

European monthly measles monitoring (EMMO)

July 2011

Main developments

- Since the last measles monitoring report, more than 5 000 new measles cases were detected in the EU and EEA/EFTA countries, bringing the total number of cases to over 26 000 so far this year.
- The countries with the highest cumulative number in 2011 are: France, Italy, Spain, Romania, and Germany.
- Three countries have reported new outbreaks since June: Slovenia, Italy and Romania.
- Latvia reported its first measles case in 2011 in a traveller returning from Germany.
- Four of the 30 monitored countries have been measles-free so far in 2011: Cyprus, Hungary, Iceland, and Liechtenstein.
- The World Youth Day and other mass-gathering events in Europe during the summer months increase the risk of spreading measles in Europe and exportation of measles to other parts of the world.

Background

Measles is a highly infectious and potentially fatal disease which can be prevented by a safe and effective vaccine. When given in two doses, at least 98% of vaccine recipients develop life-long protective immunity against the disease. As the measles virus only infects humans, the disease could theoretically be eradicated if high enough vaccination coverage is achieved in all populations. The countries in the European Region of the World Health Organization, including the EU and EEA/EFTA countries, have committed to eliminate measles by 2015. Elimination of measles requires sustained vaccination coverage above 95% with two doses of a measles containing vaccine (MCV).

ECDC monitors measles transmission in the EU and EEA/EFTA countries and produces monthly epidemiological updates. These European Monthly Measles Monitoring (EMMO) reports are based on information from multiple sources including national websites, the EUVAC.Net database, the Early Warning and Response System (EWRS), validated media reports and personal communication from national authorities. The period covered will differ between countries and the number of cases reported in EMMO should be treated as preliminary data.

EMMO data on MCV coverage is retrieved from the official WHO Computerized Information System for Infectious Diseases (CISID) unless otherwise stated. CISID data originates from the WHO/UNICEF Joint Reporting Forms submitted annually by WHO member states. It should be noted that countries use different methodologies and definitions for assessing vaccination, and that direct comparisons of coverage between countries is not possible. The recommended age for the second dose of MCV varies considerably between countries, which further complicates the picture. Only 18 out of 27 EU countries assess MCV 2 coverage at 24 months of age.

The purpose of EMMO is to provide timely public updates on the measles situation in Europe for effective disease control measures and in support of the common 2015 measles elimination target.

Overview

During the first six months of 2011, more than 26 000 cases were reported from EU and EEA/EFTA countries (Table 1). This cumulative number is preliminary and is likely to increase as more data become available. It is widely recognised that measles is underreported in many countries.

The highest number of cases have been reported from France, which accounts for more than half of all cases in 2011, including six deaths. Romania, Switzerland, Spain, Belgium, Denmark, UK, and Italy are among the countries reporting a considerable increase in case numbers during 2011 compared with 2010 (Table 1, Figure 2). The outbreaks in the EU are principally the result of transmission within and between Member States.

On 6 June 2011, the Council of the European Union concluded that additional efforts are needed to control the spread of measles in the EU and invited Member States to strengthen their immunisation activities, particularly by targeting pockets of susceptible individuals.

ECDC stresses the importance of getting vaccinated against infectious diseases, especially measles. Measles vaccination is particularly important for people who plan to attend mass-gatherings such as concerts, sporting events, and religious gatherings. Mass gathering events, such as the upcoming World Youth Day in Madrid in August 2011, which is expected to be attended by 350 000 people from across the globe, constitute a considerable risk of exposure to measles. Infected visitors might return to their home countries before onset of symptoms and spread the disease there.

Several countries recommend that people planning to travel should update their vaccination status before their summer holidays.

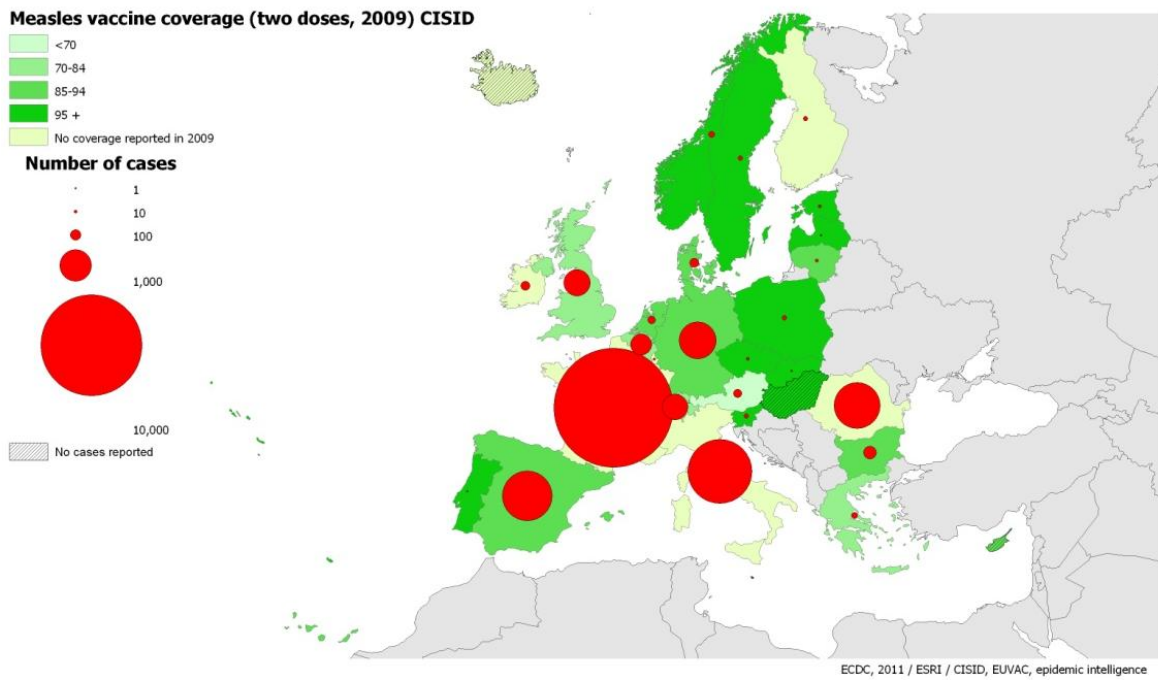
Table 1: Cumulative number of measles cases and deaths, incidence density, date of last report, and source of information; EU and EEA/EFTA countries, 2011

Country	Cumulative number of cases	Deaths	Incidence density*	Cases reported until	Trend**	Source
Austria	70		0.47	30 Jun	↗	EUVAC.Net
Belgium	433		2.23	30 Jun	→	EUVAC.Net
Bulgaria	155		1.01	24 Jul	↘	National Centre of Infectious and Parasitic Diseases
Cyprus	0		0.00	30 Jun		EUVAC.Net
Czech Republic	6		0.03	30 Jun	→	EUVAC.Net
Denmark	83		0.75	21 Jul	↘	Statens Serum Institut
Estonia	7		0.29	30 Jun	↗	EUVAC.Net
Finland	18		0.19	30 Jun	↘	EUVAC.Net
France	14040	6	12.49	30 Jun	↘	Institut de Veille Sanitaire
Germany	1361	1	0.81	27 Jul	↘	Robert Koch Institut
Greece	37		0.18	30 Jun	↘	EUVAC.Net
Hungary	0		0.00	30 Jun		EUVAC.Net
Iceland	0		0.00	31 May		EUVAC.Net
Ireland	79		0.92	13 Jul	↗	Health Protection Surveillance Centre
Italy	4000		4.42	31 May	↗	Istituto Superiore di Sanità (unpublished data)
Latvia	1		0.02	27 Jul	↗	Infectology Center of Latvia
Liechtenstein	0		0.00	30 Jun		Amt für Gesundheit
Lithuania	7		0.12	30 Jun	↗	EUVAC.Net
Luxembourg	5		0.56	30 Jun	↗	EUVAC.Net
Malta	2		0.27	30 Jun	↘	EUVAC.Net
Netherlands	51		0.15	25 Jul	→	RIVM
Norway	37		0.43	30 Jun	↘	EUVAC.Net
Poland	16		0.02	30 Jun	↘	EUVAC.Net
Portugal	1		0.01	30 Jun	↘	EUVAC.Net
Romania	2072		5.39	30 Jun	↗	National Centre for Communicable Disease Surveillance (unpublished data)
Slovakia	1		0.01	30 Jun	↗	EUVAC.Net
Slovenia	21		0.50	27 Jul	↗	National Institute of Public Health
Spain	2407		2.64	19 Jul	↘	Instituto de Salud Carlos III
Sweden	20		0.10	25 Jul	→	Smittskyddsinstitutet
Switzerland	640		4.15	19 Jul	↘	Bundesamt für Gesundheit
United Kingdom	666		0.60	30 Jun	↘	EUVAC.Net
TOTAL	26236	7				

* Incidence density is defined as number of cases per 10 million population and per day.

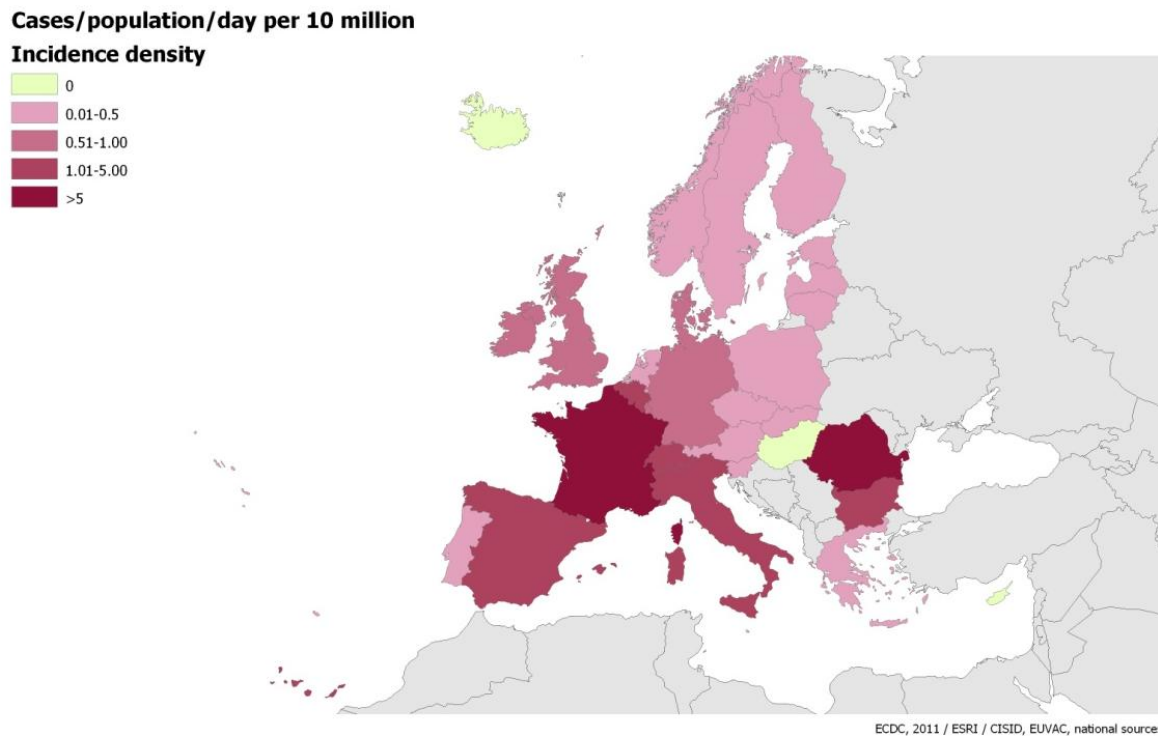
** Compared to incidence density in the previous report

Figure 1: Distribution of measles cases in EU and EEA/EFTA countries, identified through epidemic intelligence (as of July 2011) and two-dose measles vaccine coverage (2009 CISID*)



* Coverage figures (%) are official national figures reported via the annual WHO/UNICEF joint reporting form and WHO Regional Offices reports (as of 1 June 2011).

Figure 2: Distribution of incidence density (cases/10 million/day) by country; EU and EEA/EFTA countries (as of July 2011)



New outbreaks

Since the [last edition of EMMO](#), the following new measles outbreaks have been reported to ECDC or detected through ECDC's epidemic intelligence activities:

Italy

Source: [Istituto Superiore di Sanità, Italy](#) (unpublished data)

At the end of February, an outbreak started in Como, Lombardy, with more than 100 measles cases reported by the end of May. The first case was reported in a handicapped person in a long-term care facility where the infection spread to approximately 30 people. The outbreak then reached the general population, despite high vaccination coverage levels in the area (95% for the first MMR dose in children at 24 months of age and 90% for the second dose). The outbreak is currently subsiding.

Another large outbreak is ongoing in the Lazio region, with more than 1 000 cases reported in the period between April and June 2011.

Romania

Source: [Monitorul de Suceava](#)

Measles cases were detected in July in a Roma community in Suceava county, near the Moldavian border; the area had been free of measles for five years.

Slovenia

Source: [Eurosurveillance](#), National Institute of Public Health (unpublished data)

Slovenia had not reported any measles cases for ten years when a case imported from Ireland in March 2010 resulted in the spread to two individuals in the country. Since 1 January 2011, a total of 21 measles cases were reported, following six imported cases from endemic European countries. Several of the autochthonous cases were infected in a hospital setting.

Latvia

Source: [Infectology Center of Latvia](#)

On 8 July 2011, Latvia reported its first imported measles case in 2011 in a returning traveller from Berlin, Germany.

Updates on ongoing outbreaks and endemic transmission

Italy

Source: [Istituto Superiore di Sanità](#) (unpublished information), [Eurosurveillance](#)

Italy has reported over 4 000 cases so far in 2011. The number of newly reported cases in the large outbreak in the autonomous province of Bolzano in northern Italy is decreasing. About 1 500 cases have been reported from January until the end of June 2011. Other outbreaks are ongoing in the Lombardy region where about 500 cases have been detected since January 2011. In addition to these outbreaks, cases have been reported from 16 other regions.

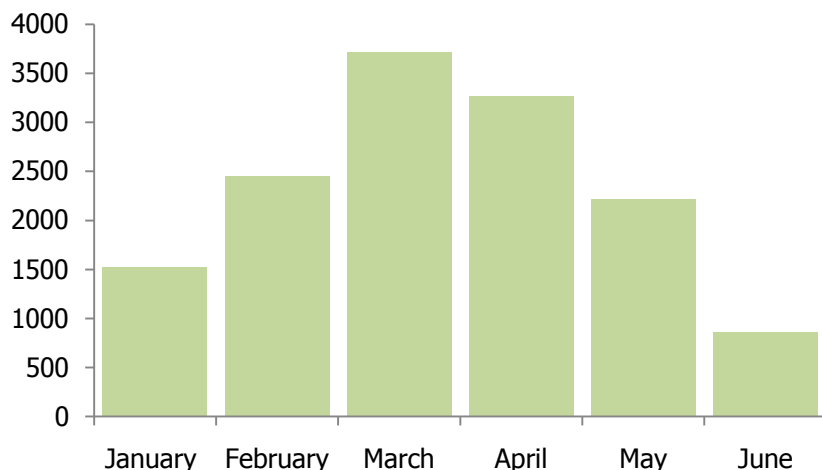
An overview article about the measles situation in Italy between July 2009 and September 2010 has recently been published in [Eurosurveillance](#). A total of 2 151 cases were reported during this period, of which 42% were laboratory confirmed. Molecular characterisation revealed circulation of measles virus genotypes D4, D8 and B3. The most affected age groups were adolescents and young adults, followed by children under one year of age. Ninety-two percent of cases with known vaccination status were unvaccinated. Four hundred and twenty-two complications, including three encephalitis cases, were reported. Thirty-eight percent of cases were hospitalised. It is also noteworthy that four measles cases that were pregnant when being infected had a spontaneous abortion or a premature delivery.

France

Source: *Institut de Veille Sanitaire*

France has had an ongoing outbreak since January 2008. Between January and June 2011, more than 14 000 cases, including six deaths, have been reported. Fifteen cases developed neurological complications and 615 suffered from severe pneumonia as a result of measles infection. The number of reported cases has been declining since a peak in March this year.

Figure 3: Distribution of reported measles cases in France by month; 1 January–30 June 2011



Source: *Institute de Veille Sanitaire, France*

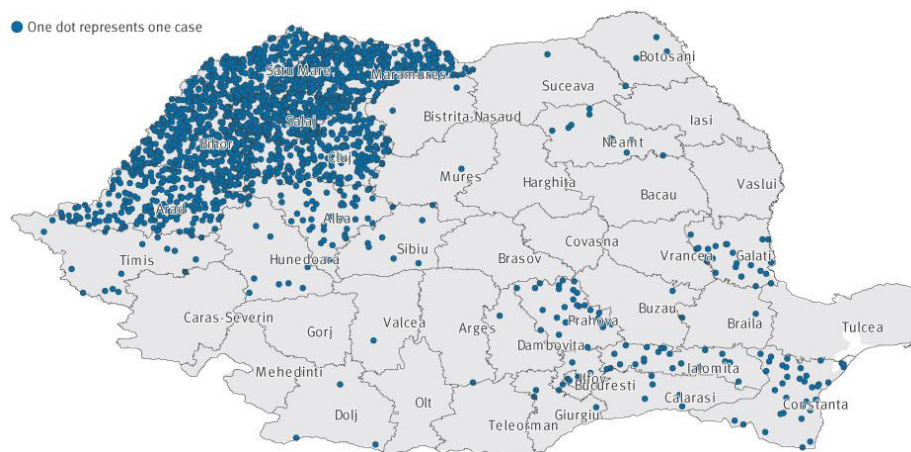
Romania

Source: *Eurosurveillance*

The measles outbreak in Romania, which started in August 2010, had by June 2011 spread to 29 of 42 districts in the country, with the highest number of cases reported from the north-western region bordering Hungary (Figure 4). In total, 2 072 measles cases were notified by 30 June 2011, of which 898 (43%) were laboratory confirmed and 1 161 (56%) were epidemiologically linked. Measles virus of genotype D4 was identified in 12 cases. The peak of the epidemic was in May (515 cases). A slight decrease in cases occurred in June (437 cases) (Figure 5). Complications of measles were reported in 800 cases (39%), with pneumonia being the most frequent complication (582 cases, 73%). Two patients developed encephalitis. The highest incidence was reported among children below one year of age, followed by children aged one to four years (Figure 6). The majority of cases were unvaccinated (73%). Of these, 20% had not yet reached the eligible age for the first vaccination.

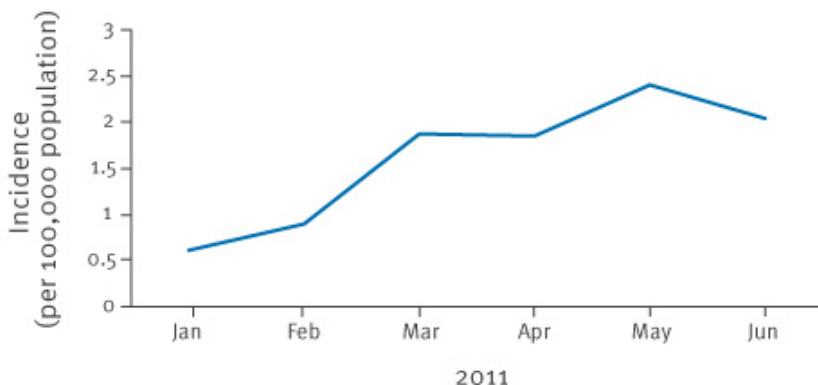
An MMR supplementary immunisation campaign was launched in the affected areas targeting children aged seven months to seven years, irrespective of their immunisation status.

Figure 4: Distribution of reported measles cases by county; Romania, 1 January–30 June 2011 (n=2072 cases)



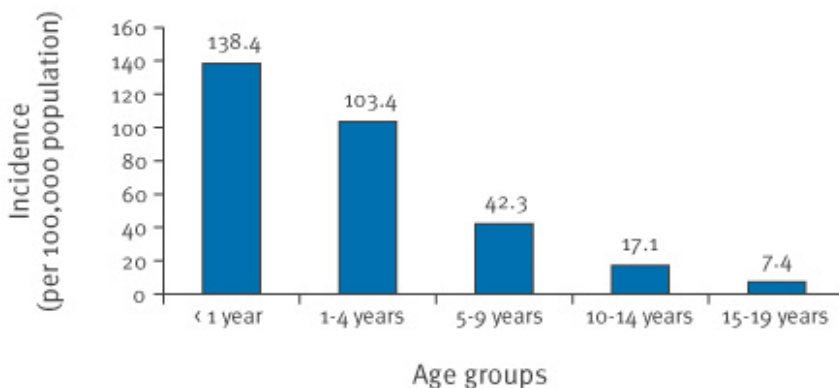
Source: *National Centre for Communicable Diseases Surveillance, Romania; Eurosurveillance*

Figure 5: Incidence of reported measles cases by month; Romania, 1 January–30 June 2011 (n=2072 cases)



Source: National Centre for Communicable Diseases Surveillance, Romania; Eurosurveillance

Figure 6: Distribution of measles incidence rates by age group; Romania, 1 January–30 June 2011 (n=1922 cases*)



* Cases aged 20 years and above (n=150) are not included in the figure.

Source: National Centre for Communicable Diseases Surveillance, Romania; Eurosurveillance

Other news

UK

Source: [HPA](#)

Immunisation data show that UK uptake rates for MMR in children aged two reached 90% in the first quarter of this year – the highest level in 13 years.

France

Source: [Romandie news](#)

In July, Médecins du Monde presented a survey conducted in Bordeaux, Lyon, Marseille, and Seine-Saint-Denis, showing that MMR vaccine coverage among Roma was as low as 55% compared to the national average of 90%.

Ukraine

Source: [Ministry of Health of Ukraine](#), WHO EURO (unpublished data)

The Ukrainian government has persistent problems with vaccine procurement and lacks sufficient amounts of vaccines for routine vaccination, including MMR. In addition, a strong anti-vaccination lobby is reported to be active in Ukraine and there is scepticism in the population towards vaccinations (personal communication, WHO EURO). This has led to low coverage. According to unofficial data, MMR 1 coverage was approximately 56% in 2010.

In Lutsk district, Volyn region, ten measles cases were reported in late July 2011.

New Zealand

Source: [Auckland Regional Public Health Service](#)

In New Zealand, the host country for the Rugby World Cup in September 2011, an outbreak is ongoing in the Auckland region with 94 confirmed cases of measles reported as of 1 August 2011, mainly among unvaccinated individuals.

Horn of Africa (Somalia, Kenya, Ethiopia)

Source: [CBS News](#)

Large outbreaks with almost 20 000 cases, including several hundred fatalities, are reported from the Horn of Africa, where a devastating drought is threatening the lives of more than half a million children.

Democratic Republic of Congo

Source: [La Libre Belgique](#)

A total of 115 600 measles cases have been reported since the start of this year, including 1 145 fatalities. By the end of July 2011, around 3.1 million children have been vaccinated against measles in an UN-coordinated campaign.

Phase III trial of measles aerosol vaccine

Source: [AlertNet](#)

Researchers at the WHO Measles Aerosol Project are analysing data from the final phase III trial. The efficiency was found to be high in previous trials and matched needle vaccination.

Acknowledgements

ECDC would like to thank the Member States for kindly agreeing to share their most recent measles-related data with us. In addition, we would like to thank our colleagues in the WHO Regional Office for Europe in Copenhagen and the WHO Country Office in Kiev (Kyiv) for sharing data related to Ukraine.

Related links

- ECDC stresses the importance of getting vaccinated before attending mass gathering events:
http://www.ecdc.europa.eu/en/press/news/Lists/News/ECDC_DispForm.aspx?List=32e43ee8_e230_4424_a783_85742124029a&ID=447&RootFolder=%2Fen%2Fpress%2Fnews%2FLists%2FNews
- Measles information on the ECDC website (see 'health topics'):
<http://ecdc.europa.eu/en/healthtopics/Pages/Measles.aspx>
- Information about vaccines and immunisation from the World Health Organization Regional Office for Europe:
http://www.euro.who.int/en/what_we_do/health_topics/communicable_diseases/measles_and_rubella
- WHO, CISID database:
<http://data.euro.who.int/cisid/>
- The Venice Project:
http://venice.cineca.org/the_project.html
- Information on the surveillance of vaccine-preventable diseases in the European Union from EUVAC.Net:
www.euvac.net
- Information from selected Member State websites regarding measles is available from:
 - [Bulgaria](#)
 - [Denmark](#)
 - [France](#)
 - [Germany](#)
 - [Ireland](#)
 - [Spain](#)
 - [Sweden](#)
 - [UK](#)
 - [Switzerland](#)