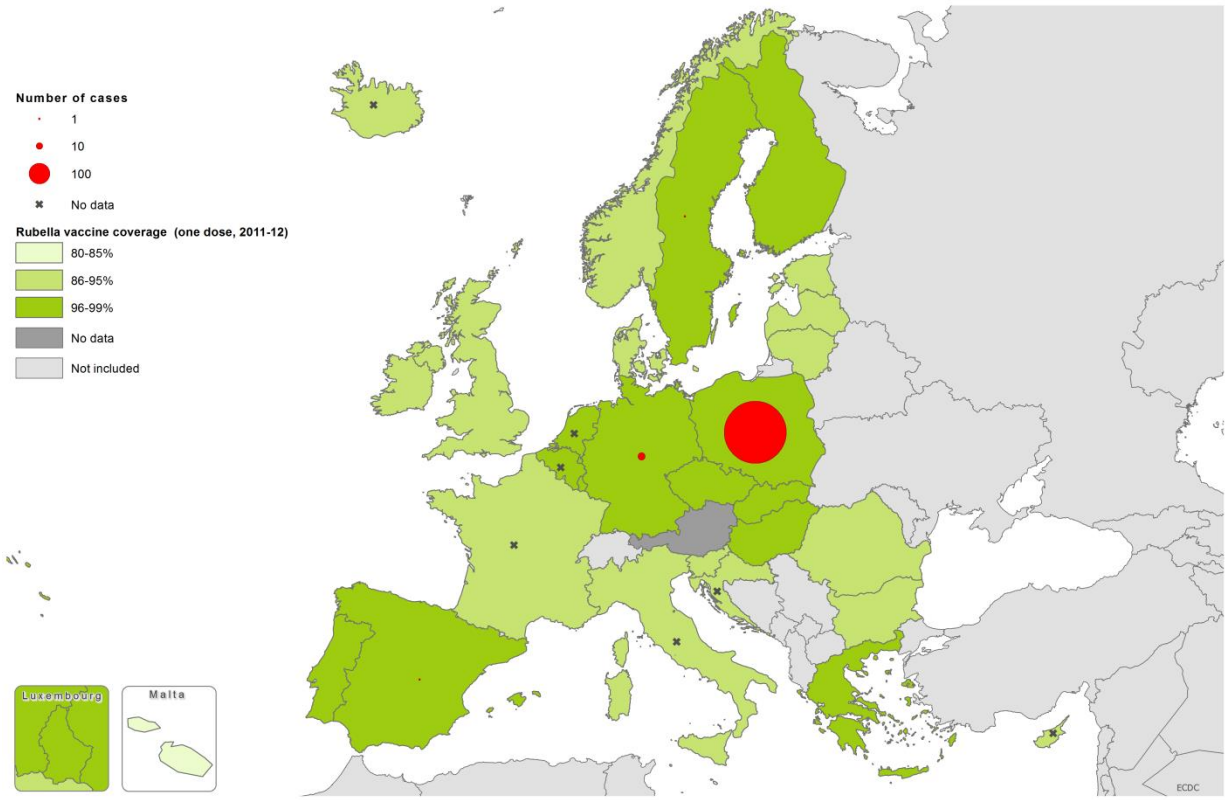
All confirmed, probable, possible or unknown cases, as defined by the EU 2008 case definition, are included.

** 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.*

*** Due to the high proportion of cases reported by Poland, an overall notification rate for Europe is not presented.*

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 9. Number of rubella cases by country, March 2014 (N=926), 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, April 2013–March 2014, EU/EEA countries (N=30 743)

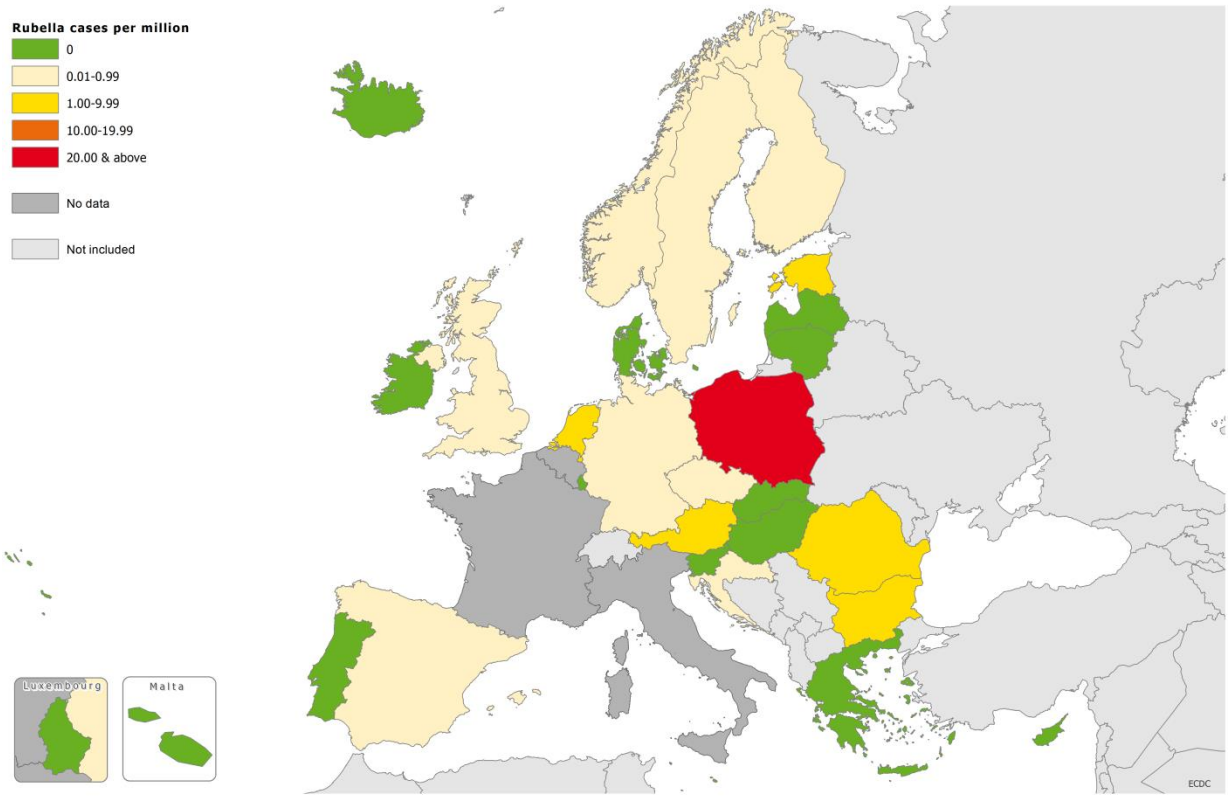
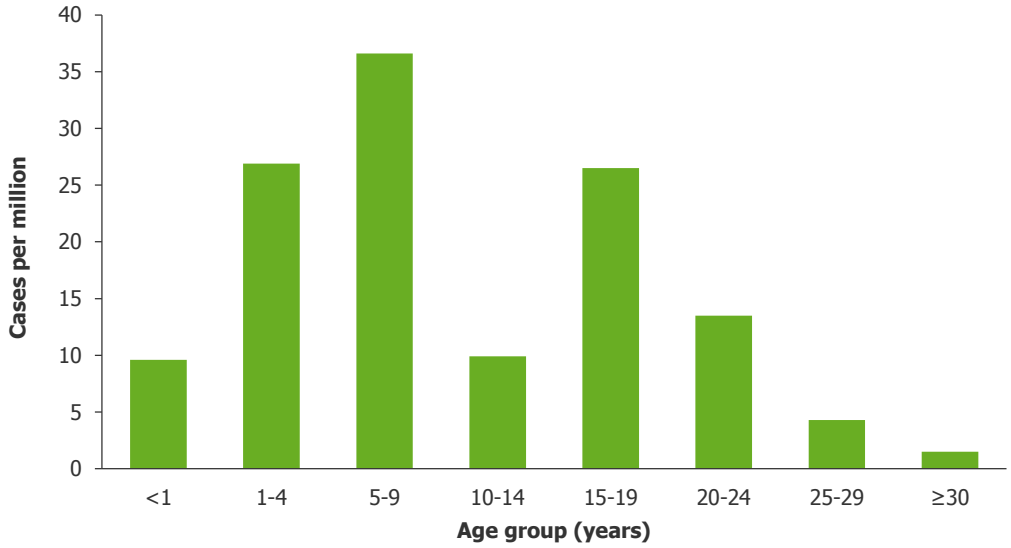


Figure 11. Rubella notification rate (cases per million) by age group, April 2013–March 2014, EU/EEA countries (N=2 599 cases with known age)



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

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 28 April 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 only report the coverage of one dose of measles-containing vaccine. For more information, please refer to the WHO Global Database (see link above).

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.