

This report provides an overview of selected epidemiological characteristics of measles and rubella in the WHO European Region. It is based on epidemiological data submitted to the centralized information system for infectious diseases.<sup>1</sup> The analyses of these diseases are performed on cases with disease onset dates during the first half of 2014. Where these dates were unavailable, cases with the date of notification reported during this period were included.

The data presented here are based on the dataset as of 19 September 2014. There may be some differences in the data presented in EpiData no. 6/2014<sup>2</sup> covering the same period (published 14 August 2014), as some countries may have updated their data in the meantime.

## Measles from January to June 2014

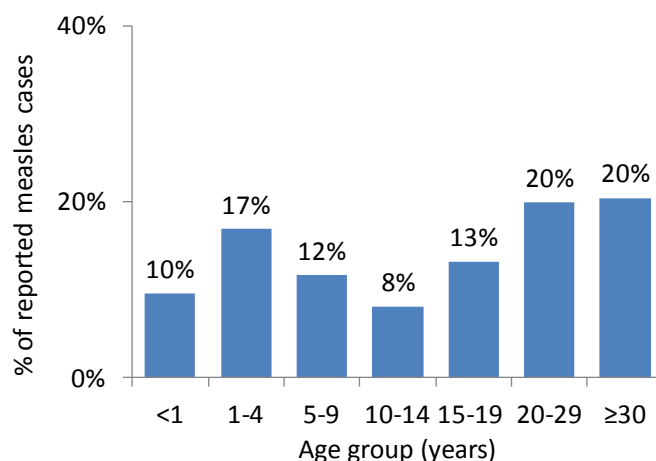
### *Incidence – notifications and laboratory data*

For the first half of 2014, 12 756 measles cases were reported in 37 countries of the WHO European Region among 50 (94%) countries that submitted measles data (including zero reporting). Three countries, namely Monaco, San Marino and Turkmenistan did not submit reports.

Of the total, 86% of cases (n=10 966) were reported by six countries: Georgia (n=2838; 23%), Russian Federation (2590; 21%), Ukraine (1960; 16%), Bosnia and Herzegovina (1702; 14%), Italy (1377; 11%) and Turkey (499; 4%). With 2801 cases of measles, the European Union as a whole reported 27% of all cases in the Region. The highest incidence per million population for the first half of 2014 was reported in Georgia (667) followed by Bosnia and Herzegovina (457).

Of the total, 5972 (47%) cases were laboratory-confirmed and 615 (5%) were epidemiologically linked cases. The remaining 6169 (48%) were classified as clinically compatible cases. During the first half of 2014, 338 clinical specimens were sequenced (reported as of 25 September 2014). The sequence data were entered in the Measles Nucleotide Surveillance database (MeaNS)<sup>3</sup> by national or reference laboratories of the WHO European Region.

Fig. 1. Age distribution of measles cases in the WHO European Region, first half of 2014 (n=12 394)



N.B. Discarded cases are not included

The genotypes identified in the Region included B3 (n=168), D8 (161), H1 (6), and D9 (1).

### *Age distribution*

The age group was known in 12 034 cases (97.08%). Forty percent of cases (n=5004) were 20 years and older (Fig. 1). Fig. 2 overleaf shows the age distribution of measles cases in the six countries that reported 86% of cases in the Region.

### *Vaccination status*

Vaccination status was known in 9315 cases (73%). Of the 6558 unvaccinated cases (70%), all had data on age: 1104 cases (17%) were <1 year old, 1417 cases (22%) were 1–4 years old, 822 cases (13%) were 5–9 years old, 1284 cases (20%) were 10–19 years old and 1931 cases (29%) were ≥20 years old. The remaining 2757 cases (30%) were reportedly vaccinated with at least one measles-containing vaccine dose.

### *Hospitalization*

Data on hospitalization status was available for 62% (n=7908) of all reported measles cases. Of these, 4844 were hospitalized, amounting to 61% of all cases with known hospitalization status.

### *Imported cases*

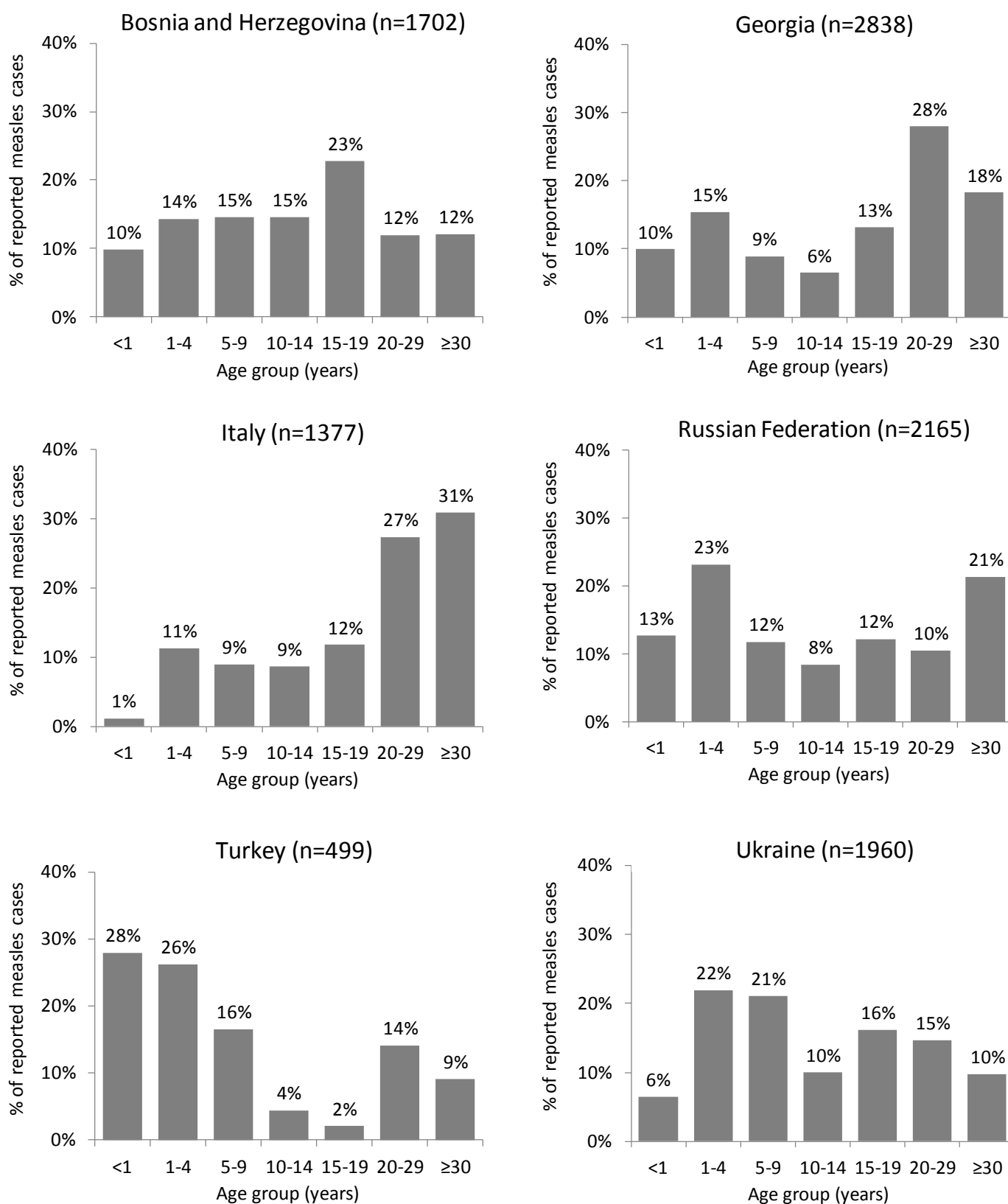
Importation status was known in 49% (n=6191) of cases. Of these, 249 were reported as imported cases, amounting to 4% of cases with a known importation status.

<sup>1</sup> World Health Organization. Centralized Information system for infectious diseases (CISID) <http://data.euro.who.int/CISID/>

<sup>2</sup> EpiData no. 6/2014 [www.euro.who.int/en/health-topics/communicable-diseases/poliomyelitis/publications/who-epibrief-and-who-epidata/latest-who-epibrief](http://www.euro.who.int/en/health-topics/communicable-diseases/poliomyelitis/publications/who-epibrief-and-who-epidata/latest-who-epibrief)

<sup>3</sup> Measles Nucleotide Surveillance database (MeaNS) [www.who-measles.org/](http://www.who-measles.org/)

Fig. 2. Age distribution of measles cases in the six countries that reported most (86%) cases in the WHO European Region, first half of 2014 (n=10 966)



## Rubella from January to March 2014

### *Incidence – notifications and laboratory data*

For the first half of 2014, 4935 rubella cases were reported in 17 countries of the WHO European Region among 43 (81%) countries submitting rubella data (including zero reporting). The cases were reported almost exclusively by Poland (n=4501; 91%), which also had the highest incidence per million population (117.4).

Of the total, 103 (2.1%) cases were laboratory confirmed. During the first half of 2014, no rubella virus sequence was entered in the Rubella Nucleotide Surveillance database (RubeNS).<sup>4</sup>

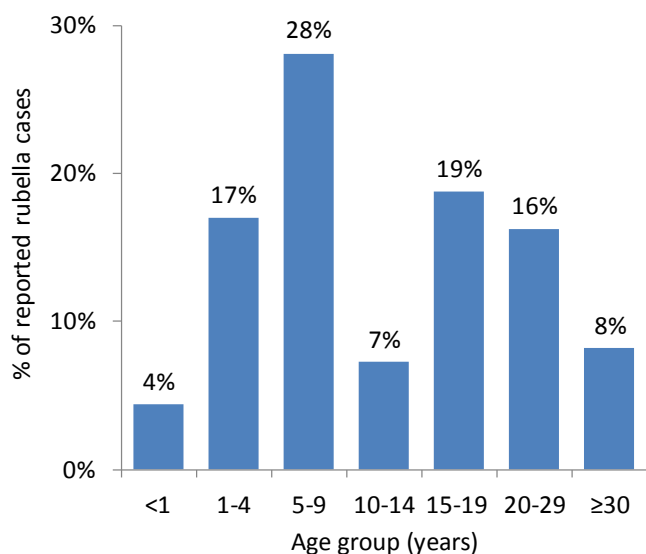
### *Age distribution*

The age group was known in all 4934 cases, of which 929 cases (19%) were 15–19 years old and 1209 cases (24%) were ≥20 years old (Fig. 3).

### *Vaccination status*

Vaccination status was known in 4080 cases (82%). 1991 (49%) unvaccinated cases had data on age: 182 cases (9%) were <1 year old, 158 cases (8%) were 1–4 years old, 123 cases (6%) were 5–9 years, 749 (38%) were 10–19 years old and 779 cases (39%) were ≥20 years old. The remaining 2088 cases (51%) were reportedly vaccinated with at least one rubella-containing vaccine dose. These were reported mostly by Poland (94%; n=1964).

Fig. 8. Age distribution of rubella cases in the WHO European Region, first half of 2014 (n=2449)



N.B. Discarded cases are not included

### *Imported cases*

Importation status was known in 5% (n=249) of rubella cases. Of these, nine were reported as imported cases, amounting to 3.6% of cases with a known importation status.

### Comments

#### *Measles and rubella*

The number of reported measles cases in the European Region for the first half of 2014 is 39% lower than that reported for the corresponding period in 2013 (n=20 879). However, in several countries measles transmission intensified during 2014. In addition, new outbreaks have been reported in countries such as Bosnia and Herzegovina, Czech Republic and Latvia that reported zero or low numbers of cases in 2013.

Maintaining high vaccination coverage and closing immunity gaps in the population is the mainstay of preventing outbreaks from occurring. Countries that have been performing well in terms of high vaccination coverage and zero or low reported cases of measles need to remain vigilant to address any drops in coverage or growing immunity gaps in their populations.

Overall, during the first half of 2014, over 40% of measles cases were adults aged 20 years and older. The age distribution of cases varied in the different countries reflecting the timing of the implementation of measles vaccination programmes, strategies used and coverage achieved. The current standard routine immunization programmes alone are insufficient to close immunity gaps in the adult population. Therefore, innovative and attractive ways need to be explored to reach out to adults who are still susceptible to measles.

Rubella continues to be reported in much fewer countries than measles. Although still too high, the number of reported cases in the European Region for the first half of 2014 is 86% lower than that reported for the corresponding period in 2013 (n=34 393). This is primarily because the number of rubella cases reported in Poland dropped from 33 877 in 2013 to 4501 for the same period in 2014. Nevertheless, the lack of both a response measure to control the outbreak and laboratory confirmation of reported cases in Poland remain of concern in relation to the 2015 goal for eliminating the disease.

Not all countries respond adequately to outbreaks, thereby allowing extension of transmission for periods

<sup>4</sup>Rubella Nucleotide Surveillance database (RubeNS) [www.hpa-bioinformatics.org.uk/rubella](http://www.hpa-bioinformatics.org.uk/rubella)

longer than a year in some cases. Countries with outbreaks affecting mostly older age groups have additional challenges as many are not equipped with mechanisms to cater for the vaccination needs of adults. Many countries do not have adequate and updated preparedness plans. Some continue to struggle with interpretation of collected data and use of this information to plan effective control strategies. Other countries are reluctant to undertake supplementary immunization activities due to lack of available resources, political commitment or secure vaccine supply.

Improvements are needed in active case-finding, contact-tracing and in the laboratory component of surveillance, especially for rubella. Every Member State should develop a plan of action for responding to detection of a measles or rubella outbreak. Such plans

should include principles of large-scale response activities, including immediate initiation of an in-depth epidemiological investigation, implementation of local control measures (SIAs) as well as long-term responses to measles and rubella outbreaks (including supplementary immunization activities, where necessary).

The current epidemiological situation of measles and rubella in the Region during the first half of 2014 remains of concern. Although intensified efforts are being taken by many countries, commitment to eliminate these diseases needs to be enhanced and continual throughout the Region.

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