



Measles in the WHO European Region

Fact sheet

July 2016

All 53 Member States of the WHO European Region committed in 2010 to the goal of eliminating endemic transmission of measles and rubella.

This commitment is a main pillar of the European Vaccine Action Plan 2015–2020. While significant progress has been made, outbreaks continue to occur in many countries, making achievement of the elimination an ongoing public health challenge for the Region.

Progress towards the elimination goal

In October 2015, the European Regional Verification Commission for Measles and Rubella Elimination (RVC) determined that 32 of the Region's 53 Member States had interrupted endemic transmission of measles, based on 2014 reporting.

Of these countries, 21 sustained interruption for three consecutive years and were therefore considered to have eliminated endemic transmission of the disease.

Epidemiology

- Despite this progress, due to several large outbreaks the number of reported measles cases in the European Region in 2015 (30 762) nearly doubled in comparison with the number of cases reported in 2014 (16 156).
- Over 43% of cases in 2015 involved adults over 20 years of age.
- 83% of cases were either not vaccinated or had no history of vaccination.

Surveillance

High-quality surveillance is required to monitor disease transmission, target immunization efforts and document progress. To support high-quality laboratory investigation of suspected cases, the WHO Regional Office for Europe coordinates a Measles-Rubella Laboratory Network (LabNet), consisting of 72 laboratories located across the Region.

With WHO support, the Network made tremendous progress in 2015:

- All but one of the 72 Network laboratories sustained a high level of proficiency and were fully accredited.
- Molecular proficiency testing was introduced for the first time in the annual accreditation review, with participation of 35 out of 72 labs.
- The Measles/Rubella LDMS – an online database linking laboratory and epidemiological data – was completely overhauled.

Prevention

- In the absence of vaccination, about 90% of individuals would be infected before they reached the age of 10.
- Two doses of measles vaccine provide over 99% protection from the disease and is the standard for all national immunization programmes in the Region.
- Elimination of measles requires $\geq 95\%$ coverage with both doses of the vaccine.
- In 2015, coverage in the target population in the Region with a first dose of measles-containing vaccine was 94%, and coverage with a second dose was 89%.

Measles immunization worldwide

- Global coverage in the target population, with a first dose of measles-containing vaccine increased from 73% to 85% between 2000 and 2015, and coverage with a second dose increased from 15% to 61% between 2000 and 2015.
- In the period 2000–2014, measles vaccination prevented an estimated 17.14 million deaths making measles vaccine one of the best buys in public health.

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Global disease burden

In 2014, 114 900 measles-related deaths were reported globally, mostly in children under the age of 5. The overwhelming majority (more than 95%) of measles deaths occur in countries with low per capita income and weak health infrastructures.

Disease profile

Measles is a highly contagious vaccine-preventable viral disease that is a major cause of childhood mortality globally. It infects the mucous membranes and spreads throughout the body. Initial symptoms appear 10-12 days after infection and include high fever, runny nose, bloodshot eyes, tiny white spots on the inside of the mouth and a rash on the face and upper neck.

Complications are more common in children under the age of 5 or adults over the age of 20. They include blindness, encephalitis, severe diarrhoea and related dehydration, ear infections and severe respiratory infections such as pneumonia. Severe complications can be fatal.

The measles virus is more contagious than many other known infectious diseases, including pertussis, mumps and rubella. Transmission occurs through airborne droplets produced by coughing or sneezing, close personal contact or direct contact with infected nasal or throat secretions. The virus remains active and contagious on infected surfaces for up to 2 hours. The virus can be transmitted by an infected person from 4 days prior to the onset of the rash to 4 days after the rash erupts.

Stepped up action needed

The WHO Regional Office places a high priority on eliminating measles and rubella from the entire Region. To reach this goal, all Member States are urged to:

- support verification activities by providing all needed surveillance and coverage data, information and documents to their national verification committee (NVC), thereby facilitating timely submission of complete and comprehensive annual status reports to the RVC;
- support capacity building of the LabNet, and improve the capacity to link genetic sequence data to measles and rubella surveillance data;
- ensure that adequate documentation on outbreaks, including supplementary immunization activities and outcomes, together with adequate outbreak reports are provided to their NVC;
- consider activities to increase population immunity through improving routine immunization and/or targeted supplemental immunization activities.

Sources

WHO Global and regional immunization profile: European Region
http://www.who.int/immunization/monitoring_surveillance/data/gseurprofile.pdf?ua=1

WHO EpiBrief, Issue no.1/2016
http://www.euro.who.int/_data/assets/pdf_file/0009/313020/EpiBrief_EpiData_1_2016-rev1.pdf?ua=1

WHO Immunization coverage fact sheet
<http://www.who.int/mediacentre/factsheets/fs378/en>

WHO vaccination recommendations for children
http://www.who.int/immunization/policy/immunization_routine_table2.pdf?ua=1

Meeting report: Regional Verification Commission for Measles and Rubella Elimination
<http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/activities/regional-verification-commission-for-measles-and-rubella-elimination-rvc>

Useful links

WHO Measles fact sheet
<http://www.who.int/mediacentre/factsheets/fs286/en/>

European Vaccine Action Plan 2015-2020
www.euro.who.int/EVAP

Elimination measles and rubella. Framework for the verification process in the WHO European Region
<http://www.euro.who.int/mr-elimination-framework>

More information on measles and rubella
<http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella>

Measles and Rubella Initiative
<http://www.measlesrubellainitiative.org/>

WHO/Europe CISID database
<http://data.euro.who.int/cisid/>

Reported measles cases as of 2 May 2016
 All online sources accessed 31 July 2016
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