World Health Organization
REGIONAL OFFICE FOR Europe

Polio in the WHO European Region

Fact sheet July 2016

Vaccination against poliomyelitis (polio) is a cornerstone of routine immunization services in all 53 Member States in the WHO European Region.

Thanks to high vaccination coverage and well-functioning surveillance and laboratory systems, the European Region was declared polio-free in 2002. Maintaining this status is one of the primary goals of the European Vaccine Action Plan 2012-2020.

Epidemiology

Since 2002, the Region has experienced at least three importations of poliovirus. An outbreak that started in Tajikistan and spread to three other countries in 2010 led to over 400 clinical cases. Routine environmental surveillance in Israel detected the presence of the virus in the sewage system in 2013. In both instances transmission was stopped within one year, and the Region's polio-free status was not affected.

In September 2015, vaccine-derived poliovirus was identified as the cause of paralysis in two children in southwestern Ukraine. Three rounds of supplemental immunization aimed at protecting millions of children were conducted in the subsequent six months. A team of technical experts assessed Ukraine's response to the outbreak in April 2016 and concluded that transmission of the virus had likely been interrupted. The situation continues to be monitored closely and the Regional Certification Commission for Europe will review the outbreak response again in 2017.

Polio Eradication and Endgame Strategy: next steps in the European Region

OPV Switch

The largest-ever globally coordinated switch of vaccines in routine immunization programmes took place from 17 April to 1 May 2016. This was the first step of a phased withdrawal of all oral polio vaccines (OPVs) as a part of the global Polio Eradication and Endgame Strategic Plan 2013-2018.

19 Member States in the WHO European Region were among the 155 countries and territories wordwide that stopped using trivalent OPV, which protects against all three serotyes of wild poliovirus. Each country either began using bivalent OPV, which provides stronger protection against the remaining two wild poliovirus serotyes, or switched to a schedule that includes only the inactivated form of polio vaccine (IPV). The remaining 34 Member States in the Region had already adopted an IPV-only schedule.

Containment

The majority of vaccine production facilities that handle polioviruses are located in the WHO European Region. To minimize the risk of reintroduction after global eradication has been achieved, steps are already underway to ensure appropiate handling and laboratory containment of the virus. WHO/Europe provides technical support to its Member States to prepare for and implement all phases of the containment process.

Disease profile

- Polio is an acute communicable disease caused by one of three enterovirus serotypes.
- The virus is transmitted from person to person, spread mainly through the faecal-oral route or by a common vehicle (e.g. contaminated water or food).
- Initial symptoms are fever, fatigue, headache, vomiting, stiffness in the neck and pain in the limbs. One in 200 infections leads to irreversible paralysis (usually in the legs). Among those paralysed, 5–10% die when their breathing muscles become immobilized. Polio mainly affects children under 5 years of age.

Prevention

- There is no cure for polio, it can only be prevented. Polio vaccine, given multiple times, can protect a child for life.
- WHO recommends that all children worldwide be fully vaccinated against polio, and every country should seek to achieve and maintain high levels of coverage with polio vaccine.
- In the Region, coverage with 3 doses of polio vaccine was 94% in 2015. Global coverage with 3 doses of polio vaccine was 86% in 2015.

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Polio outbreak simulation exercises (POSE)

National preparedness is key to ensure that any importation of poliovirus does not lead to an outbreak with ongoing transmission. POSE is a two-day tabletop exercise designed to help Member States critically review and update their national plans for responding to the detection of imported wild polioviruses and vaccine-derived polioviruses. WHO/Europe has led the exercises in several subregions since 2011 and will continue to conduct further regional and inter-regional exercises in the coming years.

Global progress toward eradication

In 1988, the World Health Assembly adopted a resolution for the worldwide eradication of polio, and this marked the launch of the Global Polio Eradication Initiative (GPEI). This Initiative is spearheaded by national governments, WHO, Rotary International, the United States Centers for Disease Control and Prevention (CDC), the United Nations Children's Fund (UNICEF) and is supported by key partners including the Bill & Melinda Gates Foundation.

Between 1988 and 2015, cases of wild poliovirus decreased by over 99%, from an estimated 350 000 cases to 72 reported cases.

Naturally circulating wild poliovirus type 2 was declared globally eradicated in Sepember 2015. No case due to wild poliovirus type 3 has been detected since 10 November 2012.

Eradication of polio from the last remaining strongholds is the only way to permanently prevent its reintroduction into currently non-endemic countries. Populations in fragile states in which immunization systems have been disrupted by armed conflict or complex emergencies are particularly vulnerable to infection and potentially large-scale outbreaks of the disease.

On 5 May 2014, the WHO Director-General declared the international spread of wild poliovirus to be a Public Health Emergency of International Concern (PHEIC) under the International Health Regulations. Since then strong progress has been made by countries toward interruption of wild poliovirus transmission and implementation of Temporary Recommendations issued by the Director-General. Intensified efforts in Afghanistan and Pakistan and renewed emphasis on cooperation along the international border between the two countries have been particularly encouraging.

Economic modelling has found that the eradication of polio would save at least US $40–50 billion over the next 20 years, mostly in low-income countries.

Sources

European Region withdraws trivalent oral poliomyelitis
http://www.euro.who.int/en/health-topics/communicable-diseases/poliomyelitis/news/news/2016/05/european-region-successfully-withdraws-trivalent-oral-poliomyelitis-polio-vaccine

WHO Poliomyelitis fact sheet
http://www.who.int/mediacentre/factsheets/fs114/en/

European Immunization, Vaccines and Biologicals
http://www.who.int/immunization/monitoring_surveillance/data/EUR/en/

Polio cases by country (Polio Global Eradication Initiative)
http://www.polioeradication.org/Dataandmonitoring.aspx

All online sources accessed 25 July 2016
Image: ©WHO

Useful links

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

Polio Eradication and Endgame Strategic Plan 2013–2018
http://www.polioeradication.org/Resourcelibrary/Strategyandwork.aspx

IPV introduction, OPV withdrawal and routine immunization strengthening
http://www.who.int/immunization/diseases/poliomyelitis/endgame_objective2/en/

More information on poliomyelitis
www.euro.who.int/polio