

## SURVEILLANCE REPORT

# ECDC measles monitoring (EMMO)

Issue 11: 23 May 2012

### Main developments

- During the period 1 January to 30 March 2012, 2 283 cases of measles were reported by the 29 contributing EU and EEA countries.
- Romania accounted for 56% (1 268) of these cases.
- There were substantially fewer cases in January–March 2012 (2 283) than in the same two months last year (11 386 cases).
- Two cases of measles encephalitis were reported.
- There were no deaths reported

### Surveillance data

The enhanced measles surveillance data was retrieved from TESSy on 26 April 2012; the analysis covers the period from 1 January to 30 March 2012.

Twenty-seven countries reported case-based data for the entire period, while Romania reported case-based data for January and aggregated data for February and March.

In January–March 2012, 2 283 measles cases were reported to ECDC (Table 1). Romania is the only country exceeding a notification rate of one case per 100 000 population during this period and accounted for 56% (1 268) of all cases. The overall number of cases reported in January–March 2012 is considerably lower than that reported for the same months in 2011 (11 386 cases). Eleven countries reported zero cases in January–March 2012 (Figures 2 and 4).

Of all cases reported in January–March 2012, 63% (1 446 cases) were laboratory confirmed, 25% (569 cases) were reported as probable (epidemiologically linked), and 12% (265 cases) as possible. Three cases lacked information on classification. The 2008 EU case definition for measles was used by 19 (66%) countries.

The highest notification rate was among infants under one year (6.3 cases per 100 000 population), followed by children aged between one and four years (3.1 cases per 100 000 population); see Figure 6.

Vaccination status was known for 92% (2 094) of the reported cases. Of these, 83% (1 729) were unvaccinated and 17% (365) were vaccinated. Among those vaccinated, 75% (273) had received one dose of measles vaccine, 23% (83) had received two or more doses, and 2% (9) had received an unknown number of doses.

Complication status was reported on for 53% (1 215) of the cases. Of these, two cases developed encephalitis, 231 cases were complicated by pneumonia, 41 cases had other complications and 902 cases were free of complications (Table 2). Information on complications was either missing from the reports or reported as unknown for 1 068 (47%) of the case-based reports. Disease outcome was missing for 32% of the reported cases (Table 2). There have been no reports of fatal outcomes in 2012 so far.

Importation status was reported on for 53% (1308) of the cases and of those, 96% (1261 cases) were infected in their country of residence, 3% (41 cases) were infected abroad and recorded as imported cases\* and 6 cases were import-related\*.

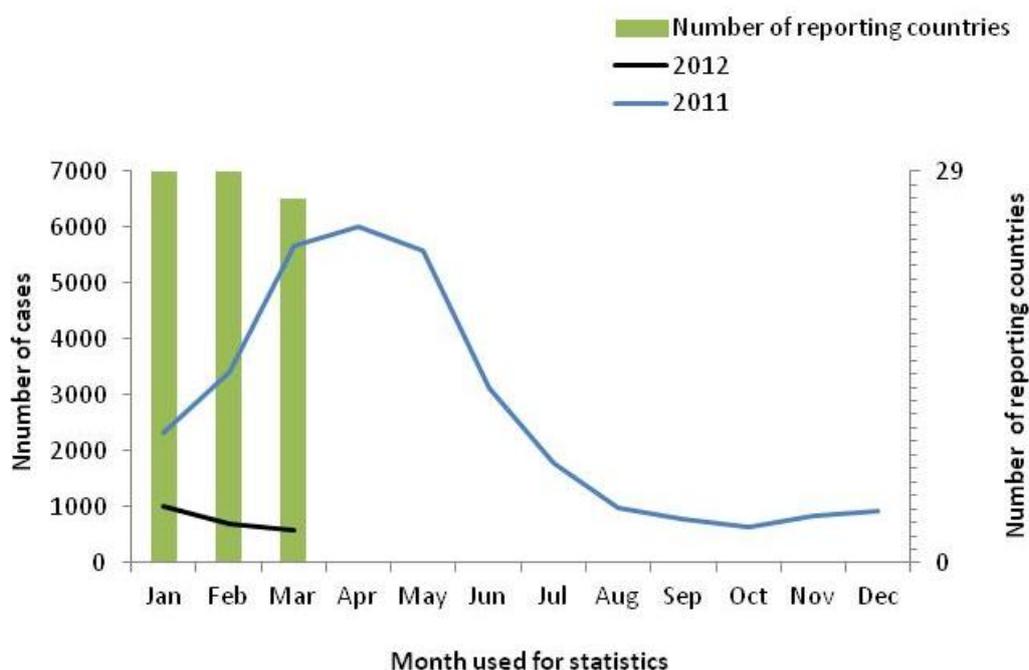
**Table 1. Number of measles cases by month, notifications per 100 000 population, and comparison with the same period in 2011; EU and EEA countries, 2012**

Country	2012					2011				
	Jan	Feb	Mar	Cumulative cases	Notifications per 100 000 population in the year	Jan	Feb	Mar	Cumulative cases	Notifications per 100 000 population in the year
Austria	0	0	0	0	0	7	5	5	17	0.2
Belgium	9	7	0	16	0.1	9	23	145	177	1.6
Bulgaria	0	0	0	0	0	76	27	27	130	1.7
Cyprus	0	1	0	1	0.1	0	0	0	0	0
Czech Republic	3	2	0	5	0.05	0	0	4	4	0.04
Denmark	1	0	0	1	0.02	7	13	23	43	0.8
Estonia	0	0	0	0	0	0	0	4	4	0.3
Finland	1	1	0	2	0.04	1	1	1	3	0.1
France	105	120	133	358	0.6	1532	2433	3686	7651	11.8
Germany	3	17	0	20	0.02	48	89	177	314	0.4
Greece	0	0	0	0	0	0	2	6	8	0.1
Hungary	0	0	0	0	0	0	0	0	0	0
Iceland	0	0	0	0	0	0	0	0	0	0
Ireland	4	7	6	17	0.4	0	5	11	16	0.4
Italy	53	74	6	133	0.2	337	340	577	1254	2.1
Latvia	0	2	1	3	0.1	0	0	0	0	0
Lithuania	0	0	0	0	0	0	0	0	0	0
Luxembourg	0	0	1	1	0.2	0	0	1	1	0.2
Malta	0	0	0	0	0	0	1	0	1	0.2
Netherlands	0	0	0	0	0	2	1	10	13	0.1
Norway	0	0	0	0	0	4	12	7	23	0.5
Poland	1	1	1	3	0.01	1	2	1	4	0.0
Portugal	1	0	0	1	0.01	0	0	1	1	0.0
Romania	729	287	252	1268	5.9	131	192	402	725	3.4
Slovakia	0	0	0	0	0	0	0	0	0	0
Slovenia	1	0	1	2	0.1	0	0	0	0	0
Spain	58	64	60	182	0.4	145	216	423	784	1.7
Sweden	2	14	4	20	0.2	4	1	1	6	0.1
United Kingdom	39	107	104	250	0.4	31	33	143	207	0.3
<b>Total</b>	<b>1010</b>	<b>704</b>	<b>569</b>	<b>2283</b>	<b>0.4</b>	<b>2335</b>	<b>3396</b>	<b>5655</b>	<b>11386</b>	<b>2.2</b>

Source: TESSy.

Notification rates were calculated using the most recent population estimates available from Eurostat (2011). Countries with a notification rate  $\geq 1.0$  per 100 000 population are highlighted in green.

**Figure 1. Distribution of measles cases in 2011 and 2012, and number of countries reporting in 2012, by month**



Source: TESSy

Reporting countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom.

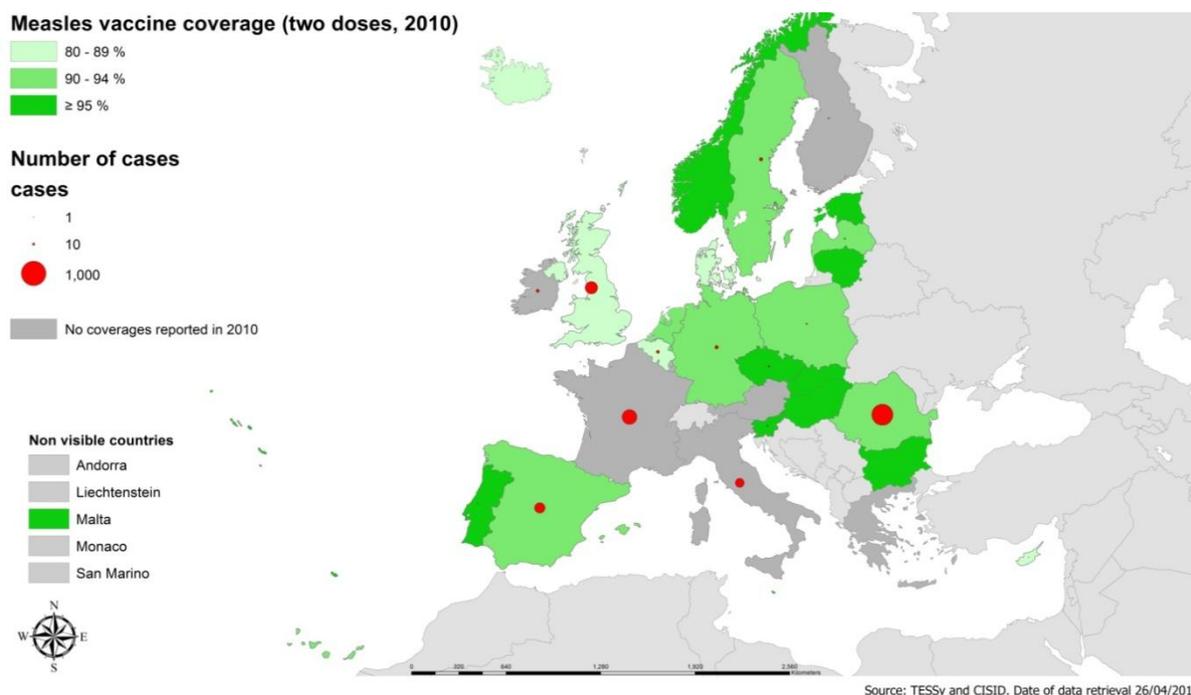
**Table 2. Outcomes and complications\* of measles, reported by 29 EU/EEA countries, January–March 2012**

Outcome	Number of cases	%
<b>Deaths</b>	0	0
<b>Cases with information on outcome status</b>	1563	68
<b>Unknown or not reported</b>	720	32
Total number of cases	<b>2283</b>	<b>100</b>
Complications*	Number of complications	%
<b>Encephalitis</b>	2	0.1
<b>Pneumonia</b>	231	10
<b>Diarrhoea</b>	34	1
<b>Otitis media</b>	6	0.3
<b>Other complications</b>	41	2
<b>No complications</b>	902	39
<b>No information provided / unknown</b>	1068	47
Total number of complications	<b>2284</b>	<b>100</b>

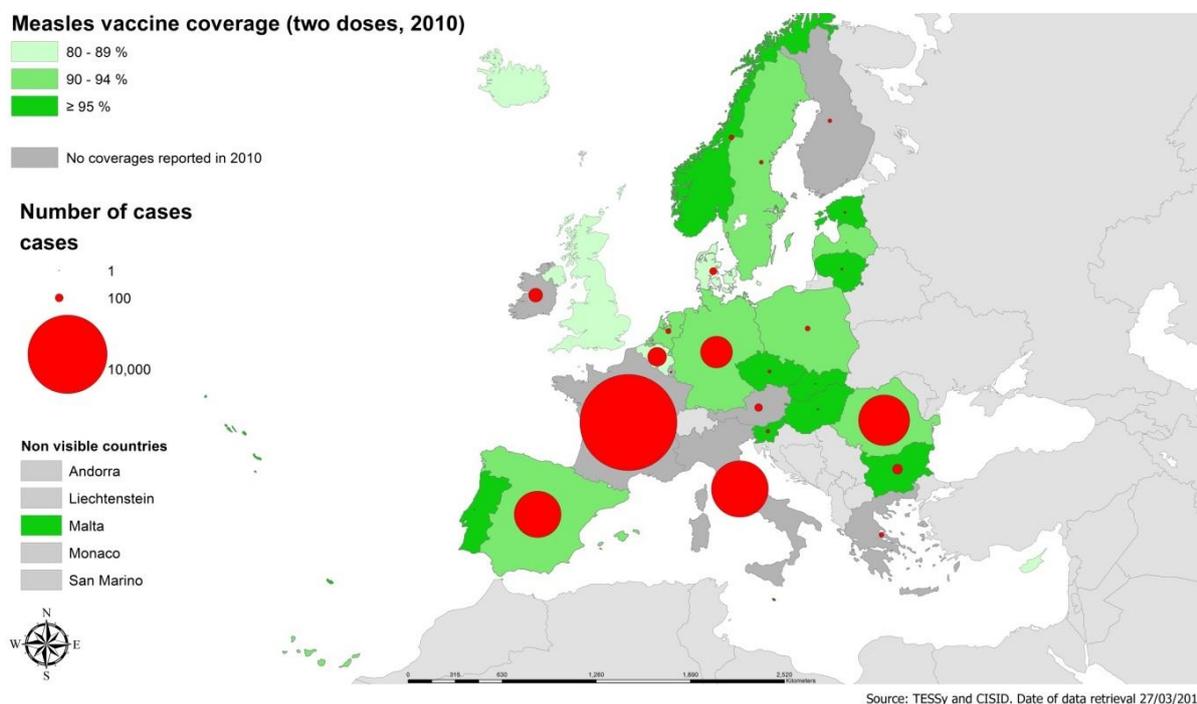
Source: TESSy

\* More than one complication can be reported for each case

**Figure 2. Distribution of measles cases reported to TESSy by EU and EEA countries for January–March 2012 (n=2 283) and two-dose measles vaccine coverage\* (2010 CISID)**

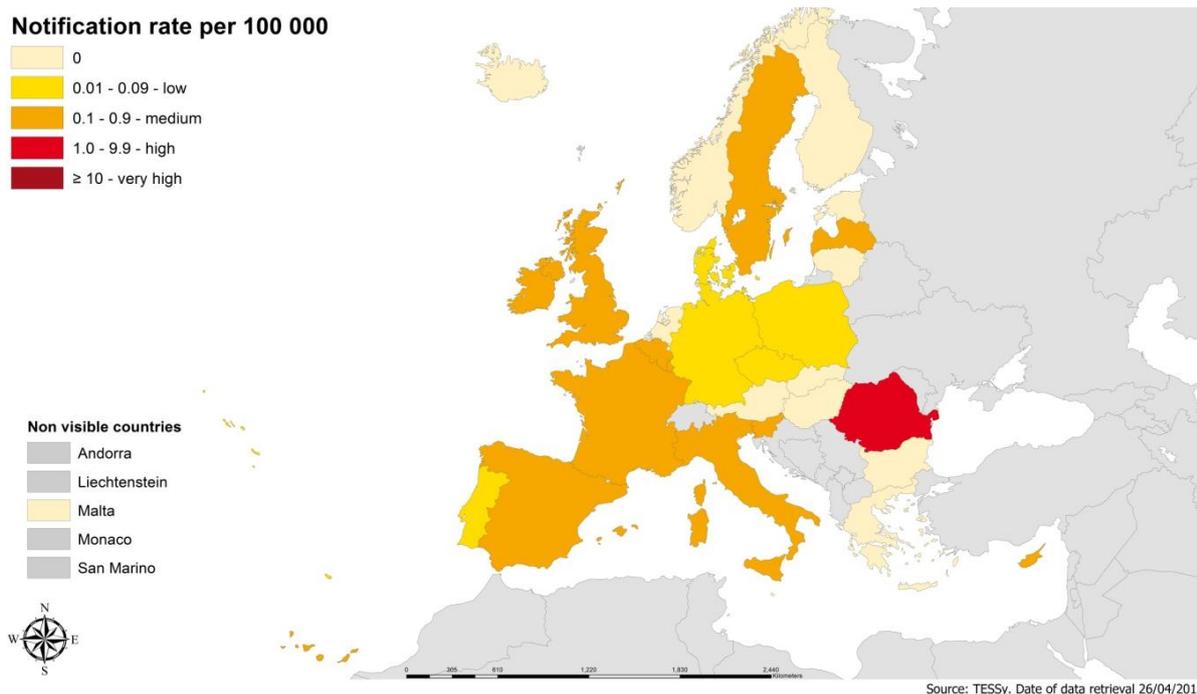


**Figure 3. Distribution of measles cases reported to TESSy by EU and EEA countries for January–December 2011 (n=32 021) and two-dose measles vaccine coverage\* (2010 CISID)**



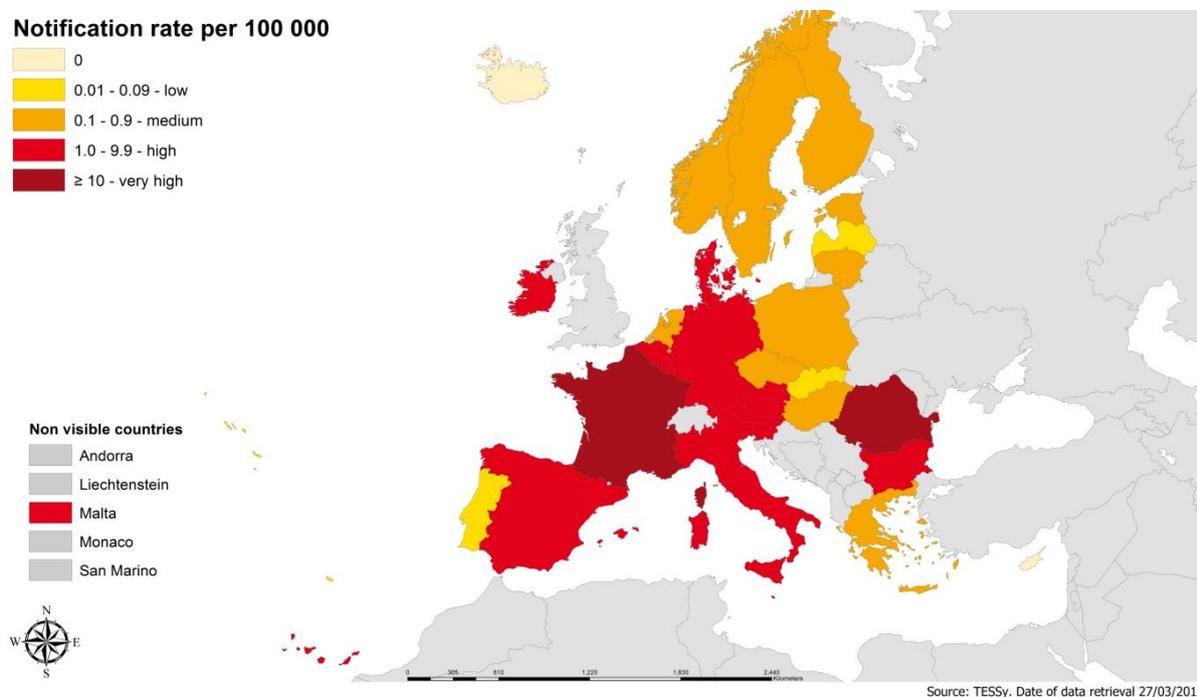
\* Coverage figures (%) are official national figures reported via the annual WHO/UNICEF Joint Reporting Form and WHO Regional Office for Europe reports (as of 27 January 2012).

**Figure 4. Distribution of notification rates (cases per 100 000 population) by country, EU and EEA countries, January–March 2012 (n=2 283)**

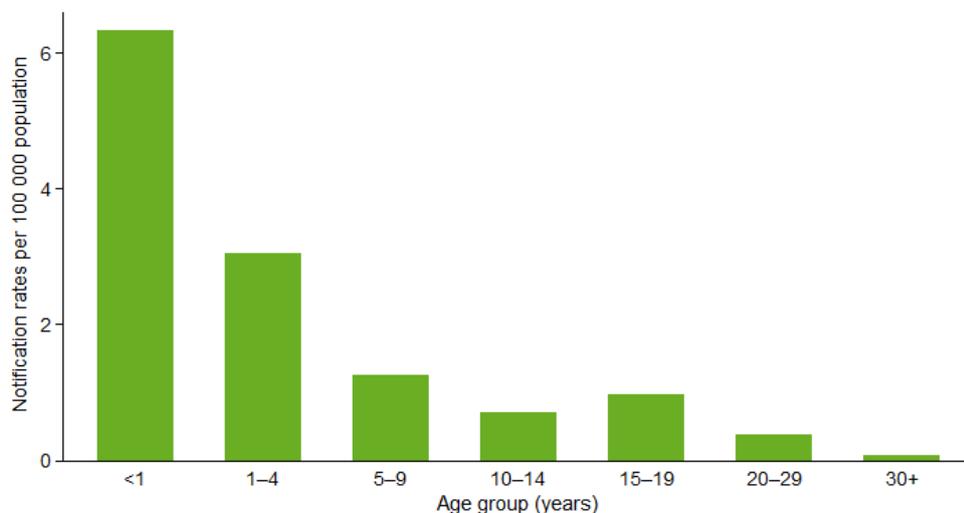


Source: TESSy. Notification rate calculated as (cases/population)\*100 000

**Figure 5. Distribution of notification rates (cases per 100 000 population) by country, EU and EEA countries, January–December 2011 (n=32 021)**



**Figure 6. Notification rates (cases per 100 000 population) by age group, January–March 2012, EU /EEA countries (n= 2 282 cases with known age)**



Source: TESSy

## Epidemic intelligence

### European Union Member States

There have been no unexpected or major developments in measles epidemiology in the EU Members States since the previous edition of EMMO. Far fewer cases were reported during the 2012 peak transmission season compared with the same period in 2011 and 2010. Outbreaks of moderate size and reproductive rate are ongoing in Romania and the UK.

#### **UK (update)**

Source: [HPA](#) and [Public Health Wales](#)

The number of cases in 2012 is increasing steadily. As of 29 April, the UK had reported 1 274 suspected cases of measles. New clusters were reported from different regions of the country, many of them in schools. The Cheshire and Merseyside area is experiencing the largest outbreak since the MMR vaccine was introduced in 1988, with 225 confirmed cases reported since January.

As of 26 April, NHS Wales reported 53 measles cases, of which 37 were confirmed. The outbreak is linked with a secondary school but also affects younger unvaccinated children. In an outbreak in a nursery in the northeast of England in early May, the index case is a six-months-old infant who is thought to have been infected during a visit to Majorca.

#### **Lithuania**

Source: [Lithuanian Centre for Communicable Diseases and AIDS](#)

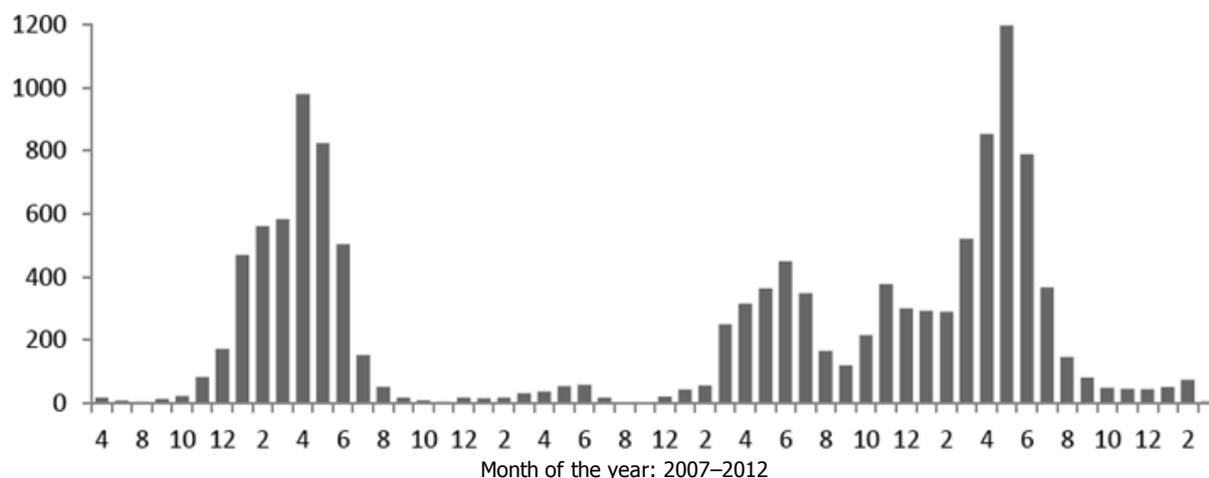
On 30 April, Lithuania reported two cases of measles in a mother and her daughter. Both were unvaccinated and they had visited a measles infected relative in St Petersburg. These are the first laboratory confirmed measles cases in Lithuania in 2012.

#### **Italy**

Source: [Ministry of health, Italy](#)

A recent epidemiological update by the Ministry of Health showed that Italy had 12 751 measles cases during the five-year period leading up to March 2012. The hospitalisation rate was 25%. Reported complications include pneumonia (252 cases), encephalitis (12 cases) meningitis (1 case), seizures (14 cases), and thrombocytopenia (19 cases). Two patients died, one in 2008 and one in 2012.

**Figure 7. Distribution of measles cases in Italy, April 2007 to March 2012**



Source: *Ministry of health, Italy*

**Hungary**

Source: *National Centre for Epidemiology*

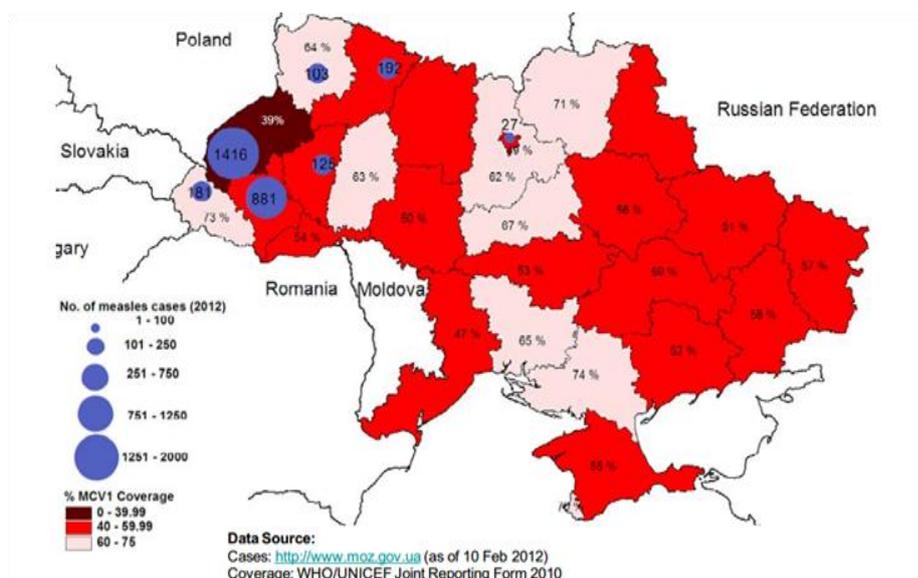
One laboratory-confirmed case was reported last week in a 28-year-old unvaccinated man who visited Ukraine during the incubation period.

**EU neighbouring countries**

**Ukraine (update)**

As of 10 May 2012, Ukraine had reported 9 173 cases of measles, the majority from the western regions of the country (Transcarpathian, Lviv Oblast, Ivano-Frankivsk, Ternopili, Volyn and Rivne). Information on hospitalisations and complications rates are not available. Officially reported vaccine uptake is low in Ukraine.

**Figure 8. Measles cases in 2012 and MCV1 coverage in 2010 by region, Ukraine**



Source: *WHO Epidemiological Brief No. 21, February 2012*

## Related links

More information about measles is available on the ECDC website:

<http://ecdc.europa.eu/en/healthtopics/Pages/Measles.aspx>

Information about vaccines and immunisation from the World Health Organization's Regional Office for Europe:

[http://www.euro.who.int/en/what we do/health topics/communicable diseases/measles and rubella](http://www.euro.who.int/en/what%20we%20do/health%20topics/communicable%20diseases/measles%20and%20rubella)

Website for 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 at <http://ecdc.europa.eu/en/activities/surveillance/euvac/Pages/index.aspx>

## Notes

- The European Surveillance System (TESSy) reports '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.
- Countries report on measles and other vaccine-preventable diseases to TESSy at their own convenience. This implies that the date of retrieval can influence the presentation of data. For this reason, the date of data retrieval is indicated for all EMMO issues. The date of retrieval for this issue was 26 April 2012. Inconsistencies with measles data reported in previous issues might arise as countries may update their data in TESSy retrospectively.