



Rubella 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 several countries, making achievement of 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 rubella, based on 2014 reporting. Of these countries, 20 sustained interruption for three consecutive years and were therefore considered to have eliminated endemic transmission of the disease.

Epidemiology

- Rubella infection during early pregnancy may result in miscarriage, stillbirth or congenital defects known as congenital rubella syndrome (CRS). Seven children were born with CRS in the Region in 2015.
- In 2015, Poland reported 2029 cases of rubella out of a total of 2468 cases in the Region.
- There was a 64% decline in cases reported in the Region from 2014 (6516) to 2015 (2468). This is attributed to the 66% decline in reported rubella cases in Poland, from 5899 for 2014 to 2029 for 2015.
- Not all countries in the Region have country-wide, case-based surveillance for rubella in place, as recommended in the European Vaccine Action Plan. Experts therefore believe that rubella is vastly underreported and many more cases are likely occurring throughout the Region.

Surveillance

The only way to confirm whether a case is actually rubella is to conduct laboratory testing. 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.

Prevention

- There is no specific treatment for rubella, but the disease is preventable by vaccination.
- Rubella-containing vaccines are most commonly used in combination with vaccines against measles (MR), measles and mumps (MMR), or measles, mumps and varicella (MMRV).
- A single dose of rubella vaccine gives more than 95% long-lasting immunity. Two doses of the vaccine give close to 100% immunity.
- Before the introduction of the vaccine, up to four babies in every 1000 live births were born with CRS. Vaccines against rubella have been in use in the Region since the 1970s.
- All countries in the Region include highly effective and safe measles and rubella vaccines in their vaccination programmes. However, due to persistent gaps in immunization coverage outbreaks continue to occur.

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Disease profile

Rubella is an acute and contagious viral disease that occurs most often in children and young adults.

The rubella virus is transmitted by airborne droplets when infected people sneeze or cough. Humans are the only known host.

In children, the disease is usually mild, with symptoms including a rash, low fever (<39°C), nausea and mild conjunctivitis. Swollen lymph glands behind the ears and in the neck are the most characteristic clinical feature. Infected adults, more commonly women, may develop arthritis and painful joints that usually last 3–10 days. Once a person is infected, the virus spreads throughout the body in about 5–7 days. Symptoms usually appear 2–3 weeks after exposure. The most infectious period is usually 1–5 days after the appearance of the rash.

When a woman is infected with the rubella virus early in pregnancy, she has a 90% chance of passing the virus on to her foetus. Infants born with CRS may excrete the virus for a year or more. Children with CRS can suffer from hearing impairments, eye and heart defects and other lifelong disabilities, including autism, diabetes mellitus and thyroid dysfunction.

Global disease burden

CRS surveillance remains a challenge globally because of lack of diagnostic capacity and extensive underreporting in some countries. Known CRS rates are highest in the WHO African and South-East Asia regions, where vaccine coverage is lowest.

In 2012, the Measles & Rubella Initiative launched a new Global Measles & Rubella Strategic Plan 2012–2020, which provides a new framework for reporting, including indicators for measles and for the first time, also rubella control and elimination. The Plans' goals are:

- to achieve at least 95% coverage with both first and second routine doses of measles vaccine (or measles-rubella-containing vaccine as appropriate) in each district and nationally;
- to establish a target date for the global eradication of rubella and CRS; and
- to achieve measles and rubella elimination in at least five WHO regions by the end of 2020.

Sources

WHO Global and regional immunization profile: European Region

http://www.who.int/immunization/monitoring_surveillance/data/g_s_eurprofile.pdf

WHO vaccine-preventable diseases: monitoring system. 2016 global summary. Incidence time series for Poland

http://apps.who.int/immunization_monitoring/globalsummary/incidences?c=POL

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 Rubella fact sheet

www.who.int/mediacentre/factsheets/fs367/en/

European Centre for Disease Prevention and Control: Fact sheet on rubella for general public

<http://ecdc.europa.eu/en/healthtopics/measles/factsheets/Pages/factsheet-general-public.aspx>

Rubella vaccines: WHO position paper (weekly epidemiological record, July 2011)

<http://www.who.int/wer/2011/wer8629.pdf?ua=1>

Useful links

European Vaccine Action Plan 2015–2020

<http://www.euro.who.int/EVAP>

4th Meeting of the European Regional Verification Commission for Measles and Rubella Elimination (RVC)

http://www.euro.who.int/_data/assets/pdf_file/0011/304958/4th-RVC-meeting-report.pdf?ua=1

Eliminating measles and rubella. Framework for the verification process in the WHO European Region

<http://www.euro.who.int/en/health-topics/communicable-diseases/measles-and-rubella/publications/2014/eliminating-measles-and-rubella.-framework-for-the-verification-process-in-the-who-european-region>

Measles & Rubella Initiative

<http://www.measlesrubellainitiative.org/>

More on measles and rubella

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

Reported rubella cases as of 02 May 2016

All online resources accessed 31 July 2016

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